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Abstract

Purpose – This paper aims to examine the role of psychic distance during the process of international market entry by software international new ventures (INVs) from small, open economies. Specifically, we investigate how home market and global industry contexts influence market-entry strategies, and how psychic distance influences initial then subsequent market-entry choice decisions.

Design/methodology/approach – Using Atlas.ti7 software, this paper adopts a qualitative, multi-case analysis of ten software INVs based in New Zealand. Thematic coding of interview and secondary data revealed three core processes: pre-entry considerations, market selection criteria and post-entry evaluation, across the stages of initial and subsequent market entry.

Findings – In the context of the global software industry, the key driver of proactive market entry by INVs from small, open economies is market size rather than psychic distance. During the process of market expansion, firms encounter the psychic distance paradox (PDP). A second paradox arises when, despite experiential learning, managerial perceptions of psychic distance increase, making entry into more distant markets less, rather than more, likely and reactive, rather than proactive.

Originality/value – This paper addresses contextual differences in software versus more traditional sectors, and the influence of psychic distance on market entry rather than outcomes. Specifically, extending our understanding of the PDP, we find perceptual psychic and cultural distance ignored as criteria for initial market-entry decisions, and initial positive attitudes toward risk-taking become less apparent during subsequent entries.

Keywords Internationalization, International new ventures, Market choice, Psychic distance, Software industry

Paper type Research paper

Introduction

The global software industry, worth around $400 billion in 2013 (Gartner, 2014), is characterized by high turbulence and competition. Opportunities exist for both small niche firms and industry giants, where success is associated with innovation and timing (Eisenhardt and Schoonhoven, 1990). Yet, despite these opportunities, positioning in this dynamic industry is fraught with challenges, which are amplified in small international new ventures (INVs) based in small, open economies, where domestic demand is limited (Oviatt and McDougall, 1994; Bell, 1995; Crick and Spence, 2005).

Hence, the software industry currently represents a global battlefield, which is a world away from the "stages" market expansion strategies adopted by the multinational enterprises (MNEs) as discussed in Johansson, Weidershiem-Paul, and Valhne's seminal

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works back in the 1970s (1975; 1977). Literature suggests that rather than internationalizing to psychically similar countries, software INVs initially "leapfrog" the sequential stages to market niche products to global customers (Bell *et al.*, 2003; Ojala, 2008). Striving for growth in large markets (Ojala and Tyrväinen, 2007), such behavior is driven by the nature of the entrepreneur or manager as much as the industry context.

The purpose of this paper is to examine the relevance and role of psychic distance in sequential market choice, entry and expansion decisions of INVs in the software industry. The context for this study is New Zealand, a small, open economy geographically isolated from key markets, customers and trends, where small software firms can only grow by internationalizing (Scott-Kennel, 2013). Our research questions are:

RQ1. How does the home market and global industry context faced by software INVs from small, open economies influence their market entry strategies?

RQ2. How does psychic distance influence initial then subsequent market entry choice and expansion decisions by managers of software INVs based in small, open economies?

Our paper addresses a gap in the extant literature that has arisen not only through contextual difference of the software industry and its characteristics but also through a focus on outcomes of psychic distance rather than its influence on the process of entry. Our findings suggest that contextual considerations, and market size in particular, override psychic distance initially, but become relevant for subsequent entry into more distant markets. This finding reveals the importance of applying the concept of psychic distance at a managerial rather than country level, and suggests that the paradox of psychic distance may serve to drive proactive post-entry expansion strategy in key markets. However, we also find post-entry experience can seriously undermine the perceived ability of these "experienced firms" to subsequently enter more psychically distant markets.

The article is structured as follows. The following review of the literature centers on the concept of pyschic distance and its relevance for software INVs where we identify the two research questions highlighted above. We then explain our use of the multi-case study approach in the methods section, followed by presentation of our findings. From there, we discuss the contribution of our findings to existing literature, develop practical implications for managers and propose suggestions for future research.

Psychic distance and market entry of INVs

Johanson and Wiedersheim-Paul (1975; Johanson and Vahlne, 1977) from Uppsala School define psychic distance in terms of factors preventing or disturbing the flows of information between the firm and market, including differences in language, culture, political systems, education level, industrial development and business practices. According to Child *et al.* (2009), the perceived differences between the characteristics of a firm's domestic environment and those of a foreign country generate uncertainties among business decision-makers that lead firms to initially expand to more psychically similar countries, before tackling those more distant (Johanson and Vahlne, 1977). An expansion strategy into foreign markets with similar consumption habits, lifestyles, level of literacy and language, is likely to give the maximum opportunity for standardization, whereas large differences across these areas will increase managerial risk and uncertainty in understanding the market and how to communicate with it (Dow and Karunaratna, 2006; Sousa and Lages, 2011).

