International market knowledge and international entrepreneurship in the contemporary multi speed global economy
Guest Editors: Kevin Ibeh, David Crick and Hamid Etemad

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Guest editorial

International marketing knowledge and international entrepreneurship in the contemporary multi speed global economy

Introduction

The past two decades have witnessed the relentless advancement of a body of knowledge focused on explaining aspects of firms’ entrepreneurial internationalisation behaviour, including the actions of their key decision makers or management teams. This literature base has, in no small measure, benefited from research originating from the McGill International Entrepreneurship (IE) Conference Series, which marks its 20th anniversary in 2018. The cross-disciplinary ethos of this nascent scholarly community is amply reflected in the wealth of IE studies that actively bridge the contiguous domains of international marketing, international management, international business and much else. The present special issue extends this admirable tradition by showcasing boundary spanning research that contributes to both theory and practice.

The selected papers have drawn on a range of theoretical perspectives to further understanding of how emerging developments, including technological advances, in the multi-speed global economy are affecting entrepreneurs’ internationalisation activities. In addressing conditions of heightened uncertainty that characterise the contemporary global economy of upended orthodoxies and diverging growth speeds, management teams are having to capitalise upon existing knowledge and experience, but also developing new capabilities and competencies, including via complementary network pathways. For decision makers in small, under-resourced firms, this typically entails taking a more creative and improvisational approach to “widely established” marketing principles like planning and information gathering, e.g. by compressing the process of acquiring and validating market knowledge and accelerating the internationalisation of “limited-window” innovations, with a view to gaining pioneering advantages, among other reasons. This approach, for the most part, describes the modus operandi of the expanding brigade of disrupters spawned, notably, by the digital and sharing economies, and their innovative and collaborative business models. The burn rate of limited funds typically available to such resource-challenged firms means that persisting with costly and time consuming in-depth market research and planning might, indeed, expose them to the very real risk of going out of business.

The above tendencies partly account for the widely observed prevalence of international new ventures, “born globals”, and similar actors that internationalise rapidly and exhibit trajectories different from the gradual, incremental pattern suggested in earlier seminal work. Such entrepreneurial international firms, and the varying contexts – sectoral, geographical and institutional – within which they innovate, operate and strategize, offer rich platforms for research at the international marketing–IE interface. A far from exhaustive list of research questions that might benefit from more in-depth insights include:

- **RQ1.** How management teams leverage marketing thinking in the exploration and exploitation of entrepreneurial opportunities across national borders.
- **RQ2.** How management teams disrupt competitive dynamics in various industries or mitigate risks in overseas markets.
- **RQ3.** How management teams deploy marketing resources and capabilities in developing international marketing strategies and the effects of such deployment on outcomes achieved.
Experiencing these issues from multi-contextual lens would be additionally helpful since previous pertinent studies dominantly take an advanced economy perspective, which is not necessarily transferable to developing economy firms, or even immigrant or transnational entrepreneurs operating astride divergent institutional environments.

In summary, this current special issue was motivated by the need to address under-researched themes, such as the above, and, in so doing advance knowledge at the international marketing–IE interface. The many rigorous contributions received understandably made decision making rather difficult, but the guest editors are convinced that the final seven papers, selected after several rounds of reviews and enhancements, help address gaps in the literature and signal avenues for future research. The contributions pertain to firms of differing sizes and organisational orientations (e.g. profit and not-for-profit) that operate in various product-markets, including services. The papers further reflect different stakeholders’ perspectives, including those of owner-managers, customers (specifically buyer-supplier relationships) and policy makers that focus on internationalisation support provision.

This editorial piece now briefly outlines each of the seven special issue articles.

**The special issue papers**

The first paper, authored by Evers and colleagues, is entitled “Local horizontal network membership for accelerated global market reach”. It examines how committed membership of a highly collaborative horizontal network actively intermediated by an industry association influences the rapid internationalisation and growth of born global ventures, including their acquisition and sharing of international market knowledge and customers. The study draws on 16 Irish firms operating in the uber globalised animation industry characterised by coopetition strategies (simultaneous collaboration and competition). The findings suggest that these collaborative networks and their associated collective experiences and communal legitimacy facilitated rapid global market development or opportunity exploration among member firms. Network members were reportedly able to leverage rich internal social capital, to acquire and share foreign market intelligence as well as bridge structural holes between member firms and foreign customers and partners. These findings, the authors argue, challenge previous evidence that suggests close social relations and ties among local network members as having adverse effects on international market performance.

The second paper on “Institutional environment and network competence in successful SME internationalisation” is by Torkelli and colleagues, and it examines the influence of institutional environment and network competence on the international performance of SMEs. The study draws on the institutional theory, the dynamic capabilities perspective and a sample of 119 internationally active Finnish SMEs from several industries. The findings reveal that institutional drivers exert direct and indirect influences on the international performance of SMEs, and that network competence mediates the positive relationship between institutional drivers and international performance. The authors thus contend that developing network capabilities, including the ability to manage business networks, can help SMEs leverage their institutional environments for sustainable successful internationalisation. The institutional drivers-performance relationships also appear to be partially mediated by dynamic capabilities.

The third paper on “Managing the challenges of piggybacking into international markets” by Rosenbaum and colleagues, draws on a longitudinal case study of collaboration between a small software developer and a global software player to advance understanding of how piggybacking partners attempt to overcome inter-firm diversity and co-create value for global customers. The authors contribute to knowledge by empirically assessing the viability of piggybacking from knowledge sharing and trust development lens. The findings
indicate that despite differences in size and organisational cultures, top managers seemed initially able to facilitate collaboration via knowledge-sharing initiatives. However, these efforts subsequently foundered at the middle management level owing to misaligned incentives, leaving both parties unable to reap the potential benefits of piggybacking in global markets. Recommendations for reconciling divergent organisational cultures, partner selection and aligning incentives in piggybacking arrangements are advanced.

The fourth paper, by Glavas and colleagues, is entitled “Knowledge acquisition via internet-enabled platforms: examining incrementally and non-incrementally internationalizing SMEs”, and it examines how SMEs’ owners/founders acquire and utilise internationalisation knowledge via internet-enabled platforms. The study draws on the experiences of 13 Australian SME owners/founders, analysis of which reveals four differing types of internet-enabled experiences: “Technical Internet-Enabled Experiences”, “Operational Internet-Enabled Experiences”, “Functional Internet-Enabled Experiences” and “Immersive Internet-Enabled Experiences”. These experiences, the authors explain, can generate both explicit and tacit forms of knowledge for the pre, early and later phases of internationalisation. The findings lay the necessary groundwork for building an evidence base and theoretically extending the concept of knowledge acquisition via internet-enabled platforms.

The fifth paper on “Capitalising on knowledge from big-science centres for internationalisation” is authored by Nummela and colleagues, and it investigates how resource-constrained, knowledge-intensive firms capitalise on knowledge gained from collaboration with big-science centres. It particularly focuses on the kind of knowledge a firm obtains and its efficient use in exploring and exploiting inward and outward internationalisation opportunities. Based on a longitudinal study of two knowledge-intensive Estonian companies collaborating with the European Space Agency, the authors uniquely find the search for resources rather than simply market knowledge to be of preponderant importance in the focal firms’ internationalisation processes. This deviates from the received wisdom in much of the existing literature. The case firms’ internationalisation was also characterised as a nonlinear process, advanced by co-creation, learning, risk reduction and exploitation of emergent knowledge, which correspondingly leads to an improved international expansion, network position and identification of further opportunities.

The sixth paper by Zuchella and colleagues is entitled “Coping with uncertainty in the internationalisation strategy: an exploratory study on entrepreneurial firms”, and it addresses how smaller, entrepreneurial internationalising firms make decisions regarding appropriate strategic options under conditions of uncertainty. Based on ten firms that adopted a global niche strategy as an uncertainty coping and growth-seeking mechanism, the authors advance an uncertainty coping internationalisation process model, built around a focused and superior/unique offering that insulates smaller firms from competition. This approach, they posit, can be sustained through continual learning, customer problem solving, technology upgrade as well as use of home country-based production facilities for enhanced technology control and internal learning. The findings suggest that case firms counterintuitively cope with uncertainty by concentrating on a few customers, not outsourcing or offshoring, but pursuing vertical integration and local production. They also cope with the challenge of niche sustainability not by moving from niches to mass markets, but by becoming larger within their niche and developing a portfolio of niche businesses along the same technological platform. As the authors contend, the observed niche strategy is neither a follow-the-customer approach nor a reactive posture, but one based on the proactive identification of customers wherever they are located, anticipating their needs, solving their problems and ultimately co-creating value and innovating through customer interactions.

The final paper entitled “The qualitative case research in international entrepreneurship: a state of the art and analysis” is by Dimitratos and colleagues, and it examines the conduct and onto-epistemology of qualitative case research (QCR) in IE research, including its use in
contextualising, capturing and illuminating the complexity of IE opportunities, events, conditions, relationships and processes. Based on the analysis of the theoretical purpose and research design of 292 IE journal articles published between 1989 and mid-2017, the study finds “positivistic” QCR to be the dominantly adopted approach in IE research, with “exploratory” and “theory building” emerging as the two most prevalent objectives. The authors find departures from positivistic assumptions to be at a relatively early stage in IE research. Positing their study as the first to examine QCR onto-epistemology and methodology approaches in IE, they call for greater methodological rigour and transparency in the reporting of QCR and for more non-positivistic QCR studies.

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Local horizontal network membership for accelerated global market reach

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Abstract

Purpose – The purpose of this paper is to explain how some born global firms can leverage the rich social capital in their local (home country) horizontal network for accelerated international market entry and growth. Horizontal networks warrant separate attention from their vertical counterparts, which, along with those focussed on external international contexts, dominate most network studies in the realm of born global research.

Design/methodology/approach – The study utilises a multi-level qualitative approach in the study of a multi-firm population of animators in Ireland that, due to the small domestic market for their product, needed to pursue global customers from inception. The case study domain was purposely selected as a critical exemplar of a local horizontal network operating in a highly globalised industry. The authors collected data through in-depth interviews with 16 company founders. This primary interview data were complemented by interviews with staff at the appropriate industry association and triangulated with secondary data on the local and global industry conditions, members’ international successes and awards.

Findings – The results demonstrate how active membership of a local horizontal network can be leveraged for the acquisition of international market knowledge and customers for born global ventures. This arises from the sharing of collective market knowledge and communal global customer information within the network to mutual benefit.

Originality/value – Although limited by the specific conditions in this highly globalised, non-competitive industry context, this study is unique in that it finds that cooperative interpersonal and inter-firm relationships embedded in a local horizontal social network, and mediated in part by an institutional support actor, emerge as important levers for a born global’s accelerated acquisition of foreign market knowledge and of global customers.

Keywords International marketing, Social capital, Intermediaries, Horizontal networks, Local networks

Paper type Research paper

Introduction

Relevant and timely foreign market knowledge is a critical resource for a firm’s international sales growth (Zahra et al., 2000) and particularly necessary for the early international market entry of rapidly internationalising firms (Ruokonen et al., 2008). As is now well-established in the international business and marketing literatures, the born global firm is a unique type of organisational form that, from inception, has a strong intent to rapidly enter and serve multiple international markets (Knight and Cavusgil, 1996; Crick, 2009; Cavusgil and Knight, 2015; Coviello, 2015). The born global founder’s deployment of a constellation of personal contacts in international networks has long since been found to facilitate the acquisition of knowledge on foreign market opportunities and customers (Coviello and Munro, 1997; Ellis, 2000; Ellis and Pecotich, 2001; Sharma and Blomstermo, 2003; Crick and Spence, 2005; Loane and Bell, 2006).
This valuable social capital derives from international personal and business contacts commonly acquired from prior work experiences and business relationships (Crick and Jones, 2000; Prashantham and Dhanaraj, 2010; Ellis, 2000; Jones et al., 2011). Extensive research has demonstrated the founders’ useful deployment of relational social capital embedded in their international relationships with vertical exchange partners, principally customers, for accelerated access to foreign market knowledge and extended global market reach (Sasi and Arenius, 2008; Jones et al., 2011; Yli-Renko et al., 2001; Evers and O’Gorman, 2011; Slotte-Kock and Coviello, 2010; Sepulveda and Gabrielssson, 2013). Yet the born global literature is less than replete on the utility of the founders’ horizontal network relationships that encompass social exchanges with, and mutual support from friends, family, business associates, even fellow industry players in the form of coopetition, for international market development (Jack et al., 2010; Theodorakopoulos and Figueira, 2012; Crick, 2018).

These horizontal relationships, unlike the vertical associations, commonly occur and are framed in a local context. Recently, an emerging stream of research has found that local business and personal ties of the born global entrepreneur can also be important sources of foreign market intelligence and facilitators of foreign connections and international network entry (Ibeh and Kasem, 2011; Boehe, 2013; Andersson et al., 2013; Prashantham and Birkinshaw, 2015). However, of the evidence to date, findings have diverged. Some research relates that local linkages that share international market intelligence can have a positive impact on the international market development of born globals (Etemad, 2004; Andersson et al., 2013; Boehe, 2013). Contrastingly, other researchers have noted that local relationships may actually hinder international growth (Milanov and Fernhaber, 2014) or at least give rise to concerns in varying contexts (Prashantham and Birkinshaw, 2015).

In an endeavour to shed light on the positive impacts of international market intelligence sharing in a local context, we set out in this study to examine the influence of active membership of a highly collaborative local horizontal network on the rapid multiple international market entry and growth for a set of born global ventures. This study investigates how a purposely selected case study of a collective of born global firms in a local horizontal network leveraged rich internal social capital for accelerated international market entry and growth. This study focusses on a set of Irish indigenous born globals operating in the highly globalised animation industry and exhibiting a benign form of coopetition. Therefore, in this explanatory, process study, we address the following research question:

**RQ1.** How can active and engaged membership of a local horizontal social network, characterised by high-intensity cooperation and intermediated by an industry association, afford a set of born globals’ accelerated acquisition of international market knowledge and customers?

**Research context: the global animation marketplace and local grouping**

The production of animation content generally takes two forms in the contemporary context: traditional drawing, 2D and digital animation that is computer generated, CG. Digital animation involves the combination of traditional artistic drawing skills with modern software technological know-how. The global digital animation industry was propelled to the forefront of the public’s imagination with Pixar’s breakthrough via hugely successfully movies, both critically and commercially, such as Toy Story, Monsters Inc, Cars, Wall-E and Up. In 2006, Disney took over Pixar for $7.4bn to cement its position as the largest animation company in the world. In tandem with the emergence of Pixar as a global success story in movies, the explosion of cable television led to the emergence of dedicated children’s TV channels such as Nickelodeon and the Cartoon Network and specialist children’s sub-units of the traditional TV networks such as BBC’s CBeebies channel. More recently the massive growth in global demand for animated content has been augmented by new requests from online providers such as Netflix and Amazon Prime. These developments have led to a
significant increase in global demand for animation content which is now bought all around the world even in non-English-speaking countries where the soundtrack is dubbed. Given their small domestic market, insufficient home country audience base and consequent negligible local market potential, the indigenous Irish animation firms must, from inception, rapidly access these customers in the international arena if they wish to survive and grow. Irish animation firms, old and new, now sell animated content to TV channels and movie distributors across the globe in almost 200 countries. By 2018, even the newest of entrants to the Irish sector target overseas markets and sell content in a multiple of ten countries, within two years of inception (www.Animationireland.com).

The Irish animation sector, therefore, represents a particularly insightful context to study born globals for two important reasons. First, given the small domestic market, the indigenous Irish animation firms must, from inception, quickly access customers in the international arena if they wish to commercially release their creative ventures and grow internationally. The vast majority of commissioners of movie and TV animation material are based in multiple countries across the globe, albeit Hollywood USA is the dominant location. Non-English-speaking sites may still purchase content, which is dubbed into the local dialect. Second, it presents a concrete exemplar of a functioning local horizontal network. The animation industry grouping in Ireland exhibits and features high-intensity collaboration rather than competition as the prevailing ethos. This is because animation firms individually pitch for commissions, or are sought out for their product by commissioners, rather than competitively tendering for projects. One firm’s success begets higher reputation capital for the collective. The sharing of international market knowledge and intelligence expands the opportunities for all members of the local network of Irish animation firms. Whilst there may be instances of mild competition around content space and the commissioners’ eyeballs, the evidence is of an extremely benign form of competition and extensive collaboration. This represents a particular variety of coopetition at the cooperation end of a coopetition spectrum.

**Literature review**

*A spectrum of coopetition*

Coopetition is a term used to describe the paradoxical phenomenon of simultaneous competition and cooperation (Brandenburger and Nalebuff, 1996). Competitive behaviour by firms is complicated when rivalries remain the dominant logic and tensions may arise in relationships within the network (Chen, 2008; Fang *et al.*, 2011; Gnyawali and Park, 2011; Raza-Ullah *et al.*, 2014; Gnyawali *et al.*, 2016; Bengtsson *et al.*, 2016). But the extent of rivalry differs along a competition–cooperation spectrum. The more dominant the cooperation logic the less likelihood of opportunistic behaviour that can lead to the emergence of tensions and conflicts between parties. Recent studies on the management of a cooperation–competition paradox has led to a realisation and understanding that rather than being a zero-sum game leading to opportunistic behaviour (Raza-Ullah *et al.*, 2014), firms in certain industry contexts have been found to collaborate with their rivals through the cooperative sharing of resources and capabilities for international growth (Bengtsson and Kock, 2000; Ritala *et al.*, 2014; Crick and Crick, 2016; Crick, 2018). Thus in certain industries, horizontal relationships tend to be less formal and more open to information exchange than vertical economic exchanges (Bengtsson and Kock, 2000). Such cooperative tendencies ultimately rest upon the prevailing dependence between competitors operating in the same industry (Bengtsson and Kock, 2000). For example, Crick (2018) found an industry-wide cooperative mind-set was the key driver encouraging resource and capability sharing activities across competing exporting firms in the New Zealand wine industry.

Coopetition has been evidenced in activities between horizontal firm actors within a network (Bengtsson and Kock, 2000, 2014; Crick, 2018). This leads to a need to distinguish
between highly competitive and highly cooperative networks (Slotte-Kock and Coviello, 2010) and between forms of exchange relations especially between firms in a horizontal social network.

**Horizontal social networks and born global internationalisation**

A social network constitutes a collective whose members connect and communicate for social or instrumental reasons (Brown and Duguid, 2000). Membership of a social network can furnish information access and personal referrals that provide new business opportunities (Burt, 2000). A social network can develop from the continuous construction and reconstruction of ties that become more multiplex and robust over time (Steier and Greenwood, 2000). Social network theory originated in Simmel’s (1955) conclusion that a better understanding of social life derives from a deeper understanding of group composition (Slotte-Kock and Coviello, 2010). The economic behaviour of actors in a social system can be determined by the quality of social capital embedded in their relationships, in other words, whether actors are connected through strong or weak ties (Granovetter, 1973, 1985; Uzzi, 1997). Strong ties exist when firms search deeply for solutions in existing close relationships rather than widely for solutions across relationships (Uzzi, 1997). Such relationships within the social network can exhibit tight bonds and high trust between people over a lengthy time duration (Starr and MacMillan, 1990). The high magnitude strength and quality of relationships form social capital amongst strong personal contacts and bonded associates. High social capital allows firms the capacity to generate value from the network of relationships in which they are embedded (Burt, 1992; Nahapiet and Ghoshal, 1998; Adler and Kwon, 2002; Kwon and Adler, 2014). Relational capital refers to the degree to which network relationships engender emotional connections and trustworthiness across members. Trust and goodwill between parties increase motivation to share knowledge (Elango and Pattnaik, 2007). Relational trust in the form of “fairness” for all parties (Gulati, 1995). The higher the degree of relational capital, the more mutual trust and the less risk of opportunism featuring between actors in knowledge-sharing activities (Oh et al., 2006; Inkpen and Tsang, 2005). Cooperation especially trumps opportunism when business and personal reputations are on the line (Sasi and Arenius, 2008).

Granovetter (1973) famously challenged the importance of strong ties for firms in social network systems. He argued that as strong ties within a social network interact frequently, much of the information circulating in this social system is redundant and can hinder firm growth. In this view, weak ties are important for firms to connect with as they represent actors who move in social networks other than those of the focal actor (Granovetter, 1985). Through weak ties, a firm can access new information and ideas that lie outside their immediate and close set of contacts. Weak ties were seen to allow wider access to opportunities outside the core web of social relations. They enabled the discovery of opportunities because they serve as bridges to new and different information. Burt (1992) extended this argument by asserting that a tie will provide access to new information and opportunities if it is non-redundant, or if it spans a structural hole. Structural holes across networks represent the absence of ties between actors. Burt (1992) argued that weak ties can fill these “holes” and create some form (although loose) of connectivity between actors that would not have been otherwise there. For international entrepreneurs, these weak ties can expose the entrepreneur to new information, ideas, opportunities and know-how for internationalisation activities (Sharma and Blomstermo, 2003). Rather than a dichotomy, there commonly exists a multiplex mix of strong and weak ties within a social network (Elfring and Hulsink, 2003). In this multiplex view, ties are differentiated not simply by intensity but also by the content of the relationship such as information, knowledge and market intelligence (Jack et al., 2010).
Such multiplex ties in social networks have been found to be particularly important to new ventures seeking to internationalise. Moreover, emerging organisations commonly even lack established business ties (Greve and Salaff, 2003; Evers, 2010; Prashantham and Dhanaraj, 2010). Membership of social networks can, therefore, provide new ventures with access to critical information, resources, knowledge and opportunities globally (Hoang and Antoncic, 2003). Internal social capital can facilitate external international market development through tapping into the knowledge resources of exchange partners (Yli-Renko et al., 2001, 2002).

On the negative side, over-embeddedness in social networks can result in member firms being insulated from other external sources of information and knowledge (Uzzi, 1997; Prashantham and Dhanaraj, 2010). Time and effort spent on nurturing and cementing local horizontal relationships can lead to over-reliance on domestic partners and loss of time that might be better spent on international marketplace development. There can be a trade-off between home relationship development and external marketplace development (Boehe, 2013). An extensive commitment of time and effort is necessary for international market development to overcome liabilities of foreignness (Eden and Miller, 2004). Firms can become distracted from such commitment through the ease of familiar relations with local allies.

Industry associations for horizontal network intermediation and orchestration
Balancing the tension between over- and under-embeddedness is a role that can be played by an external intermediary, often institutional, such as enterprise promotion state agency. Publicly funded institutional intermediaries have been identified as facilitators in a firm’s internationalisation through their support and coordination mechanisms for the industry member firms (Bannò et al., 2014; Sousa and Bradley, 2009). For instance, O’Gorman and Evers (2011) showed how an intermediary state agency played a key role in connecting born global firms to new foreign market customers and provided critical intelligence on global sales opportunities. This support commonly gives rise to the formation of a structured industry association that is organised and coordinated by an institutional intermediary (Chetty and Blankenburg-Holm, 2000).

Industry associations have long been shown to be important fora for the exchange of valuable knowledge, important market information sharing, industry product/service promotion and influencing activities for a set of related member firms (Hadjikhani and Häkansson, 1996; Dhanaraj and Parkhe, 2006). Industry associations are essentially formally structured networks that galvanise the benefits of collective presence and efficiency and orchestrate sales promotions, commonly at international trade shows (Caniels and Romijn, 2003; Evers and Knight, 2008). Despite some caveats (Belso-Martínez, 2006), industry associations, for the most part, are shown to scaffold and supplement knowledge sharing in a horizontal social network, predominantly orchestrated in the local space. Studies have shown that born globals can beneficially avail of membership of their respective industry associations to enhance and support communication, as well as relevant and timely intelligence on foreign markets and customers to rapidly furnish international market opportunities, grow rapidly (Chetty and Blankenburg-Holm, 2000; O’Gorman and Evers, 2011) and generally extend their global reach (Boehe, 2013).

Legitimisation and reputational effects in horizontal networks
Membership of a horizontal social network can provide communal reputational benefits (Oh et al., 2006). For new market entry, there is a greater need for born global firms to build legitimacy than for their globally established counterparts. As there is limited, or no record of past performance on which they can be judged and evaluated (Zimmerman and Zeitz, 2002), born global ventures may be exposed to liabilities of outsidership (Johanson and Vahlne, 2008; Brouthers et al., 2016), newness and foreignness (Zaheer, 1995). Such liabilities
are magnified for novice born globals that are in the early stages of their entry into foreign markets (Bangara et al., 2012). The notion of a “legitimacy threshold” can exist below which novice born globals will fail and above, become established (Rutherford and Buller, 2007). Horizontal actors can endow the born global with commercial reputation and legitimacy (O’Gorman and Evers, 2011; Chetty and Blankenburg-Holm, 2000). Through referrals and recommendations, existing horizontal ties can enhance a firm’s legitimacy and credibility with others (Zain and Ng, 2006; Ge and Wang, 2013). Strong endorsements from, and associations with legitimised contacts can permit newer firms to piggyback on the reputations of longer-established horizontal network members (Bangara et al., 2012).

Methodology
Research design
A case study design has long been considered appropriate for the examination of contemporary issues set in specific contexts (Yin, 2003; Bangara et al., 2012). Context is critical to validate qualitative case studies (Welch et al., 2011). Michailova and Mustaffa (2012) advocate the careful selection of idiosyncratic settings to provide more accurate explanations. Crick and Jones (2000) similarly call for studies that focus on narrowly defined groups of firms to generate more rich data. Using the explanatory case study approach (Eisenhardt, 1989; Yin, 2003), our objective in this study was to investigate how born globals in a local horizontal network leveraged rich social capital to enable their accelerated global market reach and access. This research adheres to well-established practice in the design of case studies (Yin, 2003; Eisenhardt, 1989). Our case study permits a better understanding of the dynamics present within a particular firm, and a carefully chosen setting (Eisenhardt, 1989) and has strong precedence in studies of accelerated international market entry of born globals (Freeman and Cavusgil, 2007). Moreover, we seek to provide an explication of relational processes in this study and how these evolved over time amongst the studied firms (Pettigrew, 1997; Welch and Paavilainen-Mantymaki, 2014).

Our methodological approach involved examining a case study of a single industry grouping containing multiple proven-to-be born global firms in that conformed to the maxims of a local horizontal social network. This informal social network was found to be mediated by an institutional intermediary in the form of an industry association. The approach is one of theory building and is inductive in nature, rather than seeking generalisability through representativeness. Therefore, we judiciously employed non-probability purposive sampling in choosing our study of Irish animation firms and business setting in the highly globalised animation industry (Saunders et al., 2009). This purposive selection was justified relative to our study’s objectives (Robinson, 2014). We used our judgement to carefully identify a critical exemplar of a local horizontal network with an identified need for accelerated access to overseas customers across the globe (Miles and Huberman, 1994; Patton, 2002) on which theory could be built based on the revealed phenomena (Saunders et al., 2009). The screening used in the selection process necessitated that a firm to be studied met the following three criteria. It had to be: indigenous Irish both regarding company registration, residence and principal animated content designed and created in Ireland (some content development is outsourced globally, e.g. to India and South Korea); the core business is the design and production of animation film and/ or TV content, and the firm must have achieved at least 25 per cent international sales in at least two countries within three years from inception (all firms greatly exceeded this minimum criterion of 25 per cent and did so in a shorter period of time than the minimum of three years). Initially, we used the Animation Ireland website (www.animationireland.com) to construct a database of all Irish-based animation companies. We then created a “company information profile” for each of the case companies using secondary sources. Then an introductory telephone communication was made with each case company to explain the purpose of our study and to gain agreement to participate and confirm access to key respondents.
Data collection

Through this screening process, we identified 16 firms that met the three criteria and these constituted our study population (see Table I). All 16 companies agreed to participate in the study and thus we had the involvement of the full population of identified born globals firms in the Irish animation sector. The key primary data holders and respondents were the founders of the animation firms. In total, 20 interviews were conducted over a two-year period with this group as, in the case of four companies, two interviews were conducted with each of the co-founders.

Two further interviews were conducted with key members of the industry trade association, Animation Ireland. This enabled us to get both an insight into their internal orchestration and coordination roles in this local horizontal network and a somewhat independent external perspective on the dynamics and relations between its members.

Data collection was conducted via qualitative semi-structured interviews. The interview schedule of topics that guided and prompted the interview discussion covered a variety of issues on relationships, prior experiences, collaborative activities, the role and benefits of intermediaries, access to international customers, etc. (see Table I). It was very loosely structured as we wished to probe relations in the network and we wanted the interviewees to speak openly and freely about their experiences and perspectives. We were looking to elicit rich and thick descriptions of behaviours and utilities in the network and how the social capital was leveraged for accelerated global reach. Consistency across all interviews allows for more robust and later cross-firm analyses. All interviewees were briefed in advance on the objectives of the research. The interviewees were guaranteed anonymity so that any contentious issue could be drawn out and discussed if they arose in the course of any interview, e.g., a case of opportunistic behaviour.

The interviewees were positive contributors insofar as they were open and keen to tell their individual and collective stories. Better again, they were natural storytellers in the main and thus, commonly, the interview schedule merely provided a running order for the interviews. The interviewees provided rich narrative data and insight into their prior experiences, relations and activities in rapidly internationalising their businesses.

<table>
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<tr>
<th>Co.</th>
<th>Year of inception</th>
<th>Year of internationalisation</th>
<th>International markets (Locations)</th>
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<tr>
<td>1</td>
<td>2003</td>
<td>2006</td>
<td>Canada, Denmark, Hungary, the UK, Sweden</td>
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<tr>
<td>2</td>
<td>2002</td>
<td>2003</td>
<td>Australia, Austria, Canada, Finland, France, Germany, Italy, the UK, the USA, Spain, Sweden</td>
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<td>3</td>
<td>2000</td>
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<td>Australia, Canada, the UK, the USA</td>
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<td>Canada, the UK, the USA</td>
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<td>5</td>
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<td>Holland, the UK, the USA, Singapore</td>
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<td>Belgium, France, Germany, the UK, the USA</td>
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<td>Australia, Canada, Denmark, France, the UK</td>
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<td>8</td>
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<td>Australia, Canada, Czech Republic, France, Holland, Iceland, India, Norway, the UK, the USA, Slovenia</td>
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<td>9</td>
<td>2001</td>
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<td>Canada, Germany, the UK, the USA</td>
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<td>France, Germany, Iceland, the UK, the USA</td>
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<td>2010</td>
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<td>Canada, the USA</td>
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<td>13</td>
<td>2004</td>
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<td>Australia, Poland</td>
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<td>1995</td>
<td>1998</td>
<td>Australia, Canada, France, Finland, Germany, India, the UK, the USA, Taiwan</td>
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<td>15</td>
<td>1988</td>
<td>1999</td>
<td>Australia, France, Germany, the UK, the USA</td>
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<tr>
<td>16</td>
<td>2007</td>
<td>2008</td>
<td>The UK, Canada</td>
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Table I. Sectoral profile
Triangulation was conducted through the collation of secondary material in the form of company and industry association websites, business press articles, industry reports, newspaper culture section articles, online podcasts and other published media to provide a richer context for our study. The collection of secondary data on the firms and animation sector in Ireland continued up to the present date. Much media attention is given in Ireland to this sector given its general global business growth. Moreover, there has been a veritable media frenzy surrounding these animation firms given their high-profile international successes in awards ceremonies such as the Oscars and BAFTA.

Data analysis
Our ultimate aim in this study was to build theory on how rich social capital in horizontal networks was developed and leveraged by member firms for accelerated international market access and development (Eisenhardt, 1989; Haley and Boje, 2014, Miles and Huberman, 1994; Pollock and Bono, 2013). The ethos of the analysis of our qualitative data was interpretivist and our broad structure was chronological in our depiction of the evolution of internal network relations and external global market development (Welch et al., 2011). Initially, the interviews were transcribed resulting in almost 300 pages of content from the primary interviews with the 16 firms and two interviews with the institutional intermediary. Data were organised using NVivo for within case analysis and cross-case comparison (Yin, 2003). A case file on each firm was created. For each case subsidiary, we constructed a chronological history of its entry into international markets and how it is accelerated global market presence evolution unfolded. The rich narratives provided by the entrepreneurial animators, who are mostly natural and gifted storytellers, were rigorously analysed through content analysis. We followed the logic of narrative sequence analysis as a technique for theory development (Buttriss and Wilkinson, 2006). Transcripts were manually analysed in a conventional manner to identify and interpret the nature and quality of relations in the network and interpret how this social capital was leveraged for accelerated global market reach and development. Selected quotes were used to illustrate critical insights and particularly apposite evidence. We next combined these case histories and global market evolution to create a chronological evolution of the horizontal network’s global market footprint. Subsequently, cross-case analysis of the data was performed, where data were compared and contrasted across the network firms, and particular attention was given to emerging patterns (Miles and Huberman, 1994).

We further employed triangulation of our primary qualitative data and rich narratives from these natural storytellers with secondary data in our analysis to deepen our interpretation of our interview data and enhance the reliability and trustworthiness of our findings (Sobh and Perry, 2005). Specifically, we continuously tracked and collated secondary sources on key events, critical happenings and notable milestones in both the case firms and the horizontal network. In a prolonged reflexive engagement with our data, both primary and secondary, we refined our analysis through successive iterations between theory and data (Ryan and Bernard, 2000; Silverman, 2000).

Findings
In the beginning: the provenance of internal social capital
The origins of this local horizontal network of member firms are found in the founders’ experiences and friendships, principally formed whilst at animation school in a technical art college. Animation skills development and latent artistic talent of the majority of the firms’ founders were incubated at two institutes, the Irish School of Animation at Ballyfermot College and the Dun Laoghaire College of Art and Design. These courses not only produced skilled individuals but also, they provided the loci wherein early social bonds and
connections were established between animators who had a collective and shared love of the art and technique of animation. This led to the initial formation of strong bonds, high levels of collegiality and mutual trust amongst members which later would lead to a strong willingness to aid fellow network members in decisions to undertake new venture formation. These early bonds were later cemented as industry connections between animation firm’s founders and were to continue throughout the early pioneer and later trans-generational evolution of this local horizontal social network:

I think the friends that we would have made in college would have helped us connect internationally. We have often had job referrals from our classmates in Ballyfermot [...] [...] Some of the other studios in Dublin would have been formed by guys a few years ahead of us in college. That is why everyone knows and helps each other (Co-Founder, Firm A).

It was common after graduation for animators to work for studios in the important US centre and base of movie and TV studios that is Hollywood. Half of the animation firm founders had international work experience there, in the international animation sector before setting up their own enterprises. These network members have worked in studios such as Pixar-Disney and Warner Bros. These international work experiences gave founders’ their early visions of the global animation industry and even some initial access inside the global industry network.

Post start-up, the accelerated internationalisation of the network members was also facilitated by the willingness of members to share contacts forged from their previous industry work experiences. Previous work experience with global studios also provided some early credibility with content commissioners. These contacts in the major studios were maintained and nurtured by network members and proved useful as contacts (and potential future product commissioners) that could be, and later were, passed on and shared amongst all network members:

My main connectors are my connections and that has been established by working there [USA] for three years. As Warner Brothers closed its doors to animation, everybody I know there went to other studios over there so all of a sudden you know a bunch of people at Pixar, Dreamworks and Sony. I go back there every year, and I meet with them. We would stay up to date and keep the network alive and through that, meet new people (Firm B).

The guys at [Firm X] refer to someone they know in a studio they believe would be important for you to talk to (Firm J).

A brave new world: born globalness
From the early days of the informal formation of this local horizontal social network amongst students of animation, there was an evident collective desire to matter on a global stage. Findings show that artistic talent of founders was combined with enterprise ambitions after graduation. Such pull factors were complemented by further start-up firms that were founded by animators who commonly were pushed into starting a new venture as they did not wish to permanently or even long-term leave their home country to work for the large animation companies overseas, generally in the USA. This was of course beyond the desire to leave their home country for a finite period to gain valuable short- to medium-term work and industry experience. Principally, the pioneer founders set out into the relative unknown on their early forays into the global animation marketplace. Nonetheless, they were filled with both an ambition to succeed on the global stage and a realisation that the confines of the domestic marketplace would not afford them the opportunity to keep their fledgling businesses alive and furnish growth. As expressed in parallel terms by many interviewees, they were born global:

We have always known that Ireland is a small market that can’t support the animation we produce, so we have to look abroad (Firm A).
We never set up for an Irish market at all. The population is too small. We knew straight away our product would need to have international appeal (Firm H).

We weren’t making content for Ireland […]. ever! Animation feature films cost a large amount to make, millions. The Irish market was never going to suffice (Firm B).

Ireland is such a small market […], you have to look outside the country (Firm N).

You want to be doing stuff on a global scale, be on screens around the world. Everybody (in the network) wants to be the biggest thing, the next Sponge Bob or Bob the Builder (Firm B).

Cartoon Network: rapid global market development via the horizontal social network

The easy familiarity of the early cemented social bonds in their college days was nurtured and extended into their business relations over time by the network members. As one network member stated:

[Firm X] assisted us a lot by helping us connect abroad. After all, we were all colleagues at college (Firm L).

This high willingness to assist fellow industry competitors was not simply a consequence of bonds of friendship formed as classmates (by the earliest industry entrants). It was also due to the specific industry conditions whereby each firm pitched their ideas for animation features or TV shows to the content purchasers. Though this might be the same pool of customers there was a scope for the purchase decision to be based on the quality of the original pitch which, if liked, was green-lighted. There was ample room on the demand side for several winning pitches. The competition was accordingly benign and trumped by the benefits of cooperative behaviour by these local network members. Thus trust developed amongst all firms in the network, pioneers, early entrants, latecomers and new entrants. Naturally, the strongest bonds existed between the original entrants but newcomers were welcomed into the community with open arms. The collective prevailed over individual self-interest. Strong relational ties were reported to exist between the respective pioneers, then with early entrants. Later, any weaker relational ties with later or new entrants were nurtured to become strong in good time. Network ties are almost inevitably multiplex but the preponderance in this network was strong ties between these local animation firms. This is a congenial network best characterised by placid coopetition. As one founder stated on the high levels of internal network collaboration: “I think it is because we are not all pitching at the same pool and we all have different models” (Founder, Firm D). Another said that “we see them as our friends rather than competition” (Founder, Firm M). The reason behind the extremely benign form of coopetition was suggested by one respondent (Firm I) to be as a result of the nature of the distribution and customer value chain. He claimed that:

We are all one step removed from the (final) consumer. The consumer is the watching audience. We seldom really meet the audience. We are selling to somebody who is then selling to the audience. That’s a TV station or a cinema distributor. So that sort of takes the edge off the competition!

Relations are convivial and interactions cordial between members. The pioneers who experienced stellar international successes in the industry, in both audience numbers for their content purchasers and international animation awards, acted as veritable anchors for this social network. Those parties closest to the internal network members recognised and acknowledged this strong propensity to assist, share, guide and mentor. One noted that: “The animation guys are highly collaborative in Ireland […]. this is a way to start getting connected internationally” (Animation Ireland).

In time, the pioneer international market developers and early follower international market entrants developed both valuable contacts in the international marketplace and important international market knowledge that could be shared with fellow pioneer
network members. There then followed into the local horizontal social network a wave of fresh, late market entrants. Their liability of newness in the international market was mitigated by the willingness of the pioneers to share their contacts and market knowledge. Existing members actively and enthusiastically welcomed these new entrants to their peer social network.

Network members exhibited high levels of “caring and sharing”. They were clearly intent on, and seen to leverage social capital for accelerated foreign market knowledge acquisition and entry. The internationally experienced international market pioneers and early local horizontal social network entrants mentored these young firms and were readily available when they sought counsel. Important international market information and global industry contacts were shared. Essential learnings garnered from their successful track record (and mistakes made) in developing product and accessing purchasers were passed on to new network members. One network member respondent stated that “the success of the Irish animation sector is bigger than the sum of its parts” (Firm B). Reciprocity, give and take was expected, and there was a clear absence of opportunistic behaviour by network members that might be injurious to the collective. There featured extensive goodwill trust well beyond competence trust in the local horizontal social network. Network members opened their coveted “contacts books”. For example, regarding tangible benefits of information sharing, on occasion when the network member firms have only the resources or capacity to deal with a certain number of ongoing projects they may not be able to avail of all opportunities that may arise, sometimes opportunistically. Such “hot” opportunities are readily shared with fellow network members that may be in a position to execute.

Inherent in this cooperative network was an appreciation that any benefits of sharing valuable, relevant and timely international market information and intelligence strongly outweighed corollary advantages of an isolated “go-it-alone” international market development approach. New or latecomer entrants to the network felt at liberty to seek out market intelligence from incumbents. The original network members were also willing to impart their knowledge even when relational ties were as yet weak. These new members were also socialised on the merits of openness and sharing and the expectations of such mutual sharing and non-opportunistic behaviour. One firm founder commented that “You learn about the need to share each other’s resources” (Founder, Firm O). We next show how the network members now began to leverage this internal social capital for an ever more rapid international development through sharing timely and relevant international market intelligence.

The growth of this local social horizontal network continued apace and, over time, more diverse international market knowledge accumulated within the local horizontal social network. Ultimately all boats were seen to rise from the open sharing of valuable international market knowledge: “We support each other to make it happen, that’s how we have grown the network” (Founder, Firm C). Even with differential individual firm growth and success in the global marketplace, the willingness to share and assist others’ development remained integral within the local horizontal social network. Because of rich internal social capital, they continued to share market knowledge and global industry contacts without feelings of threat or vulnerability. The open, trusting network dynamic also persisted due to members’ enduring a sense of security within the local horizontal social network for safe non-vulnerable knowledge sharing with international market-seeking fellow industry members. Newer voices were always welcomed rather than crowded out and while pioneer firms with strong track records of international achievement were obviously more impactful, the newer approaches of late entrants to international market development (e.g. social media) were shared and accepted, thereby avoiding groupthink. Cross-generational learning within the local horizontal network, therefore, was bi-directional but mainly paternalistic. Later entrants to the local horizontal social network continuously learned from the mistakes of the pioneers and early entrants. One example of learning
related back to us by a pioneer network member that had held its important first full animated feature-length movie premiere in Dublin. The event went undetected in the global marketplace. As a result from the learning from this location mistake, future premiere events took place in overseas markets, mainly in the USA.

Even nascent network members found they could easily cultivate relations even with the most experienced and iconic powerful local horizontal social network members. The founders also learned from and shared their early experiences as novices in the international marketplace, both positive and negative. Fellow pioneer entrants collectively learned from these stories and later shared their learnings with latecomer members of this horizontal social network. “War stories” from early engagements in the global market battlefield of overcoming adversity in the international marketplace, cunningly opening, even breaking down doors, accessing customers, evading gatekeepers, promising looking trails that dried up, etc. were passed on and became part of the local horizontal social network folklore and heritage. Importantly, there was both experiential and congenital learning evident in the network.

This development of rich internal social capital with harmonious community spirit and collaborative intensity within the highly cohesive network was supplemented by the industry association “Animation Ireland”, a government-funded representative body tasked with promoting and co-ordinating manifold activities of Ireland’s animation enterprises. Animation Ireland’s organisational infrastructure was marshalled to supplement its community of member firms’ own informal network activities to acquire global market intelligence and make sales internationally. Animation Ireland’s personnel possess an intimate knowledge of each animation company in the network and strenuously strove on their behalf for their international success, often behind the scenes. Locally, Animation Ireland’s personnel also organised, sponsored and hosted important networking events that complemented the animation network’s members more informal social meet-ups as friends and confidantes. More specifically, Animation Ireland organised talks, events, workshops, local conferences at which there was high attendance and wherein market intelligence, information and knowledge was shared openly. This attenuated many liabilities of newness and outsidership for new network members. Membership was thus considered prudent by the study firms as there is perceived to be a collective benefit in sharing information and reducing transaction costs.

As well as providing an important institutional scaffolding for the network locally, Animation Ireland also played a central role in international market development for its members. Animation Ireland was instrumental in showcasing individual member successes of its network members and also for the industry sector as a whole. “We sell the ‘Animation Ireland’ brand in international markets and at trade and industry events. With the growth of the animation sector here (Ireland) in the last number of years, that brand is getting very important internationally for market access” (Animation Ireland). Animation Ireland recommends international trade shows or festivals to member firms, as well as highlighting individuals with whom contact, whilst in attendance, could prove fruitful. The members of the network communally benefit from Animation Ireland’s organisation and coordination of activities at international trade shows and film festivals under an umbrella stand. This collective presence bestows further legitimacy and reputational capital on the network of firms which meant that network members could share information on commissioning agents at the events. There is also collective efficiency as the umbrella stand alleviates the expense of individual attendance for network members.

Animation Ireland was also found to target important attendees at these international events and intermediate between agents and its network members: “we do not just have a stand at a trade event, it’s a much higher level of engagement” (Animation Ireland). One interviewee recounted Animation Ireland advising that “You should talk to this person, meet that person. They (Animation Ireland) have been excellent” (Firm A). Industry association members recognised and appreciated their efforts: “At Kidscreen
(a large animation tradeshow held in various hosting countries worldwide) they organized a networking event” (Firm E). “There is an event at Annecy in France, and they (Animation Ireland) did a spotlight on Ireland” (Ferm C), “At MIPCOM (various hosting countries) they made new connections and unlocked new business opportunities” (Firm A).

Animation Ireland has a wide global network. Key personnel have critical contacts within the content commissioning departments of international movie and TV studios. This means that they can provide valuable international market intelligence that further supplements global market knowledge that exists within the social network. “We (Animation Ireland) meet a huge variety of content producers, sales agents, distributors and broadcasters from many countries”. Such direct industry contacts have been nurtured and developed over years of activity and networking in the global animation industry. “They know more people than we do, and they pick out people you should meet so that you don’t waste time meeting people that aren’t going to do anything for you” (Firm A). “They will set up meetings which kick-start new connections” (Firm C).

As a consequence of their orchestration and intermediation activities, membership of the Animation Ireland industry association consisted of the full population of animation firms producing content for TV and movie commissioners. While membership of the Animation Ireland industry association was naturally voluntary, the extent of engagement expected of, and delivered by members was high. Member firms were actively engaged, rather than holding a passive affiliation with the Animation Ireland.

Oscar Bravo: global reputation effects and collective legitimisation
Collective legitimacy for the network, that afforded extended global reach and international market access, emanated from credibility gained from the accumulation of individual members’ excellent quality original work delivered on time and budget and resultant international awards: “Any company that performs and does well is seen to raise the profile of every company” (Firm D). The reputation of the network grew in the international marketplace over time to the benefit of even nascent members.

Positive “word-of-mouth” gave rise to new international connections and market opportunities via referrals and recommendations of the firms’ craft, products and performance in terms of quality of content, timeliness of delivery and on-budget production: “OK, they have managed this one perfectly well, they made a good project, brought it in on time, on schedule” (Firm O). One firm posited that “once you do one job it links to another and so on. Previous work brought us more work than anyone can imagine” (Firm A). Another respondent simply added, “You have to build trust with others, and you only can do this by doing excellent quality work for them and as a result, one job will lead to another” (Firm D). Another stated that: “We’re known as a really easy going company to work with […] we’ve got quite a good reputation for reliability and just being good budget guys” (Firm C). Individual firm’s respective reputational capital development aggregated into a strong reputation for performance and delivery for the network community as a whole. As one interviewee reported, “It reflects well on us” (Firm B).

There was widespread global animation industry content purchasers’ confidence in the recommendations of these strong performers. There was a common appreciation amongst network members of their duty of care to all network members, particularly if poor performance followed by a positive recommendation from a fellow network member. Good track records and “earned legitimacy” for individual garnered an “ascribed legitimacy” for the wider network. There was no evidence of harmful or opportunistic behaviour by network members that would have impaired collective legitimacy and be injurious to all members of the local horizontal social network. Each firm willingly provided endorsements, referrals and commendations for network members. Latecomer members could piggyback into international markets via such collective legitimacy.
The within-industry reputation for quality work was compounded by external industry validation in the form of numerous awards garnered by network members. The reputation of the network was significantly raised when, over a short number of years, six Irish films were nominated for “Best Animation” Oscar awards, including three feature-length productions, The Secret of Kells in 2010, The Song of the Sea in 2015 and The Breadwinner in 2018 (see Table II). This represented a very high water mark for Irish animation as an Oscar nomination has been described as “the best possible endorsement” (Perry, 2010, p. 1).

Such international success in awards ceremonies led to deep and important collective reputation capital for the members of the Irish community of animations. The positive

<table>
<thead>
<tr>
<th>Year</th>
<th>Award/Nomination</th>
<th>Winner</th>
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<tbody>
<tr>
<td>2010</td>
<td>Oscar Nomination</td>
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<td></td>
<td>Fipresci Award: 34th Annecy Animation Festival</td>
<td>Cartoon Saloon</td>
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<td>Royal Television Award</td>
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<td>2011</td>
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<td>Brown Bag Films</td>
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<td>Special Animation Award: The Novara Cine Film Festival Italy</td>
<td>Prickly Pear Studios</td>
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<td></td>
<td>Best Animation Film Award: Canada International Film Festival</td>
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<td>2012</td>
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<td></td>
<td>Annecy Nomination</td>
<td>Giant Animation Studios</td>
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<td></td>
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<td>2013</td>
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<td>International Emmy Award</td>
<td>Boulder Media</td>
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<td>Emerald Star Awards at the Cinemagic Film Festival</td>
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<td>Toronto Kinder Film Festival Award</td>
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<td>2014</td>
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<td></td>
<td>SXSW Film Festival Award</td>
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<td>2015</td>
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<td>Satellite Award: Best Animation</td>
<td>Boulder Media</td>
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<td></td>
<td>Best Writing in Children’s TV Episodes by Writers Guild of Great Britain</td>
<td>Brown Bag Films</td>
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<td></td>
<td>NAACP Image Award</td>
<td>Brown Bag Films</td>
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<td>Nickelodeon Animated Shorts Selection</td>
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<td>International Emmy Award</td>
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<td>Pulcinella Award</td>
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<td>2016</td>
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<td>Nominations for the Annie Awards</td>
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<td>Nominations for the Children’s BAFTA Awards</td>
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<td>IFTA Award</td>
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<td>International Emmy Kids Award</td>
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<td>Emmy Awards at the Annual Daytime Emmy Awards</td>
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<td>NAACP Image Award</td>
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<td>European Producer of the Year Cartoon Movie</td>
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<td></td>
<td>Raindance and Flicker Rhode Island Awards</td>
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<tr>
<td>2017</td>
<td>Nominated for PGA Awards</td>
<td>Brown Bag Films</td>
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<td>2018</td>
<td>Oscar Nomination</td>
<td>Brown Bag Films</td>
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<td></td>
<td>Nominations for the BAFTA</td>
<td>Brown Bag Films</td>
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</table>

Table II. International success (2010-2018)
reputation effects for all network members from individual member’s successes are illustrated clearly in the following comments from two respondents:

“The Oscar nominations have benefited everybody, it puts Ireland on the map and portrays this is a place of good quality” and “Ireland has had many Oscar nominations […] Internationally they believe there is something creative about what is in the water in Ireland that no amount of money can buy” (Founder of Firm E).

Such reputational capital was converted by local horizontal social network members into tangible payoffs. The legitimisation gained from these achievements and successes led to the increased commissioning of product internationally across the member firms. This enhances access opportunities for the entire network as information and contacts are freely shared and market knowledge disseminated throughout the network: “Doors are opened through awards” (Firm B).

We now proceed in the paper to discuss some theoretical implications of the revealed phenomena that we have reported in this idiosyncratic study context.

Discussion
In this explanatory process study, we illustrated how active membership of a cooperative local horizontal network affords accelerated internationalisation. We paid particular attention to how the network members leveraged rich internal social capital for their acquisition of foreign market knowledge and rapid global market development, yielding born globalness for the highly collaborative network members firms. For our studied born global firms, active insidership of this cooperative local network mitigated certain liabilities of outsidership in foreign markets. This was possible as the industry grouping was characterised by benign competition at the cooperative extremity of a coopetition spectrum. Contrary to Granovetter’s (1973) and Burt’s (1992) arguments on weak ties, our findings show that strong horizontally connected firm ties within the industry had the ability to connect the member firms to foreign markets and help bridge structural holes between them and their foreign customers and partners. In this horizontal setting exhibiting mainly strong ties and close relations, the high-level relational embeddedness of trust, benevolence and solidarity discouraged opportunistic behaviour or furtive activities by any firms in the collective. The extent of competition was low, even negligible, and strongly marked by collaboration over the rivalry. This is a particular form of coopetition and supports the view that coopetition between firms can be frequently explained by the prevailing dependence between competitors operating in the same industry (Bengtsson and Kock, 2000; Crick, 2018). Based on this interdependency across horizontal actors and on similarities in resources, interests and challenges, born globals in the Irish animation sector act as valuable partners for sharing costs and risks.

