

## A network perspective on foreign entry modes of small knowledge-intensive services firms

*Accepted for publication in European Journal of Marketing*

Martina Battisti  
Grenoble Ecole de Management  
Grenoble, France  
Email: [martina.battisti@grenoble-em.com](mailto:martina.battisti@grenoble-em.com)

Joanna Scott-Kennel  
University of Waikato  
Hamilton, New Zealand  
Email: [joanna.scott-kennel@waikato.ac.nz](mailto:joanna.scott-kennel@waikato.ac.nz)

David Deakins  
Lancaster University  
Lancaster, United Kingdom  
Email: [d.deakins@lancaster.ac.uk](mailto:d.deakins@lancaster.ac.uk)

### Please cite as:

*Battisti, M., Scott-Kennel, J. & Deakins, D. (2021). A network perspective on foreign entry modes of small knowledge-intensive services firms. European Journal of Marketing, <https://doi.org/10.1108/EJM-10-2018-0732>*

### Acknowledgments

This study received funding from the New Zealand Government's Ministry of Business, Innovation and Employment, Ministry of Foreign Affairs and Trade and the New Zealand Treasury.

### Keywords

Network, position, ties, embeddedness, internationalisation, entry mode, foreign direct investment, exporting, services, KIS

### Abstract

#### Purpose:

Integrating network attributes from studies of social networks, business relationships and small to medium-sized enterprise (SME) internationalisation, this study adopts a perceptual view of a firm's focal 'net' of relationships to examine foreign market entry mode choice. Our study examines how the interaction between knowledge-intensive service (KIS) firm's focal network ties, embeddedness and position is related to entry mode choice and subsequently the firm's perceived insidership status within its focal net.

#### Methodology:

This research is based on qualitative interviews with 25 small to medium-sized KIS firms engaged in direct exporting or foreign direct investment (FDI). Our study derives an empirically grounded framework of four distinct network patterns of these KIS firms through an iterative process of triangulation between cases and theory.

#### Findings:

The four network patterns illustrate the complex interaction between network attributes and entry mode choice by KIS firms. Our findings suggest formal ties and centrality in closed network relationships provide the 'central controller' firm discretion over their entry mode choice. Resource-intensive FDI by 'opportunistic investors' proved essential to securing centrality through formal, institutional ties. Less optimal patterns lacking institutional ties and centrality, however, precluded choice of FDI by 'specialised exporters' and 'client followers'. The study

finds that entry modes are less likely to be influenced by the firm's embeddedness in open or closed network relationships, but rather by the desire to achieve a more central network position and legitimacy through more formal, less imitable ties.

Research implications:

Our findings demonstrate the importance of network structure, a position of centrality, and strength of professional and institutional ties to small KIS firm internationalisation. By adopting a more finely grained examination of the interaction between key attributes of the firm's focal net, our study provides a valuable first step in conceptualising the complexities associated with networking and adoption of export/investment internationalisation modes.

Practical implications:

There are a number of implications for the strategic and operational facets of smaller KIS firm internationalisation. To avoid excessive network liability for resource-deficient SMEs, practitioners should consider network positioning as a strategic activity, with the costs associated with building and maintaining networks offset against economic and resource-related returns.

Originality/value:

We contribute to a better understanding of entry mode choices of KIS by taking a network perspective that accounts for the combined effects of different network attributes. The four network patterns identified extend current theoretical knowledge on the role of networks for entry mode choices of small KIS by highlighting that entry mode choices reflect the particular firm's focal net and its attempt to achieve insidership status through high centrality and formal ties.

## INTRODUCTION

Knowledge-intensive services (KIS) are amongst the fastest growing sectors in developed economies (McQuillan *et al.*, 2018). Distinctive characteristics of KIS are possession of a substantial body of complex knowledge embodied in human capital, a highly professionalised workforce, and comparably low capital intensity (von Nordenflycht, 2010). Markets for KIS, particularly those serviced by smaller, creative and innovative firms, are increasingly becoming global in both demand and supply (Abecassis-Moedas *et al.*, 2012). KIS firms act as suppliers, processors and co-producers of knowledge through network relationships (Muller and Doloreux, 2009; Siahtiri, 2018). Networks thus form an inherent part of the knowledge base of KIS firms (Loane and Bell, 2006), and are developed to optimise resources and opportunities as these firms enter markets internationally (Coviello, 2006; Coviello and Munro, 1997). The purpose of this study is to explore the complex relationships between different network attributes and entry mode choice of KIS firms.

Although modes vary, KIS firms prefer to enter foreign markets by establishing sales subsidiaries through foreign direct investment (FDI) rather than exporting (Toivonen, 2002). Due to the high intangible service component of their offerings, FDI enables KIS firms to establish foreign market presence at lower levels of risk and resource outlay compared to traditional small manufacturing firms (Ball *et al.*, 2008; Hollenstein, 2005; Game and Apfelthaler, 2016; Sharma and Erramilli, 2004; Sandberg, 2014). Theoretically, foreign entry mode choices have often been explained using the transaction cost theory (TCT), resource-based view (RBV) or eclectic paradigm (OLI) on the basis of costs, firm-specific resources, skills and assets and/or location-specific drivers (Wulff, 2016). Contemporary literature theorising firm internationalisation however, also stresses the importance of network *insidership* (Johanson and Vahlne, 2011) and knowledge sharing, joint innovation and information gathering with network partners (Chetty and Stangl, 2010; Felzenstein *et al.*, 2015; Hilmersson and Jansson, 2012; Johanson and Vahlne, 2009; Odlin and Benson-Rea, 2017; Paul *et al.*, 2017). While recent research has suggested that small KIS firms in particular, leverage strong local embeddedness through client, industry and institutional networks in order to internationalise (McQuillan *et al.*, 2018), our understanding of the role of the firm's network attributes for entry mode choice remains limited (Sedzinauskiene *et al.*, 2019).

Analysing the attributes of the network in which a firm is embedded is important to understand its internationalisation behaviour (Forsgren, 2016). Therefore, the lack of knowledge regarding the interaction between network attributes and choice of foreign market entry mode by KIS firms is rather problematic. Specifically, interaction between embeddedness, ties and position (Oehme and Bort, 2015) within the firm's own focal 'net', or set of relationships (Salmi, 2000), insidership status (Johanson and Vahlne, 2011) and entry mode choice remain important yet under-researched from the perspective of the focal firm (McQuillan *et al.*, 2018). Our research question, therefore, is as follows: *How does the interaction between a small KIS firm's network ties, embeddedness and position relate to entry mode choice and subsequently, the firm's perceived insidership status within its focal net?* Using research on SME internationalisation and networks as our departure point, then integrating concepts illustrative of core attributes from social network theory, this study adopts a perceptual view of a firm's focal net of relationships to explain entry mode choice of small KIS firms. Drawing on qualitative interviews with 25 small KIS firms from New Zealand, our study considers how the interaction between ties, embeddedness and position of the focal firm relates to entry mode choice and perceived insidership status within its focal net.

This study makes two key contributions. First, we contribute to understanding of entry mode choice of small KIS firms by taking a network perspective that accounts for the combined effects of different network attributes. Our findings suggest firms' network attributes relate to different entry modes. We identify four network patterns that illustrate the complex interaction between network attributes and entry mode of the focal firm. We conclude that it is the interaction, rather than individual, effects of all three network attributes that influence KIS firms' entry mode choice. As such, we extend current theoretical knowledge on the role of networks for entry mode choices of small KIS firms by highlighting that these choices reflect the particular firm's focal net and its attempt to achieve insidership status. In particular, we clarify the role of ties in the internationalisation of small KIS firms. Previous literature has highlighted the importance of formal ties (Oehme and Bort, 2015), but there remains a lack of clarity as to what constitute formal ties and their impact on SME internationalisation (Sedzinauskiene *et al.*, 2019). In this study, we distinguish between different types of ties as well as their origin, either at home or in the host country. Findings from this study suggest that in contrast to traditional internationalising SMEs, informal ties are less relevant to small KIS firms (Idris and Saridakis, 2018). Further, while previous research has highlighted the relevance of professional ties in the home country (i.e., with clients, Bell *et al.*, 2003), our results show that associative and institutional ties of small KIS firms are located predominantly in the home country as well. Finally, the type of tie rather than its origin is important, with formal, institutional ties being highly relevant to the firm's position in its focal net.

Second, we contribute to literature relating to how small KIS firms achieve network insidership status. While the importance of achieving insidership has long been highlighted in previous research (Johanson and Vahlne, 2009), we know little about how small firms gain this status (Schweizer, 2013). Our findings suggest a sliding scale from outsidership to insidership where the status of the firm is determined by its focal net in combination with its entry mode choice. Specifically, firms whose focal net already had afforded them insidership status in the form of being an influential player with relevant professional and institutional ties in place, had more discretion over their choice of entry mode. Further, only firms embedded in open networks chose FDI to improve their network insidership status. Overall, our findings suggest that small KIS firms, first and foremost, develop their networks - particularly in the domestic market – and their foreign market entry mode is influenced by the nature of the networks they are embedded in and, by extension, their perceived insidership status in those networks.

## LITERATURE REVIEW

KIS firms are characterised by reliance ‘on professional knowledge or expertise relating to a specific technical or functional domain’ as their main asset (cited in Abecassis-Moedas *et al.*, 2012, p. 315; den Hertog, 2000). Internationalising small KIS firms not only have unique characteristics relating to their size, including diseconomies of scale and resource challenges, but also relating to their role as international service providers. KIS firms require close customer interaction due to the intangibility, inseparability and knowledge intensity embodied in service delivery (Abecassis-Moedas *et al.*, 2012), whilst simultaneously facing challenges of knowledge transfer (Apfelthaler and Vaiman, 2012) across psychic and geographical distance (Ojala, 2009). Such firms represent a specific type of service where people play a critical role in the creation, dissemination and application of knowledge both within and between firms domestically and internationally (Andersen *et al.*, 2000) and in this capacity act as key nodes in knowledge-based networks of focal firms (den Hertog, 2000). These network characteristics differentiate KIS from other small firms, resulting in different choices with regard to international market entry modes (Abecassis-Moedas *et al.*, 2012; Huggins, 2011). Next, we review the role of networks for international market entry modes of small KIS firms.

### Networks, internationalisation and market entry modes of small KIS firms

Recent research on the internationalisation process of the firm, and SMEs in particular (see Morais and Ferreira, 2019 for a review), underlines the importance of business networks in studying firm’s international behaviour (e.g. Axelsson and Johanson, 1992; Chetty and Agndal, 2007; Johanson and Mattsson, 1988; Johanson and Vahlne, 2003; 2006; 2009; Salmi, 2000; Hånell and Ghauri, 2016; Oparaocha, 2015; Ojala, 2009; Stoian *et al.*, 2017). Networks are defined as sets of connected relationships between firms and other players including customers, suppliers, distributors, competitors, governments and other institutions (Johanson and Mattsson, 1987). These authors, of the Uppsala tradition, were the first to argue that the internationalisation of firms ought to be considered in the context of the networks in which the firms are embedded. This argument was further developed by Johanson and Vahlne (2009, p.1423) who saw internationalisation “as the outcome of firm actions to strengthen network positions”. Firms may acquire knowledge of foreign markets and the internationalisation process from both local and international networks (Fletcher *et al.* 2013; Welch and Welch, 1996).

When firms, and small firms in particular, enter foreign markets they often suffer from liability of outsidership, or lack of position, market knowledge and ties in relevant network relationships (Johanson and Vahlne, 2009; Schweizer, 2013). Johanson and Vahlne (2011, p. 485) regard internationalisation as a process of building insidership in the relevant network of the targeted market by overcoming the liability of outsidership, as the knowledge of the internationalising firm is transferred incrementally to network actors and mutual learning occurs via network relationships. Thus, insidership grows as firms develop one, or a set of, business relationships within a relevant client network (McQuillan *et al.*, 2018; Hilmersson and Jansson, 2012; Johanson and Vahlne, 2009). However, whilst becoming an insider appears crucial for the internationalisation process, we know little about how small firms gain this status (Schweizer, 2013). Research is rather inconsistent, having argued that firms overcome their liability of outsidership by developing their network relationships organically (Chetty and Blankenburg Holm, 2000), accidentally or in an ad-hoc manner (Johanson and Vahlne, 2006; Kontinen and Ojala, 2011), and strategically and deliberately to acquire resources necessary to strengthen their competitive positioning (Gabrielsson *et al.*, 2008; Loane and Bell, 2006; Ojala, 2009).