It is important to note that pyschic distance is relevant not only at the country but also at the managerial levels. The latter is particularly pertinent to the study of INVs, characterized by the "newness" (international inexperience) of an entrepreneur or small management team (Loane *et al.*, 2007). This suggests that psychic distance is likely to be more, rather than less, important as an influence on market choice, as the overall experience level of the firm (as a sum of that of its managers) is lower; thus, uncertainty is higher and psychic distance, from the manager's perspective, is greater.

However, the INV seeks to derive significant competitive advantage from the use of resources and sale of output internationally and rapidly after its inception (Oviatt and McDougall, 1994). A significant proportion (e.g. 25 per cent or more) of sales to, and/or sourcing from, occurs in distant and multiple markets offshore (Arenius, 2005; Mort and Weerawardena, 2006; Kuivalainen *et al.*, 2007). Such firms typically possess global vision, product(s) based on superior technical expertise or innovation that have global market potential, as well as the entrepreneurial capability to seek methods of accelerated internationalization (Rennie, 1993; Knight and Cavusgil, 2004).

As such, the INV trajectory sharply contrasts with the traditional "stages" model of internationalization (Johanson and Vahlne, 1977, 1990), where a more well-established firm enters offshore markets in a planned and sequential way, gradually moving toward more psychically distant and, therefore, more risky markets as their experience grows. It also suggests that managers of INVs overcome their "newness" and inexperience in a way atypical to larger firms. In the following section, we build on this discussion, arguing that the market choices of software INVs are contextually driven, and that psychic distance, both country and managerial, plays a role in this process.

Why context matters – software INVs from small, open economies

The global computer software market has grown by 15-20 per cent annually since the 1980s (Bell, 1995), with software revenue worldwide totaling $407.3 billion in 2013, representing a 4.8 per cent increase from 2012 (Gartner, 2014). The consolidation process occurring in the industry has favored large software vendors, such as Microsoft, IBM and Oracle. Since 2007, the 20 largest software firms in the world have included 15 US software vendors, which accounted for more than 37 per cent of the world market (PriceWaterhouseCoopers, 2008). Maturation of the industry has left fewer possibilities for growth in mass market areas for other smaller software firms. The intangible nature of software products, coupled with low reproduction costs, specific localization needs, electronic distribution and relatively short product life cycles (about two or three years) does, however, provide such smaller firms with opportunities to pursue innovative strategies and gain leadership positions in emerging, niche areas (Ojala and Tyrväinen, 2009; Andersson *et al.*, 2004).

The key influences on the internationalization trajectories of software firms arise from the increasingly global competitive structure of the software industry, where market development has not only been dominated by key players but has also centered on key regions. While the USA has the most developed market, both North America and Europe dominate, and competition is fierce. High levels of market development in these two economic regions create increasing returns to scale, where firms proactively enter these markets seeking growth opportunities (Autio *et al.*, 2000; Crick and Jones, 2000; Ojala and Tyrväinen, 2007).

The pressure for software firms from small economies to adopt a global or even an international focus from inception is amplified because of limited domestic demand for their niche products (Crick and Spence, 2005; Bell, 1995). Firms in nations with small domestic markets tend to have a higher propensity to become INVs than firms in nations with large domestic markets (Andersson, 2004; Loane *et al.*, 2007). Further, the earlier-than-usual internationalization of INVs can also arise from insufficient demand for highly specialized (i.e. "niche") products and services in the domestic market (Madsen and Servais, 1997), as well as the desire of these innovative firms to benefit from first-mover advantages (Chetty and Campbell-Hunt, 2004) and to amortize initial R&D investments (Burgel and Murray, 2000). In a global industry, multiple niche opportunities are available to young firms across foreign markets where each provides similar openings to compete (Fernhaber *et al.*, 2007). Thus, software firms from small, open economies tend to aggressively seek opportunities in foreign markets whilst still relatively small and young (Bell, 1995; Luostarinen and Gabrielsson, 2006; Oviatt and McDougall, 1994).

To enter any foreign market, INVs must overcome largely endogenous barriers to entry. These barriers can include poor access to economies of scale, limited financial and human resources and market knowledge and aversion to risk-taking. All of these factors can act as constraints to internationalization by INVs (Chetty and Campbell-Hunt, 2003a; Shaw and Darroch, 2004; Freeman *et al.*, 2006).