Engaged membership of a local horizontal social network led to rapid accumulation and transferral of knowledge, which afforded accelerated global reach and the acquisition of international market knowledge and customers for these affiliated born global firms. The firms in the network exploited their local ties, collective experiences and communal legitimacy to access new international market contacts and opportunities. We showed that the local horizontal social network featured high-intensity collaboration with frequent open communication, timely and relevant international market information pooling and provision, reciprocal benefits, benevolent interactions, strong internal ties and bonds between members. We further explained how this active and highly engaged network membership activity conferred important international market knowledge that further accumulated and evolved within the local horizontal social network. Warm intra-network personal connections built goodwill and trust in the local domain that alleviated many liabilities of newness (Mudambi and Zahra, 2007), foreignness (Zaheer, 2002) and outsidership (Johanson and Vahlne, 2009) for
pioneer and latecomer members of this social network in their ambitions and efforts to rapidly access international markets early in their existence. The international market presence of the local horizontal social network expands collectively to the benefit of all members. While some studies have shown the existence of negative effects (Milanov and Fernhaber, 2014) or mixed benefits of over-emphasis on local relationships (Boehe, 2013; Prashantham and Birkinshaw, 2015), we illustrated the strongly positive benefits for a local horizontal social network that exhibits high-intensity collaboration.

Our findings on internal social capital refine studies that point to adverse impacts of close social relations and ties between local network members on international market performance. Strong social ties in the home country have been shown to hinder early SME international performance (Milanov and Fernhaber, 2014; Prashantham and Birkinshaw, 2015) in that an excessive internal focus may result in isolation from external valuable sources of information (Uzzi, 1997; Goerzen, 2007). However, contrary to this view, we found that this set of connected born globals was highly dependent on their strong horizontal social ties locally and close in-group relations in the initial and growth stages of international market development. We subscribe to and extend Boehe’s (2013) qualified illustration of the positive impact of strong local network relations for internationalisation rather than those close social bonds being an impediment that suppresses international market opportunities. Strong ties evolve from weak ties and at any discrete point in time there are multiple ties. Whilst multiplexity is the norm in networks (Elfring and Hulsink, 2003) the tendency in this network was towards strengthening of ties and the utility of developed strong ties.

Association with, and learnings from pioneers’ international experiences was also found to engender confidence in latecomers that they could emulate the successes of pioneer network members in international markets. Our findings illustrated that there was both experiential and congenital learning occurring in the network. We showed how a horizontal social network could cumulatively accrue a stock of international personal and business contacts derived and collated from each founder’s prior international and industry experiences (Crick and Jones, 2000; McDougall et al., 2003). Born global entrepreneurs’ deck of former foreign business contacts, acquired through prior international market exposure and previous industry experience, constitute key sources of foreign market knowledge on customers (Chetty and Blankenburg-Holm, 2000). Leveraging these communal global contacts is particularly useful for born globals (Jones et al., 2011), which typically possess limited resources for desired rapid international growth.

Our study also illustrated how each firm’s individual success benefits all local network members as market knowledge expands and reputation capital is shared. Our findings showed that the international awards garnered by individual network members drove the common good regarding enhanced credibility and authenticity and shared recognition in line with common group identity theory (O’Gorman and Evers, 2011). Our study also showed the merits and assistance of endorsements, referrals and recommendations from credible associates to enhance a firm’s legitimacy with international customers (Zain and Ng, 2006; Ge and Wang, 2013). We further explained how communal legitimacy afforded rapid market entry for latecomers to the network through piggybacking on the achievements of, and endorsements from pioneer network members.

Our study also reinforced previous research that showed that an institutional intermediary in the form of an industry association can supplement the social network’s own set of international contacts. Chetty and Blankenburg-Holm (2000) identified an industry association as especially helpful for brokering important relationships for small firms to internationalise rapidly. We challenge the findings of Belso-Martinez (2006) who conversely found that an institutional intermediary’s role was insignificant for rapidly internationalising SMEs. The industry association in our study was also shown to be highly
effective at orchestrating the communal internationalising activities and infrastructure of this local horizontal social network. This provided an institutional scaffolding for these born global ventures to enhance their collective presence and global reach into international markets. In line with previous studies (Ellis, 2000; O’Gorman and Evers, 2011), our findings support the view that institutional intermediaries utilise their resources to mobilise, coordinate, facilitate and encourage interaction and sharing amongst their industry association member firms leading to accelerated international market development. In particular, in our study, the industry association was found to have a position of formalised centrality as this is important in the facilitation of potential international customer introductions, the organisation of the attendance of these born globals at global trade forums (Caniels and Romijn, 2003) and the provision of relevant and timely international market information. In our study, the industry association acted as both a connector to external international purchasing decision makers and coordinator of the internal network that facilitated the internationalisation of this set of born globals. The industry association was shown to assume much of the intangible coordination and transaction costs across the network. We found that there were clear benefits in evidence from the collective presence at international events that expanded customer access and engendered collective efficiency from shared costs. Ultimately, in this study, we discovered complementarity between membership of an informal local horizontal social network that exhibits internal high-intensity collaboration and membership of a formalised industry association by an external network coordinator.

Our study finds that the tripartite combination of a born global’s local horizontal network relationships and social capital, collective founders’ cumulative international experiences and communal reputational legitimacy effects can be leveraged by network members to extend their global reach and international market opportunities from inception (see Figure 1).

Conclusions
High-intensity collaborative inter-firm relationships embedded in a local horizontal social network, and mediated in part by an institutional actor, can be leveraged by a set of born globals, collectively but differentially, for accelerated acquisition of international market knowledge and global customers. In essence, firms with an insufficient domestic market size and inconspicuous global presence can organise as a collective to their individual and communal benefit in their international marketplace through sharing valuable and timely international market intelligence.

![Figure 1. Local horizontal social networks for accelerated global international market development](image-url)
Contributions to theory
We principally contribute to the emerging stream of literature that explains how local relations afford international market development (Fernhaber et al., 2008; Leonidou et al., 2010; Yu et al., 2011; Andersson et al., 2013; Boehe, 2013). We explain how, under certain coopetition conditions, local connectivity affords and expands international connectivity. Previous studies identified that an excessive or over-concentration on local network relationships may hinder, or reduce the benefits of internationalisation (Boehe, 2013; Milanov and Fernhaber, 2014; Prashantham and Birkinshaw, 2015). However, in our qualitative study, we rather show how rich internal social capital grown and embedded in the horizontal network of born global firms bestows accrued benefits on all its members and in turn, affords wider global reach into international markets. We provide a richer understanding of the influence of local horizontal networks on born global internationalisation and, more so, how active membership of a such a social horizontal network can lead to high-intensity collaborative relations enabling rapid market acceleration of born globals. Further, trust in high-collaborative networks laid the foundations for expanded international market knowledge that could be widely shared amongst network members.

We also complementarily present a nuanced theory of coopetition at the cooperation extremity of the spectrum (Bengtsson and Kock, 2000; Chen, 2008; Fang et al., 2011; Gnyawali and Park, 2011; Raza-Ullah et al., 2014; Gnyawali et al., 2016; Bengtsson et al., 2016; Bengtsson and Kock, 2014; Crick, 2018). In our particular study context, cooperation between network members extends to collective efforts to create and share global market intelligence via open and rich exchange of information and knowledge.

We make some further contributions to international marketing and international entrepreneurship theory. We contribute to extant theory on how born global firms can develop their international marketing capabilities (Evers et al., 2012) and create new customer contacts in overseas markets. We also extend theory on how network coordination by an institutional intermediary, such as an industry association, affords expanded global reach and international market opportunities (Ellis, 2000; Chetty and Blankenburg-Holm; O’Gorman and Evers, 2011). Third, we add to the theory on how social and reputational capital accumulates in a horizontal social network locally and is leveraged by members to extend their global reach into international markets (Oh et al., 2006; Bangara et al., 2012). We lastly develop a theory on how active insidership of a horizontal social network locally can diminish the liability of outsidership in international markets (Johanson and Vahlne, 2009).

Managerial implications
The findings of this research have implications for international marketing practice. Our study has lessons for member firms that have the scope to be more cooperative in sharing international market intelligence for accelerated global market entry and reach. For firms that want to rapidly access international markets from their earliest days of existence market knowledge is a critical, but often missing resource. This can commonly be jealously guarded by incumbent competitors. However, where competitive conditions in an industry mean that sharing information and knowledge has mutual benefits that outweigh secrecy from rivals, managers should develop and nurture trusting relations and stridently avoid opportunistic behaviours that dent confidence in their trustworthiness from other network members. Any loss of trust would mean sanctions and even exclusion from the rich information and reputation capital that a social network may accrue and which then may be leveraged for an accelerated global market reach.

Study limitations and future research directions
Despite our contributions to extant theory, our study is not without its limitations. The high degree of market intelligence sharing in evidence in this idiosyncratic horizontal social
network is uncommon in international business. More usually, intra-industry members zealously protect their important customer contacts due to competitive pressures. While we aimed to generalise to theory development, future research on local firms wishing to rapidly enter international markets could look at differing contexts along the coopetition spectrum, in other industries and in other national cultures. Such future research could usefully endeavour to test our theoretical framework through further qualitative studies in these varieties of settings beyond the idiosyncratic, distinctive and relatively unique local network of this study.

References


**Further reading**


(The Appendix follows overleaf.)
### Appendix

<table>
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<tr>
<th>Research domain</th>
<th>Probing’s</th>
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<td><strong>Company background</strong></td>
<td>Founder(s)</td>
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<td>Year of inception</td>
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<td>Produce</td>
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<td>Employee numbers – contract and fulltime</td>
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<td><strong>Founders’ experience</strong></td>
<td>Education/training</td>
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<td>International work experience</td>
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<td>Country(ies)</td>
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<td>Duration</td>
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<td><strong>International activities</strong></td>
<td>First international sale: who, where and when</td>
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<td>Entry timings</td>
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<td>Percent of sales from international</td>
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<td>How to get access</td>
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<td>How welcome were approaches</td>
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<td><strong>Intra-network relations</strong></td>
<td>What gets shared (examples)</td>
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<td>Topics discussed</td>
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<td>How willing to share</td>
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<td>How active</td>
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<td>The frequency of meetings: formal and informal</td>
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<td>Introductions? Referrals? Commendations? (examples)</td>
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<td>Any opportunism? Lack of sharing? (examples)</td>
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<td><strong>Trade shows and festivals</strong></td>
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<td>Who organises</td>
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<td><strong>Table AI.</strong> Interview schedule topics and prompts</td>
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<td>Happy for others?</td>
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<td>Payoff? Benefits?</td>
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**Corresponding author**

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Institutional environment and network competence in successful SME internationalisation

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Abstract
Purpose – The purpose of this paper is to examine the impact of institutional environment on the international performance of small- and medium-sized enterprises (SMEs) and how this relationship is influenced by network competence.
Design/methodology/approach – This study uses a quantitative approach. In total, 119 internationally operating Finnish SMEs from five industry sectors are sampled via a cross-sectional survey. Data are analysed through regression modelling.
Findings – The international performance of SMEs is influenced directly and indirectly by institutional drivers. The results show that network competence mediates the positive relationship between institutional drivers and international performance.
Research limitations/implications – Network capability development can help SMEs leverage more or less favourable institutional environments for successful internationalisation. Perceived institutional drivers directly result in higher performance, but the effect can be partially mediated by dynamic capabilities. The limitations of the study include its single-country context and the cross-sectional nature of the data.
Practical implications – SMEs should take their home countries’ institutional environments into account, but for long-term success, they should develop the ability to manage their business networks. A conducive institutional environment may help develop competence, which in turn can enable more successful internationalisation in terms of scale, scope and satisfaction.
Social implications – Decision-makers may benefit from knowing that, in addition to capabilities, an institutionally conducive environment that drives domestic SMEs towards international markets may be an antecedent of successful internationalisation in the SME sector.
Originality/value – This is one of the few studies to illustrate how network capabilities can mediate the influence of institutional factors on entrepreneurial internationalisation. It combines institutional theory and the dynamic capabilities view to explain successful SME internationalisation.

Keywords Performance, Internationalization, Finland, Capabilities, Networks, Small- and medium-sized enterprises

Introduction
This study investigates the combined effect of institutional forces and network-related dynamic capabilities on the internationalisation outcomes of small- and medium-sized enterprises (SMEs). There are often discussions in both academia (e.g. Minnitti, 2008) and society regarding how to best promote entrepreneurial activity and growth. However, to take advantage of international growth opportunities, enterprises need to develop innovative international strategies (see Kalinic et al., 2014), specifically dynamic capabilities. In addition, marketing capabilities are linked to international entrepreneurship (Knight, 2000) and international diversification strategies (Nath et al., 2010). Therefore,
international marketing literature could benefit from more knowledge concerning these capabilities (Morgan et al., 2018). For SMEs, network capabilities can be beneficial since they facilitate international expansion, especially among smaller companies (Torkkeli et al., 2012).

Though both institutional forces and dynamic network capabilities are relevant to the international entrepreneurship and business fields, they have usually been examined separately; the institutional environment has mostly been assessed at the national level, while dynamic capabilities have been assessed at the firm or individual level. To integrate these streams of literature, we aim to answer the focal research question of this study:

RQ1. What is the relationship between the perceived institutional environment and network capabilities in the successful internationalisation of SMEs?

To justify our research focus, we identified three main gaps in the extant research.

First, current studies have indicated that the institutional environment can have an impact on entrepreneurial creation (Urbano and Alvarez, 2014), yet a recent literature review on the application of institutional theories in entrepreneurship and international business research concluded that most extant studies have focused on national-level analysis (Su et al., 2017). As a result, the role of institutional forces at the level of enterprises and industry sectors has remained relatively unaddressed. International entrepreneurship scholars have also noted that the way in which the institutional environment of an enterprise influences internationalisation is a recent topic of interest and a potentially fruitful area for continued research (Jones et al., 2011; Kiss et al., 2012; Szyliowicz and Galvin, 2010; Veciana and Urbano, 2008). This study responds to this call for research by highlighting the impact of the institutional environment on SME internationalisation at the firm level.

Second, Su et al. (2017) concluded that researchers tend to assume a direct relationship between institutions and entrepreneurial outcomes. However, they and other researchers suggest that this relationship can also be indirect. For instance, Hopp and Stephan (2012) found that the impact of cultural norms on venture creation is mediated by entrepreneurial self-efficacy and motivation. In addition, Stephan and Uhlman (2010) found that supply- and demand-side variables mediate the relationship between cultural factors and entrepreneurial outcomes, while Zhang et al. (2017) found that international entrepreneurial capabilities mediate institutional environment and performance. This study seeks to further clarify the indirect relationships between the institutional environment and international entrepreneurship.

Third, this study specifically studies the role of the institutional environment in the context of networks and international entrepreneurship. It extends prior studies (Acedo and Casillas, 2007; Kiss and Danis, 2008; Eriksson et al., 2017; Narooz and Child, 2017) by also accounting for network-related dynamic capabilities and investigating how the construct of network competence (Ritter et al., 2002) is related to the institutional environment and international performance of SMEs in a developed market context.

For practitioners, the results of this study also bring added value. For managers of SMEs seeking successful internationalisation in scale and scope, the results of this study emphasise the need to develop dynamic capabilities in order to make the best use of home-country drivers in foreign operation expansion. This study continues with a review of the central literature on the topics referenced above. Next, the hypothesis development and research methodology are presented. Then, the empirical results and their implications for theory and practice are considered. At last, the limitations of this study are addressed and avenues for future research are suggested.

**Theoretical background**

*Institutional theory and entrepreneurship*

When discussing the concept of an institutional environment (or institutional forces), this study refers to institutional theory, a framework that comprises the social forces that are
external to organisations but impact organisational behaviour (Scott, 1991, 1995). Neo-institutional theory further suggests that this impact has manifested in the norms and beliefs that shape the reality of an organisation (Hoffman, 1999). However, classical institutionalism, which has evolved into neo-institutional theory, offers economic as well as sociological and organisational views on institutions.

The definition of an institution varies depending on the conception of social reality and the research paradigm. The main difference between these definitions is related to how they prioritise institutional elements. Institutions are thus defined as the “rules of the game in a society or, more formally, [...] the humanly devised constraints that shape human interaction” (North, 1990, p. 3); taken-for-granted assumptions (Meyer and Rowan, 1991); shared interaction sequences (Jepperson, 1991); activities, beliefs and attitudes that have acquired a taken-for-granted or rule-like status in the entrepreneur’s environment (Bruton and Ahlstrom, 2003; DiMaggio, 1991) and “social structures that have attained a high degree of resilience” (Scott, 2001, p. 48).

Scott (1995) offered a structured three-pillar construct for defining institutions and their underlying structures consisting of regulative, normative and cultural-cognitive elements or pillars. Hoffman (1997, p. 36) referred to these elements as the “vital ingredients” of any institution, which exist on a continuum “from the conscious to the unconscious, from the legally enforced to the taken-for-granted”. The regulative pillar comprises the rules and laws that influence the future behaviour of objects by enforcing rewards or punishments for conformity or non-conformity, respectively. The normative pillar emphasises the values and norms that have prescriptive, evaluative and obligatory meanings. A normative system not only defines “goals or objectives (e.g. winning the game, making a profit), but also designates appropriate ways to pursue them (e.g. rules specifying how the game is to be played, conceptions of fair business practices)” (Scott, 2001, p. 55). The cognitive or cultural-cognitive pillar constitutes an internal interpretation of an external cultural framework in the form of scripts and beliefs. These constitutive elements of the institutional environment determine, to a significant extent, the legitimate strategic actions of a firm within a particular country (Dickson and Weaver, 2008; Scott, 2001).

Extant research on institutional environments has shed light on the institutional profiles of different countries. For example, Busenitz et al. (2000) and Kostova (1997) validated a measure for institutional pillars at the country level in multi-country empirical settings. In doing so, they provided empirical verification that the institutional environment of a given country can be quantifiably measured. Sambharya and Musteen (2014) identified country-level differences in necessity- and opportunity-based entrepreneurship. Additionally, the state itself can be seen as a type of entrepreneur under the guise of institutional entrepreneurship (Nasra and Dacin, 2010).

Research on the institutional forces impacting entrepreneurship has found that the institutional environment of a country can significantly either drive or prevent certain types of entrepreneurial activity. However, overall, this body of research has tended to favour the national macro-level over the meso- and micro-levels of analysis (Su et al., 2017). At the corporate (meso) level, whereas the concepts of legitimacy, isomorphism and mechanisms of institutional pressure are discussed in the domain of international management (Kostova et al., 2008), international marketing studies are built upon neo-institutional foundations, such as institutional, cultural and psychic distance, and are often linked to international business. Yang et al. (2012) showed that companies need to develop governance strategies to deal with host-country institutions and gain social acceptance and, thus, improved performance. On the other hand, Dow and Larimo (2009) criticised the concept of institutional distance in entry mode research, and the market orientation of foreign subsidiaries is linked to legal institutions (Kirca et al., 2011). Peng (2003) explained how institutional change in transition economies can impact the strategic choices a given
company makes. Balabanis et al. (2004) noted that institutional theory can be used to jointly study marketing activities and the entrepreneurship process.

In entrepreneurship literature, institutional theory and the institutional environment have been studied from different perspectives. As Baumol (1996) argued, entrepreneurial behaviour can depend heavily on the institutional environment (i.e. the "rules of the game"). Urbano and Alvarez (2014) explained entrepreneurial behaviour using a three-pillar institutional view. Institutional theory “has proven to be especially helpful to entrepreneurial research” (Bruton et al., 2010, p. 421). The relevance of institutions and the applicability of institutional theory have led research on them to be extended from macro-level country comparisons to the fields of international marketing, international business and entrepreneurship. While marketing and entrepreneurship have tended to remain distinct streams of literature, institutional theory serves as a way to link the two streams (Webb et al., 2011).

Institutional theory has been applied to the field of international entrepreneurship as well. The regulative, normative and cognitive institutional settings in home and host countries tend to influence the internationalisation decisions of entrepreneurs (Lim et al., 2010), their chosen entry mode (Brouthers and Brouthers, 2002; Brouthers and Hennart, 2007; Yiu and Makino, 2002) and their chosen target countries. These choices, in turn, may be shaped by the concept of psychic distance (Johanson and Vahlne, 1977), cultural distance (Brouthers and Brouthers, 2001; Shenkar, 2001) or institutional distance (Kostova and Zaheer, 1999; Phillips et al., 2009). Informal institutions at the country level can also impact the extent of international entrepreneurship; Muralidharan and Pathak (2017) linked high levels of self-expression and performance orientation and low levels of social desirability to increased internationalisation within new enterprises. Chen et al. (2018) found that the social value orientation of a venture negatively moderates the likelihood of the home country’s formal institutions’ forming internationalisation relationships.

Institutional settings may also determine the speed at which firms establish foreign operations (Gaba et al., 2002). Thus, there is little doubt that the institutional environment is relevant to entrepreneurs in general and to international entrepreneurship in particular.

Networks and network capabilities in international entrepreneurship

Business networking has been defined as “two or more organisations involved in long-term relationships” (Thorelli, 1986, p. 37) through linkages (“nodes”) between networked parties (“actors”) (Håkansson, 1982; Håkansson and Snehota, 1989). Some original descriptions of internationalisation, especially the network approach (Johanson and Mattsson, 1988) and the revised U-model (Johanson and Vahlne, 2003, 2009), stated that internationalisation occurs via learning through networks and is driven by the gradual acquisition of new market knowledge through business relationships between network actors. Some of these actors may reside in foreign markets and thus offer potential avenues through which organisations can learn about foreign markets and subsequently enter and commit to them. Yamin and Kurt (2018) then further emphasised the role that social network theory plays in the Uppsala model.

Business networking is considered essential for successful internationalisation among SMEs. In fact, the domain is considered important enough to warrant its own branch in the research ontology of international entrepreneurship (see Jones et al., 2011). The relevance of networks to international entrepreneurship has been recognised for a long time in the context of international new ventures (Oviatt and McDougall, 1994). It has also been recognised in SME internationalisation studies that have challenged traditional models of internationalisation (Bell, 1995) and conceptualised new types of international enterprises, such as international new ventures (Oviatt and McDougall, 1994, 2005), born global firms (Rennie, 1993) and micro-multinational firms (Dimitratos et al., 2003).

Extant empirical studies report such linkages in all types of internationalising entrepreneurial companies. Dimitratos et al. (2014) found that networking with domestic and
international partners determines the likelihood of a firm becoming micro-multinational. Both Aspelund et al. (2007) and Sasi and Arenius (2008) determined that networks enabled international new ventures to overcome their inherent size constraints and rapidly internationalise. Madsen and Servais (1997) also suggested that hybrid structures such as business networks are important, especially for the internationalisation of born global firms. Additionally, the foreign entry mode decisions of such companies are, to a large extent, dependent on their network ties (Sharma and Blomstermo, 2003).

Regardless of the rapidity of the internationalisation process, SMEs can leverage business network relationships to enter foreign markets. In doing so, business networks, rather than social networks, can influence an SME to change its strategy and mode of entry (Agndal and Chetty, 2007). SMEs’ market entry initiatives are likely to originate from opportunities created through business networks (Coviello and Munro, 1995), and embeddedness in business networks helps SMEs to grow internationally (Coviello and Munro, 1997).

In line with the network approach to internationalisation (Johanson and Mattson, 1988), business networks may consist of both foreign and domestic organisations, the latter of which are important for SMEs to increase their international competitiveness and gain foreign market knowledge (Holmlund and Kock, 1998; see also Loane and Bell, 2006). Domestic network centrality can also predict international innovation in SMEs (Nyuur et al., 2018). Thus, the extant research clearly indicates that the networks in which an SME is active facilitate its resource development, which leads to internationalisation.

It has been argued that leveraging networks is a firm-specific ability and that firms can improve their ability to develop and manage network relationships. When they do, they are said to possess network capability (Mitrega et al., 2012) or network competence (Ritter, 1998; Ritter et al., 2002). These dynamic capabilities (Teece et al., 1997; Eisenhardt and Martin, 2000) concern “the firm’s ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments” (Teece et al., 1997, p. 516), or “the firm’s processes that use resources, specifically the processes to integrate, reconfigure, gain and release resources, to match and even create market change” (Eisenhardt and Martin, 2000, p. 1107).

In this study, the focus is on network competence, as it consists of competence in dyadic network relationships, termed relationship-specific network competence (RSS), and the ability to develop a business network as a whole, termed cross-relational network competence (CRR) (Ritter et al., 2002). Network competence was originally suggested to have implications for firm internationalisation (Ritter et al., 2002), and it was later confirmed to be linked to internationally operating SMEs’ internationalisation propensity and performance (Torkkeli et al., 2012). Moreover, network capabilities contribute to the post-entry survival of international new ventures (Khan and Lew, 2018). Extant research also suggests that SME internationalisation is, to a significant extent, network-driven and that firms’ ability to develop and manage their network relationships (i.e. their network competence) is linked to more favourable internationalisation outcomes.

There have been attempts to adapt institutional theory to fit the literature on industrial networks (e.g. Melo Brito, 2001). Additionally, evidence that networks and institutions are linked has been provided by scholars such as Shirokova and McDougall-Covin (2012), who suggested that, in the context of Russia, the institutional environment can override the role of networks in facilitating entrepreneurial internationalisation.

However, extant studies examining the institutional environment have tended to concentrate on the macro-level. While several international entrepreneurship studies have noted the important influence of the external environment on the internationalisation process (e.g. Chakravarthy 1997; Jones and Coviello, 2005), there is a distinct lack of evidence on how the institutional environment influences the internationalisation outcomes of SMEs, especially those originating from developed markets; how dynamic capabilities
influence the impact of the institutional environment on entrepreneurial internationalisation and how the capability to develop network relationships, which has been deemed important by international entrepreneurship research, influences this impact. In the next section, hypotheses concerning these research gaps are presented and tested with empirical data about SMEs originating in a developed market, Finland.

**Hypothesis development**

Based on the extant literature and identified research gaps, this study examines the direct and indirect effects that the institutional environment can have on SMEs' international success. The initial assumption concerning the direct relationship is that both institutional drivers and barriers have an effect on the success of SMEs' internationalisation. This assumption is based on extant literature linking institutional environments to entrepreneurial outcomes. For instance, it has been found that favourable institutional environments are conducive to entrepreneurial decisions to establish a new company (Lim *et al.*, 2010) and entrepreneurial activity (Stenholm *et al.*, 2013). Further, Stephan and Uhlaner (2010) and Hopp and Stephan (2012) illustrated how an institutional environment can influence entrepreneurial outcomes.

Regarding international entrepreneurship, the initial decision of an SME to pursue an internationalisation strategy can be, to an extent, dependent on their home countries' institutional environments (Volchek *et al.*, 2013). Bell and Cooper (2018) further found that several types of institutional knowledge are relevant for internationalizing SMEs. Zhang *et al.* (2017) determined that sub-national institutions impact the international performance of SMEs in China and Korea indirectly through their international entrepreneurial capabilities. Also, Kiss *et al.* (2012) concluded that the institutional environment of an emerging market can impact entrepreneurial internationalisation, which can occur through institutional interactions (Oyedele and Firat, 2018).

These results might reflect the fact that path dependence in these institutional structures (see D'Arcy, 2009) could be advantageous in the long term, enabling SMEs to develop the knowledge and strategy needed for an improved performance both domestically and internationally. DiMaggio (1988) argued that companies with previous experience in international markets could create new institutions to further the interests they value, thus improving their international performance. Institutions are typically conservative structures that maintain functions and business operations for long periods of time (Rajagopal, 2000). This suggests that their impact may extend longitudinally, thus affecting the scale and scope of the international operations – or the degree of internationalisation – that firms are able to achieve.

Only a few studies have examined institutions in the international entrepreneurship domain and considered a developed market context, and most of these have investigated specific organisational aspects of institutions. For instance, Eriksson *et al.* (2017) assessed bank relationships in firms' home and host countries, and Narooz and Child (2017) analysed how institutional support affects decision-makers' networking behaviour in the UK and Egypt. Both of these studies suggested that the institutional environment of an SME's home country could have an impact on its behaviour. Thus, it is reasonable to posit that the significant role of a favourable (or unfavourable) institutional environment in the entrepreneurial internationalisation outcomes of SMEs could extend from emerging market contexts, which are more commonly examined, to developed markets.

It is proposed in this study that the perceived driving forces in the Finnish institutional environment have a positive impact on SME internationalisation and the perceived institutional barriers have a negative effect. In other words, an institutional environment that is conducive to international operations should have beneficial effects on the international activities of SMEs, enabling these enterprises to widen the scale and scope of
their foreign operations while fulfilling the strategic goals of internationalisation and thus enhancing their performance. Thus, the following hypotheses are proposed:

**H1.** SMEs that perceive a more favourable institutional environment have a better international performance.

**H2.** SMEs that perceive fewer institutional barriers have a better international performance.

In addition to the direct relationship between the institutional environment and SMEs’ internationalisation posited in **H1** and **H2**, it is hypothesised that there is an indirect relationship mediated by network capabilities. Based on the extant literature, one can presume that network capabilities have a direct positive impact on internationalisation outcomes in SMEs. In international entrepreneurship literature, dynamic capabilities in general and networking capability in particular have been recognised as important to small technology-intensive firms known as born globals (e.g. Mort and Weerawardena, 2006; Weerawardena et al., 2007). Specifically, network competence (Ritter et al., 2002) can have a direct positive influence on the internationalisation propensity and international performance of SMEs (Torkkeli et al., 2012).

Second, evidence suggests that the impact of an institutional environment on internationalisation outcomes can be mediated. For example, Zhang et al. (2017) found that international entrepreneurial capabilities can mediate between sub-national institutions and the performance of export-focused SMEs. Their arguments echo those of Jones et al. (2011), who noted in their review of international entrepreneurship that the institutional context may shape the entrepreneurial capabilities of international entrepreneurs.

The institutional context may also influence networking (Kiss and Danis, 2008), and network ties can mediate between the institutional environment and international expansion. For instance, Narooz and Child (2017) found that institutional agencies can help SMEs to develop network ties and thus reduce the perceived risk of internationalisation. Another fairly recent study by Oparaocha (2015) revealed that institutional networks can have a positive impact on the internationalisation efforts of SMEs. Similarly, the study by Freeman et al. (2006) of rapidly internationalising SMEs identified networks as the means by which firms can overcome industry-driven constraints in an external environment. International business network ties can influence the impact of export experience on export market performance (Ogasavara et al., 2016). Further, managers’ perceptions of institutional forces may affect the extent to which they seek inter-firm relationships to facilitate internationalisation (Acedo and Casillas, 2007), suggesting that mediation occurs via networks. Network-level variables may thus act as mediators between institutional forces and a firm’s growth (Webb et al., 2010).

Together, the studies described above provide empirical grounds to posit that the impact of institutional environments on SME internationalisation outcomes could be mediated by capabilities and that business networks are linked to both the institutional environment and SME internationalisation outcomes. Thus, the present study proposes that the degree to which an SME can develop and manage its network relationships (i.e. the extent to which it has network competence) (Ritter et al., 2002) can mediate the relationship between a conducive institutional environment and the successful internationalisation of SMEs:

**H3.** The level of network competence positively mediates the relationship between institutional drivers and the international performance of SMEs.

**H3a.** The level of relationship-specific network competence positively mediates the relationship between institutional drivers and the international performance of SMEs.

**H3b.** The level of cross-relational network competence positively mediates the relationship between institutional drivers and the international performance of SMEs.
Research method

Data collection

The empirical data used to test the hypotheses were collected from a sample of 119 Finnish SMEs employing between 10 and 500 people from five industry sectors: food, furniture, metal, software and knowledge-intensive business services. The study setting is relevant for two main reasons. First, it is an empirical context within a developed economy, which has received far less attention in institutional theory research than the emerging market context. There are some studies indicating that the institutional environment in Finland has a notable impact on corporate governance (Sinani et al., 2008) and international human resource management practices (Bjorkman et al., 2007). Thus, based on extant studies, it is reasonable to assume that applying institutional theory to the context of Finland is relevant. However, how doing so affects the international growth of SMEs must still be determined.

Second, existing studies on network-enabled SME internationalisation suggest that business networks (Bell, 1995; Coviello and Munro, 1997; Loane and Bell, 2006) and network competence (Torkkeli et al., 2012) are quite important for internationalising SMEs from small, open economies, such as that of Finland (Holmlund and Kock, 1998; Kuivalainen et al., 2007). However, there are few, if any, studies on the relationship between institutional drivers and the barriers experienced by these types of firms and their business networks. Obtaining data from this context is intended to provide insight into these dynamics.

The data were collected over six months through an online web survey. A sample of SMEs from the Amadeus online database was drawn using the Organisation for Economic Co-operation and Development’s (OECD’s) definition of SMEs (i.e. firms with 10–500 employees) (OECD, 2008). The search was restricted to five industry sectors: food, furniture, metal, software and knowledge-intensive business services. These sectors were selected for the intensity of their knowledge or research and development. Our aim was to control the effect of knowledge intensity on internationalisation. Through the inclusion of both traditional manufacturing industries (SMEs from the metal, food and furniture industries) and more service-oriented, knowledge-intensive fields (SMEs from the software and knowledge-intensive business service sectors), we sought to generalise the results. The selected industry sectors also facilitated a comparison of SMEs from relatively traditional, low-technology manufacturing sectors and those from high-technology, more service-oriented sectors.

A two-part survey was developed using the Webropol online questionnaire tool. The first part of the survey was presented to all firms, while the second part was administered to only SMEs with international operations. The latter part contained items concerning international activities, including the institutional barriers and drivers that affected the internationalisation of SMEs, the scale and scope of foreign operations and SMEs’ subjective assessments of their international success. Some of the items in the questionnaire were negatively worded to avoid agreement bias and account for potentially extreme response styles (see Baumgartner and Steenkamp, 2001). Finally, the survey was back-translated with the help of a professional translator and piloted with managers from two different fields.

In total, 1,147 firms were identified from the database and subsequently contacted by phone and asked to participate in the survey. During the phone call, the researchers identified appropriate respondents within the company. These respondents received an e-mail with a link to the online survey. A printed questionnaire was offered as an alternative, but it was not requested by any of the respondents. Three rounds of reminder emails were sent to non-respondents at two-week intervals. The response rate varied between industry sectors. The metal industry had the lowest response rate (16 per cent), while the furniture industry had the highest (31 per cent). The respondents were roughly equally distributed between domestic (179, 60 per cent) and international (119, 40 per cent) respondents.

A total of 298 responses were received, resulting in a response rate of 26 per cent. Of these, 119 SMEs had international operations and thus were included in the final sample.
Achieving higher response rates has been a challenge not only in Finland (e.g. Autio et al., 2000) but also in research employing mail surveys in a smaller entrepreneurship context (Bartholomew and Smith, 2006; Newby et al., 2003). Interestingly, Rutherford et al. (2017, p. 93) found “virtually no evidence that response rate has any meaningful or consistent influence on relationships in entrepreneurship, and […] there is little evidence of selective reporting when response rates are low”. Therefore, we sought to ensure the validity and reliability of the current study by testing for possible biases beyond the overall response rate.

The SMEs had an average of 39 employees and an average turnover of 5.6m Euros. The respondents were mostly managing directors (191), owners (59) or other key persons in the organisation (40). Checking the job titles of key persons on the companies’ websites and documentation revealed that most were managers from high-level strategic management and budgeting teams (e.g. CFOs, customer development managers and business development managers). ANOVA tests were conducted to ensure that the responses in the employed variables were not influenced by the type of respondent or the timing of the response and accounted for non-response bias. As none of the results of the tests were statistically significant, the sample was considered to be free of any bias related to the type of respondent or the timing of the response.

In order to minimise the potential for common method bias, several steps were taken before and after data collection, in line with the recommendations of Podsakoff et al. (2003) and Chang et al. (2010). First, the focal items were placed in different parts of the overall questionnaire and negatively worded items were included to minimise any halo effects. Second, the focal measures were made to seem like a part of a larger survey covering a range of issues for SMEs beyond internationalisation. As Chang et al. (2010, p. 179) noted, “respondents are unlikely to be guided by a cognitive map that includes difficult-to-visualise interaction and non-visual effects”. As the hypotheses in this study aim to establish mediation relationships between constructs from different theoretical foundations (i.e. institutional theory and dynamic capabilities), it was unlikely that the respondents would have been guided by the hypothesised relationships. Third, Harman’s single-factor test was conducted as an additional post-hoc test against potential common method bias. The results indicated that there were no single factors underlying the data that could have been a concern in the empirical analysis. Fourth, by including an objective performance indicator of the degree of internationalisation consisting of the total turnover and the number of countries in which the company operates, the researchers were able to adhere to the guidelines proposed by Podsakoff et al. (2003) and include a dependent variable from a different source than the one from which the independent variables were obtained (cf. Chang et al., 2010, p. 178).

Fifth, Podsakoff et al. (2012) have noted that it can be difficult to find a suitable instrument variable to control for common method variance. The marker variable technique is more suitable and was used to check for common method bias (cf. Lindell and Whitney, 2001). The number of domestic partners was regarded as a theoretically irrelevant variable and therefore usable as a marker variable. The marker variable had non-significant correlations ($p > 0.10$) with the theoretically relevant predictors and criterion variables. There were no major changes in the magnitude or significance of the correlations between the independent and dependent variables when controlling for the marker variable in partial correlation analysis. Thus, common-method bias was not expected to have an effect on the results of the study.

**Measure development**

The measures for institutional forces were adapted based on earlier research on the institutional drivers of and barriers to internationalisation (Leonidou, 1995, 2000) within the institutional environment (Scott, 2001). Respondents were asked to report their perceptions of how the institutional drivers and barriers in their environment had affected their internationalisation process using a seven-point Likert scale. This study employed subjective
measures since objective institutional measures are better for country-level analysis and subjective measures are more suitable for firm-level analysis. This is particularly true in the SME context, in which companies may or may not have specific departments or strategic business units, the entrepreneur’s perceptions may have a significant influence on the overall strategy of the company and the institutional forces perceived by individuals in power are likely to have a major effect on the internationalisation process.

Initially, 12 items were included in the measure. A two-factor solution was sought to distinguish between institutional drivers and barriers. By applying principal component analysis with the varimax rotation method and dropping items with insufficient commonality and factor loadings, a two-factor solution explaining 60 per cent of the total variance was achieved. The Kaiser-Meyer-Olkin test of sampling adequacy showed that this solution had a value of 0.59. As the KMO value was borderline, the suitability of the data was ensured by observing the measure of sampling adequacy values, which were expected to be greater than 0.50. The range of observed values was 0.54 to 0.66, indicating adequate data. In addition, Bartlett’s test of sphericity was statistically significant ($p < 0.01$), indicating that the basic assumptions in the factor analysis model were fulfilled. The Cronbach’s $\alpha$ values were 0.69 for institutional barriers and 0.61 for institutional drivers. The items’ wording, descriptive statistics and factor loadings are shown in Table I.

The measure of network competence was based on the NetComp scale (Ritter et al., 2002) and was taken from an earlier study that examined the influence of network competence on SMEs’ internationalisation (Torkkeli et al., 2012). Since the measure used in the present study was a shortened version of the NetComp scale, confirmatory factor analysis (CFA) was performed using Lisrel software. The analysis indicated sufficient model fit for a two-dimensional network competence construct based on the relationship-specific and cross-relational scales outlined originally by Ritter et al. (2002). The root mean square error of approximation value was deemed acceptable (0.068), and the main fit indices were all above the 0.90 threshold (GFI = 0.91, CFI = 0.95, NFI = 0.91). The normed $\chi^2$ was 2.12. The convergent validity of the scales was determined by estimating the average variance extracted (AVE) and composite reliability (e.g. Diamantopoulos and Siguaw, 2000). Testing for discriminant validity was conducted following the heterotrait-monotrait ratio of correlations method (Henseler et al., 2015). The values for this test were 0.36 for the institutional measures (drivers and barriers) and 0.85 for the network competence measures (cross-relational and relationship-specific). Both values fell below the 0.90 threshold recommended by Gold

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th>Item-to-total correlation</th>
<th>$\alpha$ if item deleted</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Institutional drivers</strong> ($\alpha = 0.61$)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our home markets did not provide enough customers</td>
<td>4.40</td>
<td>2.00</td>
<td>0.40</td>
<td>0.53</td>
<td>0.72</td>
</tr>
<tr>
<td>There was a positive attitude towards internationalisation in our operational environment</td>
<td>5.10</td>
<td>1.50</td>
<td>0.38</td>
<td>0.31</td>
<td>0.74</td>
</tr>
<tr>
<td>Internationalisation was taken-for-granted among the firms in the industry</td>
<td>4.25</td>
<td>1.79</td>
<td>0.33</td>
<td>0.35</td>
<td>0.78</td>
</tr>
<tr>
<td><strong>Institutional barriers</strong> ($\alpha = 0.69$)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our internationalisation was restricted by domestic legislation or other regulations</td>
<td>2.29</td>
<td>1.47</td>
<td>0.48</td>
<td>0.62</td>
<td>0.78</td>
</tr>
<tr>
<td>Our internationalisation was restricted by the strongly negative domestic attitude towards international business activities</td>
<td>2.13</td>
<td>1.39</td>
<td>0.60</td>
<td>0.47</td>
<td>0.86</td>
</tr>
<tr>
<td>Professional standards restricted our internationalisation</td>
<td>2.55</td>
<td>1.55</td>
<td>0.44</td>
<td>0.68</td>
<td>0.71</td>
</tr>
</tbody>
</table>

Table I. The institutional factors, items and descriptive statistics
et al. (2001) and Teo et al. (2008). In addition, the square roots of all AVE values were examined and found to be significantly higher in value than correlations among constructs, thus providing added support for the discriminant validity of the constructs (cf. Fornell and Larcker, 1981). In addition, two alternative models were run: one including all the items concerning network competence within the proposed dimensions and one with a one-factor model. The results of the CFA of network competence with the items listed in the Appendix outperformed the two alternative models by a significant margin.

International performance is one of the main outcomes assessed by quantitative research on international entrepreneurship (Knight, 2001). It has been explained through either an “objective” measure termed the degree of internationalisation (cf. Sullivan, 1994) or a subjective assessment of how well an SME succeeded in reaching its internationalisation goals. However, in general, international performance should be measured by multi-dimensional measures (Katsikeas et al., 2006; Zou and Stan, 1998). To account for potential common method bias, both subjective and objective measures of international performance were used in the analysis. Specifically, our objective measure of international performance captured the scale (foreign share of turnover) and scope (the number of countries in which the company operated) of international activities. The subjective performance measure was estimated by a set of items on a Likert scale, which converged on a single-measure scale with a Cronbach’s $\alpha$ value of 0.95 (see Appendix for the individual items). To determine whether an objective or subjective performance measure should be emphasised for individual results, the two hypothesis-testing models were employed individually for each type of performance. They were then standardised and combined into one international performance measure, which captured the dimensions of scale, scope and strategic success.

Finally, we controlled for the firm’s size (measured by the number of employees), industry sector and age. These control variables were chosen because, as pointed out in the literature review, new, small, high-technology firms tend to benefit most from (and be most dependent on) networks (e.g. Madsen and Servais, 1997; Coviello and Munro, 1997). For this reason, the industry sector variable was created to distinguish between high-tech sectors (software), low-tech sectors (food and furniture) and sectors with medium technological intensity (metal, knowledge-intensive business services). High-technology fields, such as the software industry, are also newer compared to, for instance, the metal and furniture industries. Thus, high-technology SMEs are expected to be of a newer origin. Firm age could complicate the relationships between the institutional environment, networks and internationalisation outcomes. In addition, older and larger firms likely had more time to develop capabilities (cf. Sapienza et al., 2006) such as network competence, which must be controlled for. In general, the comparatively small size of SMEs means that they are constrained in terms of resources, which is part of the reason that network use is important in internationalisation. Therefore, firm size, age and industry sector were controlled for when testing the hypotheses. As there were only seven firms with 250 to 500 employees compared to 291 firms with 10 to 250 employees, the seven firms were considered outliers in the data when running the analysis. The descriptive statistics and inter-correlations between the variables are presented in Table II.

Results

Linear regression modelling was applied to test $H1$ and $H2$. The controls-only model was run first, and then the relevant hypothesis variables were added to the second model. The results of the analysis are presented in Table III. They support $H1$ (institutional drivers are positively related to international performance) but only very weakly support $H2$ (institutional barriers are negatively related to international performance). The controls-only model (Table III, model 1) was not statistically significant ($F = 1.72, p > 0.05$). Thus, the control variables did not significantly help to explain the variance in international performance.
<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
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<tr>
<td>1. Environmental drivers</td>
<td>1</td>
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<td>2. Environmental barriers</td>
<td>0.04</td>
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<td>3. CRR network competence</td>
<td>0.21*</td>
<td>0.15</td>
<td>1</td>
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<td>4. RSS network competence</td>
<td>0.23*</td>
<td>−0.03</td>
<td>0.82**</td>
<td>1</td>
<td></td>
<td></td>
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<tr>
<td>5. Objective international performance</td>
<td>0.37**</td>
<td>−0.21</td>
<td>0.04</td>
<td>0.01</td>
<td>1</td>
<td></td>
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<tr>
<td>6. Subjective international performance</td>
<td>0.40**</td>
<td>−0.01</td>
<td>0.55**</td>
<td>0.29**</td>
<td>0.31**</td>
<td>1</td>
<td></td>
<td></td>
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<tr>
<td>7. Firm age (years)</td>
<td>0.01</td>
<td>0.16</td>
<td>−0.05</td>
<td>0.02</td>
<td>0.18</td>
<td>0.07</td>
<td>1</td>
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<tr>
<td>8. Industry (0 = low-tech, 1 = medium, 2 = high-tech)</td>
<td>0.16</td>
<td>−0.16</td>
<td>0.14**</td>
<td>0.10</td>
<td>0.05</td>
<td>0.11</td>
<td>−0.43**</td>
<td>1</td>
<td></td>
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<tr>
<td>9. Firm size (employees)</td>
<td>−0.07</td>
<td>−0.02</td>
<td>−0.01</td>
<td>0.00</td>
<td>0.03</td>
<td>0.04</td>
<td>0.34**</td>
<td>−0.13*</td>
<td>1</td>
</tr>
<tr>
<td>10. International performance</td>
<td>0.32**</td>
<td>−0.16</td>
<td>0.45**</td>
<td>0.32**</td>
<td>0.74**</td>
<td>0.81**</td>
<td>−0.22</td>
<td>0.03</td>
<td>0.11</td>
</tr>
<tr>
<td>Mean</td>
<td>4.55</td>
<td>2.26</td>
<td>4.16</td>
<td>4.47</td>
<td>−0.01</td>
<td>4.33</td>
<td>27.07</td>
<td>1.92</td>
<td>33.12</td>
</tr>
<tr>
<td>SD</td>
<td>1.35</td>
<td>1.15</td>
<td>1.30</td>
<td>1.41</td>
<td>1.58</td>
<td>1.71</td>
<td>21.30</td>
<td>0.78</td>
<td>38.26</td>
</tr>
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</table>

**Notes:** *p < 0.05; **p < 0.01
The results of the main model concerning both types of international performance (Table III, models 2 and 3) and composite international performance (Table III, model 4) confirmed that the perceived institutional drivers had a positive and significant relationship with objective international performance ($\beta = 0.41$, $p < 0.01$) and that the barriers had a negative and significant impact ($\beta = -0.26$, $p < 0.05$). When testing subjective international performance, only the influence of the drivers ($\beta = 0.38$, $p < 0.01$) was statistically significant. The same was true for the total international performance measure ($\beta = 0.39$, $p < 0.01$). The models were also significant overall (objective: $F = 6.06$, $p < 0.01$; subjective: $F = 2.45$, $p < 0.05$; total $F = 2.67$, $p > 0.01$), and the adjusted $R^2$ indicated that the explanatory power of the total international performance measure (Table III, model 4) was approximately 18 per cent. Considering that the barriers’ coefficient was statistically significant for only one of the performance measures at a 0.05 level (rather than at 0.01, as for the drivers), the analysis did not provide strong evidence in favour of $H1$. Additionally, while the coefficient was negative and significant in one model (Table III, model 2), it did not remain so for different types of international performance. Higher levels of institutional drivers were found to lead to increased international performance among SMEs across all measures, supporting $H2$.

We checked for potential multicollinearity and heteroscedasticity problems with the results. The error residuals in the analysis were found to be normally distributed, indicating no issues with heteroscedasticity. Further, the statistical tolerance and variance inflation factor scores were examined to detect possible multicollinearity between variables. However, as the former showed values between 0.3 and 1.0 and the values of the latter were between 1.0 and 3.0, no issues with multicollinearity were detected.

For $H3$, mediation analysis was conducted to establish whether network competence mediates the relationship between environmental drivers and internationalisation outcomes. The four-step approach suggested by Baron and Kenny (1986) was followed to investigate the possible effects of mediation. Kenny (2008) argued that Sobel’s test would, to some extent, not be independent when logistic regression, latent variable models and multi-level modelling were performed with the applied method, but noted that “when multiple regression is used, they are independent” (Kenny, 2008, p. 4). This is assumed to be the case when using Sobel’s test. In this study, multiple regression modelling was used, and Sobel’s test was deemed an adequate method of establishing mediation. However, it is acknowledged here that the discussion on mediation testing is continuous and there is no consensus regarding the best practices.

As the inter-correlations between variables (see Table II) indicated a lack of requirements for establishing the mediating effects of environmental barriers for any of the performance measures, we focused on the possibility that network competence mediates the relationship

<table>
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<tr>
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<th>Model 1 (controls only)</th>
<th>Model 2 (objective international performance)</th>
<th>Model 3 (subjective international performance)</th>
<th>Model 4 (total international performance)</th>
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<tr>
<td></td>
<td>$\beta$</td>
<td>$t$-value</td>
<td>$\beta$</td>
<td>$t$-value</td>
</tr>
<tr>
<td>Size (employees)</td>
<td>$-0.11$</td>
<td>$-0.09$</td>
<td>$0.30$</td>
<td>$2.85^{**}$</td>
</tr>
<tr>
<td>Industry sector</td>
<td>$0.08$</td>
<td>$0.43$</td>
<td>$-0.01$</td>
<td>$-0.07$</td>
</tr>
<tr>
<td>Knowledge-intensive</td>
<td>$0.33$</td>
<td>$2.01$</td>
<td>$1.14$</td>
<td>$0.06$</td>
</tr>
<tr>
<td>Firm age (years)</td>
<td>$-2.26$</td>
<td>$-2.45^{*}$</td>
<td>$-0.05$</td>
<td>$-0.45$</td>
</tr>
<tr>
<td>Drsivers</td>
<td>$0.41$</td>
<td>$3.91^{**}$</td>
<td>$0.38$</td>
<td>$3.20^{**}$</td>
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<tr>
<td>Adj. $R^2$</td>
<td>$0.06$</td>
<td>$0.27$</td>
<td>$0.10$</td>
<td>$0.10$</td>
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<tr>
<td>$F$</td>
<td>$1.72$</td>
<td>$6.06^{**}$</td>
<td>$2.45^{*}$</td>
<td>$2.67^{*}$</td>
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</table>

Notes: $^{*}p < 0.05; ^{**}p < 0.01$
between environmental drivers and total international performance. First, regression analyses were conducted to assess the components of mediation by examining the unstandardised raw coefficients. The relationship between institutional drivers and CRR was found to be significant ($B = 0.22$, $F = 5.48$, $p < 0.05$), as was the relationship between CRR and international performance ($B = 0.64$, $F = 11.92$, $p < 0.01$). Likewise, a direct effect was observed between environmental drivers and international performance ($B = 0.59$, $F = 10.02$, $p < 0.01$). As the requirements for Baron and Kenny’s four-step process were satisfied, the Sobel values (Sobel, 1982) and probabilities for CRR were calculated. The results of Sobel’s test (1.93, $p < 0.05$) showed a positive mediation relationship, with CRR mediating the positive relationship between institutional drivers and international performance. A similar analysis was conducted with RSS, but the results of Sobel’s test were non-significant (1.84, $p > 0.05$).