Researchers have also found that network relationships have a significant impact on small KIS firms’ entry mode choice (Coviello and Martin, 1999; Coviello and Munro, 1995; 1997; Moen *et al.*, 2004; Zain and Ng, 2006). In line with the assumption of the network model (Johanson and Mattsson, 1988), firms often follow their networks to foreign markets (Ojala, 2009) where existing client relationships act as a bridge to foreign markets (Bell *et al.*, 2003). Entry into new networks is also important to maintain close relations with clients and to develop technology

in offshore markets (Odling and Benson-Rea, 2017). Industry-specific features impact on small firm internationalisation behaviour (Andersson, 2004; 2006). Specifically, traditional small firms, which are ‘relatively passive and reactive’ and rely mostly on existing relationships when entering foreign markets (Schweizer, 2013, p. 86) contrast with KIS firms, which display characteristics typical of micro-multinational enterprises (Dimitratos *et al.*, 2003) drawing on relationships in multiple networks to access resources external to their firm (Dimitratos *et al.*, 2014). Firms form relationships in domestic networks (Idris and Saridakis, 2018), foreign target markets (Bell, 1995; Coviello, 2006; Zain and Ng, 2006), or those that span international borders (McQuillan *et al.*, 2018).

A further feature that distinguishes the small KIS firm from traditional SMEs, is their choice of foreign market entry mode. Traditional small manufacturing firms tend to employ non-equity entry modes, such as indirect exports and refrain from more costly and resource intensive direct investment entry modes (Hollenstein 2005; Game and Apfelthaler, 2016). In contrast, small KIS firms are more likely to engage in foreign market entry modes typically associated with high resource commitment. For instance, previous research has found that the establishment of subsidiaries in foreign markets is a more common form of market entry compared to exports (Toivonen, 2002). Yet, Ball *et al.* (2008) find this entry mode is actually *less* resource intensive for KIS firms due to the nature of their advantages based on intangible assets and because investment goes to service delivery rather than manufacturing infrastructure. Further, as client-follower firms glean knowledge of local markets through experience with existing clients, they often require fewer resources for initial internationalisation (Ball *et al.*, 2008). For instance, Odling and Benson-Rea (2017) found high-tech SMEs by-passed indirect agents and distributors in favour of strong direct relationships with customers, thus entering a country as ‘relative outsiders, attaching to the edge of the business network in the new country via these customers’ (p. 746). Thus, it is important to recognise that in contrast to traditional firms, and even other service firms, entering foreign markets by establishing subsidiaries provides proximity to international clients for KIS firms, without the high resource commitment associated with physical plant and equipment (Ball *et al.*, 2008).

Networks are of particular importance to the small KIS firm, which faces challenges arising from knowledge intensity rather than capital intensity when entering foreign markets. Strategies used by small KIS firms have challenged internationalisation theories due to the more intangible and inseparable nature of their product, electronic distribution methods, product/service overlap, as well as high dependence on relevant knowledge (Bell, 1995; Ojala, 2009; Sinha *et al.*, 2015). Small KIS firms can internationalise rapidly by targeting highly specialised global niches through network contacts, following their domestic clients overseas, using networks as channels whilst retaining control over operations (Glückler, 2004; Kautonen and Hyypia, 2009; Roberts, 2018; Toivonen *et al.*, 2009; Toivonen, 2004), and overcoming psychic distance to the foreign market through technological knowledge (Bell, 1995; Bell *et al.*, 2003). Strategic rather than reactive reasons often drive entry by KIS firms, who actively engage with existing partners and establish new networks (Ojala, 2009). Networks offer opportunities for growth for small KIS firms, particularly if there is no continuous flow of work from the existing client (Malhotra and Hinings, 2010). Further, collaborative network relationships positively influence small KIS firms’ internationalisation via innovation (Rodríguez and Nieto, 2012) and lower investment costs of entry (Ball *et al.*, 2008). Thus, we would expect that the distinguishing features of small KIS firms, coupled with network activity and focal net attributes, would affect the type of variables that explain entry mode selection (Sanchez-Peinado *et al.*, 2007). However, the set of relationships and the attributes associated with a firm’s focal net require further examination, and the following section presents relevant theory and contributions to network literatures.

### **Network theory, focal ‘nets’ and network attributes**

The theoretical field underlying the concept of networks lies at the intersection of multiple disciplines including economic sociology (organization science and strategy, e.g. Powell *et al.*, 2005; Rosenkopf and Padula, 2008; Rosenkopf and Schilling, 2007; and see Ratajczak-Mrozek, 2017 for a review), and B2B marketing (Ritter and Gemünden, 2003). The business network can be identified as an organising structure for relations between actors (McLoughlin and Horan, 2002) in which economic interdependence in information, social, financial, product/service exchange is at the core of long term relationships (Powell, 1990). While the internationalisation literature has often focussed on different types of networks or entry planning and processes, our approach is to consider network attributes and entry mode in the context of the focal net of the firm. Two complementary streams of literature, namely social network theory, which offers a rich conceptualisation of social relations, and the Industrial Marketing and Purchasing (IMP) literature, which focuses on interorganisational relationships, provide a strong foundation best suited to the nature of our inquiry.

Social network theory (Burt, 2000; Granovetter, 1973) is concerned with the attributes of social networks that explain economic action based on relationships between actors (Hoang and Antoncic, 2003). Network attributes have been conceptualised as either *structural* (position and embeddedness) (Burt, 1992; Coleman, 1994) or

*relational* (ties) (Birley, 1985; Granovetter, 1985) and we focus on these attributes in this study. Although social network theory provides a useful theoretical lens to explain how different network attributes determine the foreign market entry mode of small KIS firms, studies to date have largely adopted a quantitative approach, using attributes of the individual or the firm to explain economic action from the perspective of the network rather than a focal firm. The focus of this study, however, is on relationships between the firm and other actors in the firm's focal net.

The interorganisational relationships literature focuses on multiple links between multiple firms at the level of industry and the market (Håkansson and Snehota, 1995). Contributions by IMP researchers who seek to understand the nature of business relationships are useful for their firm-level network perspective (McLoughlin and Horan, 2002; Johanson and Vahlne, 2011). Their approach derives from *inter alia*, inter-organisational theory (March, 1988; Weick, 1979) where markets are understood as systems of networks of relationships amongst social and economic actors who are highly interdependent (Johanson and Mattsson, 1988; McLoughlin and Horan, 2002). Understanding the nature of focal firm networks of business relationships is valued within this 'markets as networks' (MAN) tradition (Håkansson and Snehota, 1989; Johanson and Vahlne, 2009; 2011; Salmi, 2000; see special issue in the *Journal of Business Research*, 2002). The IMP researchers' view is based on the idea that "no business is an island" (Håkansson and Snehota, 1989, p. 256), but part of a larger network consisting of "sets of two or more connected relationships" (Cook and Emerson, 1978, p.752). Thus, researchers view networks as a way of understanding the connectedness (embeddedness) that prevails through enactment of selective ties and business-to-business relationships between autonomous actors in business markets (Håkansson and Snehota, 1989; 1995; Johanson and Mattsson, 1988; Ratajczak-Mrozek, 2017). Thus, the position of the firm within the 'network context' (Anderson *et al.*, 1994; Forsgren *et al.*, 2005) refers to the collective set of interconnections between network actors, activities and resources.

This study builds on the idea of the firm's focal net (Salmi, 2000; Ojala, 2009), which includes all relationships that the actor considers relevant, including, but not limited to, suppliers, customers, industry associations, institutional agencies and actors, joint venture and alliance partners. Similar to the notion of an organization set, where the business network is centred on a particular node (i.e. the entering firm, Aldrich and Whetten, 1981), the basic premise of the perceptual focal net approach is that networks are defined as perceived by the focal firm. In order to best capture the firm's focal net, therefore, researchers have applied a perceptual network approach, examining relationships and network attributes from the "perspective of an individual company, the network that it perceives to be the most relevant, and to which it is connected, [and] forms the context for its business operations" (Salmi 2000, p.1376). Networks are, therefore, subjectively defined and the perception of insidership and key attributes by key decision makers matter (Hilmersson and Jansson, 2012; Forsgren *et al.*, 2005; Forsgren, 2016). This view is in line with Johanson and Vahlne (2011, p. 487) who argue, "business networks are opaque unless you are inside". Thus, only (decision makers in) focal firms know the strength and connectedness of relationships in the network and only they can know their own relationships intimately.

Thus, adopting the perspective of the firm's focal net or set of relationships (Salmi, 2000), this study incorporates key network attributes from social network theory. Although such an integrative approach is used relatively rarely, it has been adopted by researchers seeking: to examine business relationships and foreign market entry at the firm-level (Forsgren *et al.*, 2005); to link specific network attributes to SME internationalisation (Odlin and Benson-Rea, 2017); and to apply social network theory to business relationships in the context of internationalisation (Kurt and Yamin, 2016; Yamin and Kurt, 2018; Yli-Renko *et al.*, 2002). This approach not only enables a richer understanding to develop around the attributes of relationships and activities between focal actors, but also the behaviour of these actors within the wider network. Therefore, understanding network structure and entry behaviour from the firm's perspective is a meaningful and valid approach to understanding relationships relevant to that firm. We proceed through a detailed discussion of three concepts derived originally from social network theory (Burt, 2000; Coleman, 1994) but also identified in the business relationships literature (above) as being important to international market entry namely network *ties*, *embeddedness* and *position* (Håkansson and Snehota, 1989; McLoughlin and Horan, 2002; Forsgren, 2016; Kurt and Yamin, 2016).

## CONCEPTUAL DEVELOPMENT

Given the importance of networks for small KIS firms and their distinct internationalisation behaviour in terms of foreign market entry modes, this study raises the question of how interaction between network attributes influences foreign market entry modes employed by small KIS firms. As Coviello and Munro (1995) note, assessment of both the structure of the network and the nature of the interactions/relationships between network actors is required. In a more recent research note, Forsgren (2016) argues that the extent to which firms are able

to develop their foreign operations depends on the attributes of all networks in which they are embedded. Network attributes, namely embeddedness, ties and position, are common to both social network and business relationships literatures, as discussed above. We draw on both literatures in this section in order to arrive at a finer grained understanding of how interaction between different network attributes of the firm's focal net of relationships might be associated with foreign entry mode choice by small KIS firms.

### **The role of network ties for international market entry**

**Ties**, or network relationships, can be distinguished by the degree of formality in the relationships formed by the focal firm. However, Ojala (2009) notes that the use and definition of key constructs, such as formal (transaction-based), informal (social) and intermediary (third party or institutional) relationships, is confusing and inconsistent. Informal ties are ties where actors seek advice or access to resources based on relational exchange that is governed by mutual interest (Macneil, 1985; Heide, 1994), reputation and trust (Kilduff and Tsai, 2003; Salvisa *et al.*, 2012). The SME literature finds informal ties particularly important to the internationalisation of SMEs (Musteen *et al.*, 2010; Sedzinauskienė *et al.*, 2019; Sharma and Blomstermo, 2003), including both home-based ties (Zhou *et al.*, 2007) and those between firms in different markets that facilitate foreign market entry (Kontinen and Ojala, 2011). Oehme and Bort (2015) recently confirmed the importance of formal ties in the internationalisation of small KIS firms. Formal ties span functionally different groups or actors (Salvisa *et al.*, 2012), afford different economic value compared to informal ties (Hernández-Carrión *et al.*, 2016; Birley, 1985), and offer a more reliable source of information based on lower levels of redundancy (Burt, 1998). Formal ties are also better conduits of tacit knowledge, as a binding structure between the actors such as a contract or an agreement, facilitates exchange (Anand *et al.*, 2002). Thus, international entrepreneurs consider information and resources from formal ties to be relevant and useful for their firm's survival and growth (Fernhaber and Li, 2013).

Thus, KIS firms draw on their own established business and social networks, relationships and partnerships to accelerate the internationalisation process through formal and informal relationships (Ball *et al.*, 2008; Coviello and Munro, 1997; Jeong *et al.*, 2017), which offer particular benefits with respect to decisions on location choice and market entry. However, the literature lacks clarity and consistency in use of the term, formal ties, applying it to inter-firm relationships rather broadly (Sedzinauskienė *et al.*, 2019). Non-transactional ties are often treated simply as 'intermediary' or 'institutional' ties without distinguishing between different types Coviello, 2006; (Coviello and Munro, 1997; Ojala, 2009; Oparaocha 2015). Hence, in this study we follow Hernández-Carrión *et al.* (2016) who define four types of network ties depending on the degree of formality of relationships between actors: 1. Personal ties with relatives, friends and neighbours that are governed by relational norms (private and informal); 2. Associate ties with trade, business or industry associations governed by the rules of membership (informal or formal); 3. Professional ties with business partners, suppliers, customers and staff governed by contract (formal) and 4. Institutional ties with members of different public and private institutions such as research institutions, government officials or public regulatory authorities governed by specific rules and highly regulated (formal) (Oparaocha 2015). This categorisation is useful as it allows for a more nuanced picture of tie formality, and a more precise definition of each type of tie as relevant to the key actor, the focal firm. Further, we expect that these different types of ties afford access to different types of resources and influence decision makers' perception of their firm's network insidership, thus influence choice of different foreign market entry modes by small KIS firms.