The literature suggests that despite such constraints, software INVs can "leapfrog" the sequential stages, entering physically distant markets via less resource-intensive modes, such as networks (Ojala, 2008). For example, rather than entering a psychically similar market, the INV may enter a distant market by developing a position in an existing network, actively or passively establishing new ties (Johanson and Mattsson, 1988). Young firms, in particular, are known to benefit from partnering with high-status partners and customers, in an attempt to benefit from a partner's legitimacy and reputation (Reuber and Fischer, 2005). Business networks also facilitate early and rapid entry to foreign markets, as these ties between firms can act as bridges (Holm *et al.*, 1996; Chetty and Blankenburg Holm, 2000). For instance, Ojala (2009) found that small- and medium-sized enterprises without suitable network ties proactively formed new ties with a view to achieving foreign market entry. Other studies have also indicated the importance of reactive networking for foreign market entry (Crick and Spence, 2005; Ellis, 2008; Johanson and Vahlne, 2003), such as entering foreign countries by following unsolicited orders.

Motives driving a leapfrog strategy can include seeking opportunities to market niche products to global customers (Bell *et al.*, 2003), and striving for growth in large markets (Ojala and Tyrväinen, 2007) while avoiding head-on competition (Knight and Cavusgil, 2004). However, because of the advanced nature of the software offering, even when INVs use existing network ties or form new ones to enter a market (Loane and Bell, 2006), close proximity via a local presence is needed to provide pre- and post-sale service and support. As such, research has demonstrated online presence on its own does not allow the firm to achieve market penetration (Petersen *et al.*, 2002; Yamin and Sinkovics, 2006). On one hand, this suggests market expansion by software INVs is likely to be constrained by the resources required to meet specific localization needs in its existing markets. On the other hand, the relatively short product life cycle for software products (Andersson *et al.*, 2004; Ojala and Tyrväinen, 2009) highlights the fact that software INVs operate in a hypercompetitive environment, which is in stark contrast to the Swedish MNEs in the original studies of Johanson *et al.* Thus, the environment faced by the software INV, especially one from a small open economy, provides a point of departure far removed from the context of seminal internationalization research. As a result, it can be argued that these small firms do not have the luxury of time to accumulate resources and experience in psychically proximate markets prior to expanding further afield. Further, despite the fact that these firms are small, new and inexperienced, and from small, open economies, they require global markets for growth. Such a context, therefore, presents considerable obstacles and challenges to adoption of a leapfrog strategy. Thus, we ask:

RQ1. How does the home market and global industry context, faced by software INVs from small, open economies, influence their market entry strategies?

Why process matters – market entry and expansion

Market entry by large firms is known to be influenced by psychic distance, which includes levels of uncertainty surrounding culture and ways of doing business that can act as barriers to learning and understanding in the foreign market (O'Grady and Lane, 1996; Freeman *et al.*, 2012). Yet, the literature, to date, does not provide a completely clear picture of the relevance of psychic distance for software INV's initial and subsequent market choice. Some empirical studies (Bell, 1995; Coviello and Munro, 1995, 1997; Chetty and Campbell-Hunt, 2004) have found evidence that knowledge-intensive firms start their foreign operations by entering psychically close markets. However, other studies, such as those of Moen and Servais (2002), find no support for the psychic distance argument. Indeed, as software INVs are niche-focused with short product life cycles, having the world as their market place is preferable (Bell, 1995; Madsen and Servais, 1997), especially when demand for a niche product does not exist in psychically close markets (Andersson, 2004). Because demand in the software industry is concentrated in the larger markets, including the USA, Europe and Japan, firms in this industry are known to start to internationalize their operations to these large markets irrespective of proximity in terms of psychic distance (Bell *et al.*, 2003; Ojala and Tyrväinen, 2007, 2009). This suggests that in terms of initial market-entry decisions, psychic distance may have less relevance to market choice than market size and potential.

In terms of choice of subsequent markets, Johanson and Vahlne (1990), in line with their original arguments (Johanson and Vahlne, 1977), emphasize that psychic distance diminishes in tandem with international experience and organizational learning. Arenius (2005) also argues that psychic distance is less relevant for knowledge-intensive firms, as they are able to more readily gain direct experiential knowledge of foreign markets. In other words, distance, which includes the cost of overcoming uncertainty, appears to be less relevant for subsequent entries (Ellis, 2008) when we assume learning has occurred from previous entry experience (Ojala and Tyrväinen, 2009).