In sum, our empirical results showed that the determinants of the international performance of SMEs may depend on the perceived institutional drivers of SMEs rather than the perceived barriers. Institutional drivers also had an indirect effect on international performance mediated by CRR. Next, the implications of these results along with the study limitations and directions for further research will be discussed.

Discussion
The results highlight several points that require discussion. First, institutional drivers seem to be highly important for SMEs’ foreign market expansion. This observation supports the findings of Yang et al. (2009) concerning firms’ first entry into foreign markets. The results also suggest that, beyond the first entry into foreign markets, network competence is relevant for SMEs as they seek to extend their international operations beyond the initial stage. Specifically, the ability to manage the network level (CRR), rather than the ability to maximise individual alliances (RSS), plays an important role in the extension of international operations. Our results align with studies that have linked successful business networking to successful internationalisation among SMEs from small, open economies (Bell, 1995; Coviello and Munro, 1995, 1997; Madsen and Servais, 1997; Loane and Bell, 2006; Sasi and Arenius, 2008; Torkkeli et al., 2012) and studies that have conceptualised network-related dynamic capabilities (Mitrega et al., 2012; Mort and Weerawardena, 2006). In addition, the results of this study help to extend the recent discussion in the literature on international entrepreneurship and marketing, which has emphasised the role of institutions (Oyedele and Firat, 2018), as well as the discussion on the importance of networks and network ties (e.g. Chen et al., 2018; Nyuur et al., 2018; Yamin and Kurt, 2018) by linking the two types of studies through mediation effects.

The results suggest that the predictable path dependence of the institutional environment may give SMEs the opportunity to develop their network competence over time, thus enabling an improved performance. The mediation effect found in our analysis seems to confirm this notion; when the perceived institutional drivers were high, the firms were able to perform well in international markets. Further, the drivers led to increased network competence, which was a significant determinant of international performance. This clarifies the results of extant studies indicating a connection between networks and institutional forces (Bell and Cooper, 2018; Kiss and Danis, 2008; Ferreira et al., 2009; Webb et al., 2010); our results suggest that prevalent drivers of internationalisation may encourage SMEs to develop the network-related capabilities they need for global competition.

Conclusion
The point of departure in this study was the $RQ1$. Based on the empirical analysis, the main conclusion is that network capabilities, captured in this study by the construct of network competence, can mediate between favourable institutional environments for SMEs and
successful internationalisation outcomes. The theoretical contribution and managerial implications of this result are considered below.

**Theoretical implications**

This study contributes to the literature on international entrepreneurship in several ways. First, it strengthens the understanding of the external environment, which is essential for understanding international entrepreneurial behaviour (Szyliowicz and Galvin, 2010). Research applying institutional theory to international business, international marketing and entrepreneurship has tended to focus mainly on emerging economies (cf. Ahlstrom and Bruton, 2006; Peng et al., 2008; Meyer et al., 2009). A developed market – that of Finland – was chosen for this study because such markets are less examined than developing markets.

Second, the study contributes to literature applying institutional theory to international business and entrepreneurship, finding that, in addition to international entrepreneurial capabilities (Zhang et al., 2017), network capabilities can mediate the relationship between institutional forces and increasingly successful entrepreneurial internationalisation. In doing so, the study also extends the literature on network-driven entrepreneurial internationalisation in general (e.g. Covello and Munro, 1995, 1997; Loane and Bell, 2006) and on the impact of institutions on networking behaviour in particular (Eriksson et al., 2017; Narooz and Child, 2017). It suggests that both can be explained, to an extent, with the dynamic capability view. The unique contribution of this study is its outline of how network-related dynamic capabilities can help explain the relationship between institutional environment and international performance.

Third, as Szyliowicz and Galvin (2010) noted in their review, the majority of scholars applying institutional theory to international entrepreneurship have used a case study approach. By examining the institutional environment with a survey-based study, we add to the literature by using a less common methodology. In addition, the research concerning the institutional environment in international entrepreneurship has tended to concentrate on a specific industry or sector (Szyliowicz and Galvin, 2010). The present study, in contrast, applied a cross-sectional sample of firms from different industry sectors.

Fourth, by examining the dynamics of external (institutional environment) and internal (network competence) forces, this study contributes to the literature on SME internationalisation by accounting for both types of determinants. This is also one of the few studies that incorporate both institutional theory and the dynamic capabilities view to examine the determinants of success in internationalising SMEs. This study therefore contributes to the discussion on the determinants of internationalisation and international success among SMEs and to the understanding of the interplay between institutional forces and internal organisational competences in the internationalisation of firms.

Fifth, this study answers earlier studies’ (such as Acedo and Casillas, 2007; Kiss and Danis, 2008; Jones et al., 2011) call to examine aspects of networks and institutions in parallel when exploring the determinants of successful internationalisation. In addition, this study indicates that by developing network-related dynamic capabilities, SMEs can truly leverage a favourable institutional environment to international success. The review of SME internationalisation literature by Ruzzier et al. (2006) notes that earlier research on international entrepreneurship tended to neglect the dynamic capability view (Eisenhardt and Martin, 2000; Teece et al., 1997), and its impact on internationalising enterprises is still not well understood (Peiris et al., 2012). The role of network-related capabilities in this context is relevant, as firms’ environments tend to influence how well they are able to leverage their dynamic capabilities (Zahra et al., 2006). This study has provided some empirical evidence for this connection and outlined another context in which dynamic capabilities are relevant to international entrepreneurship.
Managerial implications

The results have some managerial implications. First, institutional barriers do not seem to hinder Finnish SMEs from operating internationally, growing and achieving their strategic goals for internationalisation. However, the generalisability of the results is limited since the perceived institutional barriers, and thus their influence on internationalisation, may be higher or lower depending on the context of the country in question.

The results further suggest that to successfully pursue their international strategies, SMEs should take the institutional environment into account. However, for successful internationalisation, they should also develop network competence (i.e. the ability to develop and manage their business networks). Thus, one of the key implications of this work is that dynamic capabilities are temporally important in the Finnish setting, where it is beneficial to build network competence as a strategic move to achieve international growth.

The results also suggest that practitioners should aim to favour network-level capabilities in planning, organising, controlling and staffing their business network relationships. Conversely, relationship-specific capabilities may not be similarly helpful in enabling SME managers to make full use of the home country institutional drivers for internationalisation: As relationship-specific network competence consists of initiation, coordination and exchange activities, the implications are that visiting networking events and trade fairs may not be enough to make use of an institutional environment that is favourable to internationalisation. Similarly, simply being able to engage in confidential exchanges of information in one’s business relationships may in itself also not be adequate for managers of SMEs to successfully internationalise their enterprises.

For political decision-makers, this also implies that networking events and trade fairs may not be the best use of public money when the aim is to support growth entrepreneurship and the international growth of local SMEs. Finally, public actors should note that an institutionally conducive environment that drives domestic SMEs towards international markets may be an antecedent to firms’ development of the capabilities they need to succeed abroad.

Limitations and further research

Naturally, the results of this study have some limitations and open opportunities for future research. One limitation is that because of the cross-sectional nature of the data, the strength of the causality between international performance and institutional perception that can be derived from the empirical analysis is limited. It may be possible that more internationalised SMEs may develop perceptions of their domestic institutional environment over time due to their growing international experience. This can be further explained by future studies with the help of a longitudinal study setting.

The possibility that SMEs may develop their dynamic capabilities, such as network competence, as a result of the institutional environment can also be investigated. Another limitation of this study is the fact that the institutional drivers and barriers were only examined from the point of view of internationally operating SMEs. Thus, any comparison between domestically and internationally operating enterprises (e.g. the propensity for an SME to internationalise) falls outside the scope of this research. Comparative cross-country research could provide valuable insights on this context by examining whether the dynamics of capability development are different in home countries with high institutional barriers. In particular, the impact of institutions and networks on the internationalisation of entrepreneurial firms may be due to different dynamics in emerging markets (e.g. He, 2012; Kiss and Danis, 2010; Shirokova and McDougall-Covin, 2012). Future research could investigate whether these differences have an influence on the capability development process.
The single-country context is a potentially significant limitation to the generalisability of the results. Finland, a small and relatively homogenous country with a developed institutional structure for supporting SMEs, is a specific empirical context in which we outlined the impact of institutional forces on internationalisation. Future research could adopt a cross-national view to allow for a comparison of this type of environment with one in which a more diverse set of institutional experiences is the norm.

This study also did not account for institutional dimensions outside the immediate sphere of neo-institutional theory, such as the conducive dimension (Stenholm et al., 2013). Future research could examine such dimensions in greater detail to obtain a holistic picture of institutional forces in the context of capability development and SME internationalisation.

It could also explore the connection between business networks and institutional forces and apply a comprehensive scale separating the cognitive, regulatory and normative pillars (see Busenitz et al., 2000; Kostova, 1997; Manolova et al., 2008), as they have seldom been empirically tested at the industrial or firm level. In light of the comprehensive institutional profiles suggested by the studies above, the measures for institutional drivers and barriers could be considered rudimentary and exploratory, as they were chosen to capture institutional drivers and barriers to internationalisation. In this study, an adequate model for CFA of this measure could not be developed. Thus, the analysis was constrained to exploratory factor analysis, which is another empirical limitation.

In sum, this study is a step towards applying institutional theory at the meso- and micro-levels of analysis, as recommended by Su et al. (2017). In the words of Szyliowicz and Galvin (2010, p. 328), “understanding the role that institutions play in international entrepreneurship […] is essential for theoretical development”. It can be argued that the same is true for international marketing literature, which could benefit from more knowledge on the impact of marketing capabilities as potential mediators between institutional environments and international performance outcomes.

References


**Appendix. Selected scale items**

Network competence and subjective international performance items

Relationship-specific network competence (RSS):

- We search actively for new partners.
- We visit potential partners in order to get to know them.
- We exchange confidential information with our partners.
- We inform others in our firm about the requirements of our partners.
- We put people from our partners in contact with key people in our firm.
- We put people in our firms in contact with key people from our partners.

Cross-relational network competence (CRR):

- We evaluate the way our relationship with each partner helps our relations with other partners.
- We evaluate the way the results of collaboration with each of our partners fit together.
- We compare our partners in terms of their technical knowledge.
- We share the same goals with our partners.
- We initiate meetings and discussions among those in our firm involved in relationships with our partners.
• We assign people to each relationship with our partners.
• We coordinate the activities involved in different relationships with our partners.
• We assess how much effort our people put into relationships with partners.
• We monitor the extent to which relationships with our partners work to our advantage.

Subjective international performance:
• “Generally speaking, we are satisfied with our success in the international markets”.
• “We have achieved the turnover objectives we set for internationalisation”.
• “We have achieved the market share objectives we set for internationalisation”.
• “Internationalisation has had a positive effect on our company’s profitability”.
• “Internationalisation has had a positive effect on our company’s image”.
• “Internationalisation has had a positive effect on the development of our company’s expertise”.
• “The investments we have made in internationalization have paid themselves back well”.

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Managing the challenges of piggybacking into international markets

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Genau and More, Aarhus, Denmark

Abstract

Purpose – The purpose of this paper is to understand the process by which piggybacking partners attempt to overcome the challenges of interfirm diversity when entering foreign markets.

Design/methodology/approach – The authors present a longitudinal case study following the collaboration between a rider (a small software developer) and carrier (a global player in software solution distribution) as a means of co-creating value for global customers in the pharmaceutical industry.

Findings – The authors find that despite differential size and incongruent organizational cultures, top managers were still initially able to facilitate collaboration through various knowledge-sharing initiatives, but that these efforts were subsequently undermined by middle managers (due to misaligned incentives), which prevented both parties from reaping the gains of piggybacking on global markets.

Research limitations/implications – The findings have a number of implications for academics and practitioners alike. Theoretical implications include treating piggybacking as a special case of indirect exporting with particular challenges for knowledge exchange and trust building.

Practical implications – The authors offer managerial implications for reconciling divergent organizational cultures, partner selection and incentive alignment.

Originality/value – This appears to be the first paper to empirically assess the viability of piggybacking as a foreign entry mode by examining the crucial processes of knowledge sharing and trust development within piggybacking arrangements.

Keywords Entry mode, Trust, Organizational culture, Internationalization, Knowledge-intensive business services, Piggybacking

Paper type Case study

1. Introduction

Firms offering knowledge-intensive business services (KIBS), such as computer software providers and engineering consultancies, have burgeoned on international markets in recent years (Ball et al., 2008; Rosenbaum and Madsen, 2012). Such firms ordinarily operate in niche markets (Bradley et al., 2006), typically requiring an international presence to achieve an operational critical mass (McNaughton, 2001). Consequently, many KIBS firms are international new ventures (INVs), which, despite limited resources, enter multiple markets from an early age (Oviatt and McDougall, 1994). Much scholarly attention has been devoted to studying the phenomenon of INVs (Aspelund et al., 2007; Etemad, 2016; Rialp et al., 2005), including the challenges specifically encountered by KIBS INVs (Burgel and Murray, 2000; Zucchella and Kabbara, 2013).

One such challenge concerns entry mode choice. When considering choice of foreign market entry (FME) mode, KIBS INVs have a more limited range of options than their manufacturing counterparts, given that the high degree of customization involved in providing highly tacit, intangible and largely inseparable service offerings (Becerra et al., 2008) effectively precludes direct exporting as an option (Ball et al., 2008). Similarly, while hierarchical FME modes such as acquisitions may afford superior control over proprietary (knowledge) assets (Sanchez-Peinado and Pla-Barber, 2006), this option is
ordinarily not feasible for cash-strapped INVs, particularly firms such as software providers which are highly R&D-intense and subject to long commercialization cycles (Gabrielsson and Kirpalani, 2004; Blomstermo et al., 2006; Sawers et al., 2008). Consequently, many KIBS INVs opt for a form of indirect exporting to share the resources and risks associated with entering foreign markets with an external collaborative partner (Crick, 2009; Zucchella and Kabbara, 2013).

One such collaborative, low-commitment, indirect export form is that of piggybacking – where a smaller firm (the “rider”) rides on the back of a larger firm (the “carrier”) into foreign markets in which the latter is already present (Terpstra and Yu, 1990). As Terpstra and Yu (1990) note, piggybacking may be considered as a special case of non-equity alliance/partnership in that it exhibits two main distinguishing features which do not necessarily characterize alliances/partnerships. First, piggybacking involves an agreement between two producers to expeditiously enter multiple foreign markets. Specifically, piggybacking thus allows riders to penetrate foreign markets using the contacts and reputation of the carrier without having establishment costs, while carriers benefit from offering wider product lines without incurring attendant R&D costs (Moen et al., 2004; Bueno Merino and Grandval, 2012). Piggybacking requires that carriers continually update riders with changes in multiple host markets, while riders are obliged to keep the carriers promptly and sufficiently informed of various product developments which comply with such changes (Payne et al., 2008). As such, successful piggybacking arrangements require that partners are willing to trust one another sufficiently to divulge proprietary knowledge (Becerra et al., 2008; Bueno Merino and Grandval, 2012).

Second, whereas other forms of collaborative partnership typically involve firms of symmetric size (Brouthers et al., 1995), piggybacking arrangements are ordinarily entered into by partners of asymmetric firm size (Merillees et al., 1998; Bradley et al., 2006). For example, Bueno Merino and Grandval (2012) provide several case illustrations of innovative SMEs riding on the back of the foreign subsidiaries of large industrial groups. By extension, piggybacking partners are likely to exhibit divergent corporate cultures (Sawers et al., 2008). Studies from the general collaborative partnership literature suggest that such interfirm diversity inhibits both trust building (Park and Ungson, 2001) and knowledge sharing (Brown et al., 1988; Park and Ungson, 2001; Moen et al., 2004; Sawers et al., 2008; Suppiah and Sandhu, 2011), with typically negative consequences for alliance longevity (Parkhe, 1991; Brouthers et al., 1995; Sirmon and Lane, 2004). We may therefore expect that the archetypal asymmetries in size and organizational cultures between partners is likely to have especially deleterious effects on the development of trust and exchange of knowledge in piggybacking arrangements. The challenges of piggybacking are further accentuated as multiple market entry necessitates high degrees of knowledge sharing, and entails differing levels of dependence – the carrier typically enters the agreement to reduce surplus capacity, whereas the rider is dependent on the carrier to access foreign customers, thus having more to lose should the arrangement dissolve; such lopsidedness exacerbates the unstable nature of the arrangement (Terpstra and Yu, 1990).

Unfortunately, despite growing numbers of KIBS INVs (Moen et al., 2004), prior studies tend to either investigate KIBS firm internationalization without considering piggybacking (Gabrielsson and Kirpalani, 2004; Arenius et al., 2006; Ojala and Tyrväinen, 2006) or examine piggybacking from a conceptual perspective (Terpstra and Yu, 1990; Ball et al., 2008). Moreover, the few empirical studies into piggybacking (e.g. Coviello and Martin, 1999; Moen et al., 2004; Bueno Merino and Grandval, 2012) do not consider the actual process of collaboration. For example, both Moen et al. (2004) and Coviello and Martin (1999) provide cases in which subcontractors had piggybacked into foreign markets, while Bueno Merino and Grandval (2012) identify resource complementaries between riders and carriers, but none of the above studies attempt to describe the processes through which such
collaboration transpired. Questions thus remain as to how piggybacking partners manage the fundamental tension that interfirm diversity attenuates mutual trust and knowledge transfers across organizational boundaries, which are otherwise preconditions for rendering piggybacking viable. The purpose of the present study, therefore, is to examine piggybacking as a distinct form of FME. In so doing, we explore how variables identified in the general alliance literature—interfirm diversity, trust and knowledge sharing (cf. Parkhe, 1991; Simonin, 1999; Sirmon and Lane, 2004), may affect the viability of piggybacking in foreign markets. Accordingly, we address the following research question:

RQ1. How do firms manage the challenges of interfirm diversity in order to build mutual trust and share knowledge when piggybacking into international markets?

Given the processual nature of the above research question, we invoke a single longitudinal case study of the interaction of two firms: a service provider (SPR) (a niche software developer INV) which piggybacks on a partner (a well-established global distributor). We follow the senior management in both firms intermittently over a four-year period, collecting data from questionnaires, participant observations and in-depth interviews.

Our novel and unexpected findings confirm that despite observed size asymmetries and incongruent organizational cultures, high levels of mutual trust between the senior management teams in the initial stage of collaboration spurred various inter-firm knowledge-sharing initiatives and the attainment of the first espoused shared goal (see section 4.1). However, in the implementation stage, domain conflicts led to middle managers at the carrier deliberately obstructing knowledge flows, ultimately preventing both firms from enjoying collaborative success. Five years later, no further common goals had been achieved.

The present paper makes a number of theoretical and practical contributions. In terms of the former, it offers initial insights into the process of collaboration between piggybacking partners entering international markets, as well as providing a contextualized explanation as to the effective failure of the collaborative venture. Regarding practical contributions, the paper provides guidance to managers considering piggybacking as a FME mode, specifically in terms of how to reconcile inherent interfirm diversity, delineate complementarities and avoid potentially debilitating conflicts.

The remainder of the paper is organized as follows: in the next section, we provide a brief overview of the literature on the foreign entry mode choice for KIBS firms, organizational culture, trust and knowledge-sharing. In Section 3, we introduce the case firms and data collection methods, prior to analyzing and discussing the case findings in Section 4. The concluding section discusses the study’s implications, its limitations and areas for further research.

2. Literature review

2.1 Foreign entry mode choice for KIBS firms

Prior studies of KIBS firm internationalization identify three main factors to explain the observed variation in FME choices: service offering attributes; firm-specific characteristics; and the nature of the industry itself. With regard to service offering characteristics, both Sharma and Johanson (1987) and Coviello and Martin (1999) found that the high degree of tacitness/intangibility characterizing the service offering of engineering consultancies resulted in a preference to internalize foreign market activities to retain control over non-codifiable knowledge, thereby mitigating expropriation risks. Additional service attributes which affect FME choice include the high degree of inseparability characterizing information-intensive firms, which mandates face-to-face contact (Ball et al., 2008) and requirements for close customer support in the exchange of knowledge (Burgel and Murray, 2000; Ojala and Tyrväinen, 2006).
Scholars focusing primarily on firm-specific characteristics typically note that resource scarcity characterizing small, fledgling KIBS INVs effectively precludes hierarchical entry mode options (McNaughton, 2001; Gabrielsson and Kirpalani, 2004). Relatedly, both Arenius et al. (2006) and Ojala and Tyrväinen (2006) report that the need to internationalize rapidly to exploit first-mover knowledge advantages created a preference for direct exporting through the internet, whereas other scholars have argued that given their limited prior experience and lack of foreign market contacts, KIBS firms will rely on collaboration with larger, more established partners to enter new markets (Merrilees et al., 1998).

A third group of studies focuses on the nature of the industry itself in order to explain FME choice. For instance, O’Farrell et al. (1998) posit that the highly customized nature of KIBS firm offerings necessitated a high degree of close interaction between the partners, especially on foreign markets characterized by diverse legal requirements, technological volatility and so forth. Sanchez-Peinado and Pla-Barber (2006) similarly suggest that the inherent high degree of internal and external uncertainty when disseminating non-codifiable knowledge across firm and national boundaries favors hierarchical options.

Given the above, piggybacking may be seen to provide a feasible FME mode option for KIBS. On the one hand, it permits resource-constrained INVs to enter multiple foreign markets without requiring the investments associated with hierarchical entry modes. On the other hand, it allows for close interaction with a host-country partner (Bueno Merino and Grandval, 2012), and thereby the delivery of an inseparable and intangible service offering, which would be infeasible through direct exporting (Ball et al., 2008). However, while piggybacking arrangements provide partners with the incentives to closely and continuously share knowledge (Moen et al., 2004), they constitute a double-edged sword for KIBS firms: they offer a necessary path for realizing relational rents, but carry the omnipresent risk of knowledge misappropriation. The characteristically time-limited nature of piggybacking – either due to firms separating because one replaced the other with a third-party (Terpstra and Yu, 1990) or because carriers subsequently acquired their riders (O’Farrell et al., 1998) – compounds this problem.

2.2 Size and organizational culture
As previously alluded to, interfirm diversity has been identified as an impediment to mutual trust and knowledge sharing across organizational boundaries (Khanna et al., 1998). According to Terpstra and Yu (1990), these differences are likely to assume particular importance in inherently asymmetrical piggybacking arrangements if carriers believe that riders lack the necessary formal structures and routines to enable the timely and effective transfer of knowledge. Other studies, however, reported no significant effect of differential partner sizes on the amount of inter-firm knowledge sharing (Cavusgil et al., 2003).

Other scholars have highlighted the link between size and organizational culture. For example, Simonin (1999) noted that contrary to large companies, small firms typically adhere less to formal structures and rely more on intuition. To assess organizational culture, scholars typically invoke Cameron and Quinn’s (2006) “Organizational Culture Assessment Instrument” (OCAI) to generate a “competing values framework” (CVF). By illustrating the dominant organizational culture type, the CVF can assess the degree of organizational culture alignment between collaborating partners. The CVF has two axes: the internal-external dimension reflects whether an organization has a predominantly internal or external focus, while the informal-formal axis, reflects whether it strives for flexibility/individuality, or alternatively, stability/control. The four archetypal cultures emanating from the intersection of the two dimensions have been labeled adhocracies, markets, hierarchies and clans. It is proposed that informal/external adhocracies tend to emphasize creativity and adaptability, formal/external market cultures emphasize targets and profits, formal/internal hierarchies emphasize order,
efficiency, certainty, stability and control, while informal/internal clan cultures stress cooperation and teamwork (Cameron and Quinn, 2006).

Prior studies report the dangers of integrating two different organizational cultures on knowledge sharing. For instance, Suppiah and Sandhu (2011) found that whereas clans shared knowledge, this was not the case for market cultures and hierarchies. Similarly, Eckenhofer and Ershova (2011) attributed repeated conflicts to tensions arising from interactions between market and clan cultures. KIBS firms may be intuitively expected to have traits similar to a clan culture. The driving force for such typically small and innovative companies is the development of new services which require close collaboration and knowledge sharing (Burgel and Murray, 2000), whereas larger carriers would be expected to more resemble market cultures due to a constant focus on the customer and individual sales goals. Accordingly, collaboration between piggybacking partners characterized by different organizational cultures may be problematic.

2.3 Trust and knowledge sharing

There is a wide body of literature attesting to the catalytic role of trust in facilitating knowledge sharing in partnerships (e.g. Ariño et al., 2001; Bradley et al., 2006). Given that trust is multi-dimensional (Seppänen et al., 2007), Mayer and Davis (1999) propose three dimensions to evaluate a partner’s trustworthiness: integrity (trust in the overall ethical behavior of the partner), competence (trust in the ability of the partner to fulfill agreed roles) and benevolence (trust that the partner will work in the other’s interests, despite underlying opportunistic tendencies). Each trust dimension encourages knowledge sharing by reducing the perception of risk arising from partner malfeasance (Blomqvist et al., 2008), and accordingly are frequently invoked to investigate the role of trust in knowledge sharing (cf. Bhattacherjee, 2002; Li, 2005; Becerra et al., 2008).

Trust between collaboration partners increases communication and the awareness of shared goals (Seppänen et al., 2007; Blomqvist et al., 2008), enhancing confidence that the knowledge shared will be mutually beneficial (Payne et al., 2008). Other scholars though (cf. Becerra et al., 2008) note the existence of a “dark side” to inter-firm trust, whereby one firm exploits the vulnerability and trusting nature of the other to advance its own interests at the counterparts expense. Awareness of this eventuality will likely reduce partners’ propensity to exchange knowledge.

In sum, the extant literature suggests that while piggybacking may appear to be a compelling FME mode choice of KIBS firms, the inherent size and cultural asymmetries between the partners may serve to stifle the building of trust and sharing of knowledge, which are otherwise preconditions for the viability of piggybacking arrangements in multiple foreign markets. It thus becomes incumbent upon us to examine the collaborative process of a KIBS firm engaged in a piggybacking relationship in international markets.

3. Research methodology

3.1 Choice of method

Given the exploratory nature of the present study, a single longitudinal case study was utilized to ensure methodological fit (Edmondson and McManus, 2007). Case studies are particularly appropriate when addressing “how” and “why” questions in the formative stages of theory building (Yin, 2003; Gao et al., 2016). Specifically, we adopted an instrumental case study, where the aim is to purposefully select a single case which may be instrumental in addressing our research question (Stake, 1995). The longitudinal aspect enabled us to gain in-depth insights into novel and complex relationships (Eisenhardt and Graebner, 2007; Siggelkow, 2007) during the dynamic process of partner collaboration (Leonard-Barton, 1990). Moreover, case studies are frequently favored in international
business settings which are highly contextualized (Michailova, 2011; Welch et al., 2011). As such, case studies have been often used to understand complex processes of knowledge sharing between service firms (Taylor, 2005), including the evolution of collaborative partnerships (Marshall, 2004). Emanating from the research question, the present unit of analysis is the dyadic relation between a rider and a carrier.

3.2 Case selection

Given the significance of case selection in case studies (Eisenhardt and Graebner, 2007), we adopt a multi-level sampling strategy to select the focal case (Fletcher and Plakoyiannaki, 2011). At the first level of the sampling strategy, we purposefully chose the same country of origin (Denmark) for both carrier and rider to assuage eventual national culture effects on piggybacking arrangements (Ariño et al., 2001). At the second level, we purposefully selected the software industry as it embodies both some degree of tangibility of the offering (where knowledge is typically embedded on a disc) and inseparability of its delivery (Moen et al., 2004). The former ensures that a KIBS firm may consider entry into foreign markets, while the latter requires a collaborative approach for a resource-scarce KIBS firm. At the third level, we carefully selected two firms which had entered a piggybacking relationship to serve overseas markets, where the rider was an INV providing niche solutions and the carrier was a well-established firm with a global presence. Our search led us to two firms supplying the pharmaceutical industry which is both global and subject to divergent (and typically ephemeral) regulations across national markets, thus mandating a high degree of knowledge sharing to ensure that the rider’s products were sufficiently adapted to prevailing national regulations.

3.3 Case description

The Danish SPR was established in 2002 with the aim of developing innovative software applications within digital documentation for companies in the pharmaceutical industry. The correct documentation is crucial to protect patients, minimize adverse side effects, and so forth, and regulations to these effects are subject to frequent amendment, which may differ from country to country. The burden of proof for satisfactory documentation lies with the pharmaceutical companies, who must remain constantly compliant with prevailing regulatory requirements in different host markets. Failure to readily retrieve regulation-compliant documentation (specific batch numbers, labeling, ingredients and so forth) during frequent inspections by regulatory authorities can have dire consequences – pharmaceutical firms risk being issued with public “warning letters,” having licenses withdrawn, or production facilities closed. These requirements have underpinned the trend away from a manual solution toward digital compliance solutions to minimize the nontrivial risk of human error. Within software development, this is referred to as governance, risk and compliance (GRC). While competitors traditionally offered standardized GRC software packages across sectors, SPR offered tailored digital software solutions specific to the pharmaceutical industry.

Although the founders of SPR were internationally-oriented (as suggested by preliminary attempts to develop software in cooperation with potential users in the USA and Singapore), ambitions to establish a global presence were effectively thwarted by lack of resources. In 2007, SPR was acquired by a private equity fund with the intention of exploiting SPR’s GRC competences in global markets. Pursuant to this strategy, SPR entered into a piggybacking arrangement in 2011 with an intermediary, INT – a Danish-based consultancy company specializing in the pharmaceutical industry and employing 1,700 workers in 25 countries. To leverage their complementary resources, the carrier (INT) used its network of global clients to promote the SPR’s GRC solutions to its clients. SPR thereby gained access to global clients with modest resources (e.g. only 25 employees – compared to INT international sales force comprising in excess of 150 individuals), while INT broadened its range of offerings without
incurring the attendant development costs. The viability of the piggybacking arrangement thus hinged crucially on interfirm knowledge transfers, specifically, the need for INT to relay important market and legislative updates to the rider SPR, which could then articulate its developments in GRC-compliant technology to the clients through INT’s salesforce.

3.4 Data collection and analysis

As noted by Hassett and Paavilainen-Mäntymäki (2013), the choice of a single longitudinal case study requires certain justifications in terms of data collection procedures. The present research project lasted four years. It commenced from the time that we entered the field (at the inception of the partnership in 2012) until gathering our final data in 2016. The data collection procedure comprised three phases: first, following contacts by one of the authors, five senior managers from both SPR and INT individually and anonymously completed surveys into organizational culture (the OCAI) and trust toward their partner. Both surveys were translated into Danish by a native Dane, and later back-translated by a native English speaker fluent in Danish, which failed to reveal any interpretative inconsistencies. OCAI results were then plotted onto the CVF to illustrate the dominant organizational culture, while trust questions tapped into the partner’s integrity, ability and benevolence (Mayer and Davis, 1999), for reasons expounded upon in section 2.3.

Second, following Leonard-Barton (1990), we supplemented our survey data with direct observations. Specifically, we attended two workshops (involving both top management teams) and three subsequent joint meetings (comprising middle managers and operational personnel). The former events were moderated by a professional facilitator and lasted approximately four hours, during which each team separately discussed how to enhance collaborative knowledge-sharing in light of the survey results. Attendees in the joint meetings discussed progress during the implementation stage.

The third phase of data collection comprised follow-up separate semi-structured interviews in January 2015 with both the CEO and sales director of SPR at company headquarters. The purpose was to shed light on the informants’ experience of the evolution of collaboration with INT. The interview guide comprised themes about knowledge sharing, customer contact, the process of collaboration and an evaluation of collaborative success. The same back translation procedure reported above was applied. Table I summarizes the data collection procedure.

<table>
<thead>
<tr>
<th>Data source</th>
<th>What/who</th>
<th>When/where</th>
<th>Why</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surveys</td>
<td>Top managers: 5 from SPR and 5 from INT</td>
<td>March 2012; Respective headquarters of INT and SPR, Copenhagen</td>
<td>To identify levels of trust toward piggybacking partner and own assessment of organizational culture</td>
</tr>
<tr>
<td>Direct observations</td>
<td>Workshops: Top managers: 5 from SPR and 5 from INT (as before); 3 joint meetings: Various operational personnel and middle managers</td>
<td>Workshops: December 2012 (SPR) and January 2013 (INT); Joint meetings: Intermittently in period 2012–2013</td>
<td>To observe how senior managers initially facilitated knowledge sharing and reactions to these initiatives in the implementation phase</td>
</tr>
<tr>
<td>Semi-structured interviews</td>
<td>2 semi-structured interviews with SPR’s CEO and SPR’s sales director</td>
<td>January 2015</td>
<td>SPR’s headquarters</td>
</tr>
</tbody>
</table>

Table I. Summary of the data collection process

Notes: The senior management teams comprised the following titles: INT: CEO; VP Sales Emerging Markets; VP Strategic Development; VP Business Development; VP Sales China. SPR: CEO; CIO; Sales Director; Business Development Manager; Area Manager
As such, we triangulate our data by utilizing multiple methods, multiple techniques and multiple respondents (Jick, 1979) in order to mitigate potential respondent bias and ensure congruence of findings, thereby enhancing the study’s construct- and internal validity (Yin, 2003). Moreover, we invoke both real-time (during joint meetings) and retrospective data collection (during workshops and interviews) which are regarded as important facets of longitudinal case studies (Hassett and Paavilainen-Mäntymäki, 2013).

The interviews and workshops were recorded and subsequently transcribed. Consistent with the case study approach, field notes were compiled after each type of data collection (Yin, 2003). To enhance reliability, the data were stored in a case database, allowing us to sift repeatedly through the data to derive our insights. The interview transcripts were read several times by the different authors in order to arrive at consensus regarding how to reduce the data (i.e. extract information relevant to our research question) via coding. In terms of coding, we invoked the template analysis technique for qualitative data, where we used predetermined (a priori) codes derived from themes from the extant literature (trust, size, organizational culture and so forth) as well as being open to additional codes which may emerge from the text analysis (Miles and Huberman, 1994). The flexibility of this approach – combining both planned (a priori) and emergent (in vivo) elements, is well suited to the exploratory nature of the present study, which examines the relevance of familiar concepts/insights in a new empirical context (i.e. piggybacking collaboration) (Herstein et al., 2017). Excerpts from the interviews and workshops are interspersed throughout the findings section to contextualize the emerging themes.

4. Findings and discussion

Consistent with the longitudinal case study approach (cf. Marshall, 2004), our findings are presented chronologically starting with the initial stage of collaboration (section 4.1), followed by the implementation stage (section 4.2). The data pertaining to the initial stage were derived from the first and second phases of data collection, while the data relating to the implementation stage emanated from the third phase.

4.1 The initial stage

The initial stage of collaboration was characterized by close and continual interaction between the top managers from both companies. In preliminary meetings, senior managers clearly delineated and strongly articulated resource complementarity: while the rider (SPR) lacked market knowledge and contacts with global pharmaceutical companies, the carrier (INV) lacked technical knowledge of software applications which could solve these clients’ compliance requirements across different national markets. Recognition of such resource complementarities typically facilitates the exposition of shared values (Das and Teng, 1998). During the second workshop, the partner firms articulated four common goals for the piggybacking arrangement: to offer one-stop GRC shopping (i.e. turnkey software solutions) for pharmaceuticals; to become market leaders for GRC software in the four main pharmaceutical clusters in the USA, Germany, Switzerland and China; to open a regional headquarters in Asia with shared representation; and to set up a joint representative office in Silicon Valley (where SPR would establish its new global headquarters).

In the present case, mutual trust scores for the respective top management teams were relatively high compared to similar studies (cf. Li, 2005), though there were slight differences in mapping the three dimensions of trust – integrity, competence and benevolence. Table II illustrates that whereas SPR top managers displayed higher confidence in the integrity of INT as a partner than vice versa (9.0 vs 8.6 as measured on a ten-point scale), senior managers at INT had higher levels of trust in the competence (9.3 vs 8.9) and benevolence (9.4 vs 8.8) of SPR, than vice-versa. Our field notes from the workshops point to concerns expressed by the rider’s top managers regarding the carrier’s technical strength: a top SPR
manager referred to the INT sales force as being “not particularly technical”, while another “questioned their competence within compliance, selling solutions, and experience with heavy IT.” These concerns may explain the relatively low score for competence trust ascribed by SPR. In general, though, the comments during the workshops were largely positive. For example, one senior SPR manager remarked: “We have always lacked a strong partner – we will undoubtedly have this in [INT].” Similarly, one of their counterparts from INT proclaimed: “I have really high expectations of [SPR’s] software. There is undoubtedly great potential here – I am really looking forward to cooperating with them.”

This overall high level of mutual trust facilitated various knowledge-sharing initiatives in the initial stage, including establishing a steering group to promote mutual understanding during quarterly meetings and encouraging socialization activities where key individuals (jointly termed “cooperation ambassadors”) were selected for exchange visits. Furthermore, SPR employees were exposed to the sales and marketing practices of INT, while INT sales personnel gained insights and certifications into software development via SPR technical courses, coaching seminars and product demonstrations. SPR managers noted a transition over time in the attitude of the operational personnel from a pre-occupation with smaller, more functional issues of collaboration to focus on larger issues such as requests to be involved in steering group activities and requesting memoranda of INT’s meeting with customers. This resulted in the rider launching a global helpdesk to support the reseller carrier. This climate of knowledge sharing fostered by senior management involvement led to the establishment of a common platform to create one-stop shopping, and thus the realization of the first of the four common goals referred to above.

In terms of organizational culture, the OCAI questionnaires completed by the respective top management teams revealed the expected incongruence in organizational cultures (Table II). Whereas SPR’s top managers characterized the company as having a clan culture, their counterparts in INT described their organization as having a market culture.

The resulting CVF would therefore predict barriers to knowledge sharing. The clan culture (SPR) would typically have a propensity to share knowledge to facilitate collaboration and pursue common goals, whereas market cultures (INT) focus on competing, winning and performance. While some scholars reported that organizational culture dissimilarities inhibited knowledge sharing and adversely affected performance in other international collaborative arrangements (Simonin, 1999; Sirmon and Lane, 2004), our findings support those of other scholars (e.g. Leisen et al., 2002), specifically that firms of different sizes and mixed organizational cultures can collaborate, at least in the short run, in the presence of resource complementarity and mutual trust.
4.2 The implementation stage

Despite such senior management initiatives, knowledge transfers decayed significantly in the implementation stage, when responsibility was delegated to middle managers. It became quickly apparent that the INT middle managers’ subsequent resistance to share information with their counterparts lay in the fact that its traditional core business derived from establishing and maintaining manual compliance systems in (typically) new production facilities of their customers ("consultancy hours"). For the customer, the main motivations for shifting from the manual solution to SPR’s software were cost savings, readily-updated compliance with regulative requirements, and ease of information retrieval. Accordingly, this required the carrier’s sales personnel to focus more on selling the rider’s GRC software (for which they were relatively inexperienced) rather than earning revenue from consultancy hours. As SPR’s sales director explained, selling SPR’s GRC systems is “a hard job, with a long incubation time, (requiring) a lot of effort. It’s easier to sell small task solutions that take a couple of hours than to sell large systems.” This naturally eroded INT’s sales team’s margins.

Furthermore, not only did GRC require less personal contact with the customer than the manual solution, the lack of GRC competence at INT also meant that the customer would need to rely strongly and continually on SPR’s support staff to assist with technical queries. As the SPR Sales Director noted, “[…] then it is us who will retain contact with the customer.” The fact that SPR would assume some of INT’s traditional tasks would further reduce INT’s number of billable hours. SPR’s CEO stated: “I think that the resistance is caused by the fact that […] they have all their key performance indicators such as sales of consultancy hours and then we come in and say we come here with a piece of software with a 3-month payback time on tasks that they usually solve for them [the clients]” adding that its software “[…] may actually cannibalize [INT’s] core business […] if [our system] can oversee a process more effectively, then [they] […] cannot sell consultancy hours for overseeing the process manually, and […] then we have internal resistance inside [INT].”

As a consequence, SPR was duly concerned that INT middle managers may be disinclined to sell its software, despite offering tangible benefits to the customer. As SPR’s sales director admitted, even though the two teams “[…] had quite a lot of meetings and had come up with a list of potential customers […] they [INT] had not really contacted them.” This lack of enthusiasm on the part of INT resulted in SPR fears that sales of its software may be unlikely to reach their full potential in foreign markets. Our findings in this regard corroborate several organization scholars’ findings of middle management resistance to senior management initiatives in the implementation stage (Guth and MacMillan, 1986). In such situations, middle manager self-interest overshadows organizational interests as perceived by top managers (i.e. the relational rents accruing from successful piggybacking). This resistance, even deliberate sabotage, has been detected in other studies investigating divergences between top- and middle managers in organizations participating in collaborative arrangements across borders (e.g. Kandemir and Hult, 2005). For instance, Brouthers et al. (1995, p. 18) posited that asymmetries in size and corporate culture between alliance partners can be overcome “when peer relationships between the top managements can be assured,” but that it also necessitated top-down delegation.

It also led to rider concerns that middle managers at the carrier were deliberately misreporting information to their seniors in order to thwart collaborative attempts. SPR’s sales director commented on this issue: “I have the feeling that the real opposition is just below top management and what top management is told [i.e. by middle managers] is not what we are telling them [i.e. the middle managers] about our solutions. Some kind of self-interest driven distortion or misrepresentation of information is taking place.” Indeed, we observed that several middle managers at INT deliberately withheld information and/or failed to follow up on decisions at joint meetings with SPR personnel. As a consequence,
SPR’s sales director lamented that “when [the middle managers] present the information higher up the system, the decision is not unsurprisingly negative time and time again.”

Interestingly, the differential sizes and organizational cultures between the carrier and rider which had been smoothed over by the top managers in the initial stage manifest themselves as conflict areas between middle managers in the implementation stage. The issue of size differentials was raised during the joint meetings. This was particularly a concern of INT. Based on prior experience of another small software provider subsequently going bankrupt (resulting in a lack of technical support cover), INT middle managers were suspicious that SPR’s relatively small size might inhibit its ability to keep up with changes in national legislation affecting the former’s customers operating in geographically diverse locations. Indeed, one of INT middle managers remarked that “[SPR] is a small supplier in a large industry and that in itself makes them less credible.” Another cast doubt on the ability of SPR to survive if it lost its private equity backing: “Even though it is owned by [private equity firm name], it is still only a little operation. How long will the private equity firm continue to invest in them? What guarantees do we have?” When interviewed, SPR’s Sales Director mentioned his distinct impression that one of INT’s middle managers “[…] simply does not like small firms (and) doesn’t want to be taught by a smaller firm.”

Conversely, SPR expressed fears that INT may exploit SPR relatively small size to vertically integrate backwards once it had acquired the necessary knowledge. The operational staff at SPR (e.g. the programmers and quality controllers) in particular expressed their suspicions of INT’s intentions, that once replete with the requisite knowledge, INT would possess the competences to perform these functions itself. One of the rider’s programmers confided: “They don’t really understand our business and products […] and it doesn’t actually seem as though they are interested in getting to know our software,” while a SPR middle manager remarked: “I could have my suspicions that INT only wants to cooperate with us because they want to be a gatekeeper for us and control access to the market.” These findings reinforce the fact that SPR top managers afforded their lowest trust scores to the benevolence dimension.

Another crucial issue was the entire mindset in the two organizations. The SPR sales director expressed it in the following terms: “For us it is an ambition and passion to sell our software system, but […] for [INT] it just has to be easy for them to earn money.” Here we clearly see the clash of two incongruent cultures. SPR’s CEO conceded that it was not realistic that INT’s top management put pressure on their organization to focus on sales of SPR software and “[…] go like a thunderbolt through the organization and dictate how it should be.” In this regard, the sales director’s remarks that INT have been, in his words, far too “greedy” and have wanted to “get 2/3 of the cake even though SPR comes with 4/5 of the solution,” resonate. Resultantly, SPR had not realized any sales through INT during the first two years of the piggybacking arrangement, and the SPR sales director complained that “[…] you can hardly say that anything has gone well.” In terms of the four common goals enunciated in the initial stage of collaboration, only the first had been achieved: the collaboration had failed to create a market leading position, and joint representative offices had neither been opened in Asia nor the USA. Indeed, at the time of writing, both sets of top managers were considering terminating the arrangement.

As Moen et al. (2004) noted, the benefits of piggybacking in terms of providing a competitive service to customers on foreign markets should accrue to both rider and carrier. However, in his study of the software industry, McNaughton (2001) observed that the realization of such relational rents may be thwarted by inter-firm conflicts, specifically noting that even though software distributors are often unable to provide the same level of customer support as developers, the enhanced control that comes from direct customer contact often leads managers to resist developer attempts to contact customers (e.g. to provide training or ongoing maintenance), even though this may have been a more
efficient approach. In other words, even though INT offering SPR’s digitalized GRC solutions to the customer presented both the carrier and the rider with competitive advantages, resistance further down the hierarchy reduced propensities to share knowledge, and ultimately, to a failed collaborative project.

5. Conclusion
While piggybacking has been often suggested as a form of FME for resource-constrained KIBS INVs (e.g. Moen et al., 2004), no previous empirical studies have examined the process through which piggybacking partners try to overcome inherent inter-firm diversity, which would typically attenuate mutual trust and the exchange of knowledge between partners and therefore threaten the viability of piggybacking as a FME mode. If piggybacking partners are unable to efficaciously manage this tension, then piggybacking is unlikely to be viable, especially in foreign markets where the need to share knowledge is even more paramount given heterogeneous and evolving legislative environments across multiple markets. The present paper attempts to address this deficiency in the literature by conducting a longitudinal study of the process of collaboration between an INV rider whose software offerings are marketed by a global carrier to customers in multiple international markets.

As expected, our case findings confirmed size asymmetries and corporate culture incongruities between the two partners. Furthermore, it revealed a clear tale of two stages. The relatively high level of mutual trust between the two sets of senior managers facilitated a host of knowledge-sharing initiatives designed to achieve four common goals for the piggybacking arrangement. While the first goal (a common one-stop shopping platform) was attained during this initial stage, the achievement of the remaining goals - delegated to teams of middle managers in the implementation stage failed abjectly. The source of this failure was domain disagreements, specifically relating to contact with the client. INT’s sales personnel were disinclined to sell SPR’s digital GRC solution to their global clients as it cannibalized their traditional income stream derived from selling consultancy hours associated with manual systems and required greater effort. Sensing this, SPR expressed dissatisfaction with INT’s competence and sought closer and longer-lasting relationships with the clients (e.g. through providing maintenance agreements), which naturally, intruded upon the latter’s domain. This mutual suspicion manifest itself, on the one hand, by INT’s middle managers deliberately reporting misinformation to their superiors, and on the other, by SPR’s middle managers expressing concerns that INT lacked the competences to effectively sell GRC solutions to their customers. Collaboration effectively stalled and the project failed to realize its potential. As a consequence, five years after the senior management teams espoused the four common goals in 2012, only one had been realized.

5.1 Theoretical implications
This study contributes to the extant literature in three main ways. First, this paper contributes to the collaborative partnership literature which robustly attests to the detrimental effect of interfirm diversity (both size and corporate culture) on the propensity of the partners to trust and share knowledge with one another (Das and Teng, 1998), ultimately leading to unplanned dissolutions (Parkhe, 1991). For instance, both Eckenhofer and Ershova (2011) and Suppiah and Sandhu (2011) reported that collaborations between clan and market cultures (as in the present case) led to abject failures to share knowledge. However, our findings suggest that inter-organizational diversity does not necessarily have an adverse effect on collaborative success. Specifically, we found that size asymmetries and incongruent cultures did not per se derail collaborative interaction in the initial stage where relatively high levels of mutual trust among the respective senior management teams facilitated knowledge-sharing initiatives, but that interfirm diversity became an issue when
mutual trust dissipated between the respective middle management teams in the implementation process. While Parkhe (1991) suggested the possibility of developing intermediate corporate cultures and entering into shorter-duration contracts (to attenuate risks associated with “lock-in”), and Suppiah and Sandhu (2011) proposed better shared technology platforms to mitigate interfirm diversity and promote alliance stability, neither considered the potential role of mutual trust in preventing alliance dissolution. Our findings thus extend previous research by showing that the presence of mutual trust may militate against the otherwise negative effects of interfirm diversity on collaborative success, though with the important caveat that such interorganizational trust must permeate the different managerial strata to be efficacious.

Second, and relatedly, our case findings extend the literature on the process of interfim trust and knowledge transfer by focusing on the specific context of piggybacking. Previous research in the evolution of trust building and knowledge transfer across organizational boundaries has been confined to other collaborative entry modes as strategic alliances (cf. Khanna et al., 1998; Simonin, 1999) and joint ventures (cf. Brown et al., 1988; Pak and Park, 2004). However, as noted in the foregoing, collaborative relations in piggybacking arrangements are likely to be inherently less stable given that they are often temporary affairs between two highly asymmetric partners. Furthermore, the piggybacking partners are both knowledge-intensive firms, with an attendant high risk of misappropriation, especially in settings of domain dissensus. As such, the collaborative process is likely to be different. Unfortunately though, the few empirical studies into piggybacking treat collaboration as a “black box,” absent temporal considerations. For example, while Coviello and Martin (1999) and Moen et al. (2004) all reported that various knowledge-intensive firms (either software developers or engineering consultancies) chose piggybacking as a distinct mode of entry, none of these studies considered the evolution of collaboration within this particular mode. By utilizing a single longitudinal study, this is the first paper to generate insights into processual nature of piggybacking collaboration into international markets and thereby open the “black box.” When including a temporal dimension, it becomes clear that the dynamic process of collaboration experiences both ebbs and flows as decisions are delegated from one managerial stratum to another. We thus extend the domain of piggybacking by introducing a processual understanding of collaboration.

Third, our case findings further supplement the partnership governance literature which focuses specifically on explaining the failure of alliances operating in international markets. Earlier research explained alliance failure largely in terms of interfim conflicts of interest (Brown et al., 1988; Park and Ungson, 2001). For instance, Khanna et al. (1998) explain unplanned alliance dissolutions in terms of partner inability to satisfactorily reconcile the inherent mixed-motive nature of an alliance. In contrast, our longitudinal case data provided initial insights that the failure to share knowledge was precipitated not so much by interfim tensions, but rather more by intrafirm managerial strata tensions (i.e. between senior and middle managers). In other words, collaborative failure was more the result of the breakdown of internal, rather than external, relations. We thus propose that the possibility of intrafirm managerial tensions should be taken into account when considering partnership governance failures.