### **The role of network embeddedness for international market entry**

**Embeddedness** relates to the structure and connectedness of relationships in the network as a whole and is featured in both business relationships (Forsgren, 2016; Salmi, 2000), and social network literature (Rowley, 1997). Social network theory puts forward two arguments in relation to the structure of social networks: the structural holes argument based on open networks (Burt, 1992) and the network closure argument based on closed networks (Coleman, 1994). Closed networks are dense in that they consist of closely connected relationships or strong ties built on trust and social norms over time and facilitate the transfer of information and tacit knowledge as well as cooperative behaviour (Gargiulo and Benassi, 2000; Reagans and McEvily, 2003). Developing relationships in closed networks and achieving insider status requires higher levels of resource investment (Kurt and Yamin, 2016). However, once an insider, the firm needs fewer resources to manage relationships and can put more effort into developing opportunities (Walker *et al.*, 1997). Open networks, in contrast, consist of more loosely connected relationships or weak ties that are more diverse in nature and scope but are less dense. According to Burt (2000) an actor's ability to bridge structural holes i.e., between individual networks which lack connections, through a wider set of connections, enables them to extract value from a network by gaining access to non-redundant and novel information (Oehme and Bort, 2015) and opportunities (Gargiulo and Benassi, 2000; Moran, 2005; Zaheer and Bell, 2005). Evidence from a study of high-technology SMEs also shows such firms can compete

internationally by using their close proximity to key customers, essentially a position on the edge of a business network, to leverage information asymmetries across structural holes and thus may not be as disadvantaged as they first appear (Odlin and Benson-Rea, 2017).

In his work on network embeddedness in international firms, Forsgren (2016) also refers to embeddedness as being structural (i.e., open/closed networks) and relational (i.e., strong or weak ties), but the two are often connected. Networks may be more or less tightly structured in terms of relationship and connection strength and they may be more or less linked to each other; more stable or changeable (Johanson and Vahlne, 2009). For instance, Chetty and Stangl (2010) conclude from their study of small software firms that the more diverse the firm's network, the faster the rate of internationalisation. Forsgren (2016, p.1137) argues that while "open networks facilitate discovery of opportunities in foreign markets, closed networks might be conducive to the development of these opportunities". Developing insidership in an open network promotes the flow of market-related information and codifiable knowledge, whereas closed networks promote the flow of complex tacit knowledge (Granovetter, 1985; Kurt and Yamin, 2016; Reagans and McEvily, 2003; Uzzi, 1996). Thus, we propose open and closed networks impact differently on the internationalisation behaviour of firms (Kurt and Yamin, 2016). Previous studies of SME internationalisation suggest the nature of the network and the focal firm's embeddedness within the network will impact on foreign market entry mode (Hilmersson and Jansson, 2012), but it is unclear as to how specific network attributes and types of network relationships interact with or influence market entry.

### **The role of network position for international market entry**

**Position** relates to the number of direct ties or centrality in the network and is used in both the social network and business relationships literatures (for measurement see Kurt and Yamin, 2016; and Aarstad *et al.*, 2015; Iurkov-Benito, 2018). Hilmersson and Jansson (2012) argue that network position is critical to the firm's degree of insidership, which in turn relates to the firm's coupling to and control over other firms or actors in the local network, as well as its competitive position. Specifically, network centrality determines the quality and diversity of external resources able to be leveraged by the firm (Cantner and Joel, 2011; Cerrato *et al.*, 2016) and the value it can extract from its focal net (Pinho and Pinheiro, 2015; Zaheer and Bell, 2005). Firms benefit from a central network position in two ways. First, centrality implies quick access to a large volume of valuable and diverse resources (Reinholt *et al.*, 2011). A firm with high level of centrality is well-connected throughout the network, and its direct relationships to other actors enable access to resources in close proximity. Second, firms with high levels of centrality are attractive as resource-sharing partners (Reinholt *et al.*, 2011) and are therefore, highly legitimate actors (Aarstad *et al.*, 2015). Thus, firms with high centrality can benefit from superior, exclusive and diverse resources, which in turn enhances their ability to innovate (Cantner and Joel, 2011) and to quickly recognise and respond to international opportunities (Oehme and Bort, 2015). However, smaller firms in foreign markets may struggle to occupy a central network position, especially in a highly competitive arena. Yet, evidence suggests they may also benefit from a more peripheral position on the edge of a business network by leveraging information asymmetries (Odlin and Benson-Rea, 2017). Certainly, firms positioned more peripherally are willing to share their resources with more centralised firms in order to improve their legitimacy.

It has long been argued that a firm's position in a network determines its behaviour (Rowley, 1997), but it should be noted that position can be controlled by any individual actor only partially; it is also a result of the actions of many actors in the network (Axelsson and Johanson, 1992). Despite a focus on centrality in the literature, few studies provide implications of position on foreign market entry by small KIS firms. An exception is Oehme and Bort (2015), who found small biotechnology firms who gained legitimacy and status through a central network position were less likely to imitate the foreign market entry mode of other firms in the network. Imitation reduces costs, risk and uncertainty associated with internationalisation (Fernhaber and Li, 2013). Such findings warrant further investigation of how a firm's network position influences its foreign market entry mode.

In sum, literature on SME internationalisation is well developed and researchers have found business network relationships influence the pattern of internationalisation (Martin *et al.*, 1998) and mode of entry (Coviello and Munro, 1995; 1997). Yet researchers have not given sufficient attention to firm behaviour that actively influences network attributes, interaction between attributes, and a firm's international market entry (Johanson and Vahlne, 2009). We address this gap in the literature by examining entry mode choice of small KIS firms through the lens of their focal net attributes. Further, it is important to understand how and why networks are important to small KIS firms, because they not only are quite distinct from traditional small manufacturing firms, but also 'punch above their weight' in terms of the number and size of international new ventures (Coviello and Munro, 1995).

## RESEARCH METHOD

Our study adopted a qualitative in-depth interview approach to identify the network patterns (i.e. the interaction of ties, position and embeddedness) associated with choice of foreign market entry mode by small KIS firms. As indicated earlier, our study builds on the notion that networks are subjectively defined (Forsgren, 2016). Specifically, the firm's focal net consists of relationships involving the firm, specifically actors and connections perceived to be the most relevant that form the context for its business operations (Salmi, 2000). Therefore, we are interested in each respondent's perception of his or her firm's focal net, and decisions or behaviour around market entry (Abrahamsen *et al.*, 2012; Anderson *et al.*, 1994). Applying a perceptual approach allows us to understand foreign market entry choices of small KIS firms from the respondent's perspective of his or her own firm's focal net, in other words, the subjective network context relevant to the firm rather than a more 'objective' view of an entire business network that includes the firm (Salmi, 2000).

### Research context

The knowledge intensive service sector is still an emerging sector in New Zealand, but one that has gained considerable importance over the last decade. New Zealand follows the OECD's definition of knowledge intensive services that captures a wide range of activities including professional as well as technology-based services. KIS firms now represent 22 per cent of the business population in New Zealand. These firms account for 19 per cent of employment and 20 per cent of New Zealand's GDP, which is close to the OECD average. Between 2003 and 2009, the number of KIS firms grew at 6 per cent per annum, but growth has plateaued since the Global Financial Crisis. Overall, 62 per cent of these firms are internationalised, accounting for NZ\$2.5 billion of service exports. Australia, the United States and Europe are the most important foreign markets for KIS firms (Ministry of Business, Innovation and Employment, 2014). Despite the high participation in international activities by KIS firms, there is a tendency to believe that New Zealand's isolation and smallness constrains economic development (Skilling, 2001). As a result, distance from markets is considered to be the greatest barrier reported by firms already operating in foreign markets and limited experience in entering foreign markets by those that are considering internationalisation (Ministry of Business, Innovation and Employment, 2014).

### KIS firm selection and data collection

The study reported in this manuscript was part of a large-scale qualitative research programme that examined the internationalisation process of New Zealand businesses. SMEs were defined as firms with fewer than 250 employees (OECD, 2005), which allows for international comparison and is consistent with previous studies on internationalisation of SMEs in New Zealand (Agndal and Chetty 2007; Chetty *et al.*, 2015). We identified participants from a database of firms who responded to the annual Statistics New Zealand Business Operations Survey (BOS)<sup>1</sup> and had indicated a willingness to participate in follow-up research. The advantage of using this database was that it allowed us to access information about firm demographics as well as their foreign market entry mode in order to select firms that had internationalised or were in the process of internationalising. In total 280 small firms who had responded to the survey also reported international activity.

This study draws on a subset of 25 firms that met the criteria for our study, namely, small to medium-sized KIS firms whose primary activity was provision of either professional or technology-based (i.e., technical) services (von Nordenflycht, 2010), and who were engaged in exporting or foreign direct investment in the form of sales subsidiaries (Stoian *et al.*, 2017). This maximum variation sampling strategy provided a rich dataset to explore network patterns as it allowed us to identify contrasting patterns (Eisenhardt and Graebner, 2007) and increase the robustness of the findings. After conducting then analysing the interviews, we felt that we had sufficiently captured the variation in and complexity of the phenomenon to derive meaningful theoretical insights relevant to our research question. Thus, the number of firms that participated in the study can be considered sufficient to reach theoretical saturation (Saunders *et al.*, 2018). Our approach also compares favourably to previous qualitative research studies on small firm internationalisation and networks (Pinho and Pinheiro, 2015).

Face-to-face interviews with the key decision maker formed the basis for data collection activities. These respondents had primary responsibility for the internationalisation strategy of the firm. This is the consistent with our choice of applying a perceptual approach that focuses on the subjective interpretation of respondents' – in our case the owner-managers or directors of small KIS firms – firms' focal nets and how they decide to act i.e. internationalise their firm based on these interpretations. The first and third authors conducted all interviews. We

---

<sup>1</sup> The Business Operations Survey is conducted annually, and includes all New Zealand businesses employing six or more people.

contacted respondents by phone to seek their participation, and obtained informed consent. Interviews involved a semi-structured interview protocol with open-ended questions that allowed further, more detailed responses (Guest *et al.*, 2013). We first asked interviewees to describe their business, then internationalisation process and activities of their firm in general. As respondents recounted the internationalisation history of the firm, we asked detailed probing questions about each foreign market and related entry mode choices. Respondents were also prompted to provide more information on any specific challenges and benefits associated with entry mode choices. We then asked more specific, but open-ended questions relations to respondent's perception of the network in which their firm was embedded. Then we prompted respondents for details about their perception of the nature and role of the firm's ties, position in the firm's focal net and the overall structure of the relationships in which the firm was embedded. These included questions broadly aligned to the network attributes discussed in the previous section. Further, we prompted respondents often for details on the how and why of their decision-making process, firm-specific advantages enabling their firm to compete internationally, and the importance of internationalisation to the firm.

Interviews took place on the firms' premises and were between 60-90 minutes in length. With the permission of the interviewees, we digitally recorded and transcribed interviews verbatim. We made notes during and immediately after all interviews to capture issues raised at the time and to record the immediate thoughts and observations of the researcher related to the research question. Transcribed interviews amounted to 411 single-spaced, size 12 font pages of text, an average of 16 pages per interview. Case notes amounted to 25 pages of case summary, an average of one page per case interview. Sharing transcripts with interviewees gave them the opportunity to amend and augment the initial responses. Respondents made no amendments, signalling that they were satisfied with the accuracy of the transcripts. The research design followed the University's Code of Ethical Conduct for Research, Teaching and Evaluation, was peer reviewed, and consequently judged to be low risk.

In total, 25 firms (of which 15 were small, employing less than 50 staff with the remaining being medium-sized employing 50-250 staff) participated in our study. The firms came from a range of KIS sectors, but the majority of firms (n=19) were involved in technical (e.g. science or technology-based) services rather than professional services (n=6). Firms had between 1 and 50 years of experience in international markets with an average of 13 years. In terms of level of internationalisation, firms reported between zero and 90 per cent, with an average of 43 per cent of foreign revenue as a percentage of annual revenue. The three firms that reported zero revenue from international operations were just in the process of undertaking foreign market entry. With regard to foreign market entry modes, 12 firms reported FDI in the form of wholly owned production or sales subsidiaries, thus acting as micro-multinational enterprises (Stoian *et al.*, 2017). The remaining 13 firms reported direct exporting as their foreign market entry mode. Table 1 provides a detailed summary of each firm.