The notion of learning and experience as a managerial-level, rather than firm-level, activity, causes us to reflect on the psychic distance concept from another angle. Sousa and Bradley (2006, p. 61) suggest "psychic distance captures the manager's individual perception of the differences between the home and the host country and is a highly subjective interpretation of reality". They argue the terms psychic distance and cultural distance cannot be used interchangeably. Psychic distance is applied at the individual (i.e. manager or key decision-maker) level of analysis and not at the national (country) or industry (Andersson, 2004) level of analysis, as is often implied by the cultural distance concept. Thus, psychic distance is driven by managerial characteristics, including language proficiency, international experience regarding the target country and managers' motivations and interests toward the target country (Ojala and Tyrväinen, 2009).

This distinction applies not only to pre-entry market choice but also to post-entry market expansion. Psychic distance can be underestimated through a type of "psychic overconfidence" (O'Grady and Lane, 1996) where markets are perceived by the manager as being more culturally similar than they actually are. This notion is captured by the psychic distance paradox (PDP); entry decisions are based on similarities, and critical cultural and business differences between markets are underestimated or overlooked; thus, operations in psychically close countries often fail. For example, Fenwick *et al.* (2003) found that Australian managers operating in the UK, and O'Grady and Lane (1996) found that Canadian managers in the USA underestimated the cultural and business differences between these markets which resulted in business failure.

However, as previously discussed, psychic distance is not a key influence on market selection for software INVs. In a study of software firms, Bell (1995) identified factors such as customer followership, niche markets and industry-specific characteristics to be more important to market-entry decision-making than psychic distance. Moen *et al.* (2004) proposed that initial market selection is influenced by psychic distance, but the latter becomes less relevant to subsequent market choices by firms in the software industry. Rather, it is the firm's network relationships that drive the decision to enter new markets. Other studies have also suggested network relationships and cooperation requirements with foreign clients influence market selection rather than psychic distance (Coviello and Munro, 1995, 1997; Loane and Bell, 2006).

Given the aforementioned contextual influences, it is important to consider how psychic distance might become a key influence during subsequent entry. For example, with regard to market size, we know initial entry into key (large) markets is proactive and psychic distance is ignored. However, it is less clear whether pyschic distance will be ignored in subsequent entry decisions to smaller markets. To illustrate, suppose exporting opportunities to psychically distant markets arise (e.g. through proactive approaches made by foreign buyers), do seller (managerial)-oriented perceptions of psychic distance become less meaningful (Ellis, 2008)? In other words, when a buyer from a psychically distant country approaches the software seller with an inquiry via the Internet, does the INV manager take up this opportunity because the perceived psychic distance becomes irrelevant? Alternatively does the manager postpone the potential market opportunity, implying they view cooperation requirements with the client too uncertain in a culturally distant market?

Despite treatment in the extant literature, as such, market entry is never a static decision but rather a dynamic process of evaluating, choosing and adapting modes of entry for initial then subsequent markets. While it is clear that home country and industry characteristics accelerate the internationalization process of software INVs, the literature points to a lack of clarity with regard to the extent to which psychic distance remains consistently (ir)relevant to initial, then subsequent, market entry decisions at the managerial level. Thus, we ask:

RQ2. How does psychic distance influence initial, then subsequent, market-entry choice and expansion decisions by managers of software INVs based in small, open economies?

Method

We selected the multi-case study approach due to the nature of our research design. To recap, in this study, we examine:

- how the home market and global industry context of software INVs influences market entry strategies; and
- how psychic distance influences initial, then subsequent, market-entry choice and expansion decisions by managers of software INVs based in small, open economies.

Case study research is particularly suited to asking "how" questions (Yin, 2009) about phenomena encountered in a real-life context (Scholz and Tietje, 2002). In addition, this method improves understanding about interdependencies among factors (Benbasat *et al.*, 1987) within the parameters of a natural context (Collis and Hussey, 2009; Yin, 2009). Further, we selected the multi rather than singular case study approach in an attempt to understand similarities and differences across software firms. The evidence provided from multiple cases provides a more compelling account that builds confidence in the findings, where findings from each individual case can be compared to examine how and why particular findings were and were not demonstrated. Hence, the multi-case study approach can be a powerful way in which to gather and compare fine-grained detail on specific phenomena, from which inferences and generalizations can be advanced (Siggelkow, 2007; Yin, 2009). In this instance, the cases selected were within the clearly defined boundaries of the New Zealand software industry; further details are provided below.