5.2 Managerial implications
The present study offers several implications as to how managers may improve collaborative interactions with their piggybacking partners. First, managers need to reconcile the characteristic differences in size and dominant organizational culture archetype by prudently delineating and articulating strategic complementarities in the formative stages of collaboration, facilitating the development of mutual trust and the necessary sharing of knowledge. KIBS firms would be prudent to focus on purposive actions such as the establishment of
common platforms, the regular exchange of personnel and associated socialization activities, intra-alliance communication tools such as extranets and jointly-worded statements to clients. Second, senior managers need to exercise caution when delegating the implementation stage to their middle managers that there are no conflicts of interest arising out of the carefully-delineated complementarities, such as domain dissensus, which if not addressed, sow the seeds of mutual distrust and disinclination to exchange knowledge, inexorably dooming the partnership to failure on international markets. Top managers in piggybacking arrangements thus need to consider internal incentive structures to assuage middle management resistance or “foot-dragging” at the operational level. In the present case, these incentives would have allowed SPR to have greater contact with the customer (to ensure greater competence in selling) while simultaneously compensating INT for its loss of income arising from customers’ adoption of GRC-software. Third, the fact that piggybacking imposes a greater dependence on one’s partner compared to other forms of indirect exporting (where firms typically have multiple distributors and agents present on foreign markets) means that the partner selection process needs to be especially judicious. While size and organizational culture differences may not, per se, hamper collaboration, the ability of top managers to clearly delineate complementarities, and align incentives accordingly is crucial to ensuring the perpetuation of mutual trust further down the hierarchy in the implementation stage. If managers are unable to resolve domain disputes, misaligned incentives, and such like, then organizational culture divergences will likely manifest themselves in overt conflict. In the present study, mutual dependence was especially high as both rider and carrier only targeted a single segment on global markets (i.e. pharmaceuticals). This dependence could have been lessened if the software developer (SPR) broadened its range to other segments, and availed itself of the services of additional carriers operating in other industries. Finally, as Ariño et al. (2001) note, collaborative success depends on managers assuming both an external and internal focus. In other words, managers should not just concern themselves with monitoring the behavior of their counterparts, but should also put themselves in their partner’s shoes, and critically and objectively examine their own internal mechanisms and actions as likely perceived by their partner. In the present case, managers failed to account for the internal factors (i.e. tensions within the managerial strata) which ultimately doomed the piggybacking arrangement.

5.3 Limitations and future research directions
The present study is not without limitations. It should be emphasized that it provides a highly contextualized account of collaborative behavior between KIBS firms in a specific FME, namely piggybacking. As a consequence, generalizing the idiosyncratic findings from a single case to a wider body of cases is notoriously problematic (Yin, 2003; Michailova, 2011). In this regard, future research may enhance the external validity (generalizability) of the present study’s findings in a number of ways. First, in highly knowledge-intense industries (such as in the focal setting), the inherent asymmetries in size and organizational culture may contrive to prevent the necessary sharing of knowledge, and thus attenuate the viability of piggybacking as a FME mode. In less knowledge-intensive industries, this may not be the case, and piggybacking arrangements could be made more viable. It would thus be incumbent to explore whether the nature of knowledge itself affects collaborative outcomes by considering piggybacking arrangements involving KIBS industries exhibiting varying degrees of inseparability and intangibility, such as engineering consultancies or legal services. Second, the focal context of piggybacking constitutes one form of collaborative FME. The present study revealed the serendipitous findings of the detrimental effect intrafirm managerial tensions on the collaborative process of piggybacking, and therefore, it would be opportune to consider the role of intrafirm managerial tensions in other cross-border partnerships such as global strategic alliances and international joint ventures. Third, given that empirical studies into piggybacking in their entirety are
extremely scarce, replications in other piggybacking partnerships would add greatly to our understanding of the roles of interfirm diversity, trust and knowledge sharing on inter-firm collaboration. Finally, the present study focuses primarily on the co-creation processes in a Danish context. There is already some evidence that national culture influences the nature and role of trust, and indeed how trust is perceived (cf. Li, 2005), and future studies may wish to examine cross-border relationships to investigate the impact of national culture on international value co-creation processes.

References


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Knowledge acquisition via internet-enabled platforms

Examining incrementally and non-incrementally internationalizing SMEs

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Abstract

Purpose – Technology has profoundly transformed the international business environment, particularly regarding the flow of information and the way in which knowledge is acquired and shared. Yet, the extent of this transformation is still underappreciated. The purpose of this paper is to examine how small and medium-sized enterprise (SME) owner/founders acquire and utilize knowledge for internationalization via internet-enabled platforms.

Design/methodology/approach – The empirical analysis draws on multiple case study methodology to examine 13 Australian SME owner/founders and the knowledge they acquire from utilization of internet-enabled platforms.

Findings – The analysis reveals four differing types of internet-enabled experiences: “technical internet-enabled experiences,” “operational internet-enabled experiences,” “functional internet-enabled experiences,” and “immerse internet-enabled experiences.” The findings indicate that internet-enabled experiences can generate both explicit and tacit forms of knowledge for the pre, early and later phases of internationalization.

Practical implications – The findings provide a structured approach by allowing SMEs to “plot” themselves against the classification of internet-enabled experiences to denote their level of technological involvement, and for discerning the types of knowledge that can be acquired. The findings are particularly helpful for owner/founders, highlighting that internet-enabled platforms are affecting the ways in which knowledge can be acquired and applied to international businesses processes.

Originality/value – The findings extend the conventional notion of knowledge acquisition for international business by highlighting how information and knowledge can be acquired via internet-enabled platforms. The findings lay the necessary groundwork for building an evidence base and theoretically extending the concept of knowledge acquisition via internet-enabled platforms.

Keywords Internet, Internationalization, Knowledge, Knowledge acquisition, Internet-enabled experience, Small and medium-sized enterprise

Paper type Research paper

1. Introduction

Information communication technology (ICT), such as the internet, has profoundly transformed the international business environment, particularly regarding the flow of information and the way in which knowledge is created, shared and organized. Yet, the extent of this transformation is still underappreciated. The internet has transformed the international business environment (Petersen et al., 2002; Loane et al., 2004; Glavas et al., 2017) by progressively reducing the barriers to internationalization (Glavas and Mathews, 2014), enabling firms to collate information and engage in innovation (Liao et al., 2009), and connect with supply chains instantaneously by improving the efficiency of network relationships (Sigfusson and Chetty, 2013), thus, increasing the number of international market transactions (Gabrielsson and Kirpalani, 2004). Subsequently, the number of firms, particularly small and medium-sized enterprises (SME) extending their reach beyond the domestic market has risen (Glavas and Mathews, 2014). Numerous factors have been identified as having an impact on the firm’s progression to internationalization (e.g. entry mode strategy, spatial and geographical factors, financial capital, industry and sector growth rates); however, knowledge for internationalization has been found to be particularly influential, playing a leading role in explaining the international market progression of firms (Clarke et al., 2013).
Tacit forms of knowledge have been found to be influential for the internationalization of firms (Petersen et al., 2002). Specifically, “tacit” forms of knowledge are about “knowing how” (Polanyi, 1966); such forms of knowledge are difficult to formalize, communicate and transfer (Nonaka et al., 1994).

Prior research highlights the importance of knowledge as a valuable resource (Erramilli, 1991; Dow and Larimo, 2011; Hollander et al., 2017) and an important determinant for firms pursuing internationalization (cf. Johanson and Vahlne, 1977; Reuber and Fischer, 1997; Chetty and Eriksson, 2002; Majocchi et al., 2005; Lages et al., 2008; Schwens and Kabst, 2009; Clarke et al., 2013; Le and Kroll, 2017). Although, the acquisition of knowledge in physical, often face-to-face relational environments is well-grounded, the literature has seldom explored the potential for internationalization knowledge to be acquired via internet-enabled platforms. Whilst the concept of tacit knowledge creation has previously been extended to studies exploring the influence of ICT, there is a debate among researchers as to whether ICT can play a role in creating and sharing tacit forms of knowledge (Panahi et al., 2012).

For instance, Panahi et al. (2012) demonstrate existing debates in the literature by concluding that there is a need to re-examine recent internet-enabled technologies in terms of their efficacy and capacity to support the development of knowledge among people and organizations. Similarly, a recent review provides support for the role of internet-enabled platforms in creating tacit forms of knowledge, however, highlights that further exploration in conjunction with continued evaluation of these efforts is necessary (Dillon et al., 2017). Likewise, there is a distinct lack of empirical evidence identifying how internet-enabled experiences, more specifically, can support and facilitate the internationalization process. Previous research (e.g. Coviello, 2015; Gulanowski et al., 2018) highlights this apparent gap, calling for studies to directly observe and explore how technological environments influence internet-enabled experiences and the accumulation of knowledge which can be utilized for the internationalization processes of the firm. As such, given the autonomous nature in which many firms are emerging, this research intends to examine the ways in which information and knowledge for informing internationalization processes is acquired, specifically through internet-enabled experiences. In addressing this aim, the research combines case study insights from 13 SMEs owner/founders, pursuing both incremental and non-incremental pathways to internationalization. By incorporating insights from incrementally and non-incrementally internationalizing firms, this study follows in the path of recent research (e.g. Gulanowski et al., 2018), suggesting that the role of knowledge in firms differs according to the pace of internationalization.

The findings overall suggest that the internet-enabled experiences are varied, according to the degree of technological involvement (Shiels et al., 2003), or the extent to which SMEs are utilizing technology to support the internationalization processes of the firm. The findings contribute to the extant literature by discriminating between four types of internet-enabled experiences: “technical internet-enabled experiences,” “operational internet-enabled experiences,” “functional internet-enabled experiences” and “immersive internet-enabled experiences”; such internet-enabled experiences allow owner/founders to acquire knowledge for internationalization, however, the degree of tacitness of the knowledge acquired varies (e.g. Ambrosini and Bowman, 2001; Chennamaneni and Teng, 2011). The resulting classification adds to the literature on knowledge acquisition (cf. Huber, 1991) for internationalization, in addition to current studies (cf. Clarke et al., 2013; Pellegrino and McNaughton, 2017), which generally neglect the role and importance of internet-enabled platforms in generating knowledge for internationalization. Further, the findings indicate that internet-enabled experiences can generate both explicit and tacit forms of knowledge for the pre, early and later phases of internationalization. Overall, the findings assist in building an evidence base and theoretically extending the concept of internet-enabled experiences.
2. Theoretical foundations

2.1 Knowledge acquisition

Knowledge has been described as structural information, while information itself represents processed data (Yli-Renko et al., 2001). The acquisition of knowledge is subsumed by the broader concept of “organizational learning,” and is the process by which knowledge is obtained or acquired (Huber, 1991). Given the literature on knowledge acquisition processes is voluminous and multi-faceted, Huber (1991) identified five subprocesses for the acquisition of knowledge: drawing on knowledge available at the firm’s inception (i.e. founder’s previous congenital knowledge), learning from experience (i.e. experiential knowledge), acquiring firms or individuals who possess the necessary knowledge required by the firm (i.e. grafting) and noticing or searching for information about the firm’s environment and/or performance outcomes (i.e. active search). This research intends to examine the ways in which information and knowledge is acquired, specifically through internet-enabled experiences (i.e. source of knowledge), rather than treating knowledge as an outcome variable of organizational processes. The research also incorporates the “explicit” and “tacit” forms of knowledge, which have previously been overlooked in studies of knowledge and international expansion (cf. Pellegrino and McNaughton, 2017; Gulanowski et al., 2018).

One dimension of the knowledge conception process is conveyed in the seminal work of Polanyi (1966), who identified the utility of “explicit” and “tacit” forms of knowledge. According to Polanyi (1966), “explicit” knowledge is readily accessed, articulated and communicable by formal, systematic language sources. Seminal work by Ryle (1950) and Polanyi (1966) proposes that tacit knowledge forms are primarily about “knowing how.” Polanyi (1966) summarizes this form of knowledge as being “tacit” in nature, whereby individuals can effectively accomplish a task, however have difficulty articulating precisely the decision rules of their actions (Chennamaneni and Teng, 2011); therefore, the knowledge itself has a personalized quality (Nonaka et al., 1994) making it difficult to formalize, communicate and transfer. The degree of knowledge “tacitness” has been labeled as a contentious issue within studies examining knowledge acquisition. For instance, research (cf. Jasimuddin et al., 2005) suggests that examining knowledge using the “degree of tacitness” may not be appropriate as the accumulation of knowledge generally falls between a continuum rather than within the categorical dichotomy of explicit–tacit knowledge. Nonetheless, other studies (cf. Ambrosini and Bowman, 2001) suggest that knowledge can be differentiated in terms of the level or degree of tacitness. Chennamaneni and Teng (2011) propose that knowledge can range from low to high in terms of tacitness. It is widely accepted that knowledge is an increasingly important resource for firms (cf. Johanson and Vahlne, 1990; Eriksson et al., 1997; Reuber and Fischer, 1999), particularly for informing the internationalization process (Johanson and Vahlne, 1977, 2009). While a vast amount of research has contributed to the understanding and importance of knowledge, the focus of this research is on knowledge acquisition – the process by which knowledge is obtained (Huber, 1991). Although a plethora of studies have examined the utility of knowledge for firms, relatively little is known about how knowledge is simultaneously created and acquired (Nonaka et al., 1994), particularly in smaller firms’ internationalization (Glavas and Mathews, 2014).

2.2 The centrality of knowledge in the internationalization process

Internationalization is a phenomenon which has been extensively researched for decades. In an ever- increasing globalized environment firms are no longer limited to competing in local markets against local competitors, nor are they constrained to competing in a narrow range of foreign markets (Gulanowski et al., 2018). Instead, the increasing
internationalization of business has enabled firms – regardless of their size – access to foreign markets around the world (Glavas et al., 2017); consequently, firms are becoming increasingly integrated, interconnected and interdependent. A confluence of factors have led to ever-increasing global interdependence, including (but not limited to) trade liberalization, which has allowed: the free-flow of goods, services, labor and technology (Gulanowski et al., 2018); advancements in transportation and reductions in transportation costs; economies of scale; the availability of inexpensive, rapid and reliable telecommunications; the integration of international capital markets (Rugman and Verbeke, 2004); and the spread of consumer knowledge (Mathews and Healy, 2008), which is the result of increased travel, advertising and marketing, and which is encouraged overall by a communication revolution. The internationalization of firms overall has become a pervasive phenomenon worldwide (Tanev, 2012), and it is well-known that knowledge plays a critical role in the context of internationalization decisions made on behalf of the firm (Johanson and Vahlne, 2009).

Previous internationalization research (cf. Johanson and Vahlne, 1977, 2009) signifies that two important forms of knowledge are required for firm internationalization: general knowledge, which is not context-specific but may be useful for international market expansion; and market or country-specific knowledge, which contains information relevant for specific foreign markets. Past studies have highlighted the utility of country-specific knowledge in influencing decision-making on: where to locate foreign direct investment activity (Davidson, 1980); market selection, including the decision to pursue geographically close or distant markets (Erramilli, 1991); export market performance (Ogasavara et al., 2016); and the scope of internationalization (Jiménez et al., 2018). It is suggested that country-specific knowledge directly influences a firm’s foreign market commitment and is the most valuable of the two forms mentioned (Pellegrino and McNaughton, 2017). Research (cf. Gulanowski et al., 2018) signifies that the speed of expansion, in conjunction with the firm’s steps to internationalization, and the role of knowledge differ in the process of internationalization. In turn, this has led to broad distinctions in the international business research paradigm between firms following an “incremental” and “non-incremental” pathway to internationalization.

2.2.1 The acquisition of knowledge for firms pursuing incremental and non-incremental internationalization processes. Early conceptualizations suggest that a firm’s internationalization processes are associated with a number of distinct, “incremental” steps following from the firm’s commitment decisions (Johanson and Weidersheim-Paul, 1975; Johanson and Vahlne, 1977). Seminal internationalization research has predominantly focused on the influential role of knowledge, whereby firms gradually expand to increasingly distant markets, incrementally, after the accumulation of country-specific knowledge (cf. Johanson and Vahlne, 1977). This deterministic view of internationalization suggests that firms expand to geographically close foreign markets, one country at a time, and only after generating sufficient knowledge and resources, thus minimizing the risks of foreign expansion. Influential work by Johanson and Vahlne (1977) suggests that internationalization is a process in which learning and knowledge about international operations and commitment to international business are coupled. As such, knowledge is noted as being a key factor in the preparedness of firms to take on the process of internationalization (Dana, 2004). Traditionally, knowledge has been perceived to be a critical mechanism for firms embarking on the process of internationalization. Research posits that a lack of foreign market knowledge is an obstacle which can only be overcome by the proactive engagement in international activities (Oehme and Bort, 2015). Whilst previous studies highlight the utility of eminent internationalization process theories, such as the Uppsala model, as an important point of reference on how internationalization, learning and knowledge accumulation are intertwined (Pellegrino and McNaughton, 2017), such models (cf. Johanson and
Weidersheim-Paul, 1975; Johanson and Vahlne, 1977) have also been widely criticized, as firms that internationalize in “non-incremental” ways are infrequently accounted for.

Contemporary studies (cf. Loane and Bell, 2006; Gassmann and Keupp, 2007; Glavas and Mathews, 2014; Pellegrino and McNaughton, 2017; Glavas et al., 2017) have challenged the traditional view of internationalization, contending that an increasing number of firms are engaging in accelerated international activity by entering numerous international markets simultaneously. Such studies argue that the gradual, or incremental, model of internationalization does not adequately explain the dynamics of expansion in the case of smaller, knowledge-intensive firms (Gulanowski et al., 2018). Such firms following “non-incremental” pathways to internationalization include “international new ventures” (Oviatt and McDougall, 1994; McDougall et al., 1994), “born-global firms” (Madsen and Servais, 1997), “born internationals” (Gabrielsson and Pelkonen, 2008), “global start-ups” (Oviatt et al., 1995) and “high-tech firms” (Aspelund and Moen, 2004). Research on non-incremental internationalization processes has increased significantly over the last decade, largely stemming from the international entrepreneurship literature, which is concerned with the study of international new ventures and global start-ups in an international domain.

Research suggests that an integral component of this stream of research has been that such firms draw on the application of knowledge-based resources and engage in international business activities from business formation in an effort to increase growth and international performance prospects (Loane et al., 2004; Knight and Cavusgil, 2004; Reuber and Fischer, 2011; Glavas and Mathews, 2014). Increasingly, scholars (cf. Knight and Cavusgil, 2004; Weerawardena et al., 2007; Clarke et al., 2013; Pellegrino and McNaughton, 2017) have utilized knowledge theory to explain the internationalization processes of firms pursuing non-incremental pathways. For instance, Pellegrino and McNaughton (2017) incorporate elements of knowledge theory, including knowledge acquisition processes coupled with organizational learning processes to examine the learning foci and sources of learning in incrementally and rapidly internationalizing SMEs. Whilst their study comprehensively examines the co-evolution of learning and internationalization processes in SMEs, it treats knowledge as an outcome of the learning process, rather than explicitly examining how knowledge is acquired. Further, Weerawardena et al. (2007) conceptually reviewed the knowledge-based approach to internationalization, examining the roles of learning and knowledge of non-incrementally internationalizing firms. The authors note that knowledge acquisition, articulation and codification is in need of further examination, so as to establish an evidence base fostering a greater understanding of the role of knowledge for firms seeking non-incremental pathways to internationalization.

Recent research (cf. Pellegrino and McNaughton, 2017) also suggests that the knowledge acquired for internationalization is not only influenced by a firm’s speed of internationalization but also the phase of internationalization. Drawing on internationalization theory, Pellegrino and McNaughton (2017) incorporated three phases into their data analysis (i.e. pre, early and later phases of internationalization), suggesting overall that the knowledge acquired for internationalization varies throughout these key phases, and that learning processes and internationalization strategy are intertwined. The study overcomes key limitations with existing studies, which do not consider firm knowledge acquisition and learning process throughout the internationalization process. The authors encourage additional theorizing, informing how knowledge is developed at the interface and utilized by firms throughout their internationalization (Pellegrino and McNaughton, 2017). A review of the literature indicates that, notably, the primary sources of knowledge and the ways in which knowledge is perceived differ significantly between firms pursuing incremental and non-incremental pathways to internationalization (Gulanowski et al., 2018). Notwithstanding this continued interest in firms following
non-incremental pathways to internationalization, the evidence base continues to be unconvincing. Further, whilst a considerable amount of research has been dedicated toward examining non-incremental internationalization specifically, much of this research to date has been largely descriptive in nature (Gulanowski et al., 2018). Furthermore, scholars (e.g. Weerawardena et al., 2007) have argued that the perseverance of non-incrementally internationalizing firms further highlights the need for additional studies, offering the potential for new theoretical insights regarding the nature and role of knowledge in the internationalization process.

2.3 International experience/s
Numerous factors have been identified as having an impact on a firm’s internationalization (e.g. entry mode strategy, spatial and geographical factors, financial capital, sector growth rates); however, knowledge gained from international experiences has been found to be particularly influential in explaining firms’ international market progression (Clarke et al., 2013). Past research suggests that international experience is a vital, but often scarce, resource for firms pursuing international market activity (Dow and Larimo, 2011; Hollender et al., 2017); its power lies in assisting firms to understand more deeply the nature of international markets (Lages et al., 2008). The non-transferable nature of international experience means the subsequent accumulation of knowledge is often tied to the firm’s employees; for example, the key decision-maker (Dow and Larimo, 2011; Jones and Casulli, 2014). Empirical studies (cf. Johanson and Vahlne, 1977; Welch and Welch, 2009) have focused on international experience accumulated by the firm during internationalization, but also the experience brought to the firm via the individual, most often the key decision-maker (cf. Michaelova and Wilson, 2008; Jones et al., 2011; De Clercq et al., 2012). Prior research highlights inconsistencies with regard to examining the various dimensions of international experience (Takeuchi et al., 2005). For instance, past research has explored the dimension of “length” of international experience, or “time-based” experience (cf. Luo, 1999), which is generally operationalized by the time spent working in an international market (Erramilli, 1991). In the context of expatriate cross-cultural adjustment, past and present international experiences have also been examined (Takeuchi et al., 2005). Past research has also suggested that the greater the length of the firm’s international experience, the greater its opportunity to accrue knowledge and develop routines (Clarke et al., 2013). The “scope” of international experience denotes the geographic diversity, operationalized by the number of international markets in which the experience was acquired (Erramilli, 1991). Although length of time and scope of international experience have been most frequently examined and operationalized, research posits that these concepts do not fully capture the changing nature and way in which experience can be acquired (Selmer, 2002), suggesting that the role of knowledge and international experience combined could be more complex than previously identified.

An additional salient aspect of the international experience construct, given its ability to facilitate the process of internationalization, is the source or origin of the international experience. Past research has examined the source of international experience by making a clear distinction between knowledge and experience gained in psychically close and distant markets. For instance, Dow and Larimo (2011) suggest international experience can be examined by measuring experience in countries similar to the host market and experience in countries dissimilar to the host market. Through examining firm-specific advantages, Clarke et al. (2013) suggest that an important element of applying firms’ international experience is the “non-location” or “location bound-ness” nature in which the experience is acquired. Non-location-bound experience includes general experience and technical knowledge, such as past educational training, which can contribute to the firm’s international market progression (Cavusgil, 1984). Location-bound international
experience describes the country-specific experience accumulated by residing and working across international markets (Clarke et al., 2013). This type of experience can decrease the perception of psychic distance and uncertainty when entering foreign markets. Whilst a considerable amount of empirical research has been dedicated toward examining the international experience of individuals and firms who operate in physical environments, experiences acquired from the strategic use of internet-enabled platforms and their ability to inform firm internationalization processes have been largely ignored.

2.4 The acquisition of knowledge via internet-enabled platforms
In recent years a convergence of factors has established unprecedented disruption in the way firms, regardless of size and industry, operate and evolve. The most significant, unwavering factor has been the development of internet-enabled platforms, which have facilitated fundamental business transformations for virtually all kinds of firms. Internet-enabled platforms, for instance, have created: opportunities for firms to conduct targeted research for international marketing and international business processes (Poon and Jevons 1997); opportunities for technical development of the firm’s products or service delivery; increased networking opportunities with knowledgeable individuals and experts (Sigfusson and Chetty, 2013); increased access to online communities, such as firm incubators and accelerators (Glavas et al., 2017); and the ability for firms to engage in digital transformation activities, such as implementing automation activities and software that enable business growth (Glavas and Mathews, 2014). Increasingly, firms are utilizing internet-enabled platforms to exploit new models for business growth (Mathews et al., 2016), to better align themselves to their international customer base, and for synchronization and standardization of processes which result in greater efficiency (Petersen et al., 2002). It is for these key reasons that firms now have higher expectations of what internet-enabled platforms can provide for their business. As technology continues to become a central driver of firm expansion (Reuber and Fischer, 2011) it is unsurprising that many firms, both start-up and established, are taking advantage of internet-enabled platforms for business growth. Undeniably, the ubiquitous nature of the internet has already fundamentally changed the way individuals gain access to information and develop knowledge (Yi, 2006; Chennamaneni and Teng, 2011).

The concept of knowledge acquisition has previously been extended to studies exploring the influence of ICT; however, there is a debate among researchers as to whether ICT platforms, such as the internet, play a role in forming tacit knowledge (Panahi et al., 2012). For example, Panahi et al. (2012) demonstrate existing debates in the literature regarding tacit knowledge sharing and ICT, concluding that there is a need to re-examine recent internet-enabled technologies in terms of their efficacy and capacity to support the development of knowledge among people and organizations. Additionally, Chennamaneni and Teng (2011) draw on media richness theory (Daft and Lengel, 1986) and the conceptualization of the tacitness in knowledge to assess the various media types and develop a framework for mapping communication media for different degrees of tacit knowledge, which can extend traditional and online settings. The findings suggest that communication media such as e-mail produces low levels of tacit knowledge, while media such as video conferencing produces high levels of tacit knowledge; primarily due to a multiplicity of cues, rapid feedback, greater personalization and the ability to draw on differing languages (Chennamaneni and Teng, 2011). The authors note that their framework is tentative; nonetheless, the findings support the proposition that “internet-enabled” or “Web 2.0” platforms can assist in transmitting a high degree of tacit skills. Further, a recent conceptual review highlights that extant research, while relatively nascent, generally provides support for the role of internet-enabled experiences in creating tacit knowledge,
but highlights that further exploration and the continued evaluation of these efforts is necessary (Dillon et al., 2017). The distinct lack of research in this domain is signaled by Coviello (2015), who argues that the relationship between firms’ degree of technological involvement, internet-enabled experiences, and the knowledge acquired and ongoing strategy for internationalization warrant greater scholarly consideration. A review of the literature reveals that the internet has the capacity to enhance learning processes about international market operations via more timely access to relevant information (Morgan-Thomas and Bridgewater, 2004; Mathews and Healy, 2008). In this regard, internet-enabled platforms are creating new opportunities for learning (Wang and Hitch, 2017); subsequently, knowledge, skills and capabilities are being developed through immersive interactions with internet-enabled platforms. Such interactions in this research are labeled as “internet-enabled experiences.”

2.4.1 Internet-enabled experiences as a mechanism for developing knowledge for internationalization. An internet-enabled experience is conceptualized in this research as one that engenders engagement and interaction, to varying degrees, with technological platforms, permitting the development of knowledge. Technology platforms such as the internet are undoubtedly changing the way in which firms operate. Emergent technologies (i.e. robotics, virtual reality, artificial intelligence and connected devices), for instance, are becoming more pervasive and seamless and are providing new experiences for individuals and firms. The degree to which internet-enabled platforms are utilized within business settings varies considerably. For instance, internet-enabled experiences may represent the:

- utilization of technology platforms for communication and collaboration between individuals, enabled by platforms such as Zoom, Skype for Business, Zula and Google Hangouts (all of which promote a “sense of presence”); utilization of internet-enabled platforms to develop multicultural teams and for web-based team collaboration, enabled through enhanced shared productivity tools and video conferencing applications, such as Trello, Slack and ezTalks Meetings; utilization of internet-enabled platforms for data sharing and data collaboration between individuals located around the world, enabled through platforms such as Google Drive, Microsoft OneDrive and Dropbox; and utilization of internet-enabled platforms which promote autonomy through streamlining work processes via cloud technology, such as Microsoft Azure, Google Cloud Platform and Amazon Web Services. Such platforms enable location-independent office environments and the ability of individuals to work remotely. These key internet-enabled experiences demonstrate how technological platforms are providing individuals and firms with improved learning experiences that lead to knowledge generation; this acquired knowledge has the potential to inform international business processes. This fundamental shift in the way individuals and firms, for example, acquire information and knowledge for international market progression is yet to be acknowledged within the literature. As such, few attempts have been made to assess the notion of “internet-enabled experiences.” As such, limited attention has been given to its conceptualization, nature, and role in the internationalization process. The ability to acquire knowledge via internet-enabled experiences is, however, dependent on the degree of technological involvement.

The degree of technological involvement amongst firms has most often been analyzed in relation to the concept of diffusion of innovation. Rogers’ (1995) classical diffusion of innovation model has provided the foundation for studies seeking to explain how, over time, an innovation gains momentum or diffuses through a social system. While the innovations literature is well-established, contemporary studies examining innovations encompassing complex technologies with an inter-organizational locus of impact are in need of greater enrichment (Shiels et al., 2003); such studies, for example, are only beginning to permeate academic literature. Shiels et al. (2003), for instance, provide an analysis of a pilot study of
SMEs to identify the determinants and levels of use regarding ICT. Whilst the findings point toward the development of a four-quadrant model of ICT exploitation, the model is limited in examining information and knowledge gleaned at each level of integration. Rather, the model provides a one-dimensional lens indicating how ICT integration is embedded within business processes. Through their study of internet capabilities, Poon and Swatman (1997) propose a “top-down” approach by developing a model consisting of three stages of internet-to-internal applications systems integration. The model suggests that the technology transformation process begins with the inter-organizational dimension, integration with business processes occurs subsequently, with full internet-to-internal process integration providing the greatest number of opportunities to the firm (Poon and Swatman, 1997). Whilst the model adds to the technological involvement literature, a lack of analysis surrounding technological exploitation suggests that the model is in its infancy and requires further development. One of the most comprehensive examinations of technological involvement amongst SMEs was provided in the aforementioned study by Shiels et al. (2003), who presented an analysis of a pilot study of 24 SMEs, outlining the various determinants of employing ICT and the level of sophistication of use. The study examines the introduction and implementation of new technologies to develop a conceptual model (consisting of “Technical Integration,” “Inter-organizational Integration,” “Operational Integration” and “Strategic Integration”) for determining the level of ICT use among SMEs. The current study draws on the framework provided by Shiels et al. (2003), given that their detailed framework of ICT involvement provides a foundation on which further studies can be produced. Whilst SMEs have been some of the greatest beneficiaries of the internet’s transformative influence there is still a distinct lack of understanding regarding technology involvement amongst these types of firms, particularly in relation to firm internationalization. Whilst there have been studies that have attempted to assess technology integration and exploitation amongst SMEs in general (cf. Poon and Swatman, 1997; Shiels et al., 2003), few attempts have been made to assess knowledge acquisition processes via internet-enabled experiences in the context of internationalization. Consequently, there exists a need to further develop understanding surrounding the relationship between knowledge acquisition via internet-enabled experiences and firms’ internationalization processes.

3. Research method

3.1 Multiple case study methodology, including case selection
This research employed a multiple case study methodology to identify how SME owner/founders acquire and utilize knowledge for internationalization via internet-enabled experiences. Case study methodology enables the inductive, in-depth study of a research topic through the analysis of a phenomenon within its contextual settings (Ghauri and Gronhaugh, 2005), whilst taking into consideration a full variety of evidence, such as publicly available and private documents, observations and interview data (Yin, 2009). As a research strategy within the international business and international marketing domains, multiple case study methodology has evolved into a well-accepted and widely utilized research method (Chetty, 1996; Glavas and Mathews, 2014).

The target population for this research study was Australian SMEs actively engaged in exporting activity, employing between 2 and 200 personnel (e.g. small firms employed between 1 and 19 individuals, and medium-sized firms employed between 20 and 200 individuals; ABS, 2017). SME owner/ founders were identified through one of the most comprehensive company databases available in Australia – the Austrade (Australian Trade and Investment Commission) database (www.austrade.com.au) managed by the Australian Government for the Australian Trade and Investment Commission. To select the cases
for examination, an initial list of potential SMEs was collated using an Excel spreadsheet, which included details of the firm’s main contact, operating sector and size. This initial list consisted of 47 firms (i.e. 32 small-sized firms and 15 medium-sized firms), which were emailed an invitation to participate. A total of 18 SME owner/founders responded to the initial invitation and agreed to participate. Only one prompt (i.e. reminder e-mail) was sent to SME contacts. Each of the 18 firms who agreed to participate was then subject to a screening process via telephone. The screening process included asking SME contacts a series of questions to establish the extent of exporting behavior within their firm to ensure that only owner/founders (i.e. key decision-makers) had agreed to participate and to ensure that firms were employing between 2 and 200 personnel. From the revised list of 18 firms, a total of 13 SME owner/founders were identified who satisfied the initial screening questions and were suitable candidates for the research. A total of five firms were screened out of the research: four firms due to size (i.e. three firms were entrepreneurial and employed only one person and, conversely, one firm employed more than 200 personnel); in addition, a further firm was screened out due to their lack of ability to locate the owner/founder (i.e. key decision-maker) for participation.

In relation to the number of the cases for analysis, the literature seldom specifies how many cases should be utilized. Eisenhardt (1989) recommends that cases should be added until theoretical saturation is achieved. Some scholars advocate that there should be no less than four cases in any given case study design to avoid issues with the generalization and development of theory (Eisenhardt, 1989; Perry, 1998). Given these recommendations, the use of 13 case studies was considered appropriate. A total of 13 SMEs, from the Australian goods (e.g. sectors included health, textiles, jewelry, coffee and merchandise manufacturing) and services sector (e.g. sectors included marketing and financial services, software development, tourism services, wholesaling and food services) were identified. SMEs were selected following the theoretical sampling approach, as proposed by Eisenhardt (1989) and Patton (1990). The logic of theoretical sampling is to, first, select cases for enquiry that will corroborate each other, thus predicting similar results (“literal replication”) and, secondly, select cases on the basis that they will cover differing theoretical conditions, thus predicting contrasting results for predictable reasons (“theoretical replication”) (Yin, 2009).

In this research, each firm’s pace of internationalization was utilized to ensure theoretical replication, similar to recent research (cf. Pellegrino and McNaughton, 2017) examining the learning processes of SMEs, by incorporating both incrementally and non-incrementally internationalizing firms. By incorporating insights from incrementally and non-incrementally internationalizing firms, this study follows in the path of recent research (cf. Gulanowski et al., 2018), suggesting that the role of knowledge in firms differs according to the pace of internationalization. Theoretical replication was accounted for by comparing seven incrementally internationalizing firms and six non-incrementally internationalizing firms. Incrementally internationalizing firms followed a gradual path to internationalization (cf. Johanson and Wiedersheim-Paul, 1975; Johanson and Vahlne, 1977), whereas non-incrementally internationalizing firms did not assume an incremental path, but instead internationalized soon after inception (Glavas and Mathews, 2014). To provide literal replication across these groups small-sized (e.g. 1–19 employees: ABS, 2017) and medium-sized firms (e.g. 20–100 employees: ABS, 2017) were selected. These variations aid in providing a foundation for analytical generalizability, directly supporting theory development (Yin, 2009). Following on from Pellegrino and McNaughton (2017), three stages of internationalization were incorporated into the data analysis. The pre-internationalization phase refers to pre-export activity (Tan et al., 2007), and considers activities undertaken by the firm prior to foreign market entry. The early internationalization phase considers the activities undertaken when a firm first enters a
foreign market, and the later internationalization phase refers to the point at which a firm modifies their behavior for the first time due to the accumulation of knowledge and/or learning (Pellegrino and McNaughton, 2017).

3.2 Level of analysis and unit of data collection
The level of analysis in this research is the firm (i.e. the SME). Previous research examining internationalization has suggested that the owner/founder can be identified as the single representation of the firm, particularly in relation to key decision-making processes (Jantunen et al., 2005; Loane, 2006; Mostafa et al., 2005; Reuber and Fischer, 2011). Data collection involved interviewing one key informant per firm – the owner/founder of the SME. Previous research (cf. Pellegrino and McNaughton, 2017) suggests a number of strategies to overcome inaccuracies caused by single informants (all of which were considered and incorporated into this research). For example, the strategies undertaken include: the assurance of anonymity and confidentiality, the use of digitally record interviews, the inclusion of various probes during the case study interview, and ensuring that the interviews were conducted with only the most knowledgeable person in the firm (i.e. the owner/founder). The unit of data collection was the individual owner/founder of the SME, which was deemed appropriate given decision-making power within SMEs is generally concentrated in the hands of one or very few individuals (Chetty and Hamilton, 1993). Although data were collected by interviews conducted with owner/founders, case study questions were relevant to both the individual and the SME as a collective.

3.3 Data collection and analysis procedures
Data were collected using two methods: the analysis of key documentation, in print and/or online (publicly and privately available), and in-depth semi-structured interviews. Key documentation relevant to the firm was obtained that was publicly available (i.e. key media articles, website data, marketing and advertising collateral, documentation related to the firm’s strategy and internationalization processes), in addition to privately available documents (i.e. provided on behalf of the owner/founder in confidence). Mostly, the documents were gathered from website sources and from privately available documents received prior to the interviews. The documentation was scanned and stored in a password-protected file on QSR’s NVivo. The documents were analyzed in accordance with the interview data immediately following each interview to ensure convergence of data. Where inconsistencies were identified, the participant (i.e. SME owner/founder) was notified and given an opportunity to clarify the matter. Drawing on multiple sources of data, the research engaged in data source triangulation, which is imperative for: minimizing inaccuracies that are often identified in single-source data; for verification between sources, which improves the validity of data; and for ensuring overall that comprehensive insights are obtained.

In-depth, semi-structured interviews were utilized to elicit information regarding the internet-enabled experiences of owner/founders. In line with Huber and Power (1985), data were collected through in-depth, semi-structured, face-to-face interviews with owner/founders. This stipulation saw the data being collected from the individual owner/founder, who characteristically was/is responsible for key decision-making within the SME. Based on a priori literature, an interview protocol, which included direct questions about the owner/founder’s prior international experience/s, was developed to guide the interviews. The protocol outlined the key procedures and general rules to be followed for collecting data, including: an overview of the study, key objectives and overall aim of the research, field procedures, including information about why owner/founders were selected for the research, and ethics, in addition to the interview questions. Questions at the beginning of the protocol invited participants to describe their SME and give general
background information on their firm, such as the number of staff, regional scope of the firm, and information regarding the firm’s product/service offering. Questions were also included at the beginning of the interview protocol to screen and probe owner/founders about their level of decision-making ability and key knowledge of the firm’s history to ensure that only owner/founders were interviewed.

Key questions included in the interview protocol included: the levels of education attained; levels of international experience prior to establishing the current firm; years of international experience in the current firm; the importance and significance to the firm in developing international business experience; experiences gained in the pre, during and later phases of internationalization; questions regarding the extent to which the firm developed internet-enabled experiences; and questions regarding the internet-enabled platforms used to collate information and knowledge for the firm’s international market progression. Given the requirement for owner/founders to recall previous events and/or experiences, some of the questions highlighted here contain retrospective bias, which potentially weakens the internal validity of the research (see the limitations section for additional discussion). To overcome instances of retrospective bias, data triangulation was utilized for data verification. The interview protocol also included open-ended questions, allowing for unpredictable or unexpected responses (Yin, 2009); any responses prompting the development of new questions were incorporated into the interview protocol and participants were subsequently re-interviewed. The interviews lasted on average one and a half hours in length. The data collected were digitally recorded and transcribed.

The thematic analysis of the data relied on the coding procedures of Fereday and Muir-Cochrane (2006) and Strauss and Corbin (1990) (see Table I). A code book was developed to guide the data analysis, whilst providing formalized operationalization of the codes (DeCuir-Gunby et al., 2011). The procedure of synthesizing interview transcripts, key documentation, and observer notes, as well as applying codes to the data, ensured that robustness in the data analysis was achieved. The method of qualitative analysis was a hybrid approach, incorporating both a deductive \textit{a priori} template of codes (cf. Boyatzis, 1998) and thematic analysis. The coding procedure commenced firstly with pre-coding, which involved a thorough read-through of each interview transcript. Next, a systematic, line-by-line approach was utilized for the text analysis. This process involved coding the data according to the \textit{a priori} template of codes/themes built around the \textit{a priori} literature. Additional themes to emerge from the data were also taken into consideration and were incorporated into the analysis of all transcripts. Re-coding of the data was necessary to explore emergent themes in greater depth. The re-identified themes were then utilized to categorize the data. Data analysis commenced by first adopting manual-coding procedures (i.e. using highlighters to code the data line by line on a hard copy of the manuscript); second, the data were transferred into QSR’s NVivo software, which was utilized for data management processes and for initial analysis procedures (using the “analyze” function) to explore connections between codes and themes.

4. Findings

4.1 Within-case analysis of SMEs

The Australian business landscape is populated with SMEs, accounting for a total of 97 percent of all businesses (ABS, 2017). In seeking to penetrate international markets many of these firms are using ICT, such as the internet, to extend their international reach. The upcoming generation of business founders, born around the same time as Yahoo and Google, are all deeply immersed in smartphone, tablet and computer technology. A recently published report on “Australia’s Innovation Generation” highlights that Australia’s start-ups are increasingly making their wealth from technology and digital services – a significant move away from growth centered on physical resources, finance, and property.
**Table I.** Sample of the coding framework

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Major theme: types of knowledge</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explicit knowledge accumulation</td>
<td>The owner/founder describes directly/indirectly information or knowledge acquired from internet platforms that is explicitly articulated, written down, or published and can be transferred between individuals with ease</td>
<td>“Google really has changed everything […] I wasn’t on board with whole idea of a web presence in the beginning, but now we use Google AdWords for our advertising approach in the UK […]” (Gm004)</td>
</tr>
<tr>
<td>Tacit knowledge accumulation</td>
<td>The owner/founder describes directly/indirectly information or knowledge acquired from internet platforms that is difficult to communicate, and/or deeply ingrained in the individual Knowledge that is more dependent on its holder, attached to a person’s mind (Panahi et al., 2012)</td>
<td>“We used Skype often to meet up with our agents in India. We don’t always get traction by using it [Skype] […] it’s a cost-effective way to connect […] we have had issues in the past, some things can get lost in communication. Our initial entry into India didn’t go so well, perhaps we needed to be on the ground more […] when we took a hold of China, we did things a little bit differently […] we learnt from India, so much more about the cross-cultural complexity of operating in the market […] insight we didn’t have before [internationalization]” (Gm005)</td>
</tr>
<tr>
<td><strong>Major theme: internet-enabled experiences supporting internationalization</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet-enabled experiences supporting internationalization</td>
<td>The SME owner/founder makes direct/indirect reference to internet technology that assists in supporting the firm’s progression to internationalization</td>
<td>“In the early stages of the businesses inception, I used the internet as a secondary source, particularly to verify information being gained through networks” (Ss010)</td>
</tr>
<tr>
<td>Sub-themes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical internet-enabled experiences</td>
<td>Technological platforms act as a direct tool for the accumulation of information which increases general knowledge which may support internationalization</td>
<td>“We often use the web to search for competitor information […] We aren’t really very active on the marketing front, but the use of the web allows us to see what our international competitors are doing” (Gs002)</td>
</tr>
<tr>
<td>Functional internet-enabled experiences</td>
<td>Technological platforms are utilized to support the development of tacit knowledge, however, much of this knowledge is sought from networks rather than through technology itself</td>
<td>“[…] the tourism community is a tight-knit one […] on the Gold Coast everyone seems to know someone […] we often meet with our suppliers and others in the industry to share knowledge, talk about the [operating] climate. We use the internet more to confirm trend data” (Sm011)</td>
</tr>
<tr>
<td><strong>Major theme: internet-enabled experiences facilitating internationalization</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet-enabled experiences facilitating internationalization</td>
<td>The owner/founder makes direct/indirect reference to internet technology that enables or facilitates the firm’s international market progression</td>
<td>“Our business wouldn’t exist without cloud technology […] soon we will be developing a platform which incorporates augmented reality […] for the Japanese market” (Ss010)</td>
</tr>
<tr>
<td>Sub-themes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operational internet-enabled experiences</td>
<td>Firms take a technological lead in implementing hardware or software applications for internationalization. Technological platforms are utilized for the development of contextual knowledge</td>
<td>“We used the internet to scope potential markets where we receive orders from […], unsolicited orders. There are so many health food products in the US, but the internet enables us to cut through, so we know who we are competing with” (Gs001)</td>
</tr>
</tbody>
</table>

(continued)
Given that there is a current emphasis in Australia to cultivate an ecosystem of digital natives and innovators, the Australian landscape serves as an appropriate foundation for this research, comprising Australian private, wholly-owned, goods- and service-based firms.

Demographically (see Table II) the findings highlight each firm’s year of establishment, the number of employees, the approach to internationalization – incremental or non-incremental – the industry in which the firm operates, the regional focus of the firm, and the proportion of international revenue. To preserve participant confidentiality, the owner/founders and their firms cannot be named; instead, they are referred to as cases:

Gs001–Gm006 and Ss007–Sm012. “G” refers to a goods-oriented firm, “S” refers to a service-orientated firm, “s” refers to a small-sized firm and “m” refers to a medium-sized firm. As per the Australian Bureau of Statistics (ABS, 2017), small-sized firms consist of between 2 and 19 employees, while medium-sized firms have between 20 and 200 employees. The data indicate that the year of establishment of each firm ranged from the earliest, 1984 (e.g. Gs002), to the most recent inception in 2015 (e.g. Ss010). The number of employees ranged from 2 to 200, indicating variance in the insights provided by SME owner/founders. Regarding each firm’s approach to internationalization, seven firms (e.g. Gs001, Gs002, Gs003, Gm004, Ss007, Sm012, Sm013) followed an incremental path, while six firms (e.g. Gm005, Gm006, Ss008, Ss009, Ss010, Sm011) were non-incremental internationalizers, meaning they internationalized soon after inception (Reuber and Fischer, 2011). All firms were active across the international marketplace, either physically and/or via an internet-enabled platform. Regarding the range of industries, data were captured by both goods- and service-based firms. The regional focus of SMEs extended to markets including: The United Arab Emirates, Canada, China, Fiji, India, Japan, New Zealand, New Caledonia, Russia, Thailand, Taiwan, the UK and the USA.

The proportion of international revenue from international customers ranged from 2 percent (e.g. Ss007) through to 85 percent (e.g. Gm006).

### 4.2 Cross-case analysis of SMEs

#### 4.2.1 Internet-enabled experiences identified amongst SMEs

Given the autonomous nature in which many SMEs are emerging, the purpose of this research was to examine how owner/founders acquire and utilize knowledge for internationalization via internet-enabled experiences. The findings suggest that internet-enabled experiences are varied according to the degree of technological involvement (Shiels et al., 2003), or the extent to which owner/founders utilize technology within the firm, in addition to the degree of tacitness of knowledge (Ambrosini and Bowman, 2001). The findings indicate that owner/founders gain both explicit, but also deeply ingrained tacit, forms of knowledge via engagement with

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immersive internet-enabled experiences</td>
<td>Technology is embedded within the technical infrastructure and operational activities of the firm. The strategic integration of technology facilitates the process of internationalization, moving firms towards digital internationalization</td>
<td>“Our business is obsolete without technology. It goes without saying really […] Technology enables us to reach markets close to home, but also the world over […] this kind of reach wouldn’t have been possible without the current day tech […]” (Ss009)</td>
</tr>
</tbody>
</table>

Notes: Not all codes utilized in this study are presented here. This sample codebook merely provides an indication as to how some major and sub-themes were identified.

Source: The code book was developed in accordance with DeCuir-Gunby et al. (2011)
internet-enabled platforms. The data reveal four types of internet-enabled experiences: “technical internet-enabled experiences,” “operational internet-enabled experiences,” “functional internet-enabled experiences” and “immersive internet-enabled experiences.” The data supporting these differing classifications of internet-enabled experiences are now outlined and discussed in turn in relation to the extant recommendations for building an evidence base and theoretically extending the concept of internet-enabled experiences.

4.2.2 Technical internet-enabled experiences. The data revealed that some SME owner/founders utilize technological platforms as a direct tool to accumulate specific and/or factual information; such information is often highly explicit and/or objective in nature. The literature (cf. Maula, 2000) highlights that technical forms of information and knowledge can be readily transmitted from one individual to another with ease, primarily manifesting as facts, statistics, and/or more generalized information (Johnson et al., 2002). Past research (Shiels et al., 2003) suggests that companies utilizing internet-enabled platforms in a technical sense appear only to have reached an introductory stage of

<table>
<thead>
<tr>
<th>Case number</th>
<th>Year of establishment</th>
<th>Number of employees</th>
<th>Incremental or non-incremental internationalizing firm*</th>
<th>Industry in which the firm operates</th>
<th>Regional international focus of the firm</th>
<th>Proportion of international revenue (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gs001</td>
<td>1989</td>
<td>2</td>
<td>Incremental</td>
<td>Health product manufacturer</td>
<td>AU/TW/CN/HK/NZ/US</td>
<td>25</td>
</tr>
<tr>
<td>Gs002</td>
<td>1984</td>
<td>11</td>
<td>Incremental</td>
<td>Textiles manufacturer</td>
<td>AU/NZ/AE/</td>
<td>45</td>
</tr>
<tr>
<td>Gs003</td>
<td>1986</td>
<td>6</td>
<td>Incremental</td>
<td>Jewelry manufacturer</td>
<td>AU/NZ/US</td>
<td>15</td>
</tr>
<tr>
<td>Gm004</td>
<td>1985</td>
<td>26</td>
<td>Incremental</td>
<td>Jewelry manufacturer</td>
<td>AU/AE/UK/</td>
<td>75</td>
</tr>
<tr>
<td>Gm005</td>
<td>2002</td>
<td>75</td>
<td>Non-incremental</td>
<td>Coffee bean manufacturer</td>
<td>AU/CN/IN</td>
<td>15</td>
</tr>
<tr>
<td>Gm006</td>
<td>2002</td>
<td>18</td>
<td>Non-incremental</td>
<td>Merchandise manufacturer</td>
<td>AU/CN/UK</td>
<td>85</td>
</tr>
<tr>
<td>Ss007</td>
<td>1990</td>
<td>7</td>
<td>Incremental</td>
<td>Marketing services</td>
<td>AU/NZ</td>
<td>2</td>
</tr>
<tr>
<td>Ss008</td>
<td>2009</td>
<td>3</td>
<td>Non-incremental</td>
<td>Financial services</td>
<td>AU/NZ</td>
<td>5</td>
</tr>
<tr>
<td>Ss009</td>
<td>2000</td>
<td>7</td>
<td>Non-incremental</td>
<td>Software development</td>
<td>AU/US/CA/UK/HK</td>
<td>25</td>
</tr>
<tr>
<td>Ss010</td>
<td>2015</td>
<td>2</td>
<td>Non-incremental</td>
<td>Software development</td>
<td>AU/US</td>
<td>5</td>
</tr>
<tr>
<td>Sm011</td>
<td>1996</td>
<td>92</td>
<td>Non-incremental</td>
<td>Tourism services</td>
<td>AU/NZ/US/UK</td>
<td>65</td>
</tr>
<tr>
<td>Sm012</td>
<td>1994</td>
<td>42</td>
<td>Incremental</td>
<td>Fast-moving consumer goods wholesaler</td>
<td>AU/NZ</td>
<td>10</td>
</tr>
<tr>
<td>Sm013</td>
<td>1989</td>
<td>200</td>
<td>Incremental</td>
<td>Food services</td>
<td>AU/NZ/TH/NC</td>
<td>40</td>
</tr>
</tbody>
</table>

Notes: G, goods-oriented firm; S, service-orientated firm; s, small-sized firm (1–19 employees); and m, medium-sized firm (20–200 employees) (as per the ABS, 2017); Key: AE, United Arab Emirates; AU, Australia; CA, Canada; CN, People’s Republic of China; FJ, Fiji; IN, India; JA, Japan; NZ, New Zealand; NC, New Caledonia; RU, Russian Federation; TH, Thailand; TW, Taiwan; UK, the United Kingdom; US, United States. All firms are private, wholly owned Australian companies. All SMEs are owners/founders of a small or medium-sized enterprise. Incremental internationalization refers to the “stages model” (e.g. Johanson and Vahlne, 1977; Johanson and Wiedersheim-Paul, 1975) whereby firms approach internationalization incrementally. Non-incremental internationalization refers to firms that do not assume an incremental path to internationalization (Glavas and Mathews, 2014)
technological involvement, as such investment in basic technological infrastructure tends to be low. The findings indicate that SME owner/founders often utilize internet-enabled platforms for collating market-specific forms of information for informing decision-making regarding international suppliers, distributors, distribution channels, competitors, current and potential customers, and for understanding key institutions and regulatory frameworks in potential international markets. Such information is often sourced via general internet search strategies (i.e. Google, Bing, Yahoo, Aol Search) and through web-based multimedia resources (i.e. podcasts and/or vodcasts via channels such as YouTube).