- Insert Table 1 about here -

## Data analysis

Data collection and analysis followed an iterative process to allow for continuous triangulation between theory and data (Yin, 2009). Data analysis followed a staged approach starting with the development of a coding template and conducting content analysis of all data. The second stage involved the development of a matrix table based on within-case analysis. The third and last stage of the analytical process involved the identification and naming of network patterns based on between-case analysis. Each of the stages is outlined in detail below.

**Stage 1 - Development of a coding scheme and content analysis of data.** Given that the overall objective of the study was to identify network patterns of small KIS firms, we built on existing theoretical constructs from social network theory and literature on business relationships to guide our analytical approach around network attributes namely ties, position and embeddedness. A theoretically grounded coding scheme was developed using a deductive data coding approach in NVivo 10, including a list of codes and definitions (Miles and Huberman, 2013) that reflected respondents' perceptions of focal net attributes. The use of deductive coding is consistent with content analysis, a systematic categorization of textual data that is particularly suitable to detect and analyse patterns in the data (Krippendorff, 2018). The first author coded all data refining the coding definitions in the process. The other authors then cross-checked codes and any disagreements were resolved through discussion. Table 2 shows this coding (i.e. the code categories and sub-categories including definitions, anchor examples, number of sources and references per code), and provides examples of coding by focal net attribute (discussed in more detail in the findings section).

- Insert Table 2 about here -

**Stage 2 - Development of the matrix table.** A matrix table involves the plotting of two or more coding categories that depict existing conditions or situations to see how they interact. Its tabular format allows for viewing all data in one place, for detailed and systematic within-case analysis. It is a valuable tool in the search for relationships between coding categories of interest (Miles and Huberman, 2013), which in this study are the relationship between network attributes and entry mode choice. Table 3 illustrates the final matrix table (i.e. sorted by pattern, and presented and discussed later in the findings section) and represents the firm's focal net. In the matrix table, the columns represent each of the network attributes (columns 4 to 9) from Table 2 as well as the firm's entry mode (column 3) from Table 1. The rows represent each of the small KIS firms in our sample. The first column in Table 3 shows the firm's ID, which can be linked back to the full descriptive information of each firm in Table 1 for transparency and ease of understanding by the reader. The type of KIS that the firm represents is shown in the second column. Data entered into the matrix table reflects the interview data. What that means is that after coding all interviews, we conducted within-case analysis by reviewing all codes by case firm and entered the respective data into the matrix table (Miles and Huberman, 2013). Using firm #50 in the first row of Table 3 as an example, the matrix table shows that based on the coding undertaken in stage 1 of the data analysis process, the respondent for the focal firm perceived that it had important professional ties and institutional ties. This is indicated as "yes" in columns 8 and 9 of Table 3. Similarly, based on the coding during the first stage of the data analysis process, each firm was assigned as either embedded in an "open" or "closed" network structure (column 4) and as having either "high" or "low" centrality (column 5). Based on the perceptions of the decision maker, firm #50 was coded as having a "closed" network structure and "high" centrality. We complete this process by summarizing the coding from the first stage of the data analysis process for each firm, see Table 3.

**Stage 3 - Identification and naming of network patterns.** The third and last stage in the data analysis process was the identification of network patterns by comparing and contrasting the focal firm's network attributes with their choice of entry mode. As part of detailed between-case analysis, i.e. comparing data between firms (Miles and Huberman, 2013), different patterns of network attributes as perceived by the respondents for each focal firm (i.e. network ties, embeddedness and position), and choice of entry mode (i.e. export or FDI) were identified. Repeated iteration between the emerging patterns and theory reassured the authors that the four final patterns were empirically sound. The authors then assigned each firm to one of four patterns, see the last column, Table 3. Finally, Table 4 (see findings) was developed to represent the four network patterns based on the firm's focal net and entry mode. Each pattern given a name that reflected its key attributes, as discussed below.

## FINDINGS

### Focal Net Attributes

**Ties.** Following Hernández-Carrión *et al.* (2016) we coded network ties, which span geographical borders and comprise domestic and foreign ties, into four groups with increasing level of formality from low to high. Only one firm (#9) mentioned personal ties, in the form of private and informal contacts, in foreign markets as having been important for foreign market entry, indicative of the highly professionalised nature of the networks where small KIS firms operate. As the coding examples in Table 2 illustrate, firms fostered associative ties through membership in trade and industry sector associations in the domestic market. Such firms were characterised by limited international experience and sought to access resources and learn from business peers, often through imitation of their foreign market entry modes.

Professional network ties were important to all firms, particularly ties with clients and business partners, where following clients lowers the risk associated with entering foreign markets, along with cost advantages and market credibility. Firms that were not following domestic clients frequently developed formal ties with business partners with complementary products, services or distribution channels. These ties tended to be international ones and, therefore, offered the additional benefit of familiarity with the foreign market. Lastly, institutional ties, formed mostly in the home country, were important to more than a third of the firms to assist foreign market entry, particularly in foreign markets with greater psychic distance. For example, to better understand the regulatory context in foreign markets, some firms worked directly with the New Zealand government.

**Embeddedness.** Firms perceived the majority of focal nets to be open, with loose connections between actors. These firms operated in software development, consultancy, media and design services. Information flow in open nets is hindered by fragmented structures. A frequently mentioned example of poor information flow was the firms' struggle to access information about upcoming tenders. Respondents recognised the need to know relevant actors and to attend trade shows to meet potential clients and that much more effort was needed to gain trust and establish shared expectations with other actors. The four firms that perceived themselves to be part of closed and

densely connected nets operated in narrow technology niches in the biotech sector (see Leppäaho *et al.* (2018) who also found this sector to be highly networked) and had highly specialised resource profiles.

**Position.** Nine firms believed they occupied a central position in their focal net. However, gaining centrality was a long-term process and all except one had achieved this through establishing foreign sales subsidiaries. This entry mode choice signalled higher commitment, authority and legitimacy in the foreign market and allowed firms to develop ties with other actors more efficiently and to exploit opportunities abroad. The remaining firms, with low centrality, struggled to grow their international presence beyond initial client relationships in the foreign market. It appears, therefore, that network position is related to the firm's propensity to develop and grow international opportunities.

Table 3 summarises the focal net attributes for each firm by their network pattern (see method) discussed in the following section.

- Insert Table 3 about here -

### **Network patterns and entry mode choice**

Table 4 presents the four different groups of KIS firms based on distinct patterns of network attributes, where we found interaction between these attributes associated with different foreign market entry modes. The four patterns, described in more detail below, afford the focal firms with varying degrees of perceived insidership status within their focal nets.

- Insert Table 4 about here -

#### **Pattern I: Central controller – Insidership through centrality and institutional ties in a closed network**

*Pattern I* consists of a single firm (#50) in the biotech sector that achieved insidership through, *inter alia*, centrality and formal ties in a closed network. Formal ties, and institutional ties in particular, contributed to this firm's centrality and affected its choice of foreign market entry mode. The firm also attained the highest levels of internationalisation (95 per cent of revenue derived from foreign markets) and international experience (31 years). The director described the networks they operated in as dense, with actors tightly connected to each other, characteristic of a niche industry that, globally, has only a small number of highly specialised firms. The firm's prominent and influential position was not only a reflection of their technological leadership, but also of their strong institutional ties that reinforced legitimacy. Institutional ties with the New Zealand government reinforced this firm's central position (New Zealand's biosecurity regulations were imperative for their international work on plant tissue culture research). This highly central position provided the firm with discretion over choice of foreign market entry mode. Direct exporting to all its ten markets, rather than more resource-intensive FDI (i.e. a sales subsidiary) was possible due to the strength of this firm's network relationships, particularly those at home. These relationships, combined with direct exporting, enabled the firm to serve a global niche over multiple markets, simultaneously achieving network centrality and insidership from their home base. We have dubbed this firm a '*central controller*' as high insidership status in a closed network derived through centrality based on institutional ties is associated with high control over other actors in the network, but a less resource-intensive entry mode.

#### **Pattern II: Opportunistic investor – Insidership and centrality through investment and institutional ties in open networks**

*Pattern II* comprises small KIS firms that have achieved insidership in open focal nets through FDI and formal ties. These include both professional and institutional ties, with the latter appearing to provide more support for foreign market entry. Centrality and internationalisation was high, with on average, 62 per cent of total revenue derived from foreign markets. However, in contrast to the '*central controller*', these firms chose FDI via sales subsidiaries in order to cement insidership and a central position in their focal net. Compared to the closed network, where trust and behavioural expectations are established, they are less so in open networks and clients and business partners need to have more reassurance before engaging. Foreign investment signalled commitment to the market and served as a means of achieving greater centrality in open networks. Thus, these '*opportunistic investors*' had less discretion over their foreign market entry mode, as establishing a wholly-owned subsidiary was necessary to become a legitimate actor. Once the foreign subsidiary was established, it allowed these firms to bridge the structural holes characteristic of open networks, in turn providing new opportunities.

An example is interior design firm #3, which entered the Australian market comprised, at the time, of ‘hundreds and hundreds of little players’. The directors saw an opportunity to consolidate the market, but they needed a central network position to achieve this. They opened a subsidiary and started contracting these smaller operators in order to tender for large projects. Within three years, they became a major player with preferred supplier status, thus high insidership status. This firm considered a physical presence in the form of the subsidiary crucial to their position as central actor in the network, and achieving legitimacy in the market. Similarly specialised engineering firm #24 established subsidiaries in both Malaysia and the Philippines after failing to gain traction through direct exporting. The director stressed the importance of having their ‘own people on the ground’. Software developer firm #58 explained that establishing a sales subsidiary to follow their client was a smart move as the client wanted to ensure continued local support. Once they were able to cement their position and the clients no longer needed the reassurance of their physical presence, they closed the subsidiary and switched to direct exporting. Similarly, two other firms with *pattern II* entered foreign markets through FDI and over time gained high centrality through their physical presence. They were then able to transfer their centrality into nearby markets, without needing to establish separate subsidiaries. This strategy did not work for firm #83 (providing electronic signature solutions) however, whose perceived centrality based on subsidiaries established in the UK and Australia did not transfer to the Singaporean market, where entry via a contractor relationship failed. Arguably, our results show centrality combined with a particular set of ties determines whether firms can transfer their centrality into nearby markets.

### **Pattern III: Specialist exporter – Outsidership, low centrality and associative ties in closed networks**

*Pattern III* comprises firms that perceived themselves to be outsiders in their closed focal nets, with low centrality, no institutional, and few formal associative ties. They provide lower-value services and operate in specialised industries (e.g. biotech), with moderate to low levels of international activity (foreign to total revenue). Low centrality manifests as less influence within the network and less control over other actors, and is related to a complete lack of institutional ties. Internationalisation of these ‘specialist exporters’ relied on informal associative ties with peer firms in the domestic market, often through imitating each other’s entry modes. All firms reported direct exporting as their foreign market entry mode, yet in contrast to *pattern I*, the network attributes driving this choice were different. While direct exporting was a *strategic* choice for the firm in *pattern I*, it was the *only* choice for firms in *pattern III*. Their position of low influence at the periphery of their focal nets combined with weak formal ties did not afford these firms the resources necessary to establish a foreign subsidiary. Instead, they opted for the less resource intensive direct export mode. In comparison, strong institutional ties and centrality of *pattern I* allowed this firm to dictate the market, gain advantage from its ties and influence, and still dominate the market for its niche products despite employing a less resource intensive entry mode.

Firm #54, which sells highly specialised animal insemination services, provides a good example of this lack of choice. Due to the short shelf life of the product component of their offering, and the specific breeding preferences of their customers, Australia is their only international market. This firm belongs to a tightly structured, dense network where due to small size and similarity of the markets, boundaries between domestic and international actors are blurred. Although this network structure allows information sharing, the firms’ low insidership status due to low centrality, lack of power, and legitimacy has prevented it from leveraging network resources to support entry via FDI, leaving it with only the choice of direct exporting.

### **Pattern IV: Client follower – Outsidership, low centrality and associative ties in open networks**

*Pattern IV* comprises firms that perceived themselves to be outsiders in open networks, with low centrality and less formal ties. These predominantly ‘client follower’ firms make up the largest group and are distinguished by reliance on clients to internationalise, having comparably weak internationalisation (on average, 19 per cent foreign to total revenue), and by being the only pattern to include professional as well as technology-based KIS firms. Similar to *pattern III*, most ‘client followers’ had professional ties in combination with associative ties, rather than institutional ties. Firms in this pattern operated in software development, consultancy, media and design services and, compared to the biotechnology firms in *patterns I and III*, had a less specialised resource profile.