A purposeful sample of software development firms was selected from the Web sites of Index New Zealand and the New Zealand Software Association. The criteria for selection of the firms was high reliance (more than 40 per cent) on sales offshore, and internationalization between three and six years after inception. In 2011, 15 firms were shortlisted and contacted with regard to their willingness to participate. Five firms declined, leaving a total of ten participating firms. A respondent profile is included in Appendix. The ten firms included those involved in developing and marketing their software applications business-to-business (B2B) (companies B, C, D, E, G H and I) and business-to-customer (B2C) (companies A, F and J). Five firms were considered to be, by New Zealand standards, small (less than ten employees); two were medium-sized (less than 25 employees); and three were large (more than 100 employees). Nine firms (all except G) sold more than 50 per cent of their products offshore, and six (A, C, F, H, I and J) started exporting within a three-year period, while the remaining four firms (B, D, E and G) took between four and six years to start exporting. We can refer to firms that exported overseas within three years as "early-start", and the remaining firms as "late-start" INVs. No difference was found between "early-start" and "late-start" INVs in terms of the percentage of export to total sales. In addition, no difference was found among large (B, C and E), medium (D and J) and small firms (A, F, G, H and I) in terms of exports to total sales. By 2014, companies B, C, E and I had experienced the fastest growth, whereas others were growing very slowly, but none had gone out of business.

A semi-structured interview schedule with 15 items was developed from the literature underpinning each of the two research questions. For example, for research question two, three of the items included:

RQ1. "How do you select your initial export market?"

RQ2. "What particular features of the market or customers do you take into account when deciding to sell your products in a particular country?"

RQ3. "Do you avoid any markets? Why?"

All interviews took place in 2011 at the firms' corporate offices, and these lasted for approximately 1 hour. Target interviewees were top management personnel that included respondents holding the positions of Chief Executive Officer (CEO), Chief Operating Officer (COO), Founder or Co-founder, Director, Managing Director and New Zealand Business Manager. The interviews were recorded and transcribed prior to analysis. In addition to being asked items from the interview schedule, the interviewer asked prompt questions when further detail or clarification was required. Each participant was invited to check the interview transcript to ensure accurate representation of their perspective had been captured. This process aimed to improve the validity of the findings (Eriksson and Kovalainen, 2008). Triangulation of interview data with those of other sources (including annual reports, emails, press releases, and web publications) also helped verify the data obtained in the interviews. As the data from participant transcripts and additional secondary data, including the key changes that occurred from 2011 to 2014, as documented in the media, were collated and reviewed across the ten firms, it became apparent that we had reached a point of data convergence, where no new information was emerging.

All data were then entered into Atlas.ti7 qualitative research software. The use of such software provides a powerful tool to assist in the analysis process when large bodies of text are gathered, particularly across multiple situations or respondents, as was the case in this instance. The analysis that followed was carried out in three key stages. The first two authors began by writing a rich contextual overview of the steps taken by these firms when pursing their respective internationalization strategies. This overview was then discussed with the research team. Two of the authors followed the data reductionist method by comparing and contrasting this material across the respective research questions (Collis and Hussey, 2009). These authors then proceeded to drill into the data by revisiting empirical terms such as internationalization, market size, local presence, cultural difference, business practices, customer demands and language issues. From here, a coding schema (Figure 1) was developed that highlighted three core processes engaged in by firms when internationalizing. These processes are: pre-entry considerations, market selection criteria and post-entry evaluation. The terms used here were drawn from theoretical concepts associated with the internationalization process. Within each of these core processes, we identified a macro-category market entry sequence – initial and subsequent. Initial entry begins from initial considerations when based in the