The findings suggest that technical internet-enabled experiences do not automatically lead to international business growth; however, such experiences have the potential to support a firm’s international business process. The following quotation suggests that internet-enabled platforms are often utilized as a mechanism for initial market assessment, upon which further internationalization decisions can be made:

In the early stages of the businesses inception, I used the Internet as a secondary source, particularly to verify information I gained through my networks [...] It really is about the timelines of information or urgency and the depth of understanding required. The information I needed for specific country insight could be accessed in a timely manner, right when I needed it [...] I generally used Google [search strategies] and Google My Business to begin with, then moved onto finding blogs to gain the information I needed at the time, about the US market. I think it was around trade regulations, and barriers, that type of information, maybe government support [...] all of which [search engines] assist with making decisions on [international] market entry [...] (Ss010)

The findings suggest that technical internet-enabled experiences have the potential to increase a firm’s overall stock of foreign market knowledge, which can be used to inform the international business processes, particularly in the early stages of internationalization:

[...] The Internet’s capacity to assist small business [internationalization] is unprecedented [...] we used Google, for beginning [initial] information search, and also for looking [scoping] for potential agents or franchise partners. This was important for our recent [food service] expansion into New Zealand [...] how else do you initially look for potential agents or partners [...] I would imagine this could be difficult without the Internet. Sm012

I have proactively engaged in online courses to upskill, particularly for the implementation of cloud-based computing and for social media and mobile-device marketing [...] business growth was sustained on the back of technology, to grow we need to be digitally literate, in everything we do [...] technology enabled us to expand beyond what we thought was possible. (Sm011)

Past research signals that general forms of market knowledge increase the firm’s ability to recognize and exploit new international opportunities (Wiklund and Shepherd, 2003), whilst simultaneously reducing the associated risks of internationalization (Fletcher and Harris, 2012). Whilst previous research (cf. Johanson and Vahlne, 1977, 2009) highlights that generalized market knowledge accumulates through exposure and increased commitment to foreign markets, the findings of this research also indicate that internet-enabled platforms can expedite the process by which more generalized knowledge can be obtained, allowing firms to gain access to relevant information in a timely manner:

[...] I gained all information I needed initially by using the Internet, over a 2-month period, before I invested time in setting up [physical] meetings [...] the timely access to market-specific knowledge was important in the beginning [enabled only through the use of technology] [...] likewise, doing my research on the Internet first before making the pitch investment reduced my risk overall, because I vet possible franchise partners. (Sm012)

Operational internet-enabled experiences. The findings point toward the use of internet-enabled platforms for optimizing firms’ day-to-day operations. Operational internet-enabled experiences in this regard are developmental, where firms take a technological lead in
implementing software and/or hardware applications for day-to-day operations and for their international business processes. Past research (e.g. Johnson et al., 2002) highlights that operational forms of information and knowledge are important for the firm’s development, and for reducing the incidence of error. Previous research (e.g. Shiels et al., 2003) suggests that industry and product specificity tend to influence firms in the extent of internet usage to support business operations. In a study of SMEs and ICT adoption, Shiels et al. (2003) found that “sophisticated” operational use of ICT in SMEs represented firms with an official website that, in particular, use it as a marketing tool to promote the business and its products/services. In the current research, the findings highlight that SME owner/founders utilize internet-enabled platforms to analyze targeted international market research, to gain a deeper understanding of consumer expectations, to develop technical products or services, for international marketing practice, to analyze channels of distribution, and to develop firm-specific software to facilitate international business processes. Such internet-enabled experiences allow contextual information to be developed, which can facilitate international business processes. The following quotation reveals how internet-enabled platforms can inform international marketing practice and lead to the development of information and knowledge, used subsequently to engage international consumers and facilitate internationalization processes:

[…] in our line of work, we [sic] the Internet is an essential part of what we do. We have only been able to expand across four international markets and do it with ease because of technology. We rely on targeted research to inform us of what tourism locations/destinations are more in demand […] we collate this research and share it between our international offices. The great thing about storing this in the cloud is that people across five different countries are adding to the database […] maybe you could Google the information, but our customers come to us because our information and advice is so targeted and niche, you have to be living in the country to get this kind of advice. It can’t be “Googled” […] this [is] not the type of information you’d get from the majors [major competitors]. (Sm011)

 […] my customers now and in the future, will be avid consumers of technology […] It is important that we as a business embrace a technology mindset […] and learn from the experience for future international market growth […] it’s at the core of what we do globally […] In the age of the consumer, it is more crucial now to be creating digital experiences for your customers […] our international clients demand it, it’s one of the key reasons why we invest in it […] we also collect data [and analyze it] to inform future international marketing decisions, particularly around the types of financial services that consumers abroad will be more likely to use. (Ss008)

Various cloud-based operating systems and software programs are also utilized by firms to assist in the day-to-day operations of the firm. Such cloud-based programs can assist firms with financial management (i.e. Salesforce, Zero, SAP), inventory control (i.e. QuickBooks Enterprise, NetSuite, eTurns), and human resources (i.e. BambooHR, Gusto, SAP, SuccessFactors). Such programs facilitate financial transactions, operations and logistics, and collect and analyze data. In addition, implementing virtual assistant software (i.e. Cortana, Siri, Google Now) can assist in streamlining support, particularly for firm internationalization processes. Such software can enable consumer support 24 hours a day, thus overcoming the need to engage a representative in a physical location, whilst providing valuable data which can inform international business strategy:

Our virtual assistant in the UK has allowed us to scale our business […] we’ve been able to maximize the time spent on strategy, rather than dealing with customer queries and administrative tasks etc. Essentially, we have an assistant 24 hours day, so when we’re all sleeping in Australia, the assistant is dealing with queries and customer support in the UK […] we get valuable data too, sales and marketing data [sourced via the virtual assistant] which informs our ongoing strategy [international business strategy]. (Ss009)
Functional internet-enabled experiences. The data indicate that technological platforms are often also utilized within firms as a mechanism to verify information and knowledge, specifically related to various aspects of internationalization. Functional internet-enabled experiences allow for tacit knowledge development; however, much of this knowledge is sought from networks rather than via technology itself. Previous research suggests that such knowledge is normally highly contextually dependent; its character and usefulness depend on social capital or the information contained within networks (Johnson et al., 2002). In this regard, Functional internet-enabled experiences do not facilitate the actual process of internationalization itself; rather, the information sourced via internet-enabled platforms can be used to support internationalization processes. The findings demonstrate primarily that SME owner/founders utilize internet-enabled platforms to mediate synchronous online interaction and communication enabled by online communities of practice (i.e. via engagement with online innovation communities, wikis, incubators and/or accelerators). Such communication between individuals can inform and support the firm’s international business processes. Through the creation of knowledge communities, previous research (cf. Panahi et al., 2012) suggests that business-relevant social media channels (i.e. LinkedIn, Meetup, PartnerUp and Xing) have become effective channels for social interaction, enabling the transfer of knowledge, which can be applied to international business processes. The findings suggest that online communities of practice, which include individuals motivated towards achieving a common goal combined with social media platforms can assist in developing tacit knowledge, which can inform decision-making around key internationalization processes. The following quotation explains how open innovation communities of practice can provide valuable knowledge from experienced individuals:

I am a part of an open innovation community that gets together on a monthly basis to share experiences, ideas, and expertise to develop innovative ideas for the businesses [entrepreneurs] involved […] the meetings are held online mostly, mainly in the US. We all come from different backgrounds and operate across varying sectors, from manufacturing to business services, the great thing is we share insight, valuable information that you can only gain by people who have gone before you and have faced similar hurdles […] particularly with expanding across [various international] markets. I have learnt a lot from these meetings, particularly when we entered India. The experience of others was vital and helped us to make the right moves [decisions]. That type of knowledge is valuable. (Gm005)

Immersive internet-enabled experiences. The findings signal that only a small proportion of firms (cf. Gm005, Ss009, Ss010) embed technology within the firm, where technology implementation itself is designed in conjunction with the firm’s internationalization strategies to ensure that existing processes and technology are aligned. Immersive internet-enabled experiences represent the comprehensive integration of technology, where technology itself is integral and deeply embedded within the firm’s technical infrastructure and operational activities. Such experiences are enabled by mobile devices, augmented or virtual reality, and allow for digital forms of internationalization. Such integration provides new opportunities, such as identifying new markets previously inconceivable to the firm. Immersive internet-enabled experiences therefore allow for tacit forms of knowledge to be developed via the proactive integration of technology, which can facilitate the internationalization process. Such knowledge is often kept within the firm’s borders and is seldom shared between individuals, given that intellectual property is often a key component of a firm’s success in achieving this level of technology integration. For such firms – generally online start-ups – the technology implemented becomes integral to facilitating business operations entirely, including internationalization processes. While previous research (cf. Maula, 2000) suggests that tacit knowledge commonly refers to
non-explicit and non-digital forms of knowledge, the findings of this research suggest that internet-enabled platforms can facilitate the development of tacit forms of knowledge. The following quotation reveals how valuable tacit knowledge can be gained from the online start-up process:

I would encourage any young entrepreneur or like-minded individual to explore funding opportunities, like through Kickstarter for example. We won an innovation challenge, and learnt so much through the process […] we piloted the idea, pitched it, gained feedback and sought expertise to help build the business […] personally I have taken away so much from that experience, it [the business] failed in the end, but all the knowledge I had gained I have been able to use in the current business and have since focused my efforts on the United States […] there is so much you can learn through the online start-up process, that can be applied to any business. The process is so immersive and intense, it forces you to think differently. (Ss010)

The findings also indicate some owner/founders (e.g. Gm005, Ss009, Ss010) had acquired tacit forms of knowledge through developing and implementing software for business process-automation activities. For example, the owner/founder of firm Gm005 developed firm-specific software allowing managerial functions to be automated. In doing so, the firm engaged in programming activities to develop a cloud-based point-of-sale and business management system, transforming the business-to-customer interface and supply chain management system. The following quotation demonstrates the proactiveness of the owner/founder in anticipating and responding to market needs by leveraging cloud technology to develop services for the international market:

We [the firm] are able to operate more efficiently with cloud technology and respond to customers more quickly […] it’s good for the bottom line […] we took a leap by investing in the development of software, and in doing so we are one of a few businesses in our field that can say they have developed a software program. The package will allow us to move beyond the four international markets we are currently operating in with ease. The knowledge we have gained from the process is valuable, it’s a costly process, but now we have the insight which other [competitors] don’t have […] we can keep it in-house, lease it, really the options are endless. (Gm005)

4.2.3 Knowledge acquired via internet-enabled experiences during the pre, early and later phases of internationalization. Drawing on the work of Tan et al. (2007) and Pellegrino and McNaughton (2017), this study examined the internet-enabled experiences of owner/founders during the pre, early and later phases of internationalization. The findings indicate that internet-enabled experiences generate explicit and tacit forms of knowledge during the phases of internationalization (see Table III). This finding coincides with past research, indicating that internet-enabled platforms have the ability to develop tacit forms of knowledge (Chennamaneni and Teng, 2011), and engender learning in a way that enhances international business operations (Petersen et al., 2002). The findings show that owner/founders acquire and utilize differing types of internet-enabled experiences during the phases of internationalization; although the internet-enabled experiences acquired vary according to the firm’s pace of internationalization (i.e. incremental and non-incremental approach to internationalization).

Internet-enabled experiences acquired by firms pursuing an incremental path. The findings reveal that during the pre and early phases of internationalization, SMEs pursuing an incremental internationalization pathway (e.g. Gs001, Gs002, Gs003, Gm004, Ss007, Sm012, Sm013) devoted both financial and non-financial resources to understanding the nature and performance of their products and services in domestic markets before making an initial decision to internationalize. The data reveal that these owner/founders focused on utilizing previously acquired knowledge (i.e. the owner/founders’ existing knowledge and experiences) in combination with network relationships...
to learn about new international market opportunities. This finding is consistent with previous observations (cf. Oviatt and McDougall, 1994, 2005; De Clercq et al., 2012; Pellegrino and McNaughton, 2017), which highlight that internationalization for incremental internationalizers is largely based on previously acquired or congenital knowledge. A reliance on previous knowledge and experience was identified as a strategy to limit risk exposure in the early phase of internationalization. The findings indicate that during the pre, early and later phases of internationalization, Technical internet-enabled experiences overall tend to prevail. These experiences seldom require a high degree of technological involvement; rather, internet-enabled platforms were commonly utilized by firms to collate factual, country-specific market information for supporting, rather than facilitating, the firm’s internationalization efforts, possibly as a means for initial international market assessment. The following quotation describes how the internet is often utilized in the initial pre and early phases of internationalization to access country-specific information, which serves as a basis for future international business and marketing efforts:

It takes a lot of resourcing to [internationalize] to a foreign market […] Everything is different […] rules, laws, regulations, everything […] dealing internationally is so, so different to dealing locally. You know, what you think works on a day-to-day basis here is a completely different kettle of fish when it comes to overseas [markets] […] the process really requires an intense amount of thought […] the application of technology [the Internet] provides opportunities to do initial research before leaping into investments [internationally] for international marketing. (Ss007)

The findings suggest that in the later phase of internationalization, operational internet-enabled experiences are often combined with functional internet-enabled experiences (e.g. Gs002, Sm013), particularly as owner/founders engage further in sourcing highly specific market information for informing strategic decision-making and for furthering internationalization. The findings suggest that in the later phases of internationalization owner/founders began to explore potential international expansion opportunities via internet-enabled platforms more systematically. The following two quotations demonstrate

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Notes: T, Technical internet-enabled experience; O, Operational internet-enabled experience; F, Functional internet-enabled experience; I, Immersive internet-enabled experience

Sources: Phases of internationalization are drawn from Tan et al. (2007) and Pellegrino and McNaughton (2017)
that in the later phase of internationalization the use of internet-enabled platforms became more strategic, rather than *ad hoc*.

Initially we started out with a very little investment in an Internet presence. The use of the Internet wasn’t fundamental to our core business as a [marketing] consultancy, but also it was the early 1990s. Fast forward 11 years later and we have strong foothold in Australia and New Zealand, primarily due to our networks and of course our website [...] we are getting better now that we are more established [in New Zealand] in terms of collecting data on our marketing activities, what works and what doesn’t work for the [New Zealand] market [...] but it’s taken us while, and we need to get better at it. (Ss007)

We didn’t invest in technology until the business grew, as primarily all our business is face-to-face [in manufacturing] [...] initially we didn’t see an immediate need for tech [technology] but as the business expands more beyond Brisbane and we take on new markets throughout South-East Asia, a strong website presence, including our website is important. (Gs002)

Internet-enabled experiences acquired by firms pursuing a non-incremental path. For firms following a non-incremental path to internationalization (e.g. Gm005, Gm006, Ss008, Ss009, Sm010, Sm011), the findings indicate that Functional internet-enabled experiences, where information and knowledge are sought from key networks rather than technology itself, tend to prevail. In an internet-enabled business landscape, where access to timely information and speed of communication are paramount, the value of face-to-face encounters are often overlooked, despite studies (cf. Powell and Dent-Micallef, 1997) which have examined technology’s effect on social interaction and face-to-face communication in business settings. The findings suggest that owner/founders who pursue non-incremental pathways to internationalization, often via technology, primarily utilize internet-enabled platforms as a support mechanism for the verify information and knowledge that is often sought from key networks (see Table AI, which highlights quotations supporting the assertion that face-to-face communication is, and will continue to be, one of the most effective forms of communication). Further, the findings indicate that functional internet-enabled experiences support internationalization by providing valuable knowledge for developing strategies that align the firm and its international markets. The following quotation describes the strategic use of the internet for conversing with foreign partners via networks, which are often located in physically distant, high-context markets. Although internet platforms can enhance the communication process between individuals in foreign markets, some cross-cultural exchanges require individual skills and capabilities to ensure limited incidences of miscommunication; thus, elements of the internet-enabled communication engender tacit knowledge, as demonstrated in the following quotation:

> We used Skype often to meet up with our agents in India. We don’t always get traction by using it [Skype] [...] it’s a cost-effective way to connect [...] we have had issues in the past, some things can get lost in translation [communication]. Our initial entry into India didn’t go so well, perhaps we needed to be on the ground more [...] when we took a hold of China, we did things a little bit differently [...] we learnt from India, so much more about the cross-cultural complexity of operating in the market [...] insight we didn’t have before [internationalization]. (Gm005)

The findings indicate that in the later phase of internationalization, Immersive internet-Enabled Experiences emerge. Due to the online start-up nature of some firms (e.g. Ss009, Sm010), coupled with the growth-minded outlook of owner/founders pursuing non-incremental pathways, it is unsurprising that internet-enabled platforms were utilized for the firm’s inception and ongoing internationalization. The quotations in Table AI demonstrate the ability of immersive internet-enabled experiences to produce general international market knowledge,
but also country-specific knowledge that can increase awareness of the firm’s strategic international objectives via internet-enabled platforms. This increased ability to learn has been found to be valuable for firms in developing international operations (Yeoh, 2004).

5. Discussion and conclusion
The internationalization literature has for many years highlighted that knowledge plays a dominant role in the internationalization process the firm (cf. Johanson and Vahlne, 1977; Erramilli, 1991; Reuber and Fischer, 1997; Clarke et al., 2013; Le and Kroll, 2017). While an increasing number of studies have attempted to examine knowledge and internationalization processes, the nature and role of knowledge in the internationalization process is still largely unknown (Gulanowski et al., 2018). In recent years studies focusing on the knowledge gained from internet-enabled environments have become increasingly prevalent (Coviello, 2015; Dillon et al., 2017). For instance, past research has, for example, suggested that technological platforms such as the internet have created a need and an opportunity to re-classify the ways in which owner/founders acquire new knowledge (Maula, 2000). Considering the aforementioned discussion and given the autonomous nature in which many firms are emerging, the purpose of this research to examine the ways in which information and knowledge for informing internationalization processes is acquired, specifically through internet-enabled experiences. In addressing this question, this research addresses a key limitation of past studies which overlook the strategic use of technology as an important source for the acquisition of knowledge. Consequently, the empirical findings of this research offer important implications for theory development.

5.1 Implications for theory development
5.1.1 Classification of internet-enabled experiences. The primary theoretical implication of this research is the development of a framework classifying internet-enabled experiences. The classification highlights the extent to which internet-enabled platforms can enable the generation acquisition of knowledge, which can inform international business processes. Whilst previous studies (cf. Reuber and Fischer, 1997; Petersen et al., 2002; Pellegrino and McNaughton, 2017) have attempted to examine the role of technology in developing new forms knowledge, such studies are largely based on the contextual nature of the technological environment in which firms operate, rather than examining explicitly the strategic use of technology for informing internationalization processes. As such, the current study attempts to move the literature on knowledge acquisition beyond a high-technology context focus. The findings (see Figure 1) discriminate between four different types of internet-enabled experiences (i.e. technical internet-enabled experiences, operational internet-enabled experiences, functional internet-enabled experiences and immersive internet-enabled experiences).

The resulting classification of internet-enabled experiences is important in several ways. First, the research extends mainstream international business research (cf. Johanson and Vahlne, 1977) which signals the centrality and importance of information and knowledge as critical resources which play a key role in the internationalization processes of the firm. With the exception of a small number of studies (cf. Reuber and Fischer, 1997; Petersen et al., 2002), international business scholars have predominantly underscored the importance of information and knowledge acquired from technology, such as internet-enabled platforms. The findings extend pre-existing international business research (cf. Eriksson et al., 1997; Chetty and Eriksson, 2002; Fletcher and Harris, 2012; Pellegrino and McNaughton, 2017; Gulanowski et al., 2018), which generally neglect the role of internet-enabled platforms in generating explicit and tacit forms of knowledge for international business processes. Specifically, the findings demonstrate that internet-enabled experiences vary according to
the degree of technological involvement, or the extent to which technology “supports” or “facilitates” international business processes. In instances where technology was utilized as a support mechanism, the technological component primarily served as a means for the collation of contextual or country-specific information to inform rather than facilitate the firm’s internationalization. In contrast, the findings demonstrate the ability of technology to facilitate internationalization processes, such that the cessation of technology would have disbanded the firm from operation. As such, the findings explicitly contribute to the literature by laying the necessary groundwork for developing an explanation of the ways in which individuals are accumulating explicit and tacit forms of knowledge for internationalization, from exposure to and through utilization of internet-enabled platforms. While past research (cf. Maula, 2000; Petersen et al., 2002) suggests that tacit knowledge more commonly refers to non-explicit and non-digital forms of knowledge, the current findings demonstrate that internet-enabled platforms can facilitate the development of tacit forms of knowledge. The development of such knowledge is, however, highly dependent on the degree of technological involvement.

Second, this study extends on the broader concept of knowledge acquisition – the process by which knowledge is obtained or acquired (Huber, 1991). While there have been
voluminous amounts of research dedicated toward examining congenital knowledge, experiential knowledge, vicarious learning and grafting, the current research examined more closely the source of knowledge (i.e., the point at which knowledge is acquired). Further, the findings extend the conventional notion of knowledge “acquisition,” which in its current form is limiting due to the concept’s lack of an explanation as to how knowledge can be acquired in internet-enabled settings. In addition, the findings build on previous research by Shiels et al. (2003), who examined the determinants and circumstances for ICT success and the strategic effects resulting from implementation and use of technology. The research examines more strategically the effects on knowledge acquisition and, thus, extends the seminal work of Shiels et al. (2003). The findings suggest that degree of technological involvement is a contributory factor to the extent to which explicit or tacit forms of knowledge can be acquired, for supporting and facilitating the international business processes of the firm.

5.1.2 Identification of how knowledge can be acquired via internet-enabled experiences during the pre, early and later phases of internationalization. Internet-enabled experiences have previously been extended, albeit conceptually, to internationalization. For instance, Dillon et al. (2017) examined how international entrepreneurs accumulate and apply different types of experiences in internet-enabled environments. The study postulates that an international entrepreneur’s orientation in combination with the internet-enabled experiences they acquire are important for the recognition of international opportunities and for internationalization. Further, the authors argue that the literature is limited both conceptually and empirically limited in explaining the role of internet-enabled experiences (Dillon et al., 2017). Whilst existing studies, such as the one mentioned previously, diligently describe the potential impact of internet-enabled experiences on the firm’s international market progression, there is a dearth of research with the express purpose of explaining how such experiences can inform internationalization, despite research (e.g., Petersen et al., 2002) contending that technological platforms have been shown to facilitate the generation of tacit knowledge for internationalization.

The findings of this study coincide with past research (cf. Petersen et al., 2002), which highlights the potential of the internet to provide learning opportunities that may foster the development of tacit forms of knowledge for informing the internationalization process of the firm. The findings specifically demonstrate that individuals can acquire varied types of internet-enabled experiences during the pre, early and later phases of internationalization. Specifically, the findings add to the scarcity of research by identifying how knowledge is acquired via internet-enabled experiences during the phases of internationalization (Table III). The findings suggest that firms following a more incremental pathway (e.g., Gs001, Gs002, Gs003, Gm004, Ss007, Sm012, Sm013) tend to acquire technical internet-enabled experiences during the pre, early and later phases of internationalization. While other types of experiences such as those previously explained may exist, technical internet-enabled experiences tend to dominate. The findings add to the extant literature by suggesting that incremental internationalizing firms are inclined to use internet-enabled platforms to collate factual or specific information, largely to verify existing knowledge. In this regard, internet-enabled platforms are used as a support mechanism for internationalization.

For firms following a non-incremental path to internationalization (e.g., Gm005, Gm006, Ss008, Ss009, Sm010, Sm011), the findings indicate that functional internet-enabled experiences combined with immersive internet-enabled experiences dominate during internationalization. The data also suggest that small-sized service firms are the most proactive in terms of acquiring and utilizing knowledge gained from internet-enabled platforms. The findings show that small-sized service firms tend to utilize technology across all business functions, subsequently demonstrating agile internet-enabled development
practices in delivering their services more efficiently and reliably to consumers and end users. Regardless of firm size or approach to internationalization (i.e. incremental vs non-incremental), owner/founders noted the increased importance to engage in digital transformation activities to utilize information inherent in products and services, to increase the customizability of products and services marketed online, and to enable the business to synchronize and standardize processes which result in greater efficiency. These key benefits underpin the importance and capability of technology in extending internationalization. Overall, the findings suggest that the relationship between the knowledge acquired from internet-enabled experiences and the trajectory of internationalization may be more complex than the literature currently suggests.

5.2 Implications for SME owner/founders
The primary implication of this research is the development of a framework outlining a classification of internet-enabled experiences, highlighting the extent to which engagement with internet-enabled platforms can generate knowledge, which informs international business processes. As such, the initial research is important as the findings reveal how explicit and tacit knowledge can be acquired via internet-enabled platforms. Specifically, the research provides a more structured approach, allowing SMEs to “plot” themselves against the classification of internet-enabled experiences in order to denote their current level of technological involvement, and to discern the types of knowledge that can be acquired via internet-enabled platforms. In addition, the findings point toward disparity between the types of internet-enabled experiences, highlighting for instance that some experiences can either serve to “support” or “facilitate” the internationalization process. These findings are particularly helpful for SME owner/founders, highlighting that internet-enabled platforms affect the ways in which knowledge can be acquired and applied to international businesses processes; however, this is dependent on the degree of technological involvement. During the semi-structured interviews, it became evident that owner/founders seldom understood how engaging with internet-enabled platforms could lead to knowledge generation, which could inform internationalization. Consequently, the findings signal the importance of individuals to be cognizant when utilizing and integrating internet-enabled platforms into firm operations, given that such engagement can lead to the development of explicit and tacit knowledge, which can further inform internationalization processes.

5.3 Limitations and further research
The findings of this research should be considered in light of specific limitations. These limitations can, however, be addressed in future research. First, while the research reveals promising outcomes toward classifying the nature and scope of knowledge acquired from internet-enabled experiences, there is a need for more rigorous examination beyond the current study that considers further the varying types of internet-enabled experiences and their ability to generate knowledge for informing international business processes. Additional focus on evaluating internet-enabled experiences on the basis of outcome variables, such as firm growth and international performance, will be important in order to build an empirical evidence base for the types of knowledge that can be gleaned from internet-enabled experiences. This research builds the groundwork by discriminating the different types of internet-enabled experiences, with regard to the degree of technological involvement, the extent to which technology supports or facilitates the process of internationalization, and also the degree of tacitness of the knowledge acquired. Further, evaluating the knowledge acquired from the internet-enabled experiences of non-incrementally internationalizing firms, relative to traditional incremental models, will be vital in further developing an evidence base, particularly as technological platforms continue to drive the emergence of many types of firms worldwide.
Through conceptualizing internet-enabled experiences, however, this research overcomes a key limitation of previous studies (cf. Loane et al., 2004; Reuber and Fischer, 2011) which adopt a broad "internet-enabled" lens, through which the internet and its capabilities are examined holistically.

Second, it is recognized that, in some cases, individual-level and firm-level experience/s are examined independently. The current study was concerned with examining the accumulation of knowledge from the internet-enabled experiences of the individual decision-maker (i.e. owner/founder), given that in smaller firms the owner/founder is often seen as a single representation of the firm (Jantunen et al., 2005; Loane, 2006). Future studies should also consider examining internet-enabled experiences from a firm-level perspective.

Third, the data from this research were sourced from single-informant interviews – the owner/founder. Although single-informant interviews are viewed as acceptable for studies examining firm activity (cf. Pellegrino and McNaughton, 2017), future research could seek to extend data collection to several informants, with the express purpose of corroborating the data elicited. Fourth, given the nature of self-reporting and the requirement for owner/founders to recall past events and experiences, it is important to note that questions posed to owner/founders were potentially subject to retrospective bias. Future research could be designed to incorporate current firm behavior/s rather than relying on past situations, events and experiences.

Fifth, a potential limitation of the data in incorporating firms across both the goods and services sectors is recognized, potentially limiting the strength of the generalizability of the findings. Future research should aim to replicate this research within single industries for increased robustness and generalizability. Sixth, the potential for bias regarding the year of establishment and degree of technological involvement among firms is recognized. For instance, a firm established in the 1980s would have been exposed to a very different technological environment as compared to a firm established in 2015. Despite the variability observed, the firm’s year of establishment has likely affected the elicitation of key insights and data analysis. Further research is needed to identify whether the internet-enabled experiences presented in this research are relevant and apply to both experienced and newly internationalized firms and incrementally and non-incrementally internationalizing firms. In addition, the commencement of internationalization activity (i.e. commencement date of internationalization) was not captured. Future research should seek to examine the internet-enabled experiences of SMEs relative to the point at which firms actively engaged in internationalization behavior. Seventh, the findings of this research are context-specific, which may be considered as a key limitation of the research, given that the findings are drawn from Australian SMEs. Future research may seek to replicate this study beyond the current context. Eighth, the sample of firms in this research comprises only Australian SMEs employing between 2 and 200 people (ABS, 2017), thus raising questions of the applicability of the findings to other types of firms. In regard to firm size, the findings overall indicate that small-sized service firms tend to indicate a higher degree of technological involvement and are, on average, more inclined to engage with internet-enabled platforms to facilitate the process of internationalization. Overall, however, there were no distinct differences in the data, suggesting size of the firm is not necessarily impacted by the extent to which internet-enabled experiences are acquired. Further research examining the effects of firm size should, however, be conducted to validate this finding.

References


**Corresponding author**

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Appendix

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<th>Quadrant 1</th>
<th>Quadrant 2</th>
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<tr>
<td>Technical internet-enabled experiences</td>
<td>Operational internet-enabled experiences</td>
<td>Functional internet-enabled experiences</td>
<td>Immersive internet-enabled experiences</td>
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**Firms pursuing an incremental path to internationalization**

**Pre**

We started sending product to New Zealand in the early 2000s, after receiving some initial orders [...] so I guess the Internet assisted us in scoping the market initially. We used Austrade [the website] a fair bit, as well as souring information on potential distributors. We didn’t really use technology all that much (Sm012)

**Early**

The jewelry manufacturing business is a small one. Everyone seems to know everyone. It’s a really tight-knit industry, even more so in Australia. I have previous experience of living and working in New Zealand, so that helped quite a bit when we decided to open a store in the United States. We did use the Internet initially, and even more so recently for scoping out other businesses [international competitors] (Ge003)

**Later**

The Internet for us is really a tactical thing. We didn’t use any technology really in the initial stages setting up the business, but we do use it now primarily to create videos of our products for our... We’ve only begun to use technology [the Internet] for growing the business in recent years [...] of course, technology has a place in the manufacturing of the product, but we’ve only begun to A large part of our business growth [is] on the back of word-of-mouth. I have joined a networking group through LinkedIn, I often use [the platform] to connect with others in the industry, to share experiences

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Table A1.

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<th>Phase</th>
<th>Quadrant 1: Technical internet-enabled experiences</th>
<th>Quadrant 2: Operational internet-enabled experiences</th>
<th>Quadrant 3: Functional internet-enabled experiences</th>
<th>Quadrant 4: Immersive internet-enabled experiences</th>
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<td>customers in the United States. We do also use Google a fair bit, interestingly to new fragrance formulations and scents and basic research (market research) (Gs001)</td>
<td>use technology for the operational side of the business in the last 5 years or so (Gs002)</td>
<td>[and insight] […] Online channels are also good at verifying information, making sure what someone is telling you is consistent with practice and is actually true (Gs002)</td>
<td>[…] even before we really developed the core software we had pretty good idea of the markets we would target. The Internet was really only becoming somewhat mainstay at this point, but we used it for software development and international expansion from the outset, even though our largest market is still Australia. We're seeing growth in the United Kingdom and the United States (Ss009)</td>
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**Firms pursuing a non-incremental path to internationalization**

**Pre**

I personally relied heavily on the knowledge and experience of others in the very beginning to get the business going. We knew we wanted an online presence, where our customers could order and buy coffee beans, but we couldn't do it with technology alone (Gm005)

Our clients are here in Australia and also in New Zealand, but more so in Australia. We have always engaged with technology, the Internet more so to keep abreast of what's happening in the industry […] we needed technology, software and hardware to develop the program we use today, so we have been engaged with technology from the very beginning. We wouldn't exist without it (Ss008)

I've mentioned I am a part of an online innovation community. It's an entrepreneurship group. The information you can gain from these networking events is valuable because you're getting first-hand information and experience from people who have gone before you. I've been able to avoid potential hurdles in India, from the advice I've gained […] (Gm005)

[…] even before we really developed the core software we had pretty good idea of the markets we would target. The Internet was really only becoming somewhat mainstay at this point, but we used it for software development and international expansion from the outset, even though our largest market is still Australia. We're seeing growth in the United Kingdom and the United States (Ss009)

**Early**

We built it [the business] from the outset to go international, and technology [the Internet] enabled us to do that from a distribution point of view. You either make it [the business] more generic so you could go to any industry; in Australia, or you have to go overseas because the Australian market's just too small, there's not enough [potential] clients. We wanted to create a

You know although technology is fundamental to what we do today from HR to operations, distribution and strategy [i.e. online growth via the website], I still rely on the knowledge from my networks, who aren't just based in Australia but are all over the globe. If I can't attend a trade show, I know I can always use Skype to connect with key networks (Gm006)

 […] the US has 55,000 jewelers, the UK has about 12,000, you know, which is still six times more than what Australia has. In the United States there was a lot of competition, but only one third of jewelers had software. We used technology much more strategically at this point to collate information, data and statistics to support our growth in the United States (Ss010)

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Platform that was jewelry specific, that's our point of difference so we'll go worldwide. We knew we had a niche product, because our online research provided this information (Ss010)

Later

Tourism on the Gold Coast is competitive. I am constantly using the Internet to connect [converse with] with my agents [in the United States, New Zealand and the United Kingdom]. We have become more strategic in terms of using social media, and the Internet more generally to become a little savvier in our approach (Sm011)

[...] we have been able to capitalize on the needs of a niche industry [jewelry retail software][...] we saw that we could use the Internet to actually deliver a web-based solution, purely online. We came up with the concept of re-writing the entire program for businesses in the United States. It [technology] allowed us to create a program for businesses with poor Internet [...] (Ss010)

Sources: Phases of internationalization (pre, early and later) are drawn from Tan et al. (2007) and Pellegrino and McNaughton (2017)
Capitalising on knowledge from big-science centres for internationalisation

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University of Tartu, Tartu, Estonia, and
Niina Nummela
University of Turku, Turku, Finland

Abstract

Purpose – The purpose of this paper is to investigate how resource-constrained, knowledge-intensive firms capitalise on the knowledge from collaboration with big-science centres. It pays particular attention to what kind of knowledge a firm obtains and how it can be efficiently used in exploring and exploiting opportunities in international markets.

Design/methodology/approach – The empirical basis for the study is a longitudinal case study of knowledge-intensive Estonian companies that collaborate with the European Space Agency (ESA). A rich data set was collected over three years.

Findings – By studying the inward and outward activities of the two case companies collaborating with the ESA, the authors found that the internationalisation process of these firms had unique characteristics. Their international expansion was not driven by increasing market knowledge and reducing risk or uncertainty, but by resource seeking for research and development efforts. It was a cyclical, non-linear process, which was advanced by co-creation, learning and exploitation of the emergent knowledge, leading to an improved network position and identification of further opportunities.

Research limitations/implications – The focus was on knowledge-intensive, resource-constrained firms and their collaboration with big-science centres. The transfer of the proposed framework to another context may not be straightforward. The authors relied on informants from the firms, thus ignoring the view of their partner, the big-science centre. It may be that because of this perspective, the authors did not capture some aspects of the collaboration. A broader range of cases would have provided more powerful support to the findings. Although the cases were sufficient for theory refinement and building a tentative framework, they also call for further cases that would clarify whether these conclusions would be valid for other companies.

Practical implications – Collaboration with big-science centres provides companies with access to diverse types of knowledge. However, its impact on the future success in internationalisation also depends on other factors, such as the firm’s absorptive capacity and technological competence.

Social implications – Governments invest substantially on the development of big-science centres with the expectation that they would have significant knowledge spillovers on the technology development. A more qualitative approach to impact assessment opens new ideas how to develop their activities and in particular their collaboration with SMEs.

Originality/value – The study reassesses the theory on the internationalisation process of the firm and gives voice to companies which have been marginalised in earlier research.

Keywords Knowledge, Small-to-medium-sized enterprises, Estonia, Internationalization, Big-science centre, European Space Agency

Paper type Research paper

1. Introduction

Knowledge has been central to explaining a firm’s internationalisation process (Åkerman, 2015; Eriksson et al., 1997) and it is even possible to argue that a knowledge-based theory of internationalisation exists (Welch, 2015). Unfortunately, we know very little about the knowledge acquisition and utilisation of internationalising small- and medium-sized enterprises (SMEs) (Åkerman, 2015; Durst and Edvardsson, 2012). This is quite surprising,

This research has been supported by funding from the Estonian Research Council (project PUT1003), which is a government institution supporting scientific research in Estonia.
as SMEs offer great contribution to the global economy but suffer from resource constraints which hold them back from international markets. Given the considerable number of such companies worldwide (Cusmano et al., 2018; European Commission, 2010; Keen and Etemad, 2012), we can expect that a deeper understanding of the knowledge acquisition of internationalising SMEs will have wide managerial implications, and thus increase the utility of our study (cf. Corley and Gioia, 2011).

Another contribution of this research lies in its originality (cf. Corley and Gioia, 2011). Besides its utility to practitioners, our study offers a novel view on the internationalisation process of the firm and reveals that despite the significant number of studies that have been conducted, the understanding of how entrepreneurial firms leverage knowledge in their international operations is rather limited. Two approaches have dominated the academic discussion. Early theories on the internationalisation process of the firm explained it as being driven by an active but incremental collection of knowledge from preselected markets (e.g. Johanson and Vahlne, 1977). Later, scholars interested in international new ventures (INVs) found that the process was not accelerated by knowledge created during the process but rather by the active utilisation of knowledge already possessed by key actors before a company's inception (e.g. Oviatt and McDougall, 1994). Both streams of scholarship assume that internationalising companies hold proprietary assets (e.g. products or technologies) before entering foreign markets. Recently, this premise has been questioned (cf. Kriz and Welch, 2018; Hewerdine et al., 2014) with a proposition that small knowledge-intensive firms may also internationalise in order to obtain the financial and knowledge resources required to feed their research and development (R&D) efforts. This non-linear, discontinuous and emergent internationalisation pattern results in an increased knowledge base, which is not purposefully compiled, but unintentionally accumulated.

One potential source for resources is collaboration with big-science centres. In Europe, among the best known and most studied examples of big-science centres are the European Organization for Nuclear Research (CERN) and the European Space Agency (ESA). Their activities are typically built around specific mission-oriented programs that feed into the economic growth of society (Mazzucato, 2013). The centres are hubs in a knowledge-based network and, to meet their mission targets, they need to collaborate with high-tech firms. Consequently, a large share of such centres’ annual budgets is dedicated to the procurement of novel high-tech products. This business of the “public procurement for innovation” has been defined as “the purchase of a not-yet existing product or system whose design and production will require further, if not completely novel, technological development work” (Edquist and Hommen, 2000, p. 5).

Collaboration with big-science centres is a source of high-level technical-knowledge inflows (Autio et al., 2004), enabling the development of innovative products and technologies with superior characteristics (e.g. Byckling et al., 2000; Hertzfeld, 2002). At the same time, the role of big-science centres in the internationalisation processes of SMEs has been overlooked in the literature. This is surprising, as internationalisation is implicitly considered one of the intended consequences of the public procurement for innovation (Edquist and Zabala-Iturriagagoitia, 2012). Collaboration with big-science centres can play an important role in the evolution of the business networks of firms’ suppliers, for SMEs in particular (Bach et al., 2002). Involvement with big-science centres may also be a highly valuable marketing reference for their suppliers (Cohendet, 1997; Autio et al., 2003). All this indicates that these centres may also play a role in the internationalisation of these entrepreneurial firms.

To sum up, existing theories of the internationalisation process of a firm have focused on firms with existing products or services whose growth is either driven by increasing knowledge and decreasing uncertainty or firms that already have experiential knowledge within the company or available through their network. This study focuses on firms which...
are working with new-to-the-world technologies (cf. Kriz and Welch, 2018) and whose internationalisation is driven by their constant need for resources for R&D. Collaboration with big-science centres may offer them an opportunity for such resources but it remains unclear how resource-constrained, knowledge-intensive firms capitalise on knowledge from collaboration with big-science centres. In addition to the scarcity of prior studies in this area, we assume that there is a need to challenge the underlying assumptions of the existing theories on the internationalisation process of the firm. Thus, the research question of this study is built on both the identification of a gap in the existing research and the problematisation of what is already known (cf. Alvesson and Sandberg, 2011).

This study focuses on what kind of knowledge a firm obtains through collaboration with big-science centres and how this knowledge can be efficiently used in exploring and exploiting opportunities in international markets. It adopts a broad definition of internationalisation, including both inward and outward operations in international markets[1], something which has been called for (Hernández and Nieto, 2016). The empirical study is based on longitudinal data from two Estonian firms that have successfully participated in the ESA's tenders.

The contribution of this study is considered as envisioning, i.e. making the reader aware of what previous research has been missing, revealing new insights and providing a revised view of the internationalisation process of knowledge-intensive firms (cf. MacInnis, 2011). Guided by a review of the literature, we examine empirical cases to refine the internationalisation process theory of the firm (cf. Welch et al., 2013). Thus, our study is also a response to the call for case studies to modify existing theories and offer alternative explanations (Welch et al., 2011). The result of our investigation is an alternative frame of reference that is presented at the end of the paper. It proposes a novel theoretical explanation regarding the internationalisation of resource-constrained, knowledge-intensive firms. Furthermore, our study is unique in the sense that it gives voice to a type of firm that has been marginalised in earlier research. Therefore, examining their internationalisation process provides novel insights into the role of knowledge in internationalisation and further advances the knowledge-based theory of internationalisation.

2. Literature review

2.1 Internationalisation: A knowledge-development process embedded in networks

Even 40 years after its introduction, one theoretical model dominates the discussion on the internationalisation process of the firm: the so-called Uppsala model (Welch et al., 2016). The original model (Johanson and Vahlne, 1977) was introduced in the 1970s, and the authors updated and revised it 30 years later (Johanson and Vahlne, 2009). In the early model, lack of market knowledge was considered to be the main obstacle to the development of international operations. The authors considered experiential knowledge to be a pre-requisite to identifying international opportunities and learning, and also the driver which kept the internationalisation process going. The fundamental assumption was that collecting market knowledge and the resulting increased commitment to international operations would take time. In the revised model, knowledge is embedded in the context in which firms operate. In other words, it is still considered relevant, but firms’ knowledge base is not limited to their own activities and resources but extends across company boundaries to their business networks (Johanson and Vahlne, 2009). Furthermore, knowledge is the framework through which the decision makers identify and exploit opportunities (Johanson and Vahlne, 1977), and international expansion requires membership in relevant business networks; otherwise, a firm suffers from the liability of “outsidership” when compared to its key competitors (Johanson and Vahlne, 2009).

In the Uppsala model, knowledge – particularly market knowledge – is a significant factor in reducing uncertainty and risk, thus promoting firms’ international expansion.
Market knowledge, i.e. an increased understanding of markets and customers, includes the behaviour of clients, competitors and other stakeholders as well as the surrounding institutional frameworks, rules and norms (Fletcher and Harris, 2012). Increased market knowledge leads to improved marketing capability, that is, a company’s ability to better meet the market-related needs of the business and the demands of competition (Weerawardena, 2003). It is also viewed as decreasing uncertainty and risk and thus facilitating internationalisation (Liesch et al., 2011). On the other hand, researchers have mentioned that companies also need marketing knowledge: they need to understand how to enter international markets, to localise offerings and to run international business (cf. internationalisation knowledge, Fletcher et al., 2013). This knowledge can be acquired through direct and indirect experience, external search or internal information (Åkerman, 2015; Fletcher and Harris, 2012). In this study, both market knowledge and marketing knowledge are of interest.

The Uppsala model is often contrasted with scholarly work investigating INVs, that is, companies which operate internationally at or near inception (the most notable study being that of Oviatt and McDougall (1994)). Prior research shows that these firms may be able to enter international markets rapidly because they efficiently exploit knowledge gained from their network(s) (Coviello, 2006), and they utilise it without the constraints of pre-existing organisational routines (Autio et al., 2000). INVs combine knowledge from different sources and, in particular, benefit from the congenital knowledge base that the top-management members bring to the company (Bruneel et al., 2010). Thus, a significant part of their relevant knowledge base has been formed prior to the company’s inception (Hewerdine and Welch, 2013). This interpretation of internationalisation is not contradictory to the Uppsala model: knowledge is created in relationships and networks, and it may have been created even before the inception of the firm (Johanson and Vahlne, 2009).

Both streams of literature have been heavily influenced by the resource-based view of the firm, and knowledge and relationships have been considered as key resources in the internationalisation of the firm (Grant, 1996; Wernerfelt, 1984). For SME internationalisation, these intangible resources are crucial, as they offer a way to compensate for the lack of more tangible resources (Gassmann and Keupp, 2007). Resources are considered both as indicators of a firm’s commitment to internationalisation (Johanson and Vahlne, 1977) and as assets which facilitate internationalisation (Coviello, 2006). Unfortunately, studies which offer an in-depth investigation of resource-based SME internationalisation are rare (Ruzzier et al., 2006).

Recent studies on the internationalisation of knowledge-intensive firms bring resources more into focus and also indicate that there might be a third alternative way to develop knowledge during internationalisation. Instead of a target-oriented search for knowledge in preselected markets (Uppsala model) or the effective integration of pre-existing knowledge (INVs), a firm’s knowledge base may also accumulate unintentionally during internationalisation. Some small knowledge-intensive firms may internationalise to seek resources (Hewerdine et al., 2014), and it can be assumed that in these cases, the process of knowledge acquisition, assimilation and integration may be different, with the process being more emergent than planned. The resulting knowledge-development process is probably ad hoc; irregular and non-linear, but without any prior studies on this phenomenon, it is not clear whether this is the case. Understanding this process is the core of this study.

2.2 From information to relevant knowledge
Given the “paradox of information availability” (Welch et al., 2016), that is, the richness and easy access to information, one could easily assume that internationalising companies have, by now, overcome the challenges of a lack of market or marketing knowledge. However, this is not the case, as changing information into usable knowledge requires effort and specific
competencies. Nor does the quantity of information compensate for quality. In fact, earlier research has demonstrated that excess knowledge may lead to overconfidence and misinterpretation of customer reactions (Nummela et al., 2016). Thus, the possession of knowledge does not guarantee smooth international expansion.

In line with Costa et al. (2016), this paper presumes that information precedes knowledge and that knowledge is created from information through interpretation. Thus, internationalisation is also a process of knowledge management, that is, acquisition, assimilation and interpretation, during which information is transformed into relevant knowledge. International business and marketing research is based on the assumption that while internationalising, firms search widely for information, and the use of one source does not limit the use of another (De Clercq et al., 2012; Fletcher and Harris, 2012). The significance of experiential knowledge for internationalisation has been particularly highlighted (Blomstermo et al., 2004; Eriksson et al., 1997), but objective, codified knowledge can also be beneficial. Both market knowledge and marketing knowledge can be either objective or experiential.

However, companies vary in terms of their ability to benefit from this knowledge. Their absorptive capacity, that is, the ability to recognise the value of information and assimilate it (Cohen and Levinthal, 1990), is decisive in exploring and exploiting international opportunities. It is also possible that the management recognises the value of the acquired information, but while it remains “nice to know,” they do not know what to do with it. This problem originates from a lack of transformational capability: the management is unable to develop routines which would facilitate meaningful combination of existing knowledge with newly acquired knowledge (Zahra and George, 2002). Thus, future absorptive capacity is determined by the current absorption of new knowledge in organisational routines and processes (Todorova and Durisin, 2007).

Relevant knowledge for internationalisation is acquired and assimilated through inward and outward activities (Hernández and Nieto, 2016). Studies taking a holistic view of internationalisation have typically searched for links between inward (international sourcing and R&D) activities and outward (sales-related) activities. A number of studies have shown that firms use inward activities as a springboard for outward operations, particularly in the early internationalisation phases (Holmlund et al., 2007; Karlsen et al., 2003; Jones, 1999; Korhonen et al., 1996). However, from this study’s viewpoint, it is pertinent that inward links are the interorganisational relationships which add resources to a company’s internal processes, whereas outward links exploit the internal resources (Rilla, 2016). Unfortunately, existing research does not describe the formation of inward–outward links, that is, the utilisation of knowledge created during inward activities but also used in outward internationalisation.

This study argues that links between inward and outward activities extend a company’s knowledge and experience base and provide a platform for knowledge assimilation and interpretation. The study asks what new knowledge firms acquire as they collaborate with big-science centres, and specifically with the ESA. We are particularly interested in market knowledge and marketing knowledge and how this new knowledge is utilised in subsequent internationalisation efforts. Following the call by Holmlund et al. (2007), these questions are answered by combining quantitative and qualitative process data from two Estonian companies.

3. Research design

3.1 Research strategy

This study investigates the acquisition and use of market and marketing knowledge which knowledge-intensive SMEs obtain through collaboration with big-science centres. To capture the knowledge development in the internationalisation process of these firms,
a multiple-case-study approach was chosen. This research strategy allows for an in-depth investigation of the research topic, analysis of the phenomenon in its contextual setting and a more holistic view of the selected companies (Ghauri, 2004). The theorising focus of the study is on the processes that generate new knowledge and promote knowledge transfer within the case companies. Instead of building a new theory, this study aims at refining the internationalisation process theory (cf. MacInnis, 2011).

In our case study, we focused on two firms in order to combine deep understanding of the cases with the possibility of pattern matching between the cases (Eisenhardt, 1989). In this respect, our study can be labelled as a “matched-pair” case study (cf. Piekari et al., 2009). The selection of appropriate cases was based on the study’s purpose – what the researcher wants to be able to say about the unit of the analysis – and access to information (cf. Fletcher et al., 2018). This study is based on a purposeful sampling of cases, which is typical for studies focusing on real-world problems (Emmel, 2013). Critical case sampling, a subcategory of purposeful sampling, was adopted. As Fletcher and Plakoyiannaki (2011) explain, critical case sampling “focuses on selection of cases that are rich in information because they are unusual, special or make a point quite dramatically” (p. 179). This study focuses on internationalising firms that have benefited from collaboration with big-science centres. It is unique in the sense that it gives a voice to resource-seeking firms with new-to-the-world technology, a group that has been marginalised in earlier research on the internationalisation of firms.

Two main criteria were applied in the selection of cases. First, small knowledge-intensive firms were sought which had experience in collaboration with a big-science centre. Second, the firms needed to be accessible, observable and trackable. Both selection criteria pointed toward Estonian companies which had cooperated with the ESA. By January 2014, when data collection started, 13 companies in total had experience of ESA collaboration. Of these firms, two information and communication technology (ICT) companies were chosen for investigation. These information-rich “archetypical” cases were viewed as being able to provide the best answers to the research questions (cf. Patton, 2015; Silverman, 2000; Stake, 1995).

The sampling process was iterative and could be labelled as “through the research process sampling,” which is typical for qualitative research (Uprichard, 2013). This started early in the process before the researchers entered the field and continued until the data-analysis phase. Purposeful sampling led to cases that provided detailed insights and in-depth understanding – a benefit which would not have been obtained using other sampling strategies (cf. Emmel, 2013). The study did not search for representativeness but the credibility of the findings (cf. Patton, 2015).

3.2 Data collection and analysis
This study focuses on how resource-constrained entrepreneurial firms capitalise on the knowledge they obtain during internationalisation. Following the tradition of international entrepreneurship research (Coviello and Jones, 2004), the unit of analysis in this study was a single company. The studied firms were quite small, and because of their size and centralised decision making, a holistic case analysis was possible.