While three quarters of firms in this pattern employed direct exporting as their foreign market entry mode, the remainder were in the process of establishing foreign subsidiaries or had only recently established a foreign subsidiary. These firms realised FDI was imperative to improving their position in their focal nets after attempts at direct exporting had not been successful. All firms expressed concern over their weak position in the international network with limited access to information and other resources. In open networks with limited density, information flow between actors is hindered by fragmented structures and weak ties. This is illustrated by visual imaging firm #28 whose main international market is neighbouring Australia, but who struggles to

access information about upcoming tenders and to keep abreast of developments. Firms described themselves as having low centrality and struggled to grow their international presence beyond initial client-follower relationships. For example, the director of firm #68 (entertainment services) tried to export directly into Singapore, but withdrew from the market after failing to gain sufficient momentum. She realised that they would need to establish an office in Singapore, but as a rather low-value professional service provider in an open network, competition was simply too strong and their connections too weak to enable this move.

Despite the high level of international experience (on average, over 11 years) and the comparably wide market scope (on average, seven foreign markets) of the small KIS firms characteristic of this pattern, internationalisation remains low and is often based on existing clients. Stronger institutional ties and higher centrality are needed to move forward.

## DISCUSSION AND CONCLUSION

Empirically, our findings demonstrate the importance of network structure, a position of centrality and strength of professional and institutional ties to small KIS firm internationalisation. The theoretical relevance of this study derives from recognition that the distinct characteristics of the small KIS firm, namely knowledge-intensity, services and size, will influence its internationalisation and that market entry modes reflect the interaction of network attributes experienced by each firm within their focal net. Our study makes two contributions that complement previous research on KIS internationalisation (dating back to Coviello and Munro, 1995), network attributes and insidership and foreign market entry mode (Johanson and Vahlne, 2009; McQuillan *et al.*, 2018).

### Contribution to knowledge

First, the study contributes to our understanding of entry mode from the network perspective by examining the combined effects of different network attributes on choice of entry mode by small KIS firms. In contrast to much of the literature that looks at the role of networks and the internationalisation process or performance of SMEs (e.g. Solano Acosta *et al.*, 2018; Stoian *et al.*, 2017), this study addresses calls for greater recognition of modes of entry beyond exporting (see Agostini and Nosella, 2018). It also contributes to the SME network internationalisation literature by linking entry behaviour to specific network attributes as perceived by the firm and by considering the specific characteristics of the KIS firm. Our study is novel in its explicit focus on the relationships between entry mode choice and both structural and relational network attributes namely, embeddedness, position, and ties (Inkpen and Tsang, 2005). Specifically, it provides a more holistic, albeit cross-sectional view, by integrating key relationships in the firm's focal net (e.g. Salmi, 2000) and network attributes from social network theory (Burt, 2000) into the firm internationalisation context (Sedzinauskiene *et al.*, 2019; Yamin and Kurt, 2018). Thus, it contributes to our understanding of the role of networks in the internationalisation of the small KIS firm (i.e. Ball *et al.*, 2008; Coviello, 1995; Eberhard and Craig, 2013; Ojala, 2009).

Our findings suggest entry mode choice relates to a firm's network ties, centrality and the structure (i.e. open/closed) of the focal net in which the firm is embedded. Specifically, we identify four focal net patterns that synthesize the complex interaction between these network attributes and entry mode (Table 4). In closed focal nets (*patterns I and III*), direct exporting was the mode of choice, but for different reasons. The '*central controller*' firm in *pattern I* achieved high centrality via professional and institutional ties and did not need to undertake FDI to gain insidership or to internationalise successfully. Whereas the '*specialist exporter*' firms in *pattern III* perceived themselves to lack centrality and institutional ties, which for them precluded more resource-intensive FDI as a choice of mode. This divergent effect was even stronger in open networks where FDI in the form of establishing wholly owned subsidiaries was the predominant entry mode choice for '*opportunistic investors*' in *pattern II*, but the exception for '*client followers*' in *pattern IV*. In open networks, '*opportunistic investors*' achieved high centrality through FDI, supported by highly formal institutional ties. Whereas '*client followers*', who were characterised by low centrality and low formality of ties, undertook direct exporting (although a few attempted to overcome these barriers to insidership and therefore, international growth by undertaking FDI). These findings extend current theoretical knowledge on the role of networks for entry mode choices of small KIS firms by highlighting that entry mode choice reflects the particular firm's focal net (Salmi, 2000) and its attempt to achieve insidership status. We conclude that the interaction between - rather than the individual effects of - these network attributes is important to insidership.

In particular, this study contributes to our understanding of the role of ties in KIS internationalisation and responds to calls for a richer distinction between ties (Sedzinauskiene *et al.*, 2019). Overall, our findings confirm the importance of *formal* network ties with clients followed abroad (McQuillan *et al.*, 2008; Bell *et al.*, 2003) and home-based trade associations (Battisti and Perry, 2014). Further, imitation of market entry by domestic peers

(Oehme and Bort, 2015), and attendance at trade shows to establish formal ties and access to resources (Ojala, 2009) are important to small KIS firms. In this study, we distinguish different ties by degree of formality as well as where they are formed, either in the home and host country (Idris and Saridakis, 2018; McQuillan *et al.*, 2018). While earlier studies consistently stress that formal and informal ties facilitate SMEs' internationalisation (Coviello, 2006; Coviello and Munro, 1995; 1997), our findings suggest that informal ties are less relevant to small KIS firms. Rather, formal professional and institutional ties are more important. Torkkeli *et al.*, (2019) also finds successful SME internationalisation relates to institutional drivers combined with business network competence. In contrast to traditional internationalising SMEs, where informal ties have been identified as an essential part of firms' network (Idris and Saridakis, 2018; Sedzinauskiene *et al.*, 2019), we found informal, associative ties only relevant to the small '*specialist exporter*' KIS firms in *pattern III*. These ties manifest as imitation of peer firms in the same industry as they internationalised through exporting, essentially a firm-follower rather than a client-follower strategy (Odlin and Benson-Rea, 2017; Oehme and Bort, 2015). Further, while previous research has highlighted the relevance of professional ties in the home country i.e. ties with clients (Bell *et al.*, 2003), our results find associative and institutional ties in the home country are also important to small KIS firms (Ojala 2009; Oparaocha 2015). From the perspective of the small KIS firm operating within its focal net, however, we find that the location of the tie to be less important than the type of tie. Specifically, institutional ties through which firms improve their market position and insidership in their focal net are particularly important to the small KIS firms in our study.

Second, we contribute insights to the insidership status of KIS firms in their focal nets. Although achieving insidership through network relations is emphasized in previous internationalisation research (Johanson and Vahlne, 2009; 2011; Yamin and Kurt, 2018), research addressing how such a position is achieved (Schweizer, 2013), and interaction between insidership and choice of entry mode remains scant. We propose that when firms achieve insidership through their focal net, they have discretion over the foreign market entry mode they choose. Their insidership status affords them choice of entry mode. As a result, control can come from insidership in the focal net (through central position and institutional ties), or from choice of entry mode, or a combination of the two. By way of example, the '*central controller*' firm in *pattern I* – whose technological expertise in the focal net already afforded them insidership status as an influential player with relevant professional and institutional ties in place - had more discretion over their choice of entry mode. Insidership and centrality enabled this '*central controller*' firm to gain control over other actors in its focal net with a less resource intense mode (direct exporting rather than FDI). In contrast, firms unable to leverage control through a central position and professional/institutional ties (i.e., the '*opportunistic investors*' in *pattern II*) sought to achieve this centrality by establishing a foreign subsidiary. Thus, confirming our assertion that focal nets interact with entry mode, FDI was only chosen by firms embedded in open networks in order to improve their network insidership status through centrality (i.e., the '*opportunistic investors*').

Thus, our findings concur with those studies that find firms pursue network relationships to strengthen competitive positioning in foreign markets (Gabrielsson *et al.*, 2008; Ojala, 2009; Schweizer, 2013). Further, our study provides nuance to the view of Yamin and Kurt (2018, p. 3), who suggest that '[T]he willingness of the internationalizing firm [to become an insider] is dependent on both the structural attributes of the targeted network and its perception of the extent of the liability of foreignness in the target country'. Specifically including these attributes and both home/host ties enables conceptualisation of the relationship between insidership within a focal net and foreign market entry. Importantly, foreign market entry cannot be directly linked to insidership *per se*, but rather with a process where firms may remain at the fringe or gain greater insidership over time (Odlin and Benson-Rea, 2017). Our findings suggest that direct exporting did not necessarily translate into insidership, rather, in line with McQuillan *et al.*, (2018) our study suggests a combination of network attributes facilitates a shift from network outsidership to insidership, helping small KIS firms overcome the liabilities of foreignness (Zaheer and Bell, 2005) and challenges of size. Johanson and Vahlne (2011) describe the internationalisation process as building insidership through network knowledge transfer and learning. Similarly, Hilmersson and Jansson (2012, p. 683) state that the 'entrant firm's network position develops over time as it moves from outsidership to insidership.' We refine these assertions by adding that during this shift, the insidership status of the firm appears to be determined by, *inter alia*, the attributes of its focal net in combination with its entry mode choice.

### **Implications for practice**

There are a number of implications for small KIS firms' internationalisation. First, despite the potential of network relationships, optimisation of network attributes to gain insidership and propel internationalisation may be difficult to achieve in practice, particularly for small firms, many of whom remain as laggards or outsiders in this process. To advance, the first step should be to identify the firm's current network status and then develop strategies to shift to a more optimal insider position. Second, if greater internationalisation (e.g. sales, market share or

geographic scope) is the goal, managers need to reassess current and potential networks in terms of the costs, feasibility, opportunities and returns/performance outcomes associated with gaining greater centrality and establishing formal, institutional networks relative to engaging in the more resource-intensive modes of internationalisation. Central to such a strategy is developing relationships that offer specific opportunities and requisite resources for achieving internationalisation, while exiting those that inhibit international expansion through cost-inefficiencies, over-embeddedness or inward focus (Chetty and Campbell-Hunt, 2003; Gulati *et al.*, 2000; Tang, 2011). Third, owners and managers of small KIS firms, particularly those in open networks associated with professional or specialised offerings need to recognise complementarity between developing formal institutional ties at home and professional ties internationally, while balancing the need to manage fluidity and change occurring in these relationships.

The provision of KIS requires investments in human resources and depends on the skills, talent, and knowledge of people. Foreign market entry amplifies these requirements for 'human' assets in the form of specialist knowledge and expertise, thus imposing greater resourcing challenges on the founder, manager or a few key staff of the small KIS firm. Challenges relating to human, rather than organisational (e.g. processes, routines) or physical capital (Abecassis-Moedas *et al.*, 2012), make commitment to formal network relationships essential to credibility and legitimacy (Coviello, 2006; Oviatt and McDougall, 2005; Tang, 2011). Ultimately, the imperative for managers is to capture the areas of value that best complement resource gaps and to improve centrality (Turkova and Benito, 2018). Network positioning, therefore, should be regarded as a strategic activity, where network liability or costs associated with building and maintaining focal nets are offset against economic and resource-related returns, particularly for resource-deficient SMEs (Zaheer and Bell, 2005). We suggest that managers who are able to recognize that networking strategies evolve and who can draw on the intangibility and transferability characteristics of small KIS firm offerings and the social capital of focal nets to their best advantage, will be more likely to achieve performance internationally (Musteen *et al.*, 2010).

### **Limitations and future research**

The limitations of this study highlight avenues for future research. First, the framework of four network patterns is exploratory in nature and more research with larger samples is needed to confirm some of the interactions, particularly the relationship between each of the attributes and different aspects of international activity for the single '*central controller*' firm. While our use of maximum variation sampling provided us with a heterogeneous group of internationalised KIS firms that allowed the identification of a previously overlooked outlier, we acknowledge that we cannot claim that the identified patterns are representative of the wider population of small KIS firms. The sole firm representative of pattern I '*central controller*' remains an intriguing anomaly whose unique approach to internationalisation may warrant further investigation through an in-depth case study. Theoretically, research questions that seem particularly worthy of exploration are how these firms develop their institutional ties in the home country, how those ties afford KIS firms control, how they use this control over other actors in the network and how control might change over time. Understanding these control mechanisms in more depth seems to be a fruitful avenue for future research.