When studying a change in the knowledge base of internationalising firms, a longitudinal approach is recommended (Ibeh and Kasem, 2014). For this study, we collected a rich data set spanning three years. It includes both primary and secondary data for both cases, collected both retrospectively and in the real time. In SMEs, knowledge sharing typically happens informally and not very systematically (Durst and Edvardsson, 2012). Major decisions are made by the top management and presumably these key decision makers also have the best overall view of knowledge acquisition and utilisation within their companies. Therefore, the CEO of Company C and VP of Company A were the key stakeholders in the process.
informants interviewed for this study. The interviewees had been with their companies since inception. Therefore, they were knowledgeable about both past decisions and motivations and also about the acquisition and utilisation of knowledge during internationalisation. Besides interviews, the data set comprises Skype sessions and face-to-face meetings with the key informants, as well as internal company documents and annual reports. Figure 1 presents a timeline of the data collection.

Semi-structured interviews were carried out with the key informants. All interviews were conducted face to face in Estonian, as the interviewees and the interviewing author were Estonian nationals. By using their mother tongue, the interviewees could express their opinions, thus increasing the credibility of the findings. Follow-up Skype sessions were organised with the key informants during the research process; altogether, close to 100 sessions were held. The Skype sessions were informal, mainly focusing on different events related to resource seeking and internationalisation and the managerial reasoning behind them. They provided supplementary information and allowed for the tracking of the development process.

During the research project, one of the authors worked as a consultant assisting Estonian SMEs in ESA projects and hence had an observer role (cf. Piekkari et al., 2013). While he could follow the case firms’ activities at all levels, he was not directly involved in their internationalisation processes.

Data were also obtained from several publicly available and internal documents. Estonia has comprehensive public databases on company performance, as every company is obliged to disclose its financial statements. Company websites, newsletters, professional magazines and newspapers supplemented the understanding of the companies. Utilisation of other types of internal documents such as reports related to publicly funded projects or internal memos also allowed for the validation of the views of the informants and a better capturing of the phenomenon over time.

The aim of our analysis was to create a “thick description” (Geertz, 1973) of the cases. In order to manage the rich data set, we applied tools for organising and structuring the data: it was coded systematically with NVivo software and the Gioia method was applied in the first phase of the analysis (Gioia et al., 2013)[2]. The next step involved the preparation of a primary narrative or a “re-storying” of the case from the raw data (Eisenhardt, 1989) to unite the contextual and focal elements temporarily (Makkonen et al., 2012). This involved the process of selecting, focusing, simplifying, abstracting and transforming the data by writing summaries and coding.

The list of codes evolved over the research process, as new themes emerged inductively from the data and deductively from the simultaneously evolving theoretical framework (cf. Bazeley, 2007). The codes included, for example, “ESA as a gateway to business networks,” “signal of the potential of the company to business networks,” “market information from the ESA,” “resource-seeking activity,” “cross-border inward link,” “market information from ESA events,” “learning from marketing knowledge” and “change in business strategy.” After the themes were coded, the data were categorised accordingly. This enabled the

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<td>Face-to-face meetings</td>
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<td>Company C</td>
<td>Face-to-face meetings</td>
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researchers to write narrative descriptions or “microstoria” (Makkonen et al., 2012). The result was a lengthy researcher narrative on the emergence and internationalisation of the ventures.

To increase the external validity of the research, case-study databases were compiled. The databases contained case-study memos, relevant documents from secondary data sources and the narratives collected during the study (cf. Gibbert et al., 2008). The reports and the interview transcriptions were made available to the respondents to obtain their feedback and, thus, further mitigate subject biases.

3.3 The case companies
Company A was established in 1989 by an entrepreneurial team aiming to rekindle cartography in Estonia. Since its early days, the company’s product range has continuously expanded from cartography to geographic information systems, to mobile and satellite applications. However, all these business fields are connected to spatial-information usage by different end-user groups. In 1993, the company’s current owner was appointed as the CEO. He recognised the potential of the digitisation of core business processes. By the mid-1990s, the whole process of map production was supported by ICT tools. This step led to entry into a new business field: the development and sale of geographical information systems. By 1998, Company A became the leading software developer in this niche in the domestic market.

In 1999, the company won a contract from Ericsson AB to develop a software platform enabling and supporting the provision of location-based services (LBS) for telecom operators. The new business field benefited from a partnership with a leading local mobile operator who was among the first in the world to launch innovative mobile LBS. Mobile operators around the globe are still the main customer group of the company. In 2000, a publicly traded Finnish company acquired Company A. The acquired unit focused on developing the software platform for mobile operators to provide LBS. In 2001, the company signed a distribution agreement with Ericsson AB, a major supplier of mobile network hardware for telecom operators. But the 2000 Dot-Com bust caused the bankruptcy of the Finnish group in early 2002. A management buyout of the assets of Company A led to the ownership structure of the company which continues to this day. Since 2009, the company has been actively developing Big Data solutions for the telecom sector and satellite applications. In 2013, it embarked on a corporate restructuring programme to divest some of its internationally less competitive business departments and dedicate more resources to its recently introduced, more innovative knowledge-intensive fields of activity. Today, the company turnover is €3.5m and it employs over 50 people.

Company C was founded in 2013 to provide innovative software for additive manufacturing systems. The three founders have worked in different managerial positions in the ICT industry. One had a career at Nokia, one was an export manager in an Estonian company and the third was the CEO of another successful Estonian ICT company. By summer 2014, the company had secured funding for the development of a prototype. In July 2014, negotiations for a contract with the ESA commenced. This proved the credibility of both the concept and the company in the eyes of a seed investor from Japan; by November 2014 that investment was finalised. By December 2015, the first prototype of the software platform with limited functionality was delivered to the ESA. This milestone was essential for raising equity for further R&D and marketing. The negotiations with the next venture investor started at the beginning of 2016 and they were successfully completed by September 2016. This equity round was sufficient enough to bring the software to the market.

The software platform is currently targeted at the business-to-business market. The main target groups include manufacturers of 3D printers and providers of 3D printing services. The company has developed state-of-the-art software tools which make the integration of a 3D printer for plastics and the cloud system extremely convenient for its
would-be partners. In both segments, the first paying customers are, surprisingly, from Latvia, even though the company has held talks with various companies from a wide range of industries (e.g. automotive, software and 3D printing) and from different areas (Europe, North America and Japan). As of 2016, the company had made no sales and its employees were the founders. The first tailor-made software was delivered to a commercial client in September 2017. The key facts of the case companies are summarised in Table I.

4. Findings

4.1 Obtaining and capitalising on knowledge

The case companies sought to build cross-border linkages to acquire resources needed for exploiting perceived market opportunities. The companies were followed for three years to capture their internationalisation processes and to understand how the role of the ESA was instrumental in establishing new cross-border linkages. Our investigation brought forward several mechanisms by which experiential market and marketing knowledge was obtained through collaboration with the ESA and how it was translated into useful knowledge, which supports outward internationalisation. The following case descriptions (see Figures 2 and 3) illustrate the collaboration between the case companies and the ESA, and the resulting effects on the companies’ internationalisation processes.

4.1.1 Company A. Company A launched a new business line in 2010 when Estonian companies and research institutions gained an opportunity to access ESA-funded programs[3]. The decision to diversify was based on the vision of exploiting the company’s core competencies – spatial-information technologies – in a different market setting. The access to the ESA procurement was seen as a resource-acquisition instrument to accumulate new

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<th>Table I. Summary of case companies</th>
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<td>Employees</td>
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Figure 2. Capitalising on knowledge in company A
capabilities that would differentiate the company from its competitors. The initial plan of Company A was to develop technological capabilities, a software platform prototype and validate a business case in collaboration with the ESA as the first paying international customer and lead user. The successful implementation of the ESA projects would then pave the way toward commercial upscaling in a number of international markets.

The plan worked, but only partly, for Company A. The collaboration with the ESA boosted the company’s technological capabilities and validated them in the eyes of potential clients. The marketing reference enabled the company to successfully bid for public tenders internationally:

If we had not had ESA contracts and that Lithuanian contract, then we would be in trouble. But without the ESA, there wouldn’t have been the Lithuanian […] Yes, indeed, having reference projects is essential to bid anywhere at all.

However, the plans related to the service platform – which was supposed to be the core of the value proposition of the new business unit – did not materialise. Over time, the top management realised that the ESA was searching for a different solution than the one that they had offered. At the same time, the ESA provided funding and justification for Company A to visit potential end users, e.g. German insurance giants:

Yes, with the insurance industry, we are in the process where we are helping them to tell us what technical specifications are and where the business is […] The market analysis is a part of the product development. We simply don’t ask for technical requirements, but only in tandem with a question regarding WHY it [information product] is needed.

The ESA has also created structures to stimulate further collaboration. It offers thematic exploitation platforms which are the networks of companies and R&D organisations operating in virtual workspaces with a common theme and with access to dedicated resources (including data, computing and software components). Company A benefited from this interface in the form of specific market and marketing knowledge:

I wrote to a company leading the platform and stated that I was an interested party eager to launch its services on its platform. What are the terms and conditions imposed on me to do this? After a few months, we met and negotiated […] In practice, I have asked more than 40 questions regarding technical issues, and questions on the business and commercial sides for this collaboration.
The link with the ESA facilitated, either directly or indirectly, the company’s access to highly specific knowledge about international markets and value-delivery mechanisms in different market contexts. Contacts with potential end users and accumulating market and marketing knowledge made the company rethink its understanding of market opportunities and revise its approach toward potential customers accordingly. The acquired knowledge stock also highlighted when additional resources were needed to exploit some of the identified opportunities. For example, further tests of user cases or novel technological components were required to pursue operations. These international activities led to the formation of inward cross-border linkages, often in the form of partnerships and consortia for collaborative R&D projects, which were also sources for additional funding from European or national public programs. Some of the new relationships also provided access to the critical elements of service infrastructures with favourable terms.

These inward links often arose at various ESA events. The ESA organises a wide spectrum of industry days related to a certain technological domain or a space mission, or days dedicated to supporting the involvement of SMEs in the ESA programs. These events have turned out to be highly valuable for expanding the business networks of the case company:

Even though I have difficulties with differentiating which people I’ve contacted in the workshops organised by the European Commission and those in the ESA events, my (good) business contacts have still come from these two circles rather than from any other types of conference.

At the same time, Company A continued building outward links to make use of resources obtained through the ESA contracts. Making offers to and communicating with potential end users resulted in new marketing knowledge which further augmented the company’s resource pool:

[…] then there are next-use cases and other ones where the service delivery is based on different principles. And these use cases are our […] I would say […] as strong and as important as the intellectual property of the software algorithms. I mean our business knowledge and how to couple pixels and frequencies with the needs of users.

Collected marketing knowledge is utilised in multiple ways. Besides affecting what to offer and how to offer within international markets, it also impacts pricing decisions:

What’s important now is that we are able to put a price tag on these value-added services. Not only what the CAPEX-OPEX of the services are – this is now possible to calculate – we are also able to provide an estimate to our customers about the value we add. And we are able to price the added value.

Linkage to the ESA has been instrumental in the company’s journey toward a sustained competitive advantage in its new market. The continuous refinement of Company A’s business model, understood as a “hypothesis about what customers want, and how an enterprise can best meet those needs, and get paid for doing so” (Teece, 2007, p. 1,329), is an outcome of learning by experience from various actors in its business networks (see Figure 2).

4.1.2 Company C. Company C was registered just a few months before it submitted its bid to the ESA in early 2014. Thus, the company was in an embryonic phase of development when it first approached the ESA. It had an original technological concept and a tentative business strategy, but it had not developed prototypes, nor did it then possess the resources for prototyping. At that point, the company believed that the software would create most value to customers from strongly hierarchical industries such as the automotive or aerospace industries. Based on this existing perception, Company C approached the ESA and successfully proposed a project. The collaboration with the ESA was an outcome of a creative entrepreneurial move to acquire external resources.
On the surface, the ESA appeared as a technologically distant partner for the company to realise its business concept.

The strong reputational content of the “ESA label” has manifested in many contexts for the company. It has been a real door-opener. The signal of legitimacy it provides has played a decisive role in the company’s search for financial resources when they were most needed. The ESA contract led to an equity investment by an Asian investor:

It [ESA contract] worked for the Japanese. Absolutely! […] When we received confirmation of it, then on that basis, they were instantly ready to invest in us.

Association with the ESA helped Company C to extend its business network. Based on this credential, the company had a chance to visit and pitch its first prototype (developed for the ESA) to several leading multinational groups from various industries such as the automotive and medical industries in 2014 and 2015:

[The ESA label] is a positive sign. Otherwise, it is difficult to verify. Typical situation – up pops Company X, almost without employees, no one seems to know them, tells a nice story; why should I bother to continue to chat with them if I don’t know what qualities are behind that company? But the ESA badge is on them – that the ESA has procured and approved software that works. Alright – it is worthwhile speaking with those guys!

Even though most established business ties with large multinationals were short-lived and are currently in hibernation, highly specific knowledge about the market conditions in different countries was conveyed to the company. Access to potential customers to whom the company expected to create the most value demonstrated that the company’s technology was several years ahead of the target group’s real business needs (One needs to fine-tune an engine before starting to invest in golden bumpers).

Inward cross-border links were equally important to Company C in obtaining market information. The company established contacts with several companies in its value chain in an industry event organised by the ESA (i.e. the place where the industry actors meet!) and they negotiated a possible partnership to continue the development of the technology together with the ESA or another resource provider. During negotiations with potential development partners, it became evident that in some geographical markets (e.g. Germany) prevailing attitudes toward software security issues in general did not support the implementation of the company’s business strategy:

They said after a month that they still were not ready and had to investigate what the potential risks related to this software were […] They have their own standards. Certain regulations regarding the Internet […] For us, it was nonsensical […] Nonsensical but reality.

During the implementation of the ESA contract, Company C learned more about the structure of and actors in the European space industry’s value chain. Based on this market knowledge, it was possible to approach the ESA and ask its staff to act as brokers for new business ties. The ESA mediated access to European system integrators, the large business groups residing at the top of the highly hierarchical space industry’s value chain. Without the ESA’s facilitating role, it would have been unthinkable for a start-up to reach these companies.

Witnessing the power of the ESA contract as a sign of the potential and inherent value of the technology, the company built on the momentum and created channels to several major industrial groups. For example, the company made a sales pitch to a multinational company, but instead of a sales deal, they became a beneficiary of the global player’s freshly launched cooperation platform for engaging with promising start-ups in emergent technology fields:

In addition, we have a contract [with a large MNC] which [for us] is equal to an investment. They invested €360,000 in us. It means they provide us services [back-end infrastructure] that we don’t pay for. It is free for us […] They may consider us a test case of some sort.
The contract with the ESA made the company investigate whether the ESA had provided more benefits in terms of business development. Participation in ESA events enabled the company to establish most of its inward links for R&D collaboration, but also outward cross-border links:

I picked up many exciting themes from there. One was a German company, another an Austrian with whom we principally agreed [upon R&D collaboration] […] Yes, we are continuing with a Canadian company. We will develop an integration layer for them. A real customer. Potentially a paying customer.

A reassessment of the company’s business strategy was based on market and marketing knowledge collected from the large number of cross-border links that were created by virtue of a single contract with the ESA. Company C has strongly benefited from highly knowledgeable expert feedback on the merits and weaknesses of different possible-use scenarios for the software platform. The collected marketing information has been crucial in deciding which technologies and features are to be embedded in the product:

Then again […] you massively save time. Time and money when you don’t do things the market does not seek and the market is not yet ready for. This is so huge a thing, but often, people don’t appreciate that […] All in all – not developing it in spring [2016] was the right thing, as we would have run in the wrong direction, spent our limited funds and would have […] bitterly murmured that no one wants our thing, even though it is awesome!

The marketing knowledge that was obtained increased understanding of how to customise offerings in different international contexts to win deals, e.g. by forming commercial partnerships with emergent and agile companies more willing to align their business strategy with the case company’s value proposition. One example was a Latvian hardware manufacturer, originally a potential development partner. The ESA order offered credibility and financial resources to nurture this first inward cross-border link. In less than three years, the R&D collaboration and reciprocal learning evolved into a “deep technical integration” and a commercial agreement between the parties, that is, an inward link progressed into an inward–outward relationship.

4.2 Cross-case analysis
The starting point for collaboration with a big-science centre for both case companies was a commitment to an initial understanding about how they would deliver value to customers. However, the resource base to exploit the identified business opportunity was inadequate for Company C, whereas Company A, as a more mature enterprise, had allocated substantial funding of its own to cover investments in space technology R&D over the years. Nevertheless, the top management of Company A considered their internal resource base insufficient to run its business “at a pace that they would like to.” Thus, gaining access to additional external resources was the main driver for the international activities of the companies.

The routes leading to collaboration with the ESA were different. The ESA has been a partner of long-term strategic importance to Company A due to the nature of the nascent business sector, which is highly dependent on institutional customers (such as the European Commission, national agencies and international organisations). Altogether, Company A has won four contracts with the ESA to develop applications based on satellite imagery and methods to process satellite data. It also intends to collaborate with the ESA in the future and respective goals have been set for 2018 and beyond. At the same time, Company C viewed the cooperation with the ESA as “a bit opportunistic.” However, for both case companies, the ESA was their first international paying customer and still remains their most important international source for sales revenues.
The ESA orders to its suppliers can be seen as “experimental procurement” (Uyarra and Flanagan, 2010). That is, the ESA is a lead user that procures the first prototypes and emerging designs of the most innovative but highly specialised products and services, which its contractors later offer in (non-space) niche markets. The collaborative relationships involve co-creation, which brings knowledge resources into internal development processes. Long-term organisational learning effects on a big-science supplier are stronger when the technological content of a contract is tightly linked to the core competencies of the suppliers (Nordberg et al., 2003).

The initial plan of both companies was to develop a prototype and validate a potential use case in collaboration with the ESA, and then replicate it in non-space markets. In earlier research, the results of collaboration with big-science organisations have been denoted as “quasi-immediate” knowledge spillovers (Cohendet, 1997), and this seems to be valid for our cases. Although the spillovers are rapidly visible for the company, the newly acquired technological resources as well as market and marketing knowledge, need to be adapted to various contexts. The pertinent, even growing resource need is accelerated by the discrepancy between the factors driving the procurement of a new technology at the ESA and the value proposition which would appeal to other potential customers in international markets. Accumulating market and marketing knowledge demonstrated to our case companies that their initial beliefs about market opportunities were not supported by potential customers. This was contradictory to the results of the market research that Company A had conducted prior to launching their new business line:

Our original business model [...] or one of the provisional models [...] was to take a specific market segment and a core process of a customer and to add value with our product to this core process [...] It does not work that way! (Company A)

Nor did the companies have a clear understanding of the ESA’s needs and motivations to enter into a contract. This hindered learning from the customer–supplier relationship between the ESA and the companies:

The reasons and arguments of the ESA to procure the project were different from those that we initially perceived them to be. This is something were learned over time. We could not know it in advance. (Company C)

Given the effort to collect market knowledge prior to the diversification move, Company A’s initial endowment level of relevant knowledge resources was higher than Company C’s. Company A could also rely on a network of six sales agents who assisted them in some regions. The agent network had been established while exporting the company’s other products and services. The agents were helpful in finding partners and identifying business opportunities in their home regions (e.g. Southern Europe and South-East Asia). Thus, Company A had a higher level of initial market knowledge than Company C did and a degree of “insidership” in relevant business networks. Therefore, Company A was more concerned with gathering marketing knowledge during the observed period.

However, basing judgements on biased prior knowledge may be harmful to the performance of a company (Nummela et al., 2016). The adverse effects of biased prior knowledge can be corrected by actions based on more pertinent market and marketing knowledge gathered from new relationships in enlarging business networks. Two decades ago, Hameri (1997) noted that collaboration with big-science centres entails possibilities for companies even from geographically remote areas to find new channels to expand and improve existing business networks and become engaged in international collaboration. The cases provide evidence that entering new business networks would not have been feasible to the extent that was experienced without a strong legitimising signal provided by the relationship with a highly esteemed organisation such as the ESA (cf. Hoang and Antoncic, 2003).
Thus, collaboration with the ESA helped the case companies to overcome the liability of “outsidership” (cf. Johanson and Vahlne, 2009). Due to the different knowledge-resource endowment levels, Company A emphasised the importance of the ESA as a door-opener or a signal of credibility less than Company C did. Although the new network ties established based on the ESA reference were sometimes temporary, they enabled both case companies to collect specific market and marketing information.

Learning from networks reshaped the companies’ apprehension regarding available opportunities. They identified new opportunities based on what they had learned. Accordingly, this changed their perception of the effective combinations of internal and external resources necessary to seize the opportunities and prompted the companies to undertake resource-seeking activities. During this process, some existing tangible and intangible resources were deemed obsolete. This boosted their motivation for resource-seeking, even for more mature and less resource-constrained companies.

In both cases, resource-seeking activities were dominant during the observed period. The companies sought to obtain resources at a lower cost than their market value, e.g., to gain access to critical technological components on favourable terms through partnerships with foreign companies or to get awarded a public grant for product development. Ideally, a resource-seeking activity would enable the companies to address multiple resource needs simultaneously:

If I reach an agreement with the Germans and Norwegians [to write a proposal], then it would also safeguard for me the data stream necessary for me to run the service. (Company A)

The case companies were alert to opportunities to apply for additional financing to leverage internal resources. Identified fundraising opportunities, where the core competencies of the companies could be deployed, triggered internal discussions for idea generation and a search for suitable and eligible partners. Obviously, fundraising opportunities which could be seamlessly aligned with the companies’ business strategy at the time were given priority.

New international technology-development partnerships to win a grant or a contract were proactively self-initiated by the case companies. Company C mentioned only one case of an unsolicited opportunity, as they were invited to join an industrial consortium to submit a grant proposal to the Horizon 2020 programme, having been found in the database of ESA contractors.

A focus on resource-seeking sometimes resulted in a consortium of partners from various industries or from layers of the value chain less relevant to the business strategy’s execution (e.g. a group of end users of tailor-made solutions for governmental agencies in distant markets). On the other hand, the substantial managerial effort that needed to be dedicated to consortium-building was prohibitive in many cases. Interestingly, these “sunk costs” of managerial efforts related to resource-seeking may distract the company from a chosen resource-commitment pathway:

As always with such jobs [unsuccessful proposals], I would instantly like to draft a plan to resubmit [with the same partners], after lessons are learned. (Company A)

While the ESA linkage was instrumental for both companies in finding and approaching international partners, Company C, as the more resource-constrained of the two, was extensively relying on a resource-access strategy that Rawhouser et al. (2017) labelled as a strategy of projective associations: “high-quality relationships can often convey the viability and/or legitimacy of the new venture, which may in turn incite other actors to invest their resources” (p. 476). The status of the ESA supplier proved to be a gateway to resources, as witnessed by the very favourable deal with the start-up programme of a multinational company. At the same time, institutional business support from organisations such as public agencies or technology parks as a means of facilitating more cross-border ties with potential partners was also important for Company C.
Company A was more open to building consortia for funding proposals by involving direct competitors as partners. At the same time, Company C tended to approach partners along a value chain (either upstream or downstream) in different verticals. Company A demonstrated that cross-border links were not unidirectional. Sometimes, openness to inward and outward relationships exposes a company to new types of business risks such as the potential loss of critical proprietary information which may result in a foregone entrepreneurial opportunity:

We explain some issue in full detail to a potential partner and then – thank you, guys! – the other party will develop it with their own resources and people.

Both case companies display a behavioural pattern similar to what Hewerdine et al. (2014) denote as “resource-scavenging,” described as a process of irregular and non-linear market involvement with a central objective of finding resources for product development. Sales to new markets or finding additional customers were only secondary objectives; the main motive was to access resources needed to implement the business strategy. The acquired assets were then used to develop and adjust technological resources to deliver value to end users.

The resource-seeking activities of the case companies did not focus on particular markets. This drifting, indecisiveness and general lack of planning for internationalisation (cf. Crick and Crick, 2014) is well illustrated in the comment made by Company C’s CEO:

You bang in every direction and then look where balls are hitting the hole […] You cannot be too picky with opportunities you are exposed to.

The considerable change in the companies’ business strategies over time indicates that their original understanding of customer needs was probably limited when the technology development was set in motion. Since the beginning of the collaboration with the ESA, the business strategy has constantly transformed as a result of knowledge accumulated over time. The new market and marketing knowledge compels a company to reassess existing opportunities, as well as notice new ones, by encompassing changes in the emergent business strategy.

A longitudinal look at firm-level processes shows that internationalisation and technology development are interdependent and tightly interacting processes (cf. Kriz and Welch, 2018), strongly impacted by learning and sense-making of market opportunities as well as resource commitments to seize the opportunities. The case studies indicate that the behaviour of internationalising SMEs is driven by a search for new resources, instead of exploiting resources in the international markets or looking for new knowledge or customers.

5. Discussion and conclusions

This study has investigated how resource-constrained, knowledge-intensive firms capitalise on knowledge via collaboration with big-science centres. We were particularly interested in learning what kind of knowledge a firm obtains in this collaboration and how it can be efficiently used in exploring and exploiting subsequent opportunities in international markets.

Our theoretical framework was built on the existing theory of the internationalisation process of the firm. The discussion on internationalisation processes has been heavily dominated by the Uppsala model of internationalisation, and the seminal paper by Johanson and Vahlne (1977) is clearly one of the most impactful studies in the field of international business. It proposes a model of incremental acquisition, integration and the use of knowledge in internationalisation. Our research supported the main thesis of Johanson and Vahlne (1977, 2009): learning in internationalisation leads to increased commitment, which further enhances learning. However, the learning loop (cf. Jones and Coviello, 2005) which we found differed from the one presented in earlier research. Contrary to the Uppsala model, our study highlights that increases in market and marketing knowledge and the resulting
reduced risk and uncertainty are not necessarily the key drivers of international opportunity exploration and exploitation. Instead, the main motive for internationalisation may be resource-seeking. Second, experiential learning does not always decrease the need for new knowledge, and it may even increase as new opportunities emerge. We would argue that international expansion requires simultaneous learning and unlearning. In this cyclical process, some knowledge is of value and enhances internationalisation, while other existing knowledge hinders firms from adapting to the foreign market environment and should be discarded. Thus, knowledge becomes a valuable resource in internationalisation over time, and at the time of knowledge acquisition we may not know whether it will be valuable or not.

These insights encouraged us to propose an alternative theoretical framework to describe the internationalisation process of knowledge-intensive, research-constrained firms (Figure 4). Our framework also includes different types of knowledge, but they are not what triggers the internationalisation process. The cyclical process starts with the need for additional resources, often to be used to support further R&D activities. To solve the problem of insufficient resources, the firm seeks to collaborate with a big-science centre which provides the opportunity to link inward and outward activities and obtain the resources needed. This involves co-creation: an unfinished technology is developed together with the big-science centre into a more scalable and marketable product. During the collaboration, the firm learns about the technology, market and customers, as well as the competencies needed to operate in international markets. In other words, it acquires both market and marketing knowledge. Increased knowledge decreases the company’s liability in terms of “outsidership” (cf. Johanson and Vahlne, 2009) and improves its network position. A better position in the network also facilitates resource accumulation and may accentuate the internationalisation process. However, going through the learning loop does not guarantee successful internationalisation.

Figure 4.
Tentative framework for knowledge acquisition and assimilation from collaboration with big-science centres.
This study also makes a contribution beyond the internationalisation process theory. The findings have relevance to the resource-based view on entrepreneurial internationalisation. Collaboration with big-science centres may allow companies to overcome asset parsimony, as it improves their possibility of leveraging their unique capabilities and strengths (cf. Cavusgil and Knight, 2015). This thought may at first look very similar to the popular discussion on entrepreneurial bricolage (Baker and Nelson, 2005), which attempts to explain how entrepreneurial firms cope with challenging tasks by applying different combinations of the resources at hand to new opportunities. However, collaboration with big-science centres is not bricolage, as the resources obtained are not something which the case companies already have and are not valued by others. On the contrary, collaboration with a big-science centre starts after a very competitive process in which the potential of the firm is carefully assessed against its rivals. Similarly to the resource-scavengers in the study of Hewerdine et al. (2014), the case companies are involved in “both rational, market-based transactions and opportunistic or socially based exchanges” (p. 250) to access resources needed in R&D and international operations.

The concept of “reference time” (Jones and Coviello, 2005) – a specific time or a period of time when internationalisation activities occur – is also applicable to this context. Entrepreneurial resource-seeking by knowledge-intensive companies is guided by a discernible window of opportunity. Companies exploit their unique competencies and capabilities to secure first-mover advantage. The propensity to make early moves into international markets has been linked to the firm’s resource base: companies with more versatile resources (e.g. platform technologies) are more adept at taking advantage of new opportunities (Tuppura et al., 2008). The knowledge acquisition and assimilation loop reveals new opportunities and not only pushes companies to acquire new resources to go after the opportunities, but also to make efforts to reconfigure their existing resource base for improved flexibility. There is an interplay between a company’s resource base, the “learning loop,” and the timing of internationalisation activities.

This study offers significant public-policy implications. Countries that contribute to big-science centres are interested not only in advancing the frontier of scientific knowledge but also in the economic impact on companies within their borders tendering for and implementing contracts commissioned by the centres. From this perspective, procurement for innovation by big-science centres constitutes a public-policy intervention with a broad range of desirable effects. Impact assessments of public policies often fail to capture the processes regarding how inputs (e.g. extra funding) are transformed into innovation outputs (e.g. new products, technologies, or patents). The cases in this study provided an insight into mutual interactions between complex processes of innovation, internationalisation and organisational learning (cf. Chiva et al., 2014). Involvement with big-science centres generated a cascade of effects on the firms’ behaviour. Such changes in firm behaviour that result from public innovation policy instruments are called “behavioural additionalities” (Clarysse et al., 2009). The majority of recent socio-economic impact studies of big-science centres performed at the national level have been based on surveys of companies and have focused on innovation outputs (for the ESA, Eerme, 2016), that is, additional sales from new products derived from the technology or expertise that have been developed during the implementation of big-science contracts. Such “black-box” types of assessments provide little information on how these innovation outputs come to life. Case-based behavioural additionality evaluation methods would enable us to add to the current understanding about the membership in big-science centres as a policy tool available to governments.

Furthermore, this study has also managerial implications. For managers of knowledge-intensive companies, it is important to take note that institutional demand by big-science centres, which manifests itself in procurement contracts, conveys useful information about existing and nascent markets to the supplier firms but probably not in an
expected manner, that is, as an outcome of co-creation processes. A firm’s knowledge, which becomes a valuable resource in internationalisation over time, may accumulate unintentionally, even though the legitimacy signal of being associated with a big-science centre enables it to strengthen its network position and access more pertinent knowledge sources. The organisational learning loop that feeds this new market and marketing knowledge into a firm’s decision processes may also imply the need to cyclically unlearn, discard existing business strategies and adopt new ones. This unlearning interacts with entrepreneurial resource-seeking. Therefore, such resource-seeking is not a distinctive trait of small start-ups with high financial constraints.

As with any research, the findings and conclusions of this study have limitations and should be interpreted with caution. First, our focus was on knowledge-intensive, resource-constrained firms working with new-to-the-world technologies and their collaboration with big-science centres. The transfer of the proposed framework (Figure 4) to another context may not be straightforward. Second, we relied on informants from the firms, thus ignoring the view of their partners, the big-science centres. It may be that this perspective did not capture some aspects of the collaboration. We would encourage other scholars to also include the partners in their investigation to avoid a self-centred view of the partnership. Third, a broader range of cases would have provided more powerful support to our findings. Although our cases were sufficient for theory refinement and building a tentative framework, they also call for further cases that would clarify whether these conclusions are valid for other companies.

Notes
1. Inward operations refer to upstream activities in the company’s value chain such as sourcing and R&D, whereas outward operations are the downstream activities such as sales and customer support services.
2. In line with the recommendations of Gioia et al. (2013), our initial data analysis consisted of first-order analysis with categories emerging from the evidence (interviews), followed by a second-order analysis with theoretical themes and resulting with aggregate dimensions to build a data structure.
3. A European Cooperating State Agreement between the ESA and Estonia was signed in November 2009. Since the signing of this agreement, Estonian companies and research institutions have had opportunities to access ESA-funded programs. Estonia eventually became a full member in September 2015.

References


Further reading


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Coping with uncertainty in the internationalisation strategy

An exploratory study on entrepreneurial firms

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Abstract

Purpose – The purpose of this paper is to explore uncertainty-coping strategic actions in the internationalisation strategy of entrepreneurial ventures, encompassing born globals/international new ventures, enduring established internationalisers, old born globals, born-again globals and micro-multinationals.

Design/methodology/approach – The authors developed a qualitative exploratory study applying a grounded theory approach to ten entrepreneurial firms to investigate the strategies they adopted to cope with Knightian uncertainty in international markets.

Findings – The global niche strategy emerged as a successful path to deal with uncertainty in smaller firms’ internationalisation. The authors uncover the components of this strategy, namely the creation of markets, the focus on global clients and the control of technology.

Originality/value – The contribution of this paper consists in exploring how entrepreneurial firms cope with uncertainty through a global niche strategy and in outlining its main components. The authors develop a model of smaller entrepreneurial firms’ international strategising under this perspective. The research thus links together international marketing and strategy with (international) entrepreneurship studies.

Keywords Uncertainty, International strategy, Entrepreneurial firms, Niche strategy, Global customers

Paper type Research paper

1. Introduction

Internationalisation decisions are a paradigmatic case of strategising under conditions of uncertainty (Vahlne et al., 2017). This is particularly evident in the case of smaller entrepreneurial firms (Cavusgil and Knight, 2015; Laufs and Schwens, 2014). The international entrepreneurship (IE) literature reports ample evidence of small and young firms venturing successfully in international markets (Crick and Jones, 2000; Ibeh, 2003; Keen and Etemad, 2012), notwithstanding their supposed paucity of resources. Constraints in terms of resources prevent them from engaging extensively into data analysis and planning activities, a strategy that can revert a situation of uncertainty into a situation of risk (Li et al., 2004). If so, how do smaller firms approach foreign markets under conditions of true Knightian uncertainty? And which strategic options fit better in the case of entrepreneurial internationalisation (Autio, 2017) in smaller firms? This contribution aims at providing some answers to this question, addressing a gap in studies and encompassing different typologies of international ventures, from born globals and international new ventures (INVs), to enduring established internationalisers, old born globals, born-again global firms and micro-multinationals (mMNEs)[1].

In addressing this gap, we combine the entrepreneurial decision-making perspective under Knightian uncertainty with international marketing (IM), IE and international business (IB) studies. Authors have called for research about the strategies pursued by entrepreneurial firms to achieve a global reach (Autio, 2017; Knight and Liesch, 2016; Love and Roper, 2015) and about their IM approaches (Styles and Seymour, 2006; Zou et al., 2015). In particular, the investigation at the intersection of the marketing and entrepreneurship interface (Fillis, 2001) improves our understanding of smaller firms’ internationalisation.

The authors would like to thank the three IMR anonymous referees and the SI editors for their insightful comments and guidance.
The paper is structured as follows. First, we review the strategic responses to risk and uncertainty in the internationalisation process. Then we present and discuss the exploratory research, based on ten case studies. We apply a grounded theory approach, following a call for the adoption of this method in IB research (Gligor et al., 2015), uncovering how firms understand and deal with uncertainty in their international growth. The conclusions illustrate the implications of this work for the literature, some future research directions and the main limitations. This contribution has managerial implications as well, inasmuch as it highlights some practices adopted to successfully deal with uncertainty, for smaller firms in particular.

2. Strategy under risk and uncertainty
Uncertainty represents the natural condition in which most entrepreneurial decisions and processes take place (Korsgaard et al., 2016). This is even truer in relation to internationalisation decisions, particularly in the case of smaller entrepreneurial ventures (Liesch et al., 2011).

Setting off from Knight’s (1921) seminal contribution, we distinguish here between risk and uncertainty. When facing risk, a decision maker can draw the frequency distribution of the outcomes of a range of future events. Instead, when facing uncertainty, the decision maker is confronted with the impossibility to assign objective probabilities to each of the outcomes.

Building on classical approaches in economics, the problem of choice under uncertainty may essentially be tackled by increasing the amount of information (Luce and Raiffa, 1957). By increasing the available information, a situation of uncertainty can be reverted into a situation of risk. Risk, in turn, can then be mitigated through better planning and forecasting (thanks to the information available), through diversification and through insurance (e.g. Baker et al., 2003; Mintzberg, 1973; Porter, 1985). Uncertainty cannot be mitigated, it can only be coped with (Liesch et al., 2011; Mascarenhas, 1982).

A review of the literature about the different responses to conditions of true Knightian uncertainty (Magnani and Zucchella, 2018) highlights the roles of adaptation (Becker and Knudsen, 2005), flexibility (Doz and Kosonen, 2010; Teece et al., 2016), market creation (Courtney et al., 1997; Venkataraman et al., 2012; Sarasvathy, 2001; Yang and Gabrielsson, 2017) and networking (Coviello and Munro, 1995; Johanson and Mattsson, 1988). These contributions indicate how uncertainty can be coped with via non-predictive control and opportunities creation, flexible organisations and networks.

In the entrepreneurship literature, strategic responses based on information processing are often associated with causal decision-making logics. Causal entrepreneurs are goal-oriented and rely on a predictive logic (Dew et al., 2009), while entrepreneurs who rely on effectual logics emphasise improvisation, exploitation of contingencies and market creation. They rely on a non-predictive control strategy exercising control over what can be done with the available resources, instead of taking a decision based on a given set of predictions and plans (McKelvie et al., 2011; Sarasvathy, 2001; Sarasvathy and Dew, 2005; Yang and Gabrielsson, 2017).

2.1 Strategic responses to risk and uncertainty in the internationalisation process
Classic IB theories take the stance of risk in foreign direct investment decisions. Risk minimisation strategies (Dunning, 1988) – other things being equal – deal with the geographical diversification of the investments portfolio to spread the risk across markets (Hitt et al., 1997; Rugman, 1979).

Uncertainty is present in the real options theory, which argues that multinational enterprises have the opportunity to shift value chain activities from one subsidiary to another when uncertainty prevails (Buckley and Tse, 1996). Some IB authors discuss
the role of value chain operational flexibility (Dixit, 1992), for instance through outsourcing of production (Buckley and Tse, 1996; Tong and Reuer, 2007) or lower commitment entry modes (Sanchez Peinado and Pla Barber, 2005), under conditions of high-demand uncertainty.

IB process studies (Johanson and Vahlne, 1977; Johanson and Wiedersheim-Paul, 1975; Vahlne et al., 2017) discuss uncertainty and risk, but treat them as interchangeable terms. These contributions suggest that uncertainty and risk can be reduced by increasing market and general knowledge.

In IE literature, the focus is traditionally on entrepreneurs and their ventures, and researchers refer to their risk-taking and risk-seeking postures (McDougall and Oviatt, 2000). Yet, also these studies often use the terms risk and uncertainty as if they were synonyms. Thus, we need to better understand if (international) entrepreneurs perceive conditions of risk, uncertainty, or both and, in particular, which are the relevant sources of uncertainty.

A second issue refers to which decision-making logic prevails in conditions of uncertainty. IE studies have found that causation and effectuation interweave in decision-making processes in the internationalisation of smaller entrepreneurial firms (Chetty et al., 2015; Laine and Galkina, 2016) and born globals (Nummela et al., 2014). Recent research (Gabrielson and Gabrielson, 2013; Yang and Gabrielson, 2017) finds that the two logics alternate in IM decision making. Studies framed into the effectuation and causation logics embrace a clear distinction between risk and uncertainty, as discussed above. This is also the approach adopted in this contribution.

A third issue refers to the possible responses to uncertainty. The IE literature confirms the role of networking and/or social capital in explaining international growth (Coviello and Munro, 1995; Galkina and Chetty, 2015; Johanson and Mattsson, 1988). As mentioned before, networking is mentioned in diverse streams; not last, effectuation studies. In our interpretation, networking can be viewed as an uncertainty-coping mechanism (Gabrielsson and Gabrielson, 2013; Sarasvathy, 2001).

Effectuation theory also considers market creation as a way to cope with uncertainty (McKelvie et al., 2011; Venkataraman et al., 2012). However, in IE there is little empirical evidence about these issues (Kalnic et al., 2014; Galkina and Chetty, 2015; Sarasvathy et al., 2014; Yang and Gabrielson, 2017).

In IM studies, although strategic actions in the face of uncertainty are not explicitly mentioned, strategy in foreign markets is considered as a response to the external environment involving standardisation or adaptation of marketing mix elements. Some studies have addressed the importance of product strategies (Chung, 2009; Sousa and Lengler, 2009), as well as of product uniqueness (Knight and Cavusgil, 2004), product range and product innovation (Bell et al., 2004), customer focus (Wolff and Pett, 2000) and marketing innovativeness (Hallback and Gabrielson, 2013) in relation to export success, yet with no unidirectional results. We think that these factors require a deeper analysis, also because they partially resonate with Knight’s (1921) idea that uncertainty can be managed via specialisation and concentration of production on successful lines.

Although they have identified important factors affecting internationalisation behaviour and decisions, all the mentioned research streams lack a clear identification of the strategic actions regarding risk and uncertainty (Liesch et al., 2011). The latter authors call for research in this direction.

Through the following empirical work, we aim to address the three mentioned gaps (uncertainty perception vs risk when approaching foreign markets, internationalisation decision making, and strategies to cope with uncertainty in foreign markets) and develop research about how entrepreneurial firms perceive uncertainty and how they cope with it in their internationalisation.
3. Methods

The research design of our empirical work consists of a multiple-case study of ten international entrepreneurial firms in terms of either enduring international growth as in the case of established firms/old born globals, or in their proactive pursuit of opportunities for growth (Shane and Venkataraman, 2000), as in the case of younger firms. We apply a grounded theory approach to data analysis (Glaser and Strauss, 1967; Glaser, 1992), following the so-called Gioia method (Gioia, 2004; Gioia et al., 2013) to analyse the data and present our findings.

3.1 Selection of firms and empirical context

The firms were selected through purposeful sampling (Patton, 2015) in two stages. In the first stage, we sampled firms according to the following criteria: first, manufacturing firms originating in Italy were chosen to be the initial context focus of the study to gather knowledge about international smaller firms. Second, each firm had to have less than 500 employees and therefore qualify, according to Knight’s (2000) definition, as smaller firms. This limit is higher than the European definition of small and medium-sized enterprises (SMEs from now on), i.e. 250 employees, but permits to include two cases of firms which have grown to about 300 employees during the period under observation and represent two successful cases of fast international growth. They are also two small multinationals, thus, permitting to achieve an optimal variation in the sample. Third, each firm had to be already internationalised or within its internationalisation process. Pre-internationalised firms were particularly insightful because they allowed us to interview decision makers who were starting the foreign expansion. Fourth, each firm had to show entrepreneurial features either in terms of enduring international growth (Covin and Miller, 2014), as in the case of old born globals, or in their proactive pursuit of opportunities for growth (Shane and Venkataraman, 2000), as in the case of younger firms. We then contacted 25 firms, which were part of the panel that this research unit had the opportunity to study longitudinally for at least ten years (or since foundation). Nine ventures matched the above criteria and were available for in-depth interviews.

In a second stage, as we were beginning to analyse the transcripts and draw theoretical elaborations, we decided to add one further case in order to confirm or disconfirm our preliminary findings (Patton, 2015). To do so, we considered introducing sector variation in the sample (services) and country of origin (different than Italy). We restricted the search for entrepreneurs in our database to these two criteria, and – after having contacted five firms – VolleyMetrics was available and responded to our selection criteria. This firm provides software analytics solutions for Volleyball matches and is based in Provo (Utah).

Overall, our variation in the sample allowed us to cover the different types of entrepreneurial internationalisation in smaller firms: two mMNEs (Fedegari and ATOM) of which one is an old born global company (ATOM), two are enduring established internationalised firms (Mary Shorts Tricot and Ceriani), one is a born-again global (Grandinote) and five are young born globals (So.Víte, Julight, Evomode, Paperbanana and VolleyMetrics). Even though these last five firms have no foreign sales yet, they are particularly insightful because we were able to interview the entrepreneur about the early stage of the firm’s internationalisation at the time when that was taking place. Table I summarises key data about the ten studied firms.

3.2 Data collection

We conducted 19 in-depth interviews with highly knowledgeable informants (the entrepreneurs) all playing important roles in the internationalisation process. During the interviews, we asked them to speak as representatives of their companies. Thus, the analysis of the study was conducted at the firm level, and the individual firm was inquired
<table>
<thead>
<tr>
<th>Group</th>
<th>Firm.</th>
<th>Number of Employees</th>
<th>Foundation</th>
<th>Industry</th>
<th>Products</th>
<th>Services</th>
<th>Turnover</th>
<th>% Change 2015/2014</th>
<th>% International Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Businesses that have received innovation support</td>
<td>Budapest Automotive spz</td>
<td>300</td>
<td>1983</td>
<td>Automotive industry</td>
<td>Manufacture of electrically controlled vehicles</td>
<td>Pre-sale, post-sale support, technical assistance, services</td>
<td>84,000,000 USD (2015)</td>
<td>0%</td>
<td>1980</td>
</tr>
<tr>
<td></td>
<td>Mary Short’s Textile</td>
<td>40</td>
<td>1981</td>
<td>Textile industry</td>
<td>Manufacture of textiles and clothing</td>
<td>Design and engineering of products for fashion lines</td>
<td>3,000,000 USD (2014, last year available)</td>
<td>0%</td>
<td>1983</td>
</tr>
<tr>
<td></td>
<td>Cas Crystal Spz</td>
<td>55</td>
<td>1982</td>
<td>Manufacturing industry</td>
<td>Manufacture of machinery and equipment</td>
<td>Consultation of projects and production of small and large machines</td>
<td>85,500,000 USD (2015)</td>
<td>0%</td>
<td>1945</td>
</tr>
<tr>
<td></td>
<td>Aseu Spz</td>
<td>300</td>
<td>1986</td>
<td>Manufacturing industry</td>
<td>Manufacture of machinery and equipment</td>
<td>Technical assistance, CAD/CAM services and training, increasing productivity and maintenance</td>
<td>79,000,000 USD (2015)</td>
<td>0%</td>
<td>1950</td>
</tr>
<tr>
<td>Businesses that have not received innovation support</td>
<td>Greendirect</td>
<td>1</td>
<td>1996</td>
<td>Manufacturing and reproduction of records and media</td>
<td>Archival storage and exploitation of records</td>
<td>270,000 USD (2015, last year available)</td>
<td>n.a</td>
<td>2012</td>
<td></td>
</tr>
<tr>
<td></td>
<td>South America</td>
<td>49</td>
<td>1998</td>
<td>Manufacturing of food products</td>
<td>Vacuum-packed food</td>
<td>16,928,000 USD (2015)</td>
<td>n.a</td>
<td>2002</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Joltex</td>
<td>3</td>
<td>2011</td>
<td>Textile industry</td>
<td>Manufacture of textile equipment and photographic equipment</td>
<td>Consultation and customer services for a textile company</td>
<td>225,700 USD (2015)</td>
<td>n.a</td>
<td>2011</td>
</tr>
<tr>
<td></td>
<td>Formosa</td>
<td>5 – a variable number of partners</td>
<td>2011</td>
<td>Textile industry</td>
<td>Manufacture of textile equipment and photographic equipment</td>
<td>Consultation of textile and photographic equipment for the textile industry</td>
<td>3,000 USD + 130,000 USD (last year available)</td>
<td>n.a</td>
<td>s.a.</td>
</tr>
<tr>
<td></td>
<td>Volatil hb</td>
<td>30</td>
<td>2012</td>
<td>Manufacturing of textile equipment and photographic equipment</td>
<td>Consultation of textile and photographic equipment</td>
<td>150,000 USD (2015, last year available)</td>
<td>n.a</td>
<td>s.a.</td>
<td></td>
</tr>
</tbody>
</table>
regarding how to cope with uncertainty during the internationalisation process. The observational unit was the entrepreneur.

Interviews were co-conducted by the two researchers and, on average, lasted between 1 and 2 hours. We began by asking the informants to illustrate the key features of their company and retrospectively built their international expansion: market entry decisions in chronological order. A second set of questions was designed to gain understanding about the foreign countries that were perceived as particularly uncertain, mentioning the corresponding sources of uncertainty. We followed almost the same process for the pre-internationalised firms but, in this case, we asked informants to explain their internationalisation projects, the perceived sources of uncertainty, and how they were planning to cope with them. We wanted to ensure that our respondents were referring to sources of uncertainty (and not risk). To establish communicative validity (Sandberg, 2000), we specified what we meant by “uncertainty/risk the process of internationalisation”, building on the mentioned Knightian distinction between the two. Additionally, to make sure that our respondents understood what we meant by “uncertainty”, we frequently used the term “complexity” (see Barney, 1986). Subsequent questions were devoted to understanding the firm’s relevant decision-making processes, and the uncertainty-coping strategic actions in already approached foreign markets, or in prospective ones.

Apart from structured interviews, we collected documental data through the following documents: company reports \((n = 10)\); press releases about the companies \((n = 15)\); and books and papers containing the companies’ analyses \((n = 8)\).

3.3 Data analysis
Following a grounded theory approach, we started developing open codes. After that, we aggregated the first-level themes into more abstract second-order themes (axial coding) by focusing on the similarities and differences between the open codes. We then developed second-order themes through analysis of emerging patterns, relationships, in comparison with existing theory (Dubois and Gadde, 2014). We collapsed second-order themes into overarching aggregate dimensions to facilitate the presentation of our emergent model.

Theoretical saturation was reached when we stopped getting variations in the concepts and categories that we were building systemically through the data collection process.

Overall, the processes of grounded theorising illustrated so far were aimed to find recurrences and commonalities among the investigated case, so to frame the phenomena through a set of emerging categories (e.g. common responses to cope with uncertainty in internationalisation decisions).

4. Findings
The data structure (see Figure 1) illustrates our three main macro contexts in the uncertainty-coping process: first, the antecedents to uncertainty-coping strategic actions context, comprising the main sources of uncertainty as reported by our respondents, associated with the most uncertain markets; and the decision-making processes implied to tackle the sources of uncertainty, whether based on causal or effectual logics; second, the uncertainty-coping strategic actions context; third, the outcome context, represented by the impact of uncertainty-coping strategic actions in relation to internationalisation decisions. The following sections are dedicated to “zooming-into” the aggregated dimension and second-order themes of our macro contexts as systematised in a grounded model (see Figure 2).

4.1 Antecedents to the uncertainty-coping context
4.1.1 Perceptions of environmental uncertainty. All respondents could specify the main source(s) of uncertainty related to the foreign environment their firm had approached or was
First-order concepts

1: Antecedents to uncertainty-coping

- Institutional environment (especially regulations and legal requirements)
- Cultural and psychic distance
- Distance from the customer
- Demand sophistication, heterogeneity and dynamism
- Availability of skilled human resources
- Access to distribution channels
- Look at contingencies
- No market research analyses
- Focus on current resource availability and means
- Accumulation of information and knowledge
- Focus on prediction and planning
- Rely on previous experience

Second-order themes

- Sources of environmental uncertainty
- Effectual logics
- Interplay of effectual and causal logics

Aggregate dimensions

- Overall perception of uncertainty
- Decision making in the face of uncertainty

Figure 1. From perceiving to coping with uncertainty: emerging concepts, themes and aggregate dimensions.
First-order concepts
- Develop a unique product to avoid/reduce competition
- Higher quality than competing products/services
- Trial and error to improve the product
- Technological specialisation
  - Trial and error processes in technology development over time
  - Leveraging technology for process and product performance and product useful life
- Differentiation of product driven by customers' needs
  - Adaptation to customers' requests, production of small series
  - Post-sales technical service
  - Long-term customer relationships
- Few customers spread in the world
- A group of similar clients to target both domestically and internationally
  - Focus on customers who show the same characteristics globally, regardless of their country
  - Proximity to customers, because homogenous customers require high customisation of offer
  - Long-lasting relationship with distributors
- Highly qualified human resources
- Pre- and post-sale assistance
- Constant improvement of production processes and technologies
  - Accumulation of expertise in managing processes and know how
  - Vertical integration

Second-order themes
- Product uniqueness
- High customisation
- Countries matter, but customers come first
- Control of human resources
- Control of production processes

Aggregate dimensions
- Market creation (global niche)
- Concentration on global clients
- Control of technology and of manufacturing capabilities
Outcomes

Perception of reduced uncertainty thanks to market creation

International growth

Increased likelihood of looking for global customers who respond to the market creation strategy

Increased likelihood of continually nurturing relationships with existing customers' relationships in the world

Perception of reduced uncertainty thanks to concentration on global clients

Perception of reduced uncertainty thanks to control of technology/manufacturing capabilities

Aggregate dimensions

Figure 1.
The uncertainty-coping context

Market creation (global niche)
Control of technology and of manufacturing capabilities

Global niche strategy components
Concentration on global clients

Sources of environmental uncertainty
Perception of uncertainty
Decision-making processes
Effectual logics
Interplay of effectual and causal logics

Antecedents to uncertainty coping context
Reduced perceived uncertainty
Increased likelihood of looking for global customers who respond to the market creation strategy

Impact of uncertainty-coping strategic actions on internationalisation decisions
Increased likelihood of continually nurturing relationships with existing customers in the world

Uncertainty-coping strategic actions
Product uniqueness
High customisation
Countries matter, but customers come first
Control of human resources
Control of production processes

Figure 2.
A grounded model of uncertainty-coping in the internationalisation process
planning to approach. We found evidence of uncertainty related to institutional differences with respect to the legal framework, its enforcement and regulatory regimes (Italy for Fedegari, Grandinote, Evomode, Paperbanana and VolleyMetrics; France for Grandinote; the USA for Julight); cultural distance (Russia, China and Japan for Fedegari; Japan for Cerliani, Arabic countries, Russia and India for So.Vlte; Middle East and Finland for Evomode; Eastern countries for Paperbanana; Japan for VolleyMetrics); demand heterogeneity, sophistication and dynamism (China and Japan for Fedegari, all foreign markets for Mary Short’s Tricot); market access barriers, due to distribution channels (India and East Europe for Cerliani) or to the nature of local competition (Japan for Fedegari, the UK and the USA for Paperbanana, and China and India for Cerliani); difficulties in finding a highly skilled labour force (China and East Europe for Cerliani, Middle East and Finland for Evomode).

Four firms reported the home country to be a highly uncertain market, especially in terms of institutional setting and ongoing societal evolution. This opinion was shared both by younger firms (Grandinote, Paperbanana, Evomode) and more established companies (Fedegari) who complained about Italy’s inability to develop adequate instruments to foster the international growth of small firms. This was also confirmed by VolleyMetrics, whose founder deliberately chose to establish the firm outside Italy because of the perceived excessive institutional/administrative uncertainty which inhibits entrepreneurial proactiveness.

Interestingly, two respondents mentioned distance from foreign customers (instead of distance from countries) as a major source of uncertainty. For instance, Fedegari’s CEO told us: “More generally – when I think about foreign countries – distance from the foreign customer is what generates uncertainty”. Also, Mary Short’s Tricot founder stressed: “To my firm, possibly the most problematic thing that generates uncertainty in our experiences in foreign countries, resides in not being able to respond to our clients […].”

4.1.2 Decision-making processes. Effectual logics. When making internationalisation decisions, entrepreneurs from Fedegari, Cerliani, Mary Short’s Tricot, Grandinote, Evomode, Julight, So.Vlte and Paperbanana employed effectual logics. Fedegari’s CEO leverages a contingency-based attitude towards unexpected events: “As an owner, I want to be present in all decision-making processes and in each decision involving the foreign country we are approaching, step by step, day by day, taking a deep look at each contingent aspect”. So. Vlte’s CEO takes strongly means-oriented actions, and also relies on a contingency-attitude towards unexpected events, thus, perceiving uncertainty as an opportunity: “When you enter a foreign country, uncertainty is your worst enemy because it is better to make a bad choice rather than not to decide at all. Uncertainty is a great opportunity because adrenaline forces you to try anticipating problems! We did not loose time in sophisticated market analyses when we approached Greece, we just decided to do our best being confident in our means. We know what we can do”.

Interplay of effectual and causal logics. The entrepreneurs from ATOM and VolleyMetrics employed the causal and effectual logics concurrently, confirming recent findings about their interplay (Chetty et al., 2015; Nummela et al., 2014). For example, ATOM’s CEO exhibited a co-creation kind of attitude (effectual approach): “We have always partnered with expert distributors to increase our knowledge of both markets and clients with the objective of ultimately enhancing our market positioning”. At the same time, he reported that the firm is committed to undertake market analyses (causal approach): “We are used to meetings, analyses and numbers and we try to forecast each aspect that will bring us a cost or a return in that specific market. Casting a light on what the problems are and how we can handle them is a very useful approach to us” (ATOM, CEO).

Regarding time-to-internationalisation, all of the pre-internationalised firms’ respondents employ effectual logics apart from VolleyMetrics’ CEO who employs both effectual and
causal logics. Grandinote (the born-again global) and Fedegari (mMNE, family owned belonging to a traditional manufacturing sector) rely on effectual logics too. As in the case of VolleyMetrics, the CEO of ATOM (mMNE, old born global) combines effectual and causal logics (Chetty et al., 2015; Gabrielsson and Gabrielsson, 2013; Laine and Galkina, 2016).

We can conclude that effectual logics emerged more frequently. When entrepreneurs interplay effectual with causal-oriented logics, these are mainly related to efforts in reducing uncertainty by reverting it to situations of risk. For instance, as VolleyMetrics’ founder told us “The experience my team and I have gained through these years in the European volleyball market is fundamental to anticipate the market scenario that may characterise Poland, its clients and the environment. Of course, it has its peculiarities, but at the same time it is part of European Union and it is a European country from a cultural perspective. Therefore, we are able to understand some elements in advance and we can try to predict some aspects”.

4.2 The uncertainty-coping context

A particularly interesting result of the exploratory study is represented by the common adoption by all the studied firms of a niche strategy. The firms themselves brought to our attention the existing link between their niche strategy and the uncertainty characterising their internationalisation processes.

Our results indicate that a global niche strategy (GNS from now on) was implemented both by firms exhibiting an effectual decision-making approach and by firms exhibiting an interplay of effectual and causal logics.

The in-depth interviews also permitted to uncover what exactly a niche strategy entails. Three main aggregate dimensions emerged as key components of the GNS: market creation, concentration on global clients and control of technology and manufacturing capabilities.

4.2.1 Market creation. A crucial element of the niche strategy is market creation: the niche is understood by our respondents as a highly specialised (unique) product/service offered to a small group of global customers. This combination is the outcome of an entrepreneurial effort to create opportunities, matching their highly specialised competences with the enactment of a demand from a few clients, wherever located. Two specific uncertainty-coping strategic actions, i.e. “product uniqueness” and “high customisation” – that we collapsed under the strategic component “market creation” – emerged from the case studies as closely related both to reduced perceived uncertainty and to internationalisation decisions.

Product uniqueness. Targeting a few global customers with products characterised by high quality and specialised technology is mentioned by our respondents as one of the key elements to reduce perceived uncertainty in international markets and increase the likelihood of entry. According to Fedegari’s CEO, this strategy has helped the firm reduce uncertainty and, at the same time, ease the process of entry in a perceived uncertain market like China: “I think that uncertainty is somehow not an issue when you specialise and try to target a market through excellence in terms of product quality. It is something that potential clients out of the domestic market recognise. This was the case of China for us: it was a very uncertain market, yet our product specialisation helped to remain focused on the quality of our products and to partially reduce uncertainty”. As it emerged from the analysis of secondary sources, Fedegari proposes a differentiated sterilising technology and related machinery for different groups of customers in the world, from pharmaceutical companies to health care institutions. The firm targets a number of niches across different industries, and concurrently refines the technology and quality of its products to provide excellent solutions, deepening the positioning in the domestic market.

As Mary Short’s Tricot’s founder puts it: “We have been specialising in a unique product and we have been focusing on quality. This helped a lot in managing uncertainty in the
1980s and 1990s when we were approaching Asian countries like Japan and Hong Kong for the first time, even if there were quite a lot of competitors”. As documented in archival materials, since the mid-1980s, Mary Short’s Tricot engaged in a process of incremental product specialisation, reaching top quality in the execution of its yarns, deepening its niche positioning in the domestic market and, hand by hand, being able to expand abroad.

According to our respondents, the niche strategy is possible thanks to the development of a high-quality product which is often referred to by respondents as “unique”, both in terms of quality and technology. A niche positioning through product uniqueness is associated, according to our informants, to the reduction of uncertainty in foreign markets as the following quotes illustrate: “We are unique in terms of technology performance and ecological impact, and I am confident this will be the basis for having an easier approach to Polish clients” (Evomode, founder). “We have the unique ability of interpreting and engineering the design sketches coming from the fashion houses. This characteristic has allowed us to sell abroad […] even in highly complex markets like the Far East” (Mary Short’s Tricot, founder). “We are the best in terms of quality. Only the Japanese are similar to us in terms of hook quality. Our unique offer gives us the possibility to access highly critical foreign contexts such as China” (Cerliani, CEO).

The medium-tech, high-tech and the start-up groupings also highlight the importance of specialised technology, uniqueness of offer and specialisation of the product offering as key elements affecting the likelihood of accessing uncertain countries. Grandinote’s CEO described its products as belonging to “a niche of the niche”, addressed to customers looking for high-fidelity products who search for the perfect sound. As he puts it: “I think I can face the sources of uncertainty I have been telling you about, by doing things that others don’t. Customers who seek ‘high fidelity’ sound systems do not buy a system that transmits audio only because it is expensive, but they seek perfection in sound. This has helped in having a smoother access to those countries that to me were uncertain, such as France”.

High customisation. This second theme relates to the emerging finding about the orientation towards both domestic and foreign customer needs and the ability to develop customisable solutions. This was argued by many firms as a key strategic trait allowing to strengthen the niche positioning in previously approached markets that were mentioned among the most uncertain ones. As Fedegari’s CEO reports: “We always focus on customer needs and requirements, while paying special attention to product innovation and customisable solutions. When we had our first experience in China in the 1980s we noticed that the Chinese valued our customised solutions very much and we started to become more successful and present in the market, until we set up a subsidiary in 2008. Our foreign customers value this, and they reward us”. The Fedegari case highlights the IM approach of a successful mMNE. Notwithstanding their continued growth and the opening of subsidiaries in different continents (the last was opened in the USA in 2017), the firm keeps on being constantly focused on global customers, whom they serve with a highly specialised and customised offer.

A similar story is told by ATOM, another mMNE. ATOM diversified more pronouncedly its products over the past years, from its initial (and still core) sector – machinery for footwear manufacturing – to machinery for automated cutting systems. The common link among different product lines is the advanced cutting technology (from leather to other materials), involving continual focus on solving and anticipating problems for global customers and customising the technology, in a logic comparable to the co-creation of value (Prahalad and Ramaswamy, 2004) and to innovation through supplier/buyer interaction (Berthon et al., 2004).

Relatedly, close relationships with key customers emerged as a key element to anticipate their requests and innovate the offer. This shows the “interactive” knowledge competence
through linking markets and new product development (Berthon et al., 2004) of this firm, as well as virtuous value co-creation behaviours (Prahalad and Ramaswamy, 2004; Ranjan and Read, 2016). This is confirmed looking at Cerliani’s offer: the firm has recently started customising its products by producing small series both for their domestic and foreign customers (secondary source). This, in turn, has increased the firm’s willingness to stay in a market perceived to be uncertain (China in this case).

4.2.2 Concentration on global clients. An interesting finding relates to our firms’ attitude of reasoning in terms of customers, instead of doing so in terms of countries. This is a key element in the reduction of perceived uncertainty in approaching international markets and in entry facilitation by the old born global firms in our sample with regard to their past internationalisation choices, as well as by younger firms in their initial stages of international growth, or by pre-internationalised companies.

Countries matter, but customers come first. All the firms in the sample have been referring to their internationalisation processes (or plans) as an attempt to focus on globally spread groups of homogeneous customers, i.e. similar demand in terms of needs but coming from very different countries.

The case of Mary Short’s Tricot represents this orientation very well. The firm faced a progressive strategic shift from several domestic B2B customers to fewer global B2B customers. The founder, in turn, associated this process with an easier access to Asian countries: “I think our history tells us that we could overcome degrees of uncertainty through a strategy devoted to reducing the number of clients. This is because we have been focusing on very few B2B customers of the luxury industry over time and this has helped us a lot in improving our position as a brand and, in turn, in being recognised abroad. This has led us towards opportunities in Asia even if the market was very uncertain” (Mary Short’s Tricot, founder).

Cerliani and ATOM mostly refer to customers rather than to foreign countries. Cerliani has been able to expand internationally since the 1950s by targeting sewing machine producers, first in Europe, and then in the USA and in Brazil. The CEO underlined their commitment to focus on groups of homogeneous clients globally and how this process was key to cope with uncertainty and make internationalisation choices.

A similar strategy was pursued by the born global ATOM when, during the 1980s and 1990s the firm started to follow its lead clients (footwear producers) who were de-localising towards labour-intensive countries in Eastern Europe and Asia. ATOM soon moved from a follow the client approach to a global opportunities’ creation approach, relying on what the Chinese experience had taught them. The latter boosted the firm’s confidence in their capabilities and in their capacity to manage distant customers and businesses. On these premises, they also decided to start a diversification in advanced cutting machinery for materials other than leather.

Even firms in the pre-international phase mostly refer to customers rather than to foreign countries: “We plan to internationalise in European countries such as Germany, France and Czech Republic where there are several automotive manufacturing plants, and we are focusing on the biomedical industry because this is a global market of clients that we can access with our technology. This way, it is easier to focus on which countries to commit resources to – and which to avoid. It somehow reduces the uncertainty related to understanding and choosing where to commit our resources” (Julight, CEO).

Our respondents often referred to the need of having tight relationships with customers in foreign locations. Cerliani’s CEO argues that “good relationships with distributors enable us to get increasingly close to clients and to reduce the uncertainty that comes from unexpected requests and needs”. A similar thought is shared by Mary Short’s Tricot’s CEO who says: “The close relationships we have been establishing with distributors have helped
reduce uncertainty related to their specific needs”. This is confirmed by respondents of the pre-international group of firms: “It was critical for me to participate in trade fairs in order to anticipate my customers’ requests, reducing demand uncertainty” (Grandinote, founder).

4.2.3 Control of technology and of manufacturing capabilities. According to our respondents, the above-described creation of markets through a niche strategy, with unique products supported by high customisable solutions, can be achieved via a constant and tight “control of human resources” and “control of production processes”. The two, in turn, reduce perceived uncertainty when approaching or planning to approach foreign markets. This outcome seems to contrast with the idea that flexibility through outsourcing is a response to uncertainty, as we discussed in the literature section. This finding is particularly intriguing.

This third component of the global niche strategy is hereafter discussed.

Control of human resources. As mentioned earlier, most of the interviewed firms – which concentrate their premises prevalently in Italy – reported the access to highly skilled human capital (more than financial capital) as a source of uncertainty in international markets. According to these firms, leveraging the availability of highly skilled people in the domestic country and anchoring production there is the way to cope with this type of uncertainty. Domestic labour force could develop the competences needed to assist (foreign) customers in pre- and post-sales over time, especially for highly customised products.

Control of production processes. Jointly with the control of highly qualified human resources, the longitudinally studied well-established old born global firms of the traditional manufacturing group stressed the need to control production to enable continuous processes of technological innovation and refinement. Respondents often stress how their firms’ innovative process is based on trial and error learning and on the constant tension towards technological improvement, both in terms of performance and design. The ability to learn and constantly improve technology, the quality of products and performance are achieved by exerting a high degree of control over production processes and research and development activities. The latter are present in almost all vertically integrated case studies. Control of production processes is often referred to as key for international growth in conditions of uncertainty. Fedegari (mMNE) mostly relies on foreign subsidiaries as gateways to customers, and to provide continual assistance for their problem solving. Very recently they opened a US subsidiary to conduct R&D also in North America. Our respondent motivated this decision, on the one hand, by the will to be present where much of the cutting-edge technology is being developed, and on the other hand, as an attempt to counterbalance the rising American protectionism.

With the development of the continuous cut in western markets, ATOM conceives its production of machines for continuous cut in Vigevano, while it outsources the production of traditional die cutting to China. In fact, these machines appear to be much more suitable for emerging markets where shoes are produced in standard series and in large quantities, and where simple and inexpensive technologies such as die cutters are employed. Furthermore, control of production is a way of reducing perceived uncertainty, as in the words of ATOM CEO: “We know that if we want to compete at our best in complex foreign environments, we need to have no uncertainty regarding our products. This means that we have to have full control of our production processes”. This perspective seems to be further confirmed by Mary Short’s Tricot. The firm has a complete production cycle at its headquarters, from design to shipping, where technologically advanced equipment and a culture based on quality allow production to reach top quality standards.

Respondents of the younger firms in the high- and medium-tech context confirmed the importance of controlling production processes to ease the shift towards complex international markets. So.Vlte’s CEO argues that: “Our R&D laboratories are fully
integrated at our headquarters. Moreover, our products are made entirely under our control at our factory. This way we can control vacuum cooking as well as water recycling and waste reducing. Full control over production is helpful when you already have to deal with many other uncertain aspects in foreign environments. Of course, it helps in your domestic market, but is has a strong impact on uncertainty also when you deal with foreign customers’.

4.4 The outcomes context
4.4.1 The impact of uncertainty-coping on internationalisation decisions. Our respondents’ narratives indicate that for both established internationalised ventures and pre-international firms reduced perceived uncertainty via GNS implies a (reinforced) intention to look for customers with homogeneous characteristics and needs and the intention of nurturing relationships with the existing global customers. These two, in turn, affect international growth.

For example, Ceriani and ATOM reported their will to continue their international expansion, targeting sewing machine producers, thus, following the logic of focusing on groups of globally spread yet homogeneous clients as they did in the past: “The project is and will be to focus on our main clients […] we need to strengthen relationships with them and to look at where they choose to locate themselves […] this may imply an easier access even to difficult countries” (ATOM, CEO). These findings further emphasise that our firms first look for customers instead of selecting countries.

Similar outcomes – in terms of internationalisation intentions – were found for pre-international ventures. As the CEO of our start-up VolleyMetrics reports: “I think that a lot of the uncertainty in foreign countries can be overcome by what we offer and especially to whom […] we offer a unique service for the well-defined need of a group of customers in the Volley industry”.

5. Discussion: from perceiving to coping with uncertainty through a global niche strategy
In our research, the decisions makers confirm the hypothesis that – when they are confronted with internationalisation decisions – they typically reason in terms of uncertain conditions, instead of risky ones (Alessandri, 2003). According to the informants’ narratives, uncertainty does not only relate to classic distance dimensions (psychic, economic, cultural, institutional/administrative, see Ghemawat, 2001). Our respondents underlined the perception of uncertainty related to the fact of being distant from the (foreign) customer and stressed the need to get closer, either by relying on employees’ own expertise in pre- and post-sale assistance or by establishing trustworthy relationships with distributors.

Regarding decision-making processes, we could report a predominance of effectual logics, and – in the cases of ATOM and VolleyMetrics – the interplay between causal and effectual logics (Laine and Galkina, 2016; Yang and Gabrielsson, 2017). These findings led us to propose the following proposition:

P1. In their decision-making processes about internationalisation in the face of uncertainty, entrepreneurial ventures’ decision makers are more likely to adopt effectual logics, or to intertwine effectual logics with causal ones.

The results indicate that those entrepreneurs applying effectual logics and those interplaying effectual and causal logics cope with uncertainty implementing a GNS, regardless of the precocity of internationalisation. Furthermore, for those firms in their pre-internationalisation phase, this is also the preferred strategic choice:

P2a. The implementation of the global niche strategic components is positively associated with the use of effectual logics in entrepreneurial ventures’ internationalisation strategy.
The implementation of the global niche strategic components is positively associated with the joint use of effectual and causal logics in entrepreneurial ventures’ internationalisation strategy.

We thus argue that decision logics – particularly effectual or, interplaying effectual and causal – positively relate to the strategic components that underpin uncertainty-coping in internationalisation decisions and processes of entrepreneurial ventures.

Early contributions (e.g. Dalgic and Leeuw, 1994; Gomes-Casseres and Kohn, 1997) have associated the niche strategy with internationalisation of smaller firms. Zucchella and Maccarini (1999) and Zucchella and Palamara (2006) found that a niche strategy could speed up the global growth of Italian SMEs in different industries. IE scholars have agreed that born globals and INVs tend to target specific market niches (Bell et al., 2004; Knight and Cavusgil, 2004; Crick and Jones, 2000; McDougall et al., 2003; Zucchella et al., 2007), sometimes referring to the idea of “focusing on narrow niche segments” (Luostarinen and Gabriellson, 2006). More recently, Hennart (2014) argued that rapid international growth of born global firms is the outcome of their global niche orientation. Hennart et al. (2017) found that the international growth of family-managed SMEs is supported by the implementation of a global niche orientation, while Autio (2017) further stressed the importance of the global niche strategy as an enabling factor for entrepreneurial internationalisation. However, notwithstanding the increasing popularity of this concept, none of these studies explains the building blocks of the niche strategy: why a niche strategy is a viable approach for entrepreneurial ventures to grow internationally and what a niche strategy entails (Stachowski, 2012). According to our grounded research, a GNS is executed through a series of specific uncertainty-coping strategic actions that can be regarded as the main components of the GNS, namely “creation”, “concentration” and “control” that are hereafter discussed in further detail.

The “creation” strategic dimension relates to the shaping of an environment, through the creation of market spaces (Cyert and March, 1963; McMullen and Shepherd, 2006), and unique systems of offer (Ibeh, 2003, Knight and Cavusgil, 2004). According to our respondents, a (global) niche strategy typically focuses on very specialised (unique) products thanks to a continuous learning and improvement process which involves the product’s features and/or its production technology. Superior technology, performance and reliability are important features, which are often coupled with intense customer pre- and post-sale service and the possibility of customisation. These GNS characters are in line with a service centred view of marketing (Vargo and Lusch, 2004).

The larger firms in our group, i.e. our two mMNEs, moved from a single niche strategy to the progressive development of a portfolio of niches, continually exploring and exploiting global opportunities, in terms of novel combinations between their core technologies and new types of users or new needs of existing users. Thus, they continued to rely on their core technological competences. This allows them to gain recognition for distinctive strengths which are valued in the niche, and to compete against large incumbents (Autio, 2017). These firms have kept growing while remaining niche firms: they have progressively refined their focus strategy, as they understood it was the best way to cope with uncertainty and to withstand competition from larger multinational companies in most uncertain markets. This implies that growth is not achieved through market expansion in the same business (from niche to segment and finally to mass markets), but by developing related niche businesses.

Our firms provide interesting findings regarding the standardisation/adaptation debate, which is at the heart of IM literature (Schmid and Kotulla, 2011; Theodosiou and Leonidou, 2003). In our cases of entrepreneurial internationalisation, what matters first is the global customer, while countries (markets) are a less impactful variable (though not negligible). Instead of adaptation, our narratives speak of customisation. At a first glance, our firms
predominantly standardise their marketing mix across countries (Gabrielsson et al., 2012) and at the same time customise their offer. In the IM literature, adaptation is referred to as a response to uncertainty (Calantone et al., 2006). Conversely, for our firms, adaptation is mostly based on the needs of individual customers (high customisation) and not on marketing mix adaptations.

The “concentration” (Knight, 1921; Piercy et al., 1998) component of the GNS is represented in our firms by the process of focusing on a horizontal micro-segment (group of customers) of the global market, and by the concentration of capabilities and technologies around a unique offer. Customer orientation in marketing is a notion which is more related to a firm’s marketing practices and corporate culture (Deshpandé et al., 1993), one of the traits a niche strategy involves (Dalgic and Leeuw, 1994). In the industrial marketing literature, relationship marketing refers to a focus shift from the activity of attracting customers to taking care of them, and delivering value to them (Christopher et al., 1991; Grönroos, 1994; McKenna, 1993). The industrial marketing and purchasing literature (Håkansson, 1982) regards interdependencies and relationships connecting customers, suppliers, partners and distributors as a source of competitive advantage, while service-dominant logic studies emphasise the primacy of a service perspective over a goods perspective (Vargo and Lusch, 2004). The customer orientation we encountered in our niche firms is not a mere customer serving one. It is rather a problem-solving attitude which involves proactiveness in anticipating and solving customers’ problems in many instances (Zucchella et al., 2016). In our research, the relationship with global customers is prominent in that the firm focuses on a process of “horizontal micro-segmentation” of foreign markets, concentrating on clients displaying homogenous characteristics (Hagen and Zucchella, 2011; Hennart, 2014; Jain, 1989). What is new with this finding is that the focus on customers’ characteristics is more prominent than the market one within the firms’ process of strategising towards international markets. Furthermore, uncertainty is coped with by decreasing the number of customers, instead of following a customer diversification logic. This appears to be paradoxical and counterintuitive: in IB literature, diversification (Buckley and Tse, 1996; Tong and Reuer, 2007) is a key response, while in our case concentration (of customers, but also of products, and technologies) emerges as the mechanism to cope with uncertainty.

The “control” component of the GNS (Mascarenhas, 1982) refers to the control of technology and core manufacturing and technological competences/capabilities that allows firms to make a distinctive product and deliver it to customers. The response capacity of our firms to customer requirements is favoured by vertical integration of R&D activities and of production processes. Our firms do not benefit from outsourcing nor from offshoring parts of their production, challenging IB literature that suggests an increase in flexibility is a successful response (Buckley and Tse, 1996; Tong and Reuer, 2007) in the face of market uncertainty. For our firms the amount of tacit knowledge and practices built over time becomes a crucial competitive element that is very difficult to transfer or outsource.

Proximity to customers requires that employees handle pre- and post-sale services, as they could develop expertise in understanding customised offers and problem solving (Kelley, 1992). When the firm is not entirely able to control the whole value chain through its own employees, tight and trustworthy relationships with distributors are referred to as being extremely important (Conduit and Mavondo, 2001).

On the one hand, serving a small number of customers leads to stable and strong customer relationships, which support learning, monitoring and adapting to/anticipating customer needs. On the other hand, networking is never highlighted as an uncertainty-coping strategy that supports or links to the internationalisation process. This seems to be in contrast with the IE literature (Chetty and Patterson, 2002; Coviello and Munro, 1995;
Freeman et al., 2006; Johanson and Mattsson, 1988; Sarasvathy et al., 2014) that associates networks to the fast internationalisation of smaller and younger ventures:

**P3.** Uncertainty-coping in entrepreneurial ventures’ internationalisation is positively associated with the use of a global niche strategy implemented with three main strategic components: (a) the creation of market spaces and unique systems of offer; (b) the concentration on horizontal segments of homogeneous clients in different countries; and (c) the control of technology and manufacturing capabilities.

Last, with respect to the outcomes, we find that using a GNS and its strategic components as an uncertainty-coping strategy overall reduces the perceived uncertainty. As per the evidence from our case studies, the reduction of perceived uncertainty has a positive influence in reinforcing the orientation of the firm to look for global customers that respond to its market creation strategy as well as on the likelihood of the firm to nurture relationships with existing globally spread customers:

**P4.** The implementation of a GNS is positively associated with entrepreneurial firms’ international growth thanks to the reduction of perceived uncertainty. Reduced perceived uncertainty, in turn, (a) reinforces the orientation of the firm to look for global customers who have already responded to the firm’s market creation strategy; and (b) increases the likelihood of continually nurturing relationships with the existing customer based on a global scale.

6. Implications

The present study has some relevant implications for studies in IB, IE and IM that aim to investigate the strategies entrepreneurial firms adopt to cope with uncertainty in their internationalisation. We respond to calls for studies in entrepreneurial internationalisation (Autio, 2017; Knight and Liesch, 2016), as well as for studies about risk and uncertainty in IB, as distinct conceptual categories (Liesch et al., 2011). We provide a novel perspective, framing these processes in the uncertainty-coping posture, since Knightian uncertainty is the dominant context in which they occur.

We addressed three gaps in research, that are, the perception of uncertainty (as distinct from risk), the decision-making logics adopted in conditions of uncertainty like internationalisation process and the strategies used to cope with uncertainty. Our firms perceive and experience mostly conditions of true Knightian uncertainty and we have discussed which are its sources, including the novel concept of “distance from customers”.

The predominant decision-making logic is effectuation or, sometimes, the combination of effectuation and causation.

We find that what the different types of international entrepreneurial firms (from born globals to enduring established internationalisers to mMNEs) have in common is the adoption of a global niche strategy. Although this finding is not entirely new (Autio, 2017; Hemmart, 2014; Knight and Cavusgil, 1996; Madsen and Servais, 1997; Zucchella et al., 2007), we provide to this strategic option a rationale (uncertainty-coping) and uncover its distinctive traits. The lack of any previous clear conceptualisation of the niche strategy has paved the way to different interpretations and contrasting findings (Dow, 2017).

According to our results, the adoption of a global niche strategy represents the way entrepreneurial internationalised ventures (young and longer established born globals, mMNEs, etc.) successfully cope with uncertainty and become international. The niche strategy is neither a follow-the-customer approach nor a reactive posture. On the contrary, it is based on the proactive identification of customers wherever they are located, anticipating their needs, solving their problems and ultimately co-creating value and innovating through customer interactions (Prahalad and Ramaswamy, 2004; Ranjan and Read, 2016).
Our research also unveils strategic postures of mMNEs, a topic that is still in its early stage and received calls for further developments (Dimitratos et al., 2014). Our findings support the idea that mMNEs keep a “niche imprinting” in their strategy and, instead of progressively enlarging their original niche market breadth, they prefer to enter in “proximate” niches, thus building a portfolio of niches.

The global niche strategy and its strategic components, as portrayed in our model, challenge the IE perspective of entrepreneurial internationalisation as driven and supported by networks (Coviello, 2006; Johanson and Mattsson, 1988; Johanson and Vahlne, 2009). In contrast, these firms seldom rely on networking to cope with uncertainty: their global niche strategy requires a relatively high degree of vertical integration, and only the dyadic relationships with customers matter. This helps in understanding apparently puzzling findings in previous research (Shirokova and McDougall-Covin, 2012).

Our work also contributes to IM studies, bringing a different perspective into the standardisation/adaptation debate. The internationalisation of firms (mainly multinationals) is often associated with strategies of marketing mix adaptation or standardisation that aim to reduce risk (overlooking uncertainty) and is often referred to the country level of analysis. Our firms do not seem to follow these “dichotomic” logics, instead they pursue customisation, focusing on individual niche clients’ requirements, problems and potential needs.

7. Concluding remarks
The present paper is aimed at casting a light on the strategic actions adopted by international entrepreneurial firms in coping with uncertainty in their internationalisation process, contributing to a gap in the studies at the crossroads of IM, IE and IB.

Following Knight (1921) we make a distinction between situations of risk and situations of uncertainty and the possible related strategic responses. We respond to a call for studies in this area, with particular reference to firm internationalisation (Auto, 2017; Knight and Liesch, 2016; Liesch et al., 2011).

Our exploratory research rests on a purposeful sample of ten firms, which differ in terms of stages of life, stages of international growth and industry, and provide a set of diverse types of entrepreneurial internationalisation. Our work highlights how international entrepreneurial firms operate mostly in conditions of Knightian uncertainty and unveils which are its main sources. They predominantly adopt an effectual logic in their internationalisation decision making (or a combination of effectuation and causation). They all adopt a global niche strategy to cope with uncertainty and this allows them to achieve an international growth.

The idea that a global niche positioning can explain the internationalisation of smaller firms is not entirely new, but it still represents a relevant research gap stressed by recent calls for more studies about this topic. In fact, this issue has never been explored in its components and – in addition to this – it has never been related to the uncertainty-coping posture.

Thanks to this study, we could contribute to this gap, by developing a model of uncertainty-coping in the internationalisation process via the implementation of a global niche strategy, of which we illustrate the main strategic components. A superior/unique offer shelters smaller firms from global competition. Also, the sustainability of positioning is ensured through continual learning achieved by tackling and attempting to solve the customer’s problems, and by refining their technology. Internalising production in the home location maximises the control of technology and the internal learning. Production is very “local”, while marketing (in terms of customer service) is very global. The way these firms cope with uncertainty is counterintuitive and apparently in contrast with the mainstream IB literature: they do not diversify customers, they concentrate on a few; they do not outsource and offshore, they pursue vertical integration and local production.
(usually, in a single plant). As a result of this effort, the CEO of Fedegari, when asked about uncertainty, answered “Uncertainty does not exist, as long as you can create your market and control your key resources”.

The GNS has high relevance for practitioners as well. Continual learning in the existing market and extending their technology to new groups of customers are the main responses to the challenge of niche sustainability. These firms, and particularly our mMNEs, do not grow by moving from niches to mass markets. As they mature, they become both larger in their niche and they develop a portfolio of niche businesses on the same technological platform.

8. Boundary conditions and future research

Our purposeful sampling restricts the direct empirical generalisability of the findings: in fact, our study is limited to firms that have successfully internationalised or that are in the process of beginning their internationalisation.

Since our qualitative research allowed for the respondent a certain degree of discretion, we expect future quantitative studies to broaden the sampling frame. Furthermore, we hope that future studies employing quantitative approaches will test our preliminary findings. Avenues for future research also regard increasing the level of detail in describing uncertainty vs risk, and related strategic choices. We then call future studies to systematically map the strategic actions associated with the mentioned sources of uncertainty.

Finally, we believe that an interesting path for future research is represented by the investigation around the factors that may determine niche strategy sustainability over time as this requires as much entrepreneurial effort as their creation, if not more. In this regard, longitudinal studies, and comparative case studies of both successful and failure stories are needed.

Note

1. Born globals are small (Knight and Cavusgil, 1996) “companies that expand into foreign markets and exhibit international business prowess and superior performance, from or near their founding” (Knight and Cavusgil, 2004, p. 124). The born global firms in our sample – in their attempt to expand internationally – can also be regarded as INVs according to Oviatt and McDougall’s (1994, p. 49) definition of an INV being “[…] a business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and sale of outputs in multiple countries”. Enduring established internationalisers are firms that exhibit enduring international growth (Covin and Miller, 2014). The concept of born again globals was developed by Bell et al. (2001): “Typically, these are well-established firms that have previously focused on their domestic markets, but which suddenly embrace rapid and dedicated internationalisation” (p. 174). Micro-multinationals are defined as a “small- and medium-sized firm that controls and manages value-added activities through constellation and investment modes in more than one country” (Dimitratos et al., 2003, p. 165).

References


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(The Appendix follows overleaf.)
Table A1. From perceiving to coping with uncertainty: most representative quotes from interviews

<table>
<thead>
<tr>
<th>Perception of uncertainty</th>
<th>Sources of environmental uncertainty</th>
</tr>
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<tbody>
<tr>
<td>“Russia has a critical language barrier. Russian people are also very different in terms of culture […] this may be the cause of the difficulties we have encountered when looking for the right partners” (Fedegari, CEO)</td>
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<tr>
<td>“I think the most uncertain countries to us are Arabic and Islamic countries because of the huge cultural gap in comparison to our domestic culture. But this holds also partially for both Russia and India that we now plan to approach” (So.VITE, CEO)</td>
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<tr>
<td>“I believe that for us, the most uncertain countries are Asian countries because of the very different culture, and this of course does not only affect demand and customer preferences but also business relations” (Paperbanana, founder)</td>
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<tr>
<td>“I think Japan would be a very uncertain country for my firm because culture is too different from the Italian culture as well as from the Anglo-Saxon culture with which I am now more accustomed” (VolleyMetrics, founder)</td>
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<tr>
<td>“I would say that China and Japan are very uncertain countries: we have experienced many problems in interacting with our business partners […] all in all, I would say that there are critical communication barriers. Moreover, our customers there also expect higher quality, so they have highly sophisticated requests which we must satisfy” (Fedegari, CEO)</td>
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<tr>
<td>“In Japan, competitors are too strong because the industry is considered ‘strategic’ and is supported by the government, which makes the country even more uncertain for us […] in addition they have a very different culture, and this is always an issue” (Cerliani, CEO)</td>
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<tr>
<td>“In China, in my perspective, uncertainty is related to the lower prices of their products, and the poorly skilled human resources” (Cerliani, CEO)</td>
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<tr>
<td>“In Eastern Europe, a prominent source of uncertainty is related to the inefficiency of distribution channels. They are not comparable to ours. Furthermore, as I have commented with respect to China, the human resources are less skilled in comparison to those we can rely on in Italy” (Cerliani, CEO)</td>
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<tr>
<td>“If I have to think about other very uncertain countries […] for sure India, Among other things, India is problematic because of the many inefficiencies in its distribution channels as well as for […] as I have said for China […] low prices” (Cerliani, CEO)</td>
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<tr>
<td>“In the US, we see many uncertainties regarding legal and contractual issues. We also perceive this in the countries we are planning to enter: Germany and France” (Juligle, CEO)</td>
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<tr>
<td>“I am trying and planning to enter Finland and the Middle East. They are very uncertain! On the one hand, their culture is very different from the Italian one. On the other, I haven’t been able – until now – to find the same excellence in terms of human resources. I must say that, here in Italy, I can find skilled human resources precisely as I want them” (Evomode, CEO)</td>
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<tr>
<td>“To me France has been quite tough because of some institutional barriers that made me take withdrawal into consideration” (Grandinote, CEO)</td>
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</tr>
<tr>
<td>“In my experience, the uncertainties we have experienced in foreign countries are related to the many and different needs and wants of our clients. I can say that this holds for all the countries we have approached” (Mary Short’s Tricot, founder)</td>
<td></td>
</tr>
<tr>
<td>“Uncertainty resides in everyday activities, both in our domestic market as well as in those foreign countries we are dealing with. We need to be adaptable in a highly changing environment and we need to be able to read market changes” (Mary Short’s Tricot, founder)</td>
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(continued)
“The most complex markets for us are those we contingently consider the most important and relevant ones. By the way I can say that for sure in the Far East and in China we face a tough language barrier and we perceive that culture is too different. These countries for us are the most uncertain because of these problems” (ATOM, CEO)

“In the US and in the UK the main issue that generates uncertainty is that there are too many competitors in our niche” (Paperbanana, founder)

“Italy has a very unfavourable institutional environment with excessive bureaucracy, unfavourable tax policy, and inefficient management of resources resulting in systematic waste, and in an inefficient incentives system. This can also cause problems when the firm looks towards internationalisation. You cannot get stuck in too much bureaucracy. You need to be enabled” (Fedegari, CEO)

“Italy has a contingent cultural problem, it has a very unfavourable institutional environment: the tax burden is too high and there is no aid from the state). I would like to have incentives to promote and do my business abroad so that I would be able to promote Italy as a country in other countries. It’s just so difficult to get any help” (Grandinote, founder)

“It is difficult to have access to credit in Italy and this also represents a problem for my internationalisation plans because I need money to make ideas work” (Evomode, CEO)

“Italy is not a very stimulating and enabling environment, there should be ways to incentive our business here but also to ease the internationalisation process if we want to convey the name of good Italian firms abroad – young companies included!” (Paperbanana, founder)

“To me France has a main source of uncertainty, which is nationalism” (Grandinote, founder)

“The US has legal system and contractual arrangements that are source of uncertainty to the firm. They are complex and too different from ours” (Juliight, CEO)

“In my perspective, both Italy and Poland have institutional and political problems. In Italy, I find almost the same unfavourable institutional and political environment that I see in any other distant country! […] But I have none of those problems in the US” (VolleyMetrics, founder)

Decision-making in the face of uncertainty

Effectual logics

“If I think about the uncertainties I have just told you about and our experiences in foreign markets […] I can tell you that in general we come to terms with what we cannot predict afterwards, and we will solve the issues. Sometimes we are not able to predict all problems. To have an experience in our business gives us the confidence to go abroad and try” (Fedegari, CEO)

“We do not usually make detailed predictions of our sales in each market we would like to approach” (Cerliani, CEO)

“We try not to be overwhelmed with plans, programs and analysis […] we make decisions looking at the company’s history, business culture, and strategy” (Mary Short’s Tricot, CEO)

“I am the only one involved in the decision-making processes, and this also applies to internationalisation choices. Usually this is how it works: I see what the opportunities are abroad, and I try to succeed by doing the best I can with my resources and the experience I have developed over time” (Grandinote, founder)

“Often, when I am interested in specific foreign countries, I rely on very close and trustworthy distributors I know well to start

(continued)
understanding the peculiarities of the market, so I can decide how to begin the adventure” (Grandinote, founder)

“With respect to internationalisation choices, especially when uncertainty is involved in our internationalisation moves, I make decisions with my closest executives. We do not perform strategic plans or market analyses losing hours and hours. For now, what we do is evaluate the opportunities we see, and go. This will also be the planned approach for future internationalisation in Russia and India” (So.Víte, CEO)

“With respect to the uncertainties in foreign markets, I can say that I am quite confident as I know I can solve any technological issue. I always execute my ideas and I solve all problems: this is my core activity. I do not accept uncertainty in this sense” (Evomode, CEO)

“All the team takes part in the decision-making process when it comes to internationalisation choices. I think that technical know-how must be integrated with business know-how to execute ideas. We do not really perform accurate foreign market analysis before approaching a specific market. An excessive prediction is not useful to decide when there is a context of uncertainty because it does not really open to the possibilities in those markets” (Julight, CEO)

“I believe that for now we are not really making any formal and structured market analysis for our internationalisation aims in UK” (Paperbanana, founder)

“Strong decisions are always the best no matter what the external conditions are” (Mary Short’s Tricot, CEO)

“We have always been used to having frequent and systematic meetings where we could evaluate and analyse each critical business decisions in relation to international markets in depth. This holds for those uncertain markets I have told you about before” (ATOM, CEO)

“We have always partnered with expert firms to increase our knowledge of both markets and clients to enhance our market positioning” (ATOM, CEO)

“In our perspective, our most important asset towards successful decision-making in uncertain conditions is technological knowledge and the knowledge of our clients” (ATOM, CEO)

“I believe my plans to internationalise in Poland are based on the experience that my team and I have gained through these years […] Therefore, we are able to understand some elements in advance and we can try to predict some aspects. In general, I would say that I need to do things the moment we approach the market [Poland][…] of course there are things I can understand in advance more or less thanks to experience, but there are other cases where I need advice and step by step solutions” (VolleyMetrics, founder)

**Uncertainty-coping strategic actions**

**Market creation**

“When customers recognise our quality and technological specialisation, we are able to penetrate a foreign market even when it is particularly uncertain, as was the case for us with Japan” (Ceriani, CEO)

“Fedegari has a strong specialisation in the pharmaceutical industry, focusing on some very specific sterilisation processes. I believe this specialisation has helped us in approaching foreign countries here in Europe but also in uncertain markets like Russia” (Fedegari, CEO)

**Product uniqueness**

Table AI.
"I think that a lot of the uncertainty in foreign countries will be overcome by what we offer. In fact, we offer a unique service for a well-defined need of a group of customers in the volley industry. Moreover, our technology is upfront and innovative. This service enables us thinking about our future internationalisation as something targetable. This service is unique, and we believe this uniqueness will be understood in Poland, where we are planning to internationalise. This might ease the process" (VolleyMetrics, founder)

"I have succeeded here in Italy doing things that others don't. The product is a niche of the niche addressing customers of high fidelity products who search for the perfect sound. This, in my perspective, reduces uncertainty a lot as it allows to be more focused. I think that this feature was a key factor in reducing uncertainty in France, a market we are now planning to enter. All the research and the production are made and has been made by myself in my lab. In 2002, I delivered my first prototype made of wood beam: the sound was far superior to other technologies existing at the time. In 2007, I could develop 100% the Magnetosolid technology that has merits both in terms of valves amplifiers and the strengths of solid amplifiers. No one had ever delivered a technology of this type before; it is unique in the world" (Grandinote, founder)

"I admit no uncertainty in my products. And at the same time, I think that if foreign customers can perceive the value of the product, I can succeed. When people see the product, they recognise the quality. Products like these mean success [...] I am quite confident from the perspective of what I offer, even when I think about selling my products to Finland, a country that I am now thinking of approaching" (Evomode, founder)

"Focusing on customer needs and requirements is too important, and special attention must be paid to product innovation and customisable solutions. It’s extremely important to stick to our core and founding values and focus on our customers at the same time. I believe this has been an important factor to gain Asian and Russian customers' trust. Once you have built trust, you are less uncertain about demand and you can think about establishing closer and increasing investments there" (Fedegari, CEO)

"We try to be as close as possible to our customers and be ready for their requests. We work on customised small or large product batches for our customers, from the sketches to the whole design, until the production of final clothes. This has allowed us to reach excellence and to take big orders from very important fashion houses" (Mary Short's Tricot CEO)

"We are able to work on our foreign customers requests and small series better than any other. I am sure this is critical to all clients we have all over the world. We wanted to be close to reduce the unexpected and we wanted to verify that our offer was fine-tuned to real demand. Being able to do so means that we are able to gain a position in the market. For instance, we started as subcontractors in Brazil, but then as we could see that we were able to respond to demand, we decided to gradually commit more resources in the market. First, we partnered with Klein, a local group, and then in the early 1990s we set up a subsidiary" (ATOM, CEO)

"Our firm is essentially based on customised products, this is the feature that allow us to be deeply rooted in our small business segment. I think this small segment has potential in the UK" (Paperbanana, founder)

"Product development and innovation are customer-driven, and this helps in terms of customer loyalty and positioning in the market because it allows us to be more competitive. If we will be able to do so also abroad, it means that we will be able to reduce the uncertainty which is due to demand, because we are flexible and open to the customer" (Julight, CEO)
Concentration on global clients
Countries matter, but customers come first

“One European market that we find interesting is the UK, because customers constitute a very open market in terms of prepared foods. Scandinavia is another interesting market because consumers are similar to those in the UK, which means we can somehow reduce the uncertainty related to demand and ease the process of entry” (So.VIté, CEO)

“After some decades of international business in difficult countries as well, I can say that our product can target very specialized customers in almost every country we are in. I know I can find groups of customers that need exactly what we produce, and we can target them. This mitigates some uncertainty with respect to the market, because it assures that you will have your niche of customers” (Fedegari, CEO)

“We address customers who love the planet as much as we do all over the world. We have plans to further internationalise, and at the same time we are confident of being able to overcome uncertainty by sticking to this kind of customer” (Paperhana, CEO)

“We build trust and confidence with agents, representatives and distributors. This enables us to get closer and closer to foreign clients” (Fedegari, CEO)

“The role of a trustworthy and efficient distributor network is very important, so we try to be directly involved with our clients. We have been strengthening trusted networks of distributors in Europe, US, and the Far East since the 1950s. This process somehow reduces uncertainty” (ATOM, CEO)

“We have been building personal relationships of trust with distributors in Russia and India, because we believe that this can help reduce the level of uncertainty, especially the cultural gaps I have told you about. Russia and India are the markets that interest us the most; we have personal relationships with local distributors here. It helps us to better manage the relationships with our customers” (So.VIté, CEO)

“To me being directly present in the markets especially through trade fairs was crucial to anticipate my customers. Moreover, this implied having highly trustworthy distributors. Trusting the local distributor was critical” (Grandinote, founder)

Control of technology and<br>technological/manufacturing capabilities
Control of human resources

“To overcome uncertainty here and in foreign markets, I need to be able to solve any technological problem. I don't accept uncertainty in my products. At the same time, I think that if foreign customers can perceive the value of the product, which is developed thanks to highly skilled resources, I am able to succeed. I do not wish to outsource any production to foreign locations nor to other suppliers in Italy because this could increase uncertainty instead of reducing it” (Evomode, founder)

“Uncertainty does not exist. You do not have uncertainty if you have the experience and the solid values that you never needed to change. If in doubt, you have to refer to the values and past experiences, therefore it means that you need to leverage the people who have been involved in production for many years and know how to deal with complexity, for example coming from foreign client demand clients. It's important to make long term projections [...] putting qualified people in the structure will give more confidence with foreign operations and foreign customers, and at the end, it gives the firm the opportunity to have new orders. Pre- and post-sales assistance is the key to maintain our customers” (Fedegari, CEO)

“I need to be able to provide the most effective assistance to my customers. I can do it because I can count on highly qualified
employees that were able to develop expertise during the years at our headquarters, and can follow each step of a sale and every
detail of a product” (Cerliani, CEO)

“…we maintain control over production at the headquarters because here we can thoroughly check the performance and quality. This is a requisite which we also need when we go abroad. As I told you, with customers in uncertain countries, I feel safer if I am able to offer the highest quality I can, and the best performance. I can do it if I control production here […] when our foreign customers consider us, they know that we are able to provide higher quality products and excellent post-selling services” (Cerliani, CEO)

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“We produce machineries with the most sophisticated and advanced continuous cut technology at our headquarters, while we have decided to outsource the production of traditional die cutting to China. Indeed, these machines appear to be much more suitable for emerging markets where shoes are produced in standard series and in large quantities, and where simple and inexpensive technologies such as die cutters are used. Keeping production at home means better control of your product performance; you have less uncertainty and you are able to provide customers with what they expect. At the same time, it reduces the uncertainty of having critical production processes in markets that are already seen as complex. It also reduces uncertainty about competing at your best in those countries. So, yes, we do not need to outsource production, it would imply more uncertainty” (ATOM, CEO)

“…we maintain control over production at the headquarters because here we can thoroughly check the performance and quality. This is a requisite which we also need when we go abroad. As I told you, with customers in uncertain countries, I feel safer if I am able to offer the highest quality I can, and the best performance. I can do it if I control production here […] when our foreign customers consider us, they know that we are able to provide higher quality products and excellent post-selling services” (Cerliani, CEO)

outcomes
impact of uncertainty - coping strategic actions
on internationalisation decisions
increased likelihood of looking for global customers

We plan to expand abroad based on the fact that we are pretty sure to find customers in Europe or in the US who need our technology, and as I have been telling you before, this helps reducing uncertainty” (Julight, CEO)

“We are the best in what we do and when a client needs our exact technology, we are ready to respond. Before deciding which market to target, we need to ask ourselves: Are there any potential clients that fit with our existing offer and that we can manage on the basis of our experience with other similar clients?” (ATOM, CEO)

“I more or less know where the demand for products like ours – manufactured with these excellent features - is located […] globally” (Mary Short’s Tricot, founder)

“First, I need to see where to find a request for our software, then I see if I can manage to go there” (VolleyMetrics, founder)

“We need to be constantly able to meet our customers’ requests, especially because of the highly specialised technology of the customised offer we provide […] so it is very important that we monitor them and that we are able to anticipate their requests effectively” (Fedegari, CEO)

“I need to be able to have a long-lasting relationship with my customers because this means returns, future orders and further opportunities to do business with them” (Mary Short’s Tricot, founder)

“We have built extremely good relationships with some of our historical clients, here in Italy and abroad. Trust and good relationships mean that we can be more stable […] in the years to come […] and have long term returns” (ATOM, CEO)
The qualitative case research in international entrepreneurship: a state of the art and analysis

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Abstract

Purpose – The purpose of this paper is to examine how qualitative case research (QCR) has been conducted in the field of international entrepreneurship (IE) in terms of onto-epistemology and methodology. QCR can serve as an umbrella approach for contextualizing and capturing the complexity of IE opportunities, events, conditions and relationships, and to illuminate and enrich the understanding of related IE processes.

Design/methodology/approach – A thorough literature review was conducted of IE journal articles published between 1989 and mid-2017. This paper identified and analyzed 292 journal articles in terms of theoretical purpose and research design.

Findings – The findings suggest that the “positivistic” QCR is the customary convention of QCR in IE. “Exploratory” and “theory building” are the two most commonly pursued objectives. There have also been atypical practices and increased methodological rigor in recent years. Alternative paradigmatic QCRs that depart from positivistic assumptions are in an early stage of development in IE.

Originality/value – To the best of the authors’ knowledge, this is the first research examining QCR onto-epistemology and methodology approaches in IE, providing a useful state of the art that has been hitherto lacking in the literature. Based on this paper’s findings, the authors suggest that the IE field would benefit from greater methodological transparency in the reporting and writing of QCR. Also, the breadth of knowledge and legitimacy of the IE area would be enhanced through more studies involving unconventional (beyond positivistic) QCR.