Second, our research focuses on the firm's focal net, but future research could explore the nature and importance of inter-firm exchange by focusing on resources crucial to internationalisation and network positioning (Abecassis-Moedas *et al.*, 2012; Sharma and Erramilli, 2004). Work that specifically identifies exchange of specific tangible (e.g. technology, capital, etc.) and intangible (e.g. innovation, expertise, etc.) (Huggins, 2011; Rodríguez and Nieto, 2012) resources through network relationships might serve to extend our understanding of the influence of network acquired resources and insidership status, and entry mode evolution. Of particular theoretical relevance might be approaches that combine the perspective of the firm's focal net with the perspective of inter-firm exchange.

Third, our study offers specific insights solely on the influence of firm networks on market entry behaviour, rather than an explanation of modes of KIS firms, *per se*. Researchers could build on this work by examining important related influences, in addition to networks, on entry mode decisions. These might include sector, industry, technology and competitive position of the firm (Salavisa *et al.*, 2012); efficiency, value-based (Sanchez-Peinado *et al.*, 2007) and strategic concerns (e.g. targeting niches and product/service differentiation) (Odlin and Benson-Rea, 2017). Theoretically worth considering are contextual factors other than geography such as (technological) change, psychic distance and host country risk (Bell *et al.*, 2003; Ojala, 2009) and how such changing contexts impact network attribute interaction and entry mode choice of small KIS firms.

Finally, this study explores the internationalisation history of firms in a cross-sectional manner, but our findings suggest international network configurations are not static, but rather develop and evolve over time. Future

research would benefit from adoption of longitudinal designs that explore the processual and temporal perspective of international network patterns in greater detail. Research questions of particular theoretical relevance are how a '*client follower*' might become an '*opportunistic investor*' and how a '*specialist exporter*' might become a '*central controller*'. Understanding not only the network patterns, but the pathways through which firms develop from one pattern to the other is relevant to conceptualising insidership as a time-sensitive concept. Exploring cases of firms that have lost their insidership status as a result of changing network attributes and the subsequent effects on their internationalisation behaviour, is equally intriguing.

## REFERENCES

- Aarstad, J., Ness, H. and Haugland, S. (2015), "Network position and tourism firms' co-branding practice", *Journal of Business Research*, Vol. 68 No. 8, pp. 1667-1677.
- Abecassis-Moedas, C., Ben Mahmoud-Jouini, S., Dell'Era, C., Manceau, D. and Verganti, R. (2012), "Key resources and internationalization modes of creative knowledge-intensive business services: The case of design consultancies", *Creativity and Innovation Management*, Vol. 21, No. 3, pp. 315-331.
- Abrahamsen, M. H., Henneberg, S. C. and Naudé, P. (2012), "Using actors' perceptions of network roles and positions to understand network dynamics", *Industrial Marketing Management*, Vol. 41 No. 2, pp. 259-269.
- Agndal, H. and Chetty, S. (2007), "The impact of relationships on changes in internationalisation strategies of SMEs", *European Journal of Marketing*, Vol. 41 Nos. 11/12, pp. 1449-1474.
- Agostini, L. and Nosella, A. (2018). "Interorganizational relationships involving SMEs: a bibliographic investigation into the state of the art", *Long Range Planning*, Vol. 27 No. 6, pp. 1128-1140.
- Aldrich, H. and Whetten, D. (1981), "Organization sets, action sets, and networks: Making the most of simplicity", in Nystrom, P. and Starbuck, W. (Ed.), *Handbook of Organizational Design*, Oxford University Press, New York, pp. 385-408.
- Anand, V., Glick, W. and Manz, C. (2002), "Thriving on the knowledge of outsiders: Tapping organizational social capital", *The Academy of Management Executive*, Vol. 16 No. 1, pp. 87-101.
- Andersen, B., J. Howells, R. Hull, I. Miles and J. Roberts (eds.), (2000), *Knowledge and Innovation in the New Service Economy*, Edward Elgar, Cheltenham.
- Anderson, J. C., Håkansson, H. and Johanson, J. (1994), "Dyadic business relationships within a business network context", *Journal of Marketing*, Vol. 58 No. 4, pp. 1-15.
- Andersson, S. (2004), "Internationalization in different industrial contexts", *Journal of Business Venturing*, Vol. 19 No. 6, pp. 851-875.
- Andersson, S. (2006), "International growth strategies in consumer and business-to-business markets in manufacturing and service sectors", *Journal of Euromarketing*, Vol. 15 No. 4, pp. 35-56.
- Apfelthaler, G. and Vaiman, V. (2012), "Challenges and opportunities of internationalization in professional service industries", *The Service Industries Journal*, Vol. 32 No.10, pp. 1589-1592.
- Axelsson, B. and Johanson, J. (1992), "Foreign market entry - the textbook vs the network view", in Axelsson, B. and Easton, G. (Ed.), *Industrial Networks: A New View of Reality*, Routledge, London, pp. 218-234.
- Ball, D., Lindsay, V. and Rose, E. (2008), "Rethinking the paradigm of service internationalisation: Less resource-intensive market entry modes for information-intensive soft services", *Management International Review*, Vol. 48 No.4, pp. 413-431.
- Battisti, M. and Perry, M. (2015), "Small enterprise affiliations to business associations and the collective action problem revisited", *Small Business Economics*, Vol. 44 No. 3, pp. 559-576.
- Bell, J. (1995), "The internationalization of small computer software firms—a further challenge to 'stage' theories", *European Journal of Marketing*, Vol. 29, No. 8, pp. 60–75.
- Bell, J., McNaughton, R., Young, S. and Crick, D. (2003), "Towards an integrative model of small firm internationalisation", *Journal of International Entrepreneurship*, Vol. 1 No. 4, pp. 339-362.
- Birley, S. (1985), "The role of networks in the entrepreneurial process", *Journal of Business Venturing*, Vol. 1 No. 1, pp. 107-117.
- Borgatti, S. and Foster, P. (2003), "The network paradigm in organizational research: A review and typology", *Journal of Management*, Vol. 29 No. 6, pp. 991–1013.
- Burgel, O. and Murray, G. (2000), "The international market entry choices of start-up companies in high-technology industries", *Journal of International Marketing*, Vol. 8 No. 2, pp. 33-62.
- Burt, R. (1992), *Structural Holes: The Social Structure of Competition*. Harvard University Press, Cambridge.
- Burt, R. (1998), "The gender of social capital", *Rationality and Society*, Vol. 10, pp. 5-46.
- Burt, R. (2000), "The network structure of social capital", *Research in Organizational Behavior*, Vol. 22, pp. 345-423.
- Cantner, U. and Joel, K. (2011), "Absorptive capacity and firm success", *Journal of Knowledge Management*, Vol. 9 No. 1, pp. 37-56.
- Cerrato, D., Crosato, L. and Depperu, D. (2016), "Archetypes of SME internationalization: A configurational approach", *International Business Review*, Vol. 25 No. 1, pp. 286-295.
- Chetty, S. and Agndal, H. (2007), "Social capital and its influence on changes in internationalization mode among small and medium-sized enterprises", *Journal of International Marketing*, Vol. 15 No. 1, pp. 1-29.
- Chetty, S. and Blankenburg Holm, D. (2000), "Internationalization of small to medium-sized manufacturing firms: a network approach", *International Business Review*, Vol. 9 No.1, pp. 77–93

- Chetty, S. and Campbell-Hunt, C. (2003), "Paths to internationalisation among small-to medium-sized firms: a global versus regional approach", *European Journal of Marketing*, Vol. 37 Nos. 5/6, pp. 796-820.
- Chetty, S. Ojala, A. and Leppäaho, T. (2015), "Effectuation and foreign market entry of entrepreneurial firms", *European Journal of Marketing*, Vol. 49 Nos. 9/10, pp. 1436-1459.
- Chetty, S. and Stangl, L. (2010), "Internationalization and innovation in a network relationship context", *European Journal of Marketing*, Vol. 44 Nos. 11/12, pp. 1725-1743.
- Cook, K. and Emerson, R. (1978), "Power, equity and commitment in exchange networks", *American Sociological Review*, Vol. 43 No.5, pp.721-739
- Coleman, J. (1994), *Foundations of social theory*, Harvard University Press, Cambridge, MA.
- Coviello, N. (2006), "The network dynamics of international new ventures", *Journal of International Business Studies*, Vol. 37 No. 5, pp. 713-731.
- Coviello, N. and Martin, K. (1999), "Internationalization of service SMEs: An integrated perspective from the engineering consulting sector", *Journal of International Marketing*, Vol. 7 No. 4, pp. 42-66.
- Coviello, N. and Munro, H. (1995), "Growing the entrepreneurial firm: Networking for international market development", *European Journal of Marketing*, Vol. 29 No. 7, pp. 49-61.
- Coviello, N. and Munro, H. (1997), "Network relationships and the internationalisation process of small software firms", *International Business Review*, Vol. 6 No. 4, pp. 361-386.
- den Hertog, P. (2000), "Knowledge-intensive business services as co-producers of innovation", *International Journal of Innovation Management*, Vol. 4 No.4, pp. 491-528.
- Dimitratos, P., Amorós, J., Etchebarne, M. and Felzensztein, C. (2014), "Micro-multinational or not? International entrepreneurship, networking and learning effects", *Journal of Business Research*, Vol. 67 No. 5, pp. 908-915.
- Dimitratos, P., Johnson, J., Slow, J. and Young, S. (2003), "Micromultinationals: New types of firms for the global competitive landscape", *European Management Journal*, Vol. 21 No. 2, pp. 164-174.
- Eberhard M. and Craig J. (2013), "The evolving role of organisational and personal networks in international market venturing", *Journal of World Business*, Vol. 48 No. 3, pp. 385-397.
- Eisenhardt, K. and Graebner, M. (2007), "Theory building from cases: Opportunities and challenges", *Academy of Management Journal*, Vol. 50 No. 1, pp. 25-32.
- Felzensztein, C., Ciravegna, L., Robson, P. and Amorós, J. (2015), "Networks, entrepreneurial orientation, and internationalization scope: evidence from Chilean small and medium enterprises", *Journal of Small Business Management*, Vol. 53 No.1, pp. 145-160.
- Fernhaber, S. and Li, D. (2013), "International exposure through network relationships: Implications for new venture internationalization", *Journal of Business Venturing*, Vol. 28 No. 2, pp. 316-334.
- Fletcher, M., Harris, S. and Richey Jr, R. (2013), "Internationalization knowledge: What, why, where, and when?", *Journal of International Marketing*, Vol. 21 No. 3, pp. 47-71.
- Forsgren, M. (2016), "A note on the revisited Uppsala internationalization process model—the implications of business networks and entrepreneurship", *Journal of International Business Studies*, Vol. 47 No. 9, pp. 1135-1144.
- Forsgren, M., Holm, U. and Johanson, J. (2005), *Managing the Embedded Multinational: A Business Network View*, Edward Elgar, Cheltenham, UK.
- Gabrielsson, M., Kirpalani, V., Dimitratos, P., Solberg, C. and Zucchella, A. (2008), "Born globals: Propositions to help advance the theory", *International Business Review*, Vol. 17 No. 4, pp. 385-401.
- Game, R. and Apfelthaler G. (2016), "Attitude and its role in SME internationalisation: Why do firms commit to advanced foreign market entry modes?", *European Journal of International Management*, Vol. 10 No. 2, pp. 221-248.
- Gargiulo, M. and Benassi, M. (2000), "Trapped in your own net? Network cohesion, structural holes, and the adaptation of social capital", *Organization Science*, Vol. 11 No. 2, pp. 183-196.
- Glückler, J. (2004), "A Relational Account of Business Service Internationalisation and Market Entry: Theory and Some Evidence", *Working Papers on Services, Space and Society*, No. 15, University of Birmingham School of Geography, Earth & Environmental Sciences.
- Granovetter, M. (1973), "The strength of weak ties", *American Journal of Sociology*, Vol. 78 No. 6, pp. 1360-1380.
- Granovetter, M. (1985), "Economic action and social structure: The problem of embeddedness", *American Journal of Sociology*, Vol. 91 No. 3, pp. 481-510.
- Guest, G., Namey, E. and Mitchell, M. (2013), *Collecting Qualitative Data*. Sage, London, UK.
- Gulati, R., Nohria, N. and Zaheer, A. (2000), "Strategic networks", *Strategic Management Journal*, Vol. 21 No. 3, pp. 203-215.
- Håkansson, H. and Snehota, I. (1989), "No business is an island: The network concept of business strategy", *Scandinavian Journal of Management*, Vol. 22, No. 3, pp. 187-200.