Keywords Methodology, International entrepreneurship, State of the art, Onto-epistemology, Qualitative case research

Introduction

The interlinked globalized market, declining political barriers and the advancement of information and communication technologies have generated numerous product-market opportunities for entrepreneurs and their firms in the cross-border context. Given this dynamic environment, in the last two decades there has been a dramatic increase in attention being given to the emerging and diverse field of international entrepreneurship (IE) (De Clercq et al., 2012; Mort and Weerawardena, 2006). IE concentrates on phenomena that cut across the disciplines of marketing, international business, entrepreneurship and management, and engages a community of diverse stakeholders, namely, academics, managers, consultants and policy makers.

Alongside other disciplines, international marketing research has advanced enquiries in the IE field in relation to foreign market entry pace, internationalization intensity and diversity, the authors are grateful to Dr Qingan Huang for his kind support in search of IE case studies. Junzhe Ji acknowledges the support from the Research Foundation of Humanities and Social Sciences for Young Scholars by the Ministry of Education of China (Grant No. 15YJC630040).
international market selection and entry mode, among others (e.g. Aspelund et al., 2007; Jørgensen, 2014; Knight, 2000; O'Cass and Weerawardena, 2009). The multi-faceted nature of IE is a mixed blessing as it can also generate conceptual and methodological fragmentation in the field (Neergaard and Ulhøi, 2007). Indeed, IE has been frequently understood and written in terms of theories that discuss the substantive domain of the IE phenomenon. There have been several IE literature reviews published during the last 15 years (e.g. Angelsberger et al., 2017; Coviello and Jones, 2004; Jones et al., 2011; Keupp and Gassmann, 2009; Mainela et al., 2014; Melén Hånell et al., 2013; Peiris et al., 2012; Rialp et al., 2015; Schwens et al., 2018; Terjesen et al., 2016) in which this study surprisingly found only one effort to systematically summarize and assess prior IE methodological issues in either marketing or other disciplines. This was the Coviello and Jones (2004) contribution that, nonetheless, has become relatively dated.

Therefore, a current shift toward a methodological discussion in the field of IE is needed, not only to complete the picture of what has happened in the field, but also to develop a commonly understood vocabulary, a rigorous methodological toolkit (Coviello and Jones, 2004, pp. 497-498), and, most importantly, a collective system of knowledge production (Suddaby, 2014). In addition, such a review and analysis facilitate the identification of methodological novel practices that enhance diversity and breadth in approaches to theorizing a new field (Welch et al., 2011, p. 757). Therefore, in order for the IE field to further expand, one must take stock of and reflect on its methodological approaches and advances. The examination and evaluation of methodological issues in IE is the focus of enquiry in this study.

This review is especially interested in qualitative case research (QCR) and how it has been conducted to advance knowledge in the field of IE. This paper discusses the ways that QCR has been used (i.e. research practice) in relation to methodological writings and draws from Platt (1996) and Piekkari et al. (2009) who consider and problematize QCR as disciplinary convention, namely a collective and socially embedded product of a scientific community that emerges from the formation of consensus among scientists within a discipline.

This paper concentrates on QCR because it is “an increasingly popular and relevant research strategy” (Eisenhardt and Graebner, 2007, p. 30) and a qualitative methodology of choice for IE scholars. Despite its popularity, QCR has not been discussed in IE especially when compared with other established disciplines such as marketing (Piekkari et al., 2010) or international business (Welch et al., 2011; Piekkari et al., 2009), possibly because of the potency of quantitative approaches in IE (see Styles and Seymour, 2006). QCR could enjoy its advantage of the flexibility and holistic and processual account into the international entrepreneurial behavior of firms (Coviello et al., 2011; Reuber et al., 2018). Moreover, QCR can identify and unveil the actors, behaviors and dynamics behind the opportunity theme, namely, its identification, enactment and exploitation, which appear to be high on the agenda of IE academics and practitioners (Angelsberger et al., 2017; Mainela et al., 2014; Terjesen et al., 2016). In order to keep pace with this growing demand for enhancing the QCR, it is important to provide an understanding of the state of the art and illuminate the usefulness, versatility and paradigmatic pluralism of this methodological approach.

The current literature review identified and analyzed methodological practices of 292 IE QCR articles employing content analysis that considers the text content, context and arguments of authors. This approach has been used substantially in prior IE review studies (e.g. Coviello and Jones, 2004; Keupp and Gassmann, 2009; Mainela et al., 2014; Peiris et al., 2012; Schwens et al., 2018). The current paper addresses the question of how QCRs have been conducted in the field of IE. To explore the question, the authors draw on Bluhm et al. (2011), Piekkari et al. (2010) and Welch et al. (2011), and investigate key aspects of the QCR methodology, including the theoretical purpose of qualitative IE case study, the research design of the case and associated paradigmatic quality criteria.

Other than being a useful review that has not existed until now, this study contributes to the IE literature by identifying the disciplinary convention in QCR in the form of "qualitative
positivism” inspired by the legacies of Eisenhardt (1989) and Yin (2014). The current paper suggests that the development of IE can benefit from not only greater consistency of QCRs that embrace the positivist stance but also open-mindedness to alternative philosophical stances (namely, interpretivism or critical realism) that emerged from its findings.

This paper is structured as follows. Initially, it begins with an investigation of the onto-epistemological approaches of QCR, and, next, it discusses the methodology of reviewing and analyzing published IE case studies. The practices found in the sample of 292 IE case studies are then described and examined, employing relevant methodology literature. The authors conclude by arguing in favor of paradigm consistency and pluralism of QCR in IE.

Qualitative case research under different theoretical traditions

The term “case study” defies a generally accepted definition stemming from the fact that cases are tied to different disciplinary perspectives and theoretical traditions (Patton, 2015). Despite differences in viewpoints, scholars consider cases to be meaningful units or set of units that investigate a phenomenon in its context using a variety of sources of evidence with the purpose of confronting theory with reality (Piekkari et al., 2009).

Researchers make various implicit or explicit assumptions about the nature of reality (ontology) and the construction of knowledge (epistemology) (Tsoukas and Chia, 2011), resulting in a variety of definitions and approaches of QCR. This paper outlines how philosophical underpinnings are reflected in key aspects of QCR including theoretical purpose, research design and quality criteria.

“Positivist” approaches to case research: the legacy of Eisenhardt and Yin

Eisenhardt (1989) and Yin (2014) adhere to “qualitative positivistic” assumptions about the nature of reality and the production of knowledge through QCR. Their onto-epistemological assumptions lean toward an objective reality that can be understood and explained by establishing regularities rather than the reasons behind them. The positivist view is the most common in empirical studies of marketing and management research (e.g. Piekkari et al., 2010).

In particular, Eisenhardt’s work unpacks the usefulness of “theory-building” QCR for inducing new theory from empirical data and generating theoretical propositions upon which large-scale quantitative testing can be based. Generalization differentiates Eisenhardt’s approach from other qualitative traditions that avoid context-free accounts and universal claims in favor of thick descriptions (Eisenhardt, 1989). The assumption that research mirrors objective reality is also embedded in the work of Yin (2014), who similarly endorses “exploratory” and “descriptive” QCR for emerging or new research areas but also “explanatory” QCR for deductively testing propositions and revising/extending existing theories. Both Eisenhardt and Yin detail a step-by-step process of designing QCR that starts with a priori specifications of concepts or constructs and includes the sampling decisions, units of analysis, data collection and analysis techniques for developing credible evidence. The power of QCR in this school of thought lies on replication logic and the search for general patterns (pattern matching) and descriptive constructs rather than idiosyncratic insights gained from particular settings. Data collection relies on the combination of interviews with archival sources or observation echoing Yin’s (2014) advice of triangulating multiple sources of evidence in order to develop a converging line of inquiry and unite with a single explanation of investigated phenomena. Data are analyzed according to the conceptual underpinnings of the study and employing content analysis, thematic analysis or pattern matching techniques. Rigor in QCR is ensured by deploying criteria inspired by the positivist tradition, namely construct validity, internal validity, external validity and reliability, but following different procedures to meet them (Welch and Piekkari, 2017).
Alternative approaches to QCR: beyond Eisenhardt and Yin

Recently, marketing, entrepreneurship and international business literatures have witnessed a remarkable onto-epistemological discussion regarding how core research puzzles and methodologies are formed under post-positivist philosophical traditions, including interpretivist/constructivist approaches and (critical) realism (see e.g. Ramoglou and Tsang, 2016; Suddaby et al., 2015; Welch et al., 2011).

Differing from the positivist tradition, interpretivism suggests that “only the physical reality is ‘real’ and knowledge of that reality, which entails the actions of others, is subjective, [and] derived from two sources: empirical experience and imagination” (Packard, 2017, p. 540). Knowledge is believed to be constructed rather than discovered, and value-free empirical accounts are neither sought nor desirable. Viewed in this light, the focus of QCR is neither theory building nor testing, but rather the utilization of the interpretive power to develop an understanding of personal experiences and interpretations of the social meanings attached by participants in their settings. In comparison to de-contextualizing and generalization, QCR appreciates the uniqueness, complexity, embeddedness and interaction with contexts.

As far as the research design is concerned, cases are selected not only for their revelatory potential but also for information richness and accessibility that would allow deep scrutiny of investigated phenomena. Interpretivists highlight the emergent nature of case research and the dynamic or micro-level view of the unit of analysis (e.g. individual) that changes during the course of the study. An emphasis of the “voice” of different participants and the reflexive approach enables researchers to develop an in-depth understanding and interpret the social meaning of investigated phenomena (Alvesson and Sköldberg, 2017).

Data collection and analysis are highly disciplined processes “whose central artifact, a hierarchical ‘data structure’ is presented as a key output of the research, usually in the form of a horizontal tree-shaped figure” (Langley and Abdallah, 2011, p. 215) (e.g. Corley and Gioia, 2004, p. 184). Instead of the terms of validity and reliability, the quality of QCR is assessed in terms of “trustworthiness” of the data related to the involvement of multiple researchers in the research process, member-checking and combination of emic and etic perspectives in data analysis and reporting.

Another emerging approach to QCR is associated with critical realism that contends to the existence of an underlying independent reality that can be understood only through our descriptions and interpretations (Tsang and Kwan, 1999). This philosophical stance adheres to a hybrid, stratified ontology claiming that the investigation of social phenomena is both causal (matching a positivist view) and interpretive (matching a constructivist/interpretive view). In light of critical realism, causality does not mean merely a search for event regularities because scholars “need to go beyond the events to understand the nature of objects, and cause-effect relationships do not consistently produce regularities in an open system” (Welch et al., 2011, p. 17).

As far as research design is concerned, selection of cases is “constructed” and driven by sets of ideas (or theories) about the social world, the institutions and the social contexts acting as external powers, and the researchers’ presumptions and propositions that make up the acts of explanation and interpretation (Emmel, 2013). Explanatory accounts encompass actors’ intentionality and therefore in-depth interviews form the key data source in critical realist cases. According to Pawson (1996), interviews and other sources of evidence are used both to appreciate the interpretations of the experts (informants) and analyze the dynamics of social contexts, constraints and resources within which those informants act. The hybrid ontology of critical realism is reflected in the quality criteria of QCR, which draw both from positivism and interpretivism (Wynn and Williams, 2012). Triangulation is used to support causal analysis based on a variety of data sources and types, analytical methods, investigators and theories (Modell, 2009).
Methodology

The methodology in this paper included the assessment of international peer-reviewed journals as they are considered to be a validated source of knowledge (Podsakoff et al., 2005). The current review identified 292 IE QCR papers following a thorough search for IE case studies between 1989 and mid-2017 (June 30, 2017). The time scope of this analysis commenced with the landmark study of McDougall (1989), which empirically differentiates between international and domestic new ventures. The present study adopted a three-phase methodology: initially the authors exhaustively collected published IE empirical studies, then identified the studies employing QCR methods and finally undertook a qualitative content analysis classifying QCR papers based on their theoretical purpose and research design. All articles were double-coded, checked on their consistency and differences arisen were resolved through discussion.

Specifically, in the first phase of this review, IE empirical studies that involved primary data collection and analysis through four sources were identified. IE was defined as the entrepreneurial behavior or opportunity recognition activity for value creation across national borders. This definition captures the essential aspects of the conceptualization of McDougall and Oviatt (2000) and Oviatt and McDougall (2005). Initially, this review undertook a thorough and manual search for IE empirical studies between 1989 and 2013 in the published article pool listed in five recent key IE literature reviews (Coviello and Jones, 2004; Jones et al., 2011; Keupp and Gassmann, 2009; Mainela et al., 2014; Peiris et al., 2012). To avoid the possibility of missing studies between 2010 and mid-2017, the authors further employed the Boolean search that consists of key words presented in Jones et al. (2011) in searching databases such as EBSCO, Proquest and ScienceDirect. These key words cover international entrepreneurial behavior, international comparisons of entrepreneurial behaviors and opportunity discoveries across borders. In order to be fully comprehensive, a further item-by-item manual search was conducted for IE empirical studies between 2010 and mid-2017 in outlets in marketing, entrepreneurship and small business, international business, IE, management and other journals, which have hosted special issues in IE or often published IE-related articles (see Table I for a full listing of these journals). The search results were additionally compared with two IE article lists provided in the virtual community of global IE researchers (www.ie-scholars.net) to ensure the inclusion of all listed case studies: “Key Articles in the Development of International Entrepreneurship” and “IE Articles 2010–2012 (prepared by Nicole Coviello in October 2013).”

In accordance with the practice of Jones et al. (2011), the searches were not confined to only top-quality business journals. This decision was dictated by the objective of this study and the status of IE studies. It is very likely that some interesting methodological ideas and practices are published in “lower level” journals before they are widely accepted by mainstream outlets. As IE research is still at an emergent stage of development, this inclusion facilitates extensions that improve IE knowledge (Jones et al., 2011). After eliminating possible replications of the aforementioned procedures, 1,015 IE empirical studies were identified. This result is very comprehensive when compared with 714, 323 and 291 entries of Schwens et al. (2018), Jones et al. (2011) and Peiris et al. (2012), respectively, despite the slight differences in the focal periods.

In the second phase of this review, these empirical studies were classified into categories. Following Nakata and Huang (2005), the articles were classified as “quantitative” (60 percent, 611 entries) if they predominantly relied on large-scale data collection and analysis; “qualitative” (35 percent, 356), if the examination collected data using methods like case studies, ethnography or in-depth interviews, and analyzed these data using methods like content analysis; and “mixed-method” (5 percent, 48), if the study employed both quantitative and qualitative methods, and both methods played substantial roles in the study. At this stage, case articles were also identified. During this process, the review encountered the difficulty of deciding what to regard as a case study. Initially the author claims were used as a
Table I. International entrepreneurship (IE) qualitative case research articles by journal source and year

<table>
<thead>
<tr>
<th>Period</th>
<th>Entrepreneurship</th>
<th>International business</th>
<th>Marketing</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>JBV</td>
<td>ETP</td>
<td>SEJ</td>
<td>SBE</td>
</tr>
<tr>
<td>1989–1990</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>1991–1992</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>1993–1994</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1995–1996</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1997–1998</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1999–2000</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2001–2002</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>2003–2004</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
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<tr>
<td>2005–2006</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>2007–2008</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009–2010</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>2011–2012</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2013–2014</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015–2016</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017 (till June 30)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>3</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

% of all articles: 24.10 1.0 1.0 24.21 2.1 202.0 7.38 10.6 3.8 1.7 4.1 2.1 5.1 0.3 0.3 0.3 0.7 0.7 1.0 33.2 100.0

guide; however, some articles conflated the terms “case” and “example.” Some articles even proved to be practitioner papers or teaching cases, and so, these articles were excluded from the analysis (see Welch et al., 2011). The definition of QCR proposed by Piekkari et al. (2009) was taken into consideration because it highlights its role in theory confrontation and has been widely used in IE. Following this approach, 292 qualitative IE case studies were finally identified[3], which primarily appear in principal journals (67 percent) within the key disciplines presented in Table I. The category of “others” covers the IE QCRs in the lower-level journals within these disciplines as well as the ones in other fields such as area studies (n = 15), technology and information management (n = 6), economics (n = 4), innovation (n = 4), strategy (n = 3), social science (n = 2), organization studies (n = 2) and human geography (n = 1). These studies either touched upon the substantive domain of IE (e.g. study of IE phenomena such as high-tech ventures for innovation) or utilized IE concepts and theories to address relevant research problems (e.g. entrepreneurial opportunity as a lens of studying field-specific issues). For instance, Henns (2012) examined the impact of transnational entrepreneurship on the change of production structures in different geographical locations.

The case method turns out to be the most common research design in the IE qualitative enquiry as QCR accounts for 29 percent of total IE empirical studies from 1989 to 2017. Coviello and Jones (2004) found that less than a quarter of the 55 articles they reviewed employed qualitative techniques, out of which only five case studies existed. More recently, Keupp and Gassmann (2009) found that there were only 35 qualitative studies out of 149 empirical papers they reviewed, yet their review included only “high-quality” journals. Overall, it appears that the steady growth of QCR publications reflects the increasing attractiveness of QCR to IE researchers as shown in Table I.

The third phase of this review sought to classify the IE articles previously identified as qualitative case studies. A qualitative content analysis was conducted as it went beyond the enumeration of categories to classify and interpret text, paying attention to the content and author arguments. This approach is characterized by an emergent flexibility as it allowed authors to follow cycles of coding and go through stages of the analysis more than once (Schreier, 2012). It has been substantially used in the aforementioned review studies in the IE field.

The coding of published articles was theory-driven but also flexible and exploratory, allowing key categories and concepts to emerge from the data (see Schreier, 2012). This review commenced with, but then supplemented, the coding frame that was based on insights drawn from the extant methodological literature on QCR. Each article included in the review was content-analyzed to assess the theoretical purpose and research design of QCR as well as whether and how these aspects of QCR were followed throughout the examined article. In this examination, 21 categories formed the columns of a coding spreadsheet, with a row for each article. Besides the ones shown in Table II, these categories also included the research topic, research objective, theoretical purpose, philosophical stance along with others. The theoretical purpose was determined according to the guidelines set by the relevant QCR literature (Bonoma, 1985; Welch et al., 2011; Yin, 2014), which are outlined in the previous section. There were certain difficulties in classifying the theoretical purpose of some of the articles. Occasionally, this occurred because the theoretical purpose was not stated explicitly or was even misstated. The philosophical stance that refers to the onto-epistemology of the QCR was identified through an overall consideration of the paradigmatic claim of author(s), the theoretical purpose of the paper, the methodological authorities consulted, the sampling logic, the emphasis on context and the rhetoric of writing (Welch et al., 2011, 2013).

**Findings**

Because the ways to view reality and assessment criteria for QCRs under different philosophical orientations tend to vary (Welch and Piekkari, 2017), the findings and
evaluations are presented by differentiating positivistic from alternative QCRs. In each cohort, the presentation is guided by the focus of this review in terms of the theoretical purpose of QCR, research design and quality evaluation.

The disciplinary convention of QCRs \((n=284)\) in IE is found in a positivistic stance, which probably is also a result of the prevalence of positivism in marketing, international business and other business-related disciplines (e.g. Piekari et al., 2009, 2010; Welch et al., 2011). Eight post-positivist studies representing interpretivist, constructionist and critical realist approaches were also identified.

IE case studies with positivistic approach

Theoretical purpose. In general, positivistic IE case studies serving exploratory \((n=134)\) and theory-building \((n=66)\) purposes (as per Yin and Eisenhardt) have occupied a dominant position. This finding reflects the relative adolescence of the IE field and the attempt to improve the understanding of IE phenomena through theory development. Some “descriptive” studies \((n=12)\) following the insights of Yin (2014) were also identified.

<table>
<thead>
<tr>
<th>Primary sampling strategy</th>
<th>No. of papers</th>
<th>Unit of analysis</th>
<th>No. of papers</th>
<th>Data collection method</th>
<th>No. of papers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purposeful sampling</td>
<td>99 (5)</td>
<td>Firm level</td>
<td>200 (2)</td>
<td>Interview only</td>
<td>42 (3)</td>
</tr>
<tr>
<td>Criterion sampling</td>
<td>70</td>
<td>Individual level</td>
<td>27 (3)</td>
<td>Interview and secondary data sources (e.g. internal documents, archives, websites, media, etc.)</td>
<td>164 (2)</td>
</tr>
<tr>
<td>Theoretical sampling</td>
<td>50</td>
<td>Network</td>
<td>13</td>
<td>Involved additionally other sources</td>
<td>75 (3)</td>
</tr>
<tr>
<td>Unique cases</td>
<td>16</td>
<td>Opportunity</td>
<td>7 (1)</td>
<td>Do not specify</td>
<td>11</td>
</tr>
<tr>
<td>Convenience sampling</td>
<td>14 (2)</td>
<td>Process</td>
<td>4 (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Judgmental sampling</td>
<td>7</td>
<td>Duality of unit of analysis</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>State/region</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Representative sampling</td>
<td>8</td>
<td>Opportunity</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>23 (1)</td>
<td>Process</td>
<td>24 (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do not specify</td>
<td>8</td>
<td>Others</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>292</td>
<td>Do not specify</td>
<td>292</td>
<td></td>
<td>292</td>
</tr>
<tr>
<td>Method/process of analysis</td>
<td>No. of papers</td>
<td>Presentation of findings</td>
<td>No. of papers</td>
<td>Methods of verification</td>
<td>Frequency</td>
</tr>
<tr>
<td>Primary method/process of analysis</td>
<td>189 (6)</td>
<td>Main theme analysis</td>
<td>205 (5)</td>
<td>Multiple sources of evidence</td>
<td></td>
</tr>
<tr>
<td>Within/cross-case analysis</td>
<td>76</td>
<td>Proposition testing</td>
<td>130 (5)</td>
<td>Multiple informants</td>
<td></td>
</tr>
<tr>
<td>Pattern matching</td>
<td>72</td>
<td>Analysis advancing propositions or framework</td>
<td>57 (1)</td>
<td>Multiple interviewers and analysts</td>
<td></td>
</tr>
<tr>
<td>Critical incident analysis</td>
<td>15</td>
<td>Diachronic analysis</td>
<td>66 (1)</td>
<td>Collect and re-collect</td>
<td></td>
</tr>
<tr>
<td>Abductive/both inductive and deductive approach</td>
<td>7</td>
<td>Do not specify</td>
<td>57 (3)</td>
<td>Interviewees’ feedback</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>51 (7)</td>
<td>Do not specify</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do not specify</td>
<td>71 (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>292</td>
<td></td>
<td>292</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analysis facilitated by software</td>
<td>39</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Descriptive statistics for alternative QCRs in parentheses
“Exploratory” is the most common term mentioned in IE QCRs despite it being used very loosely, and typically in two forms. One form tends to have more deductive elements (e.g., Spence and Crick, 2006) relying on relevant literature to identify possible general directions and then conducting the case study to explore associated research questions. The other form seems to be more inductive, using QCR to tentatively gain some insights into the investigated phenomenon (e.g., Apfelthaler, 2000). An exemplar reason for the employment of “exploratory” case studies associated with a gap-spotting approach (Sandberg and Alvesson, 2011) is “because there is a lacuna in the literature regarding the activities of international entrepreneurial firms viewed through the lens of the international market presence aspect” (Dimitratos et al., 2010, p. 592).

With regard to the IE theory-building QCRs, Eisenhardt’s (1989) method seemingly is widely accepted by an absolute majority of reviewed articles, which could be partially manifested by the citations in their methodologies. As Kirkwood and Walton (2010, p. 205) noted, “[w]e use Eisenhardt’s (1989) method and process for building theory from cases that is ‘highly iterative’ and ‘tightly linked to data.’” It is also interesting that a significant majority of theory-building case studies (n = 50) ended their analysis processes with propositions or conceptual framework, again in line with Eisenhardt’s (1989) theorizing tradition. Notwithstanding the popularity of the data-grounded approach (e.g., Bruton et al., 2009), the current research found 5 recent QCRs employing abductive (e.g., Rocha et al., 2012) and multi-grounded theorizing (e.g., Sigfusson and Harris, 2012) approaches. In both approaches, existing theoretical contributions were incorporated into studies either prior to or after exploring data signaling iteration between evidence and theory. Although theory-building QCRs are logically inductive, this review revealed that most of these studies have not justified their stance and presented themselves deductively. One exception refers to Schotter and Abdelzaher (2013, p. 83), who noted that “[…] for presentation purposes only, we adopted the convention set by the post-positivist research paradigm, to present literature up front, followed by a description of the methodology followed by the findings.” A further exploration provided evidence with a completely inductive presentation of theory-building case study (Prashantham and Dhanaraj, 2010). In their work, which coherently reflects Eisenhardt’s recommendations, the methodology was presented following an introduction, and then a combination of case and literature analysis led to the development of propositions. In addition, 12 “descriptive” QCRs have been encountered. Consistent with Yin’s portrayal of this category, these “descriptive” cases primarily performed illustrations of the IE process in different contexts rather than elaborated on theoretical concepts (e.g., Bell and Loane, 2010).

More interestingly, there were some atypical practices in IE QCRs, including “theory testing” (n = 29), “theory refinement or extension” (n = 33) as well as “explanatory” studies (n = 10). Regarding “theory-testing” IE QCRs, this review made several interesting findings. First, when addressing its research aim, no article explicitly employed the term “test” rather than more “neutral” terms such as “investigate,” “shed light on” or “understand.” Second, some studies described their research objectives vaguely or broadly, reflecting the difficulty that authors encountered in discussing how to relate theory to case empirical evidence. Third, in order to justify their approaches, a majority of these studies claimed that they were tentative in nature inspired by the positivist tradition that favors statistical generalization. For instance, Gabrielsson (2005, p. 218) noted that “[t]his result is, however, a preliminary nature and will require further verification.” In addition, the current review did not observe any in-depth discussion that went beyond statistical generalization to embrace analytical inference and contextualized explanation regarding this approach in the reviewed IE QCRs.

An example that highlights the importance of theory-testing QCR is provided by Chandra et al. (2009). This study initially used qualitative data from eight cases to examine the effect of search activities, networks and entrepreneurial orientation on the processes of
international opportunity recognition through testing three preset research propositions, which were confirmed/disconfirmed in light of the case evidence.

This review’s analysis has also identified “theory refinement” and “theory extension” approaches in IE QCRs. These explicate the suitability of QCR for later stages of theory development beyond exploration. This type of case study is employed to challenge, extend and refine theory (e.g. Perks and Hughes, 2008). QCRs with a “theory extension” purpose sought to extend theories or concepts from other fields into studying IE phenomena. Two successful examples refer to Kontinen and Ojala (2011b, p. 135) and Sainio et al. (2011, p. 562).

The former study articulated that “[...] we aim to extend existing social capital theories to a new context, namely the internationalization of family SMEs,” while the latter suggested that “[i]n order to increase our understanding of the applicability and usefulness of the business model concept on IE, a case-study approach was chosen.” Apart from the construction of IE theories, the current study’s findings revealed that validated borrowing seems to offer another approach to provide solid basis to further theoretical advancement of the IE field.

QCRs regarding theoretical purposes that were least frequently encountered included “explanatory” research. The lack of “explanatory” QCRs in IE may be attributed to the insufficiently documented explanation-building process. Some authors (e.g. Freeman and Cavusgil, 2007, p. 8) attempted to alleviate this challenge through indicating that “[t]he method we adopt herein entails a qualitative, primarily explanatory research perspective. However, elements of both exploratory and descriptive research are apparent in the cases because of the holistic nature of the research questions.”

In addition, Figure 1 presents the trend of these atypical theoretical purposes from 1993 to 2017. The variety of atypical theoretical purposes reaches its climax during 2009–2012. Evidently, 79 percent “theory testing” (23 out of 29), 88 percent “theory refinement or extension” (29 out of 33), 80 percent “abductive” (4 out 5) and 70 percent “explanatory” (7 out of 10) QCRs have appeared within the last 8.5-year period of this review. These findings suggest an increase in theoretical purpose diversity of IE positivistic QCRs in the past ten years, illustrating that case scholars within this school of thought gradually decouple “qualitative” and “exploratory” research, and pursue theory refinement, elaboration or testing. Theory elaboration, often viewed as a form of abductive reasoning, utilizes existing theory to examine empirical realities and identify whether theory falls short so that it can be

Figure 1. Atypical theoretical purposes of positivistic IE QCRs between 1993 and 2017
elaborated (Fisher and Aguinis, 2017). The theoretical purpose diversity of QCR in IE may be attributed to the diffusion of an alternative rhetoric within the qualitative positivistic repertoire, which is a part of a wider, ongoing dialogue over the role of theory in academic research (Suddaby, 2014).

Overall, this study’s analysis suggested a substantial lack of clarity in the published positivistic IE cases regarding their theoretical purpose due to four reasons. First, a few articles either mentioned little about theoretical purposes or provided no cues through using neutral terms such as “to investigate” when addressing their research aims. Even more confusing was the fact that some authors have offered generic arguments and not provided the most pertinent justifications for choosing QCRs in response to their theoretical purposes, while discursively and simultaneously presenting several others (e.g. to answer “how” and “why” questions, to deal with complexity, to conceptualize the phenomenon, to provide rich information and to capture the context).

Second, the theoretical purposes were misstated in some studies, and what these works actually performed did not follow what they claimed previously. For instance, one study reports in its methodology section, “[t]his research adopts a qualitative case study design, deemed appropriate for theory development in international entrepreneurship […]” (theory building), while it states when analyzing its findings “[…] as expected, the data provided support for the base-line Proposition 1 […]” (theory testing). Third, the review found inconsistencies regarding theoretical purposes in various parts of some articles. A typical example was that of a study that used a positivist language “[…] to test the effects of entrepreneurship and networking relationship on the internationalization pattern of SMEs […]” (a strong cue of theory testing) in its abstract, while eventually it indicated “[…] constructing a theoretical descriptive framework about the studied phenomenon based on the multi-case (two or more cases) qualitative study” in its methodology. Fourth, a mixture of different philosophical stances was observed in few studies. For example, a study sought to understand and actually investigated “[…] how managers perceive and construct time in a subjective sense […]” (interpretivist stance) and simultaneously it also indicated “[…] the intention of our study was to build theory […]” which adhered to a deductive pattern matching logic (Eisenhardt’s positivist stance) in its analysis. In short, all these practices decrease the clarity of theoretical purposes of QCRs and may impede, confuse or even mislead the reader to approach the real objectives of case studies in the IE field.

Research design. The content analysis findings for research design are presented in Table II. This evidence reveals the general approaches adopted by IE positivistic QCRs, specifically those referring to the sampling strategy, unit of analysis, data collection method, method/process of analysis and presentation of findings.

First, as to the sampling strategy, purposeful sampling, namely the selection of information-rich cases for in-depth study, was more frequently used to describe case selection \((n = 94; 33\%\) percent). Criterion sampling \((n = 70; 25\%)\) and theoretical sampling \((n = 50; 18\%)\) were more commonly used along with other approaches such as convenience sampling, identification of unique cases, judgmental sampling and representative sampling. As shown in Figure 2, these atypical practices in terms of sampling strategies have rapidly increased since 2001, but most frequently appeared in the period 2009–2012. It was interesting to observe two polarized trends in terms of sample justification, namely unique cases that emphasized contextual richness and convenience sampling that relied on accessibility, availability at a given time or geographical proximity of investigated cases.

It was also observed that 22 studies did not mention this issue. Purposeful sampling was mainly “[…] for the purpose of this research […]” (Freeman et al., 2012, p. 94), while criterion sampling was usually applied to selecting the appropriate study object following its definition, e.g. born globals (Andersson and Wictor, 2003). In order to respond to the theory
development in IE, literal and theoretical replication logic advocated by Eisenhardt (1989) was also followed by some studies. For example, Pettersen and Tobiassen (2012, p. 123) noted that “we select two similar business cases and one dissimilar to explore similar and contrasting results.”

This review found very limited evidence incorporating prior empirical evidence to guide case selection. There are a few exceptions including Rasmussen et al. (2001) and Gabrielsson (2005); for example, Rasmussen et al.’s (2001) case study followed a survey in order to understand in detail identified born global firms. This approach was advantageous since it uncovered the idiosyncrasies of the investigated cases and allowed for method triangulation by incorporating nuances of the pilot study in discussing the case study evidence.

Second, as to the unit of analysis, this investigation revealed that firm-level (n = 198) and individual-level (n = 24) analysis studies dominated IE positivistic QCRs, accounting for 78 percent of identified studies. This manifests that entrepreneurial firms and entrepreneurs in the international context have attracted the majority of research attention. There are several other studies focusing on state, region, industry, community, cluster, project, subsidiary or even dual levels of analysis. However, these units of analysis seem to be static in nature. Also, 23 studies did not specify their choices on this issue.

This review has additionally identified several more dynamic units of analysis including the network (n = 13), opportunity (n = 6) and process-level (n = 3) analysis in IE positivistic QCRs. As exhibited in Figure 3, nearly 85 percent of these dynamic units of analysis appeared after 2005, when the concept of IE was reformulated as opportunity identification and exploitation (Oviatt and McDougall, 2005). For instance, in order to explore the network dynamics of international new ventures, Coviello (2006, p. 718) indicated that “the unit of analysis was the network from the perspective of the INV (international new venture).” In a related vein, Kontinen and Ojala (2011a, p. 498) also noted that “the unit of analysis for this study was the recognition of the opportunity […]” to capture the dynamism of opportunity recognition. The process involving many interactions was also adopted as the basic unit of study. Voudouris et al. (2011) and Varis et al. (2005) chose the learning and partnering process of firms, respectively, as the unit of analysis to provide a holistic view of IE phenomena.

Third, as to data collection methods, sole interviews (n = 39; 14 percent) or their combination (n = 162; 57 percent) with secondary data sources (such as internal reports,
media, company websites and archival data) were the most usual methods for collecting qualitative data for positivistic QCRs in IE. This is in line with prior evidence in the other business research fields (e.g. Piekkari et al., 2010). In total, 72 studies (25 percent) additionally employed other methods in collecting qualitative data, and most of them (74 percent; n = 53) appeared in the past six years. Only 11 studies did not report anything on this issue.

A further examination revealed the employment of less frequently presented methods including participant observation (×38), e-mail communication (shown ×11 times), questionnaires (×10) and focus group (×4). A good example with diverse data methods is Chelekis and Mudambi (2010), which investigated the activities of multinational corporations in the direct sales industry regarding micro-entrepreneurship in the Brazilian Amazon. Through an ethnographic case study, one author “spent two months living and working in two upland communities […] observing their (entrepreneurs’) sales calls and delivery visits, and talking to them regularly about their work.” Following this, the authors conducted a focus group that “[…] provided the opportunity to observe the discussion and interaction between participants focused on specific research questions.” Subsequently, the researchers developed a questionnaire from the observation and used a focus group in a small-scale survey supplemented by interviews with multinational corporation managers (Chelekis and Mudambi, 2010, p. 416). In their study, the authors employed multiple data collection methods that were tightly synthesized and complemented to offer in-depth and contextually rich information for the purpose of theory development.

Fourth, as to the methods/processes of analysis, this review suggests that within and across-case (n = 76; 27 percent) and pattern-matching (n = 72; 25 percent) analysis represented the related strategies claimed by over half of IE QCRs. Less frequent methods included critical event analysis (n = 15; 5 percent) and abductive or inductive and deductive approach (n = 7; 2 percent). A majority (82 percent; n = 18) appeared in the last six years of the review. It is noteworthy that 70 (25 percent) studies did not report their methods or process of analysis. In the remaining 44 positivistic QCRs, the employment of coding, content or thematic analysis was intensively mentioned without detailed descriptions.

It is expected that the analysis methods, such as within and across-case and pattern-matching analysis, were widely employed, confirming the dominance of positivist case studies in IE. These approaches were obviously important and well-established to
facilitate theorizing (Eisenhardt, 1989). We encountered a few studies following abductive reasoning (e.g., Rocha et al., 2012) and combining deductive and inductive procedures, which were suitable for theory refinement, as discussed earlier. Only 15 studies claimed that they used the critical incident technique. Such a technique was discussed as a “[…] qualitative interview procedure that facilitates the investigation of significant occurrences (events, incidents, processes or issues) identified by respondent, the way they are managed, and the outcomes in terms of perceived effects” (Chell, 1998, p. 56). It is favored to “[…] investigate causality as it actually happens in a particular setting” (Evers et al., 2012, p. 53). Turcan’s (2012) work is a good example with a detailed illustration of how the critical incident technique was conducted. In comparison to conventional manual analysis, the current review identified 39 QCR studies that employed several software packages to facilitate qualitative data analysis, involving NVIVO (e.g., Makhmadshoev et al., 2015), NUDIST (e.g., Voudouris et al., 2011), ATLAS (e.g., Mahdjour and Fischer, 2014), NETDRAW (e.g., Henn, 2012), Leximancer (e.g., Middleton et al., 2011) and MAXQDA (e.g., Thai and Chong, 2013).

Fifth, as to the presentation of findings, this was organized by main themes ($n = 163$). This is prevalent in IE QCRs, consistent with a considerable number of studies with exploratory or theory-building purposes in this field. In total, 28 and 51 QCRs presented their findings by proposition testing and advancement of propositions or frameworks (refinement processes of propositions or frameworks), respectively. Diachronic analysis, namely the study of change in a phenomenon over time, was only chosen by seven studies for the presentation of their findings, and these all appeared after 2009 with one exception.

The novel presentation approach of diachronic analysis was used to offer the evolution process of IE phenomena and provide historical context, which was usually followed by a synchronic analysis at one point of time. These examinations were mainly in the form of historical event analysis as the progressive accumulation of these events is critical in understanding path dependency. Behaviors or actions that occur during and immediately following these historical events tend to be significant (e.g., Nasra and Dacin, 2010).

**Evaluative criteria and quality assessment of IE positivistic QCRs.** To facilitate the logic of replication and generalization, evaluative criteria for positivist QCRs pose a request for robustness. A vigorous positivistic QCR demonstrates itself in the concern of construct validity, internal validity, external validity and reliability (Gibbert et al., 2008). Following the insights of Yin (2014), this review has examined a few key aspects of methodological vigor in terms of the number of cases, methods of verification, comparison with existing literature and overall transparency.

In relation to positivist QCRs, a multiple-case design is preferred to a single-case approach as emergent patterns will be confirmed or tested by multiple cases and eventually increase external validity (Welch and Piekkari, 2017). In this review, out of 284 IE QCRs, 147 featured between four and ten cases. A typical justification for the selection of multiple cases is that “the selection of seven SMEs falls within Eisenhardt’s (1989) suggestion for the appropriate number of cases, which is between four and ten, because it is enough for analytical generalization without creating an unwieldy volume of data” (Galkina and Chetty, 2015, p. 657).

In addition, it was observed that the majority of IE positivistic QCRs ($n = 261$) claimed to use one or more methods to verify their findings. Ranked in order of the presented frequency, these were multiple sources of evidence ($\times 200$), multiple informants ($\times 125$), collection and re-collection ($\times 65$), multiple interviewers and analysts ($\times 56$) and feedback from interviewees on case transcripts or findings ($\times 54$). From a positivist view, all these methods were helpful in reducing certain subjective biases from interviewers or interviewees, through which researchers could enhance the reliability and construct validity of their QCR findings. A typical example performing diverse methods of verification is Kalinic et al. (2014), which focused on rapid internationalization of traditional small firms.
To achieve triangulation, they collected data from three different sources including interviews, archival data and observations. To control interviewee bias in each enterprise, they interviewed the entrepreneur and at least one other manager who was most involved in the internationalization process. To reduce observer bias, all interviews were conducted by two investigators. Furthermore, to clarify conflicting results and conduct verification, at least one informant from each firm was contacted for a follow-up interview.

This review also examined whether IE QCRs compared their findings against extant literature as suggested by Eisenhardt (1989, p. 545) because “tying the emergent theory to existing literature enhances the internal validity, generalizability, and theoretical level of the theory building from case study research.” The current review identified that a majority of IE QCRs (n = 220) followed this practice and made such comparisons or linked their findings with literature. The approach further corroborated the internal validity of these studies.

Research transparency captures an additional dimension of research quality (Gibbert et al., 2008), which indicates how well research methods and analysis are reported. Overall, the current analysis suggests that the methodological transparency in positivistic IE QCRs was not satisfactory. A majority of reviewed positivistic QCRs cannot be considered to be well presented and reported regarding their research methods and analysis. This finding is similar with Bluhm et al.’s (2011) qualitative review in management.

Out of 284 positivistic IE articles examined in the present study, only 84 (29 percent) contained sufficient information and complete descriptions of research design, data coding and analysis techniques as well as criteria used to ensure the quality of QCR evidence. This suggests the overall vagueness in the methodological reporting of IE positivist QCRs. It is noteworthy that nearly half (n = 38; 45 percent) of the studies with good methodological reporting practices emerged within the past five years. It shows that an increased number of IE qualitative case researchers have started acting on this critical methodological issue.

IE case studies with alternative paradigmatic approaches

This review identified only eight alternative QCRs that represent the stances of interpretivism (n = 1), social constructionism (n = 2) and critical realism (n = 5). There are two possible reasons accountable for the near absence of case studies linked to other philosophical stances. First, when compared with positivistic qualitative, alternative paradigmatic approaches are more recent additions to the methodological literature (Welch et al., 2011). Second, the publishing of QCR based on other ontological-epistemological tends to be difficult given the prevalence of concepts regarding decontextualization of theorizing and generalization emphasized by positivist case study advocates.

Theoretical purpose. Embracing the stance of interpretivism, Carrier (1999, p. 33) articulated its research purpose as “[... ] to reveal idiosyncratic perceptions of the owner-managers rather than to obtain confirmation or denial of a set of training needs previously identified by researchers in the field.” It served the theoretical purpose of “exploratory” to understand the needs of international training and development perceived by Canadian small business owner-managers. Slightly different from the position of interpretivist QCR, social constructionist IE QCRs “[... ] emphasize the social self but focus on the interactive (rather than cognitive) aspects of social or international being and becoming” (Fletcher, 2004, p. 296). With the theoretical purpose of “exploratory,” both IE QCRs under this paradigm (Fletcher, 2004; Lehto, 2015) examine opportunity construction through international buyer–seller interactions and joint cross-border co-ordinations between entrepreneurs and external players, respectively. “Exploration” is not associated with the first steps of a study leading to hypotheses-testing research, instead it is “reclaimed and reinterpreted as a means of gaining in-depth understanding of local, emic meanings and remaining open to alternative perspectives” (Welch et al., 2013, p. 256).
In addition, four out of five critical realist QCRs (e.g. Andersen and Rask, 2014) took advantage of the “explanatory” potential of QCRs by developing contextualized explanations of investigated phenomena. Interestingly, there was one realist QCR (Oxtorp, 2014) with the aim of theory building, which developed propositions for the implications of specific contexts such as organizational processes, rules and structures to dynamic managerial capability.

**Research design.** A majority (n = 5) of alternative IE QCRs adopted purposeful sampling. This finding is similar to that of their positivistic counterparts. Two critical realist case studies employed convenience sampling and one study did not specify its sampling strategy. The employment of convenience sampling for critical realists may be attributed to the difficulty of accessing data over time since longitudinal design is essential to understand the contextual dynamics or complexity. For instance, through an industrial PhD project, Oxtorp (2014, p. 402) approached “the opportunity to spend much of her time at the firm’s premises, studying the organization, taking part in meetings, talking to employees and the management, etc.” With regard to the unit of analysis, all three interpretivist/constructionist cases adopted individual-level analysis, which fits their paradigmatic focus. Their critical realist counterparts are diverse on this aspect, which include two firm-level studies, one opportunity-level study, one process-level study and one that did not specify its unit of analysis. For instance, taking more dynamic “opportunity” as their unit of analysis, Mainela and Puhakka (2011, p. 20) suggested that “[a]ccording to our study, essential for understanding the international new venture emergence process is setting the opportunity in the focus.”

It is found that all IE-interpretive QCRs, including interpretivist and constructionist stances, used face-to-face interviews as the sole method for data collection, while critical realist QCRs employed at least two means to collect data including e-mail communication and observation. To some extent, this evidence echoes their ontological and epistemological differences concerning reality. IE-interpretive QCRs tend to appreciate the strength of in-depth interviews to understand idiosyncratic perceptions of informants and related interactions in international opportunity enactment.

Apart from one study without relevant information of analysis process, this research found that narrative (n = 4) and content (n = 3) analysis represented the main analysis strategies for interpretative and critical realist QCRs, respectively. In a constructionist case study, Lehto (2015) argued that narratives in the forms of story/experience-telling enacted holistic descriptions of relevant events, actors and the context, and the meaning attached to the associations between them was not fixed but socially constructed. In comparison, content analysis employed by critical realists was primarily used to reduce and interpret data (e.g. Kontinen and Ojala, 2012). The presentation of QCR findings was organized by main themes (n = 6) and diachronic analysis (n = 2). The employment of diachronic analysis by two critical realist case studies mainly facilitated the understanding of the chronology of the events (e.g. Mainela et al., 2011).

**Evaluative criteria and quality assessment of IE alternative QCRs.** Different knowledge claims stemming from varied paradigmatic beliefs require heterogenous evaluative criteria (Johnson et al., 2006; Welch and Piekari, 2017). However, QCR authors have not operated consistently within a particular philosophical stance. In relation to interpretivist/constructionist QCR, no study specified the researchers’ personal involvement or co-production of findings with participants as a source of interpretive insight; no study discussed reflexivity to consider the role of investigators’ identity on the research; and, no study reported the researchers’ and participants’ different accounts that allowed multiple voices to speak (e.g. Lincoln and Guba, 1985). Nevertheless, two out of three studies used thick descriptions to explore focal issues in the contexts and to make sense of “what is told about focal actors, events, situations and emotions” (Lehto, 2015, p. 285).
This review also explored research quality criteria of IE QCR that endorsed critical realism. First, it was discovered that the selection of cases was driven by both theoretical considerations and contexts in IE QCRs. As well as a discussion of theoretical frameworks or components that guide case selection, all realist QCRs in this review explicitly addressed the importance of context. For instance, Kontinen and Ojala (2012, p. 502) acknowledged that “[…] in an entrepreneurial process, there are several components interacting simultaneously, and the phenomenon is connected to the organizational context.” To understand dynamic contexts sufficiently, four out of five studies adopted a longitudinal design. Second, this research found that these QCRs intentionally combined theoretical frameworks with contextual elements to provide idiosyncratic explanations to focal generative mechanisms. A typical example is Mainela et al. (2011), whose study identified a repertoire of behaviors embedded in various networks of the INV, which drew from literature and generated three types of processes in terms of internationalization-, opportunity- and technology-centered processes. Third, all the IE-realist QCRs employed multiple sources of evidence that included interviews and additional evidence to achieve triangulation. Importantly, four out of five studies received the interpretation or comments of informants on their findings. However, only one critical realist QCR (Andersen and Rask, 2014, p. 370) claimed the employment of retroduction logic that underpinned their analysis as a process “to trace specific conditions that either lead or have led to a given event.” Surprisingly, there was no IE QCR that involved empirical corroboration to demonstrate the workability and superiority of proposed generative mechanism (Wynn and Williams, 2012). Collectively, the analyses above suggest that quality criteria are contingent on philosophical assumptions rendering the notion of “good” QCR polysemous. In practice, case scholars have not fully exploited the toolkit of contingent criteriology (Johnson et al., 2006), which may sensitize them to particular quality challenges that their research should address. The awareness that may result from such reviews can help case authors to match their philosophical assumptions to particular forms of inquiry and evaluation.

Conclusions
IE as a research field deals with actors, phenomena and behaviors that are dynamic, processual and complex in nature (Reuber et al., 2018). Following Platt’s (1996) view that methodologies cannot be understood in a vacuum, this study sought to assess the QCR methodology in the IE field, which is based on the evidence collected from 292 papers published between 1989 and mid-2017. This systematic review reveals that the qualitative positivistic case study with conventional practices constitutes the disciplinary norm in this area, although there is still great room for improvement in their paradigmatic consistency and methodological rigor. An increasing number of atypical practices were observed within the positivistic QCR cohort since 2005, which may respond to the refocusing of the IE research toward opportunity (Oviatt and McDougall, 2005) and the subsequent extension of its research area boundaries. A scant number of alternative QCRs that depart from positivistic assumptions suggest their early stage of development. They also signal an unexpected divergence between practice and methodological writings manifested in the unwillingness of scholars to give up the disciplinary convention and/or ensure consistency in their research designs.

The study makes three important contributions to IE research (see Whetten, 1989). First, it is only one of two available reviews (Coviello and Jones, 2004 being the other one) that examines methodological advancements in the IE field. Not only that but also it serves as the first attempt to approach them via an angle of philosophical orientation. Apart from its comparative comprehensiveness, for the first time in the area of IE this review specializes in assessing QCR method that achieves good methodological fit with the nascent stage of the field (Edmondson and McManus, 2007; Melen Hännel et al., 2013). Through an examination
of the paradigmatic stances and research practices, this review contributes to the state of the art understanding of QCRs, facilitation of quality knowledge creation and identification of possible directions for further advancement of QCRs in the IE.

Second, this review contributes to the improvement of QCR quality in IE in a timely period when discussions about the future of the field are surging forward (Terjesen et al., 2016; Verbeke and Ciravegna, 2018). According to this study’s analysis, IE QCRs that adopt positivistic orientation should pay special attention to articulation of the theoretical purpose, promotion of consistent and robust research design and operationalization, and enhancement of overall transparency. This solution could respond to the long-standing critiques related to the methodological rigor, contingent criteriology and standards of qualitative research (Harley and Faems, 2017). It is recommended that IE QCRs that adopt alternative paradigmatic assumptions consider research quality through contingent criteriology (Johnson et al., 2006) and transparency (Cuervo-Cazurra et al., 2016), which highlight longitudinal design, reflexivity and an inclusion of etic and emic perspectives. Given the contextual nature of IE actors, behaviors, opportunities and processes (Cornelissen, 2017; Reuber et al., 2017), an inclusion of interpretivism and critical realism is further important.

Third, the present study contributes to the identification of the variety and breadth of research practices in the dominant positivistic QCRs. As well as the prevalent practices, it was noted that the employment of atypical practices by positivistic QCRs from theoretical purposes to the presentation of findings has increased during the past ten years. These atypical practices are either those that are well documented but seldom used (e.g. theory-testing purpose) or the improvement of conventional practices (an involvement of additional data source beyond interview and secondary data). A careful selection of these atypical practices aligned with the philosophical stance could help address the complexity (e.g. duality of unit of analysis) and dynamism (e.g. process as unit of analysis) of IE phenomena and broaden the IE research horizon. Given the predominance of positivistic QCR, the incorporation into the IE study of such atypical positivistic practices to a greater extent would be a pragmatic way forward to advance the field methodologically and theoretically.

Overall, IE scholars are encouraged to consider their particular philosophical position in undertaking QCRs. Despite the value of the positivistic QCR, researchers should not ignore the potential of alternative paradigmatic traditions. To avoid over-institutionalization of positivistic conventions in research, this review makes a plea for increased pluralism in case study methodology to provide a fuller account of IE phenomena and increase legitimacy of the field (see Piekkari and Welch, 2011). This research further posits that with greater positivistic consistency and adoption of alternative non-positivistic approaches, editors and gatekeepers of high-quality journals may be able to gradually welcome and accept QCR to a higher extent, which would in turn add to the legitimacy of the IE field.

Notes
1. The term “qualitative positivism” is discussed by Prashad and Prashad (2002, p. 6) and refers to the “use of non-quantitative methods within traditional positivistic assumptions about the nature of social or organizational reality and the production of knowledge.” The term “positivist” in this paper is used to denote “qualitative positivism” as per Prashad and Prashad (2002).
2. These five major studies were selected because of two reasons. First, they followed a rigorous methodology as to the performed literature reviews. Second, in line with this paper’s definition, they conceived IE as either innovative, proactive and risk-seeking behavior (Coviello and Jones, 2004; Jones et al., 2011; Keupp and Gassmann, 2009) or opportunity identification activities (Mainela et al., 2014; Peiris et al., 2012) in the international context.
3. Due to space constraints, the full list of references can be made available upon request.
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