- Håkansson, H. and Snehota, I. (1995), *Developing Relationships in Business Networks*, Routledge, London and New York.
- Hånell, S. and Ghauri, P. (2016), "Internationalization of smaller firms: Opportunity development through networks", *Thunderbird International Business Review*, Vol. 58 No. 5, pp. 465–477.
- Heide, J. B. (1994), "Interorganizational governance in marketing channels", *Journal of Marketing*, Vol. 58 No. 1, pp. 71-85
- Hernández-Carrión, C., Camarero-Izquierdo, C. and Gutiérrez-Cillán, J. (2016), "Entrepreneurs' social capital and the economic performance of small businesses: The moderating role of competitive intensity and entrepreneurs' experience", *Strategic Entrepreneurship Journal*, Vol. 11 No. 1, pp. 61-89.
- Hilmersson, M. and Jansson, H. (2012), "International network extension processes to institutionally different markets: Entry nodes and processes in exporting SMEs", *International Business Review*, Vol. 21 No. 4, pp. 682-693.
- Hoang, H. and Antoncic, B. (2003), "Network-based research in entrepreneurship: A critical review", *Journal of Business Venturing*, Vol. 18 No. 2, pp. 165-187.
- Hollenstein, H. (2005), "Determinants of international activities: Are SMEs different?", *Small Business Economics*, Vol. 24 No. 4, pp. 431-450.
- Huggins, R. (2011), "The growth of knowledge-intensive business services: Innovation, markets and networks", *European Planning Studies*, Vol. 19 No. 8, pp. 1459-1480.
- Idris, B. and Saridakis, G. (2018), "Local formal interpersonal networks and SMEs internationalisation: Empirical evidence from the UK", *International Business Review*, Vol. 27 No.3, pp. 610–624.
- Inkpen, A. and Tsang, E. (2005), "Social capital, networks, and knowledge transfer", *Academy of Management Review*, Vol. 30 No.1, pp. 146–165.
- Iurkov, V. and Benito, G. R. G. (2018), "Domestic alliance networks and regional strategies of MNEs: A structural embeddedness perspective", *Journal of International Business Studies*, Vol. 49. pp. 1033-1059.
- Jeong, S., Jin, B., Chung, J. and Yang, H. (2017), "Network evolution and cultivation patterns during the internationalization process: Case analyses from Korean SMEs", *Asian Business and Management*, Vol. 16 No.4/5, pp. 323-351.
- Johanson, J. and Mattsson, L. (1987), "Interorganizational relations in industrial systems: a network approach compared with the transaction-cost approach", *International Studies of Management and Organization*, Vol. 17 No. 1, pp. 34-48.
- Johanson, J. and Mattsson, L. (1988), "Internationalisation in industrial systems—A network approach", in Hood, N. and Vahlne, J. (Ed.), *Strategies in Global Competition*, Croom Helm, London, pp. 287-321.
- Johanson, J. and Vahlne, J. (2003), "Business relationship learning and commitment in the internationalization process", *Journal of International Entrepreneurship*, Vol. 1 No. 1, pp. 83-101.
- Johanson J. and Vahlne J. (2006), "Commitment and opportunity development in the internationalization process: A note on the Uppsala internationalization process model", *International Business Studies*, Vo. 40 No. 9, pp. 1–21.
- Johanson J. and Vahlne J. (2009), "The Uppsala internationalization process model revisited: From liability of foreignness to liability of outsidership", *Journal of International Business Studies*, Vol. 40, No. 9, pp 1411–1431.
- Johanson, J. and Vahlne, J. (2011), "Markets as networks: Implications for strategy-making", *Journal of the Academy of Marketing Science*, Vol. 39 No. 4, pp. 484-491.
- Kautonen, M. and Hyypia, M. (2009), "Internationalising business services and the national innovation system: The Finnish business services sector in a European comparison", *International Journal of Services Technology and Management*, Vol. 11 No. 3, pp. 229-246.
- Kilduff, M. and Tsai, W. (2003), *Social networks and organizations*. Sage, London, UK.
- Kontinen, T. and Ojala, A. (2011), "Network ties in the international opportunity recognition of family SMEs", *International Business Review*, Vol. 20, No. 4, pp. 440-453.
- Krippendorff, K. (2018), *Content Analysis: An Introduction to its Methodology*. Sage, London, UK.
- Kurt, Y. and Yamin, M. (2016), "Understanding internationalisation through the lens of social network analysis", In Tüselmann H., Buzdugan S., Cao Q., Freund D., Golesorkhi S. (eds) *Impact of International Business*, Palgrave Macmillan UK, pp. 241-264.
- Leppäaho, T., Chetty, S. and Dimitratos, P. (2018), "Network embeddedness in the internationalization of biotechnology entrepreneurs", *Entrepreneurship and Regional Development*, Vol. 30 No. 5-6, pp. 562-584.
- Loane, S. and Bell, J. (2006), "Rapid internationalization among entrepreneurial firms in Austria, Canada, Ireland and New Zealand: An extension to the network approach", *International Marketing Review*, Vol. 23 No. 5, pp. 467–485.
- Macneil, I. R. (1985), "Relational contract: What we do and do not know." *Wisconsin Law Review*, Vol. 1985 No. 3, pp. 483-526.

- Malhotra, N. and Hinings, C. (2010), "An organizational model for understanding internationalization processes", *Journal of International Business Studies*, Vol. 41 No. 2, pp. 330-349.
- March, J. (1988), *Decisions and Organizations*, Basil Blackwell, Oxford, UK.
- Martin, X., Swaminathan, A. and Mitchell, W. (1998), "Organizational evolution in the interorganizational environment: Incentives and constraints on international expansion strategy", *Administrative Science Quarterly*, Vol. 43 No. 3, pp. 566-601.
- McLoughlin, D. and Horan, C. (2002), "Markets-as-networks: Notes on a unique understanding", *Journal of Business Research*, Vol. 55 No. 7, pp. 535-543.
- McQuillan, D., Sharkey Scott, P. and Mangemartin, V. (2018), "From outsider to insider: How creative professional service firms internationalise", *International Marketing Review*, Vol. 35 No. 5, pp. 869-888.
- Miles, M. and Huberman A. (2013), *Qualitative data analysis*, SAGE Publications, Thousand Oaks, CA.
- Ministry of Business, Innovation and Employment (2014), *New Zealand Sectors Report 2014: Knowledge Intensive Services*, Ministry of Business, Innovation and Employment, Wellington.
- Moen, Ø., Gavlen, M. and Endresen, I. (2004), "Internationalization of small, computer software firms", *European Journal of Marketing*, Vol. 38 No. 9/10, pp. 1236-1251.
- Morais, F. and Ferreira, J. (2019), "SME internationalisation process: Key issues and contributions, existing gaps and the future research agenda", *European Management Journal*, Vol. 38 No. 1, pp. 62-77.
- Moran, P. (2005), "Structural vs. relational embeddedness: Social capital and managerial performance", *Strategic Management Journal*, Vol. 26 No. 12, pp. 1129-1151.
- Muller, E. and Doloreux, D. (2009), "What we should know about knowledge-intensive business services", *Technology in Society*, Vol. 31 No. 1, pp. 64-72.
- Musteen, M., Francis, J. and Datta, D. (2010), "The influence of international networks on internationalization speed and performance: A study of Czech SMEs", *Journal of World Business*, Vol. 45 No. 3, pp. 197-205.
- Odlin, D. and Benson-Rea, M. (2017), "Competing on the edge: Implications of network position for internationalizing small- and medium-sized enterprises", *International Business Review*, Vol. 26, pp. 736-748.
- OECD. (2005), *OECD Small and Medium Enterprise (SME) and Entrepreneurship Outlook*. Organisation for Economic Cooperation and Development, Paris.
- Oehme, M. and Bort, S. (2015), "SME internationalization modes in the German biotechnology industry: The influence of imitation, network position, and international experience", *Journal of International Business Studies*, Vol. 46 No. 6, pp. 629-655.
- Ojala, A. (2009), "Internationalization of knowledge-intensive SMEs: The role of network relationships in the entry to a psychically distant market", *International Business Review*, Vol. 18 No. 1, pp. 50-59.
- Oparaocha, G. (2015), "SMEs and international entrepreneurship: An institutional network perspective", *International Business Review*, Vol. 24, No. 5, pp. 861-873.
- Oviatt, B. and McDougall, P. (2005), "Defining international entrepreneurship and modelling the speed of internationalization", *Entrepreneurship Theory and Practice*, Vol. 29 No. 5, pp. 537-554.
- Paul, J., Parthasarathy, S. and Gupta, P. (2017), "Exporting challenges of SMEs: A review and future research agenda", *Journal of World Business*, Vol. 52 No. 3, pp. 327-342.
- Pinho, J. and Pinheiro, M. (2015), "Social network analysis and the internationalization of SMEs: Towards a different methodological approach", *European Business Review*, Vol 27 No. 6, pp. 554-572.
- Powell, W. (1990), "Neither market nor hierarchy", *Research in Organizational Behaviour*, Vol. 12, pp. 295-336.
- Powell, W., White, D., Koput, K. and Owen-Smith, J. (2005), "Network dynamics and field evolution: The growth of interorganizational collaboration in the life sciences", *American Journal of Sociology*, Vol. 110 No. 4, pp. 1132-1205.
- Ratajczak-Mrozek, M. (2017), *Network Embeddedness: Examining the Effect on Business Performance and Internationalization*, Palgrave Macmillan, Cham, Switzerland.
- Reagans, R. and McEvily, B. (2003), "Network structure and knowledge transfer: The effects of cohesion and range", *Administrative Science Quarterly*, Vol. 48 No. 2, pp.240-267.
- Reinholt, M., Pedersen, T. and Foss, N. (2011), "Why a central network position isn't enough: The role of motivation and ability for knowledge sharing in employee networks", *Academy of Management Journal*, Vol. 11, No. 6, pp. 1277-1297.
- Ritter, T. and Gemünden, H. (2003), "Interorganizational relationships and networks: An overview", *Journal of Business Research*, Vol. 56 No. 9, pp. 691-697.
- Roberts, J. (2018), *Multinational Business Service Firms: Development of Multinational Organization Structures in the UK Business Service Sector*, Taylor & Francis Ltd, UK.
- Rodríguez, A. and Nieto, M. (2012), "The internationalization of knowledge-intensive business services: The effect of collaboration and the mediating role of innovation", *The Service Industries Journal*, Vol. 32 No. 7, pp. 1057-1075.

- Rosenkopf, L. and Padula, G. (2008), "Investigating the microstructure of network evolution: Alliance formation in the mobile communications industry", *Organization Science*, Vol. 19 No. 5, pp. 669-687.
- Rosenkopf, L. and Schilling, M. (2007), "Comparing alliance network structure across industries: Observations and explanations", *Strategic Entrepreneurship Journal*, Vol. 1 Nos. 3-4, pp. 191-209.
- Rowley, T. (1997), "Moving beyond dyadic ties: A network theory of stakeholder influences", *Academy of Management Review*, Vol. 22 No. 4, pp. 887-910.
- Salavisa, I., Sousa, C. and Fontes, M. (2012), "Topologies of innovation networks in knowledge-intensive sectors: Sectoral differences in the access to knowledge and complementary assets through formal and informal ties", *Technovation*, Vol. 32, pp 380-399.
- Salmi, A. (2000), "Entry into turbulent business networks-The case of a Western company on the Estonian market", *European Journal of Marketing*, Vol. 34 No. 11/12, pp. 1374-1390.
- Sanchez-Peinado, E., Pla-Barber, J. and Hébert, L. (2007), "Strategic variables that influence entry mode choice in service firms", *Journal of International Marketing*, Vol. 15 No.1, pp. 67-91.
- Sandberg, S. (2014), "Experiential knowledge antecedents of the SME network node configuration in emerging market business networks", *International Business Review*, Vol. 23 No.1, pp. 20-29.
- Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B. and Jinks, C. (2018), "Saturation in qualitative research: Exploring its conceptualization and operationalization", *Quality and Quantity*, Vol. 52 No. 4, pp. 1893-1907.
- Schweizer, R. (2013), "SMEs and networks: Overcoming the liability of outsidership", *Journal of International Entrepreneurship*, Vol. 11 No. 1, pp. 80-103.
- Sedziniuskiene, R., Sekliuckiene, J. and Zucchella, A. (2019), "Networks' impact on the entrepreneurial internationalization: A literature review and research agenda", *Management International Review*, Vol. 59 No. 5, pp. 779-823.
- Sharma, D. and Blomstermo, A. (2003), "The internationalization process of born globals: A network view", *International Business Review*, Vol. 12 No. 6, pp. 739-753.
- Sharma, V. and Erramilli, M. (2004), "Resource-based explanation of entry mode choice", *Journal of Marketing Theory and Practice*, Vol.12 No.1, pp. 1-18.
- Siahtiri, V. (2018). "Innovation at the service encounter in knowledge intensive business services: Antecedents and boundary conditions", *Journal of Product Innovation Management*, Vol. 35 No. 5, pp. 742-762.
- Sinha, P., Wang, M., Scott-Kennel, J. and Gibb, J. (2015). Paradoxes of psychic distance and market entry by software INVs, *European Business Review*, Vol. 27 No. 1, pp. 34 – 59.
- Skilling, D. (2001), *The Importance of being Enormous. Towards an Understanding of the New Zealand Economy*, The New Zealand Treasury, Wellington.
- Solano Acosta, A., Herrero Crespo, A. and Collado Agudo, J. (2018), "Effect of market orientation, network capability and entrepreneurial orientation on international performance of small and medium enterprises (SMEs)", *International Business Review*, Vol. 27, No. 6, pp. 1128-1140.
- Stoian, M., Rialp, J. and Dimitratos, P. (2017), "SME networks and international performance: Unveiling the significance of foreign market entry mode", *Journal of Small Business Management*, Vol. 55 No. 1, pp. 128-148.
- Tang, Y. (2011), "The influence of networking on the internationalization of SMEs: Evidence from internationalized Chinese firms", *International Small Business Journal*, Vol. 29 No. 4, pp. 374-398.
- Toivonen, M. (2002), "Internationalization of knowledge-intensive business services in a small European country: experiences from Finland", Chapter 7 in Miozzo M. and Miles, I. (Eds.), *Internationalization, Technology and Services*, Edward Elgar, Cheltenham, UK, pp. 206-226.
- Toivonen, M. (2004), "Foresight in services: possibilities and special challenges", *The Service Industries Journal*, Vol. 24, No. 1, pp. 79-98.
- Toivonen, M., Tuominen, T., Smedlund, A. and Patala, I. (2009), "Models and paths of internationalisation in KIBS", In *29th International RESER Conference, Budapest 2009*, pp. 24-26.
- Torkkeli, L., Kuivalainen, O., Saarenketo, S. and Puumalainen, K. (2019). "Institutional environment and network competence in successful SME internationalisation", *International Marketing Review*, Vol. 36 No. 1, pp. 31-55.
- Uzzi, B. (1996), "The sources and consequences of embeddedness for the economic performance of organizations: The network effect", *American Sociological Review*, Vol. 61 No. 4, pp. 674-698.
- von Nordenflycht, A. (2010), "What is a professional service firm? Toward a theory and taxonomy of knowledge-intensive firms," *Academy of Management Review*, Vol. 35 No. 1, pp. 155-174.
- Walker, G., Kogut, B. and Shan, W. (1997), "Social capital, structural holes and the formation of an industry network", *Organizational Science*, Vol. 8 No. 2, pp. 109 – 125.
- Weick, K. (1979), *The Social Psychology of Organizing*, McGraw-Hill, New York, NY.
- Welch, D. and Welch, L. (1996), "The internationalization process and networks: A strategic management perspective", *Journal of International Marketing*, Vol. 4 No. 3, pp. 11-28.

- Wulff, J. (2016), "A systematic assessment of empirical research on foreign entry mode", *European Journal of Marketing*, Vol. 50 No.5/6, pp. 942-972.
- Yamin, M. and Kurt, Y. (2018), "Revisiting the Uppsala internationalization model", *International Marketing Review*, Vol. 35 No. 1, pp. 2-17.
- Yin, R. (2009), *Case Study Research: Design and Methods*, Thousand Oaks, CA, Sage.
- Yli-Renko, H., Autio, E. and Tontti, V. (2002), "Social capital, knowledge, and the international growth of technology-based new firms", *International Business Review*, Vol. 11 No. 3, pp. 279-304.
- Zaheer, A. and Bell, G. (2005), "Benefiting from network position: Firm capabilities, structural holes, and performance", *Strategic Management Journal*, Vol. 26 No. 9, pp. 809–825.
- Zain, M. and Ng, S. (2006), "The impacts of network relationships on SMEs' internationalization process", *Thunderbird International Business Review*, Vol. 48 No. 2, pp. 183-205.
- Zhou, L., Wu, W. and Luo, X. (2007), "Internationalization and the performance of born-global SMEs: The mediating role of social networks", *Journal of International Business Studies*, Vol. 38 No. 4, pp. 673-690.

**Table 1: Description of participating KIS firms**

ID	Sector	Description	Type of KIS	Entry mode	Country	Experience (years)	Internationalisation (foreign to total revenue last financial year)
3	Design services	Interior design for commercial outfits	Technical	FDI	Australia	5	60%
9	Recruitment service	Specialist recruiter for temporary, permanent and contract staff	Professional	FDI (in the process of establishing WoS)	US	1	0%
10	Media services	Post production service for film, television and advertising	Technical	Export	US	17	20%
13	Software development and supply	Software solutions for gym and health service providers	Technical	Export	US, UK	5	30%
16	Biotechnology	Pasture seeds development service	Technical	Export	Globally	16	30%
24	Engineering services	Specialised environmental, water and geotechnical engineering consultancy	Technical	FDI after export failed	Philippines, Australia, Malaysia	31	70%
25	Transport technology services	Intelligent transport systems solution provider	Technical	FDI	China, Australia	unknown	5%
28	Print technology services	Specialised visual imaging services	Technical	FDI (WoS with minimal operation)	Australia	14	5%
35	Software development and supply	Integrated business knowledge solutions	Technical	FDI	Australia, US	2	70%
43	Biotechnology	Life science and biomedical services	Technical	Export	Japan, UK, US	30	95%
50	Biotechnology	Plant tissue culture and plant science research	Technical	Export	Globally	19	95%
52	Consulting services	Strategic marketing and branding services	Professional	FDI (WoS only recently operational)	Australia	3	5%
54	Biotechnology	Animal insemination service	Technical	Export	Australia	11	35%
57	Media services	Screen writing, directing and production services	Technical	FDI	US	8	90%
58	Software development and supply	Activity tracking for welfare-to-work, injury management and rehabilitation	Technical	FDI, then export	Australia	16	65%
66	Education provider	Private tertiary education provider	Professional	Export	Globally	22	80%
67	Research services	Global market and opinion research services	Professional	Export	Australia	14	20%
68	Entertainment services	Professional speakers services	Professional	Export	Australia, US	22	10%
73	Software development and supply	Energy supply and management services	Technical	Export	Singapore	11	15%
77	Consulting services	Career consulting and advisory	Professional	Export (in process)	Australia	1	0%
83	Software development and supply	Electronic signature solutions	Technical	FDI	UK, US, Australia	7	80%
86	Software development and supply	Simulation and prediction for emergency and response services	Technical	FDI	UK, US	7	90%

87	Software development and supply	Mobile computing solutions	Technical	FDI (in the process of establishing WoS)	Australia	1	0%
89	Media service	Television production services	Technical	Export	Australia	21	5%
90	Software development and supply	Business intelligence solutions	Technical	Export	Australia, US, China	5	40%

---

Note: WoS = Wholly owned subsidiary

**Table 2: KIS firms focal net: Coding structure**

Categories	Sub-categories	Definition	Anchor examples	Sources	References
<b>Ties of focal firm</b>	Personal ties	Perceived ties of focal firm with family or friends, private and informal in nature (Hernández-Carrión <i>et al.</i> , 2016).	We based it out of a friend of mine’s house, in fact it’s his letter box. That’s our registered office in the US.	1	1
	Associative ties	Perceived ties of focal firm with professional associations, such as for example trade, business or industry association that are governed by the rules of membership, can be formal or informal in nature (Hernández-Carrión <i>et al.</i> , 2016).	There are a lot of initiatives by the industry organisation to help with international work which is fantastic for companies of our size, who don’t have the resources to do that themselves or not be able to do it. Certainly piggy backing on some of it.	10	18
	Professional ties	Perceived ties of focal firm with actors who engage in a professional activity such as for example, customers, suppliers, business partners, staff that are governed by a contractual arrangement; formal in nature (Hernández-Carrión <i>et al.</i> , 2016).	We work in partnership with a number of Australian companies and that’s really helped excel our presence within Australia. We had two of our bigger customers in New Zealand that either had offices in Australia or in Asia, so effectively we followed our customers overseas.	25	62
	Institutional ties	Perceived ties of focal firm with institutional authorities such as for example government agencies or public authorities that are highly regulated; formal in nature (Hernández-Carrión <i>et al.</i> , 2016).	We work very closely with them [at the Ministry] obviously because we are bringing plants in and sending plants out all the time. That is the beauty of those mayoral visits, they open doors and then it’s up to you build on that.	9	22
<b>Structure of relationships focal firm is embedded in</b>	Open	Focal firm’s perception that actors in the network are only loosely connected with each other; behavioural expectations are low; resource investment to enter is low (Burt, 1992; 2000; Ohme and Bort, 2015)	Knowing what’s going on in that market is the difficult thing. It’s not a thick market, it’s all over the place, it’s spasmodic.	21	57
	Closed	Focal firm’s perception that actors in the network are tightly connected with each other; behavioural expectations are high; resource investment to enter is high (Coleman, 1994; Kurt and Yamin, 2016).	Everyone knows everything that’s going on and what’s happening here and in Australia. It’s all incestuous, we’re close to being incestuous, it’s all intertwined, and everyone knows what everyone else is doing.	4	15
<b>Position of focal firm</b>	High centrality	Focal firm’s perception of occupying a highly prominent and influential position in the network; having high degree of control over other actors in the network; being a highly legitimate actor (Reinholt <i>et al.</i> , 2011; Aarstad <i>et al.</i> , 2015).	We have commonality in our research if we want to develop some technology. Certainly track records very important. We have no trouble getting to see people, senior people. Once you’re in the inner circle they’ll look after you.	9	29
	Low centrality	Focal firm’s perception of occupying a less prominent and influential position in the network; having a low degree of control over other actors in the network; lacking legitimacy (Reinholt <i>et al.</i> , 2011; Aarstad <i>et al.</i> , 2015).	They said, “look guys come back to us when you’re a credible supplier.” They get to say who they choose and why.	16	58

**Table 3: KIS firms' focal net attributes**

Firm ID	Type of KIS*	Entry mode	Structure of relationships firm is embedded in	Position	Personal ties	Associative ties	Professional ties	Institutional ties	Pattern
50	T	Export	Closed	High centrality			yes	yes	I
3	T	FDI	Open	High centrality			yes	yes	II
24	T	FDI, after export failed	Open	High centrality			yes	yes	II
25	T	FDI	Open	High centrality		yes	yes	yes	II
35	T	FDI	Open	High centrality			yes		II
57	T	FDI	Open	High centrality			yes	yes	II
58	T	FDI, then export	Open	High centrality			yes	yes	II
83	T	FDI	Open	High centrality			yes		II
86	T	FDI	Open	High centrality			yes	yes	II
16	T	Export	Closed	Low centrality		yes	yes		III
43	T	Export	Closed	Low centrality		yes	yes		III
54	T	Export	Closed	Low centrality		yes	yes		III
9	P	FDI	Open	Low centrality	yes	yes	yes		IV
10	T	Export	Open	Low centrality			yes	yes	IV
13	T	Export	Open	Low centrality		yes	yes		IV
28	T	FDI	Open	Low centrality		yes	yes		IV
52	P	FDI	Open	Low centrality		yes	yes		IV
66	P	Export	Open	Low centrality		yes	yes	yes	IV
67	P	Export	Open	Low centrality			yes		IV
68	P	Export	Open	Low centrality			yes		IV
73	T	Export	Open	Low centrality			yes		IV
77	P	Export	Open	Low centrality			yes		IV
87	T	FDI	Open	Low centrality		yes	yes		IV
89	T	Export	Open	Low centrality			yes		IV
90	T	Export	Open	Low centrality			yes		IV

Note: \*T=Technology-based services, P=Professional services

**Table 4: Network patterns based on KIS firms' focal net attributes and entry mode**

	Focal net attributes			Entry mode	Firm ID
	<i>Structure of relationships in which firm is embedded</i>	<i>Position of Firm</i>	<i>Formality of Ties<sup>1</sup></i>		
Pattern I: <i>Central controller</i>	Closed	High centrality	Higher formality	Direct export	50
Pattern II: <i>Opportunistic investor</i>	Open	High centrality	Higher formality	FDI	3, 24, 25, 35, 57, 58, 83, 86
Pattern III: <i>Specialist exporter</i>	Closed	Low centrality	Lower formality	Direct export	16, 43, 54
Pattern IV: <i>Client follower</i>	Open	Low centrality	Lower and higher formality	Direct export with some cases of FDI	9, 10, 13, 28, 52, 66, 67, 68, 73, 77, 87, 89, 90

Note<sup>1</sup>: The combination of professional ties and institutional ties was classified as higher formality, whereas the combination of professional ties and associative ties was classified as lower formality.