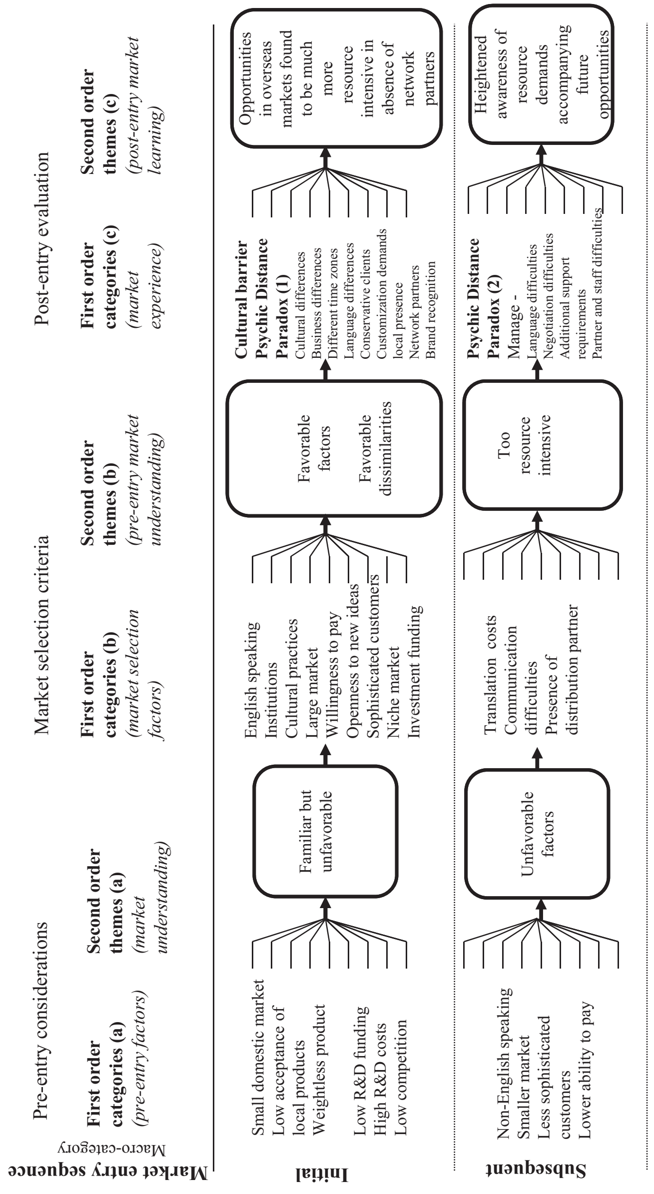

Figure 1.
Coding schema – market-entry stages and sequence

home market, and subsequent entry refers to considerations after the initial entry. In each core process, we identified a first-order category and a second-order theme. For example, within pre-entry considerations, a first-order category (pre-entry factors) is a small domestic market; and a second-order theme (market understanding) is familiar but has unfavorable considerations.

Findings

In this section, we describe the internationalization process used by the ten New Zealand software firms in our study as they engaged in their initial and subsequent stages of market entry. Drawing from Figure 1, we discuss the central considerations surrounding pre-entry, market selection and post-entry evaluation. For each, we consider the role of managers in identifying those factors considered to be (un)familiar and (un)favorable in making these decisions. In particular, we identify the PDP that presented during initial entry to the large markets of the USA and the UK, as well as the cultural barrier in Japan, and how firms learned from the PDP "shock effect" that shaped subsequent market entry and led them to become more risk averse. Table I summarizes the key findings of the cross-case analysis.

Pre-entry considerations

Home market context – familiar but unfavorable considerations. Our research reveals several home market factors were vital to shaping early internationalization by software INVs from New Zealand. On the positive side, the absence of "red-tape" in New Zealand, relative to other larger countries, was noted by Companies D (medium-sized), and F and J (small) were noted as favorable. As the co-founder and CEO of B2C, Company J noted, "compared to other countries, New Zealand is a fantasy-land from the point of view of bureaucratic complexity. However, we do not see growth potential". For all firms, local demand for software was low in terms of quantity or quality, and the small market size of New Zealand was the most important reason for them to go to overseas. New Zealanders were viewed as less knowledgeable about software use and less willing to pay for software services. Contributing to this lack of demand for software products marketed by the medium- and large-sized firms in our sample, was the fact that the New Zealand Government agencies appeared to have less confidence in domestically produced software products than overseas customers. This was explained by the experiences of the CEO of medium-sized Company D:

> The [New Zealand] Government decided to buy the product from the UK to do exactly the same job as our product at four times the cost. Today we are more interested in pitching sales to clients in Brisbane or Sydney.

On the other hand, all three B2C firms, including company F that had only one other local competitor for its online gaming products, maintained a cooperative relationship with other compatriot firms when they went offshore, as they believed everyone benefited when a New Zealand firm was successful on the world stage. However, countering these positive attributes of cooperation and risk-taking by New Zealand entrepreneurs were higher levels of risk aversion by New Zealand investors. As less capital was available for growth locally, firms were more interested in acquiring funds from overseas markets. For example, the Founder of Company I, the fast-growing B2B firm, noted:

Table I.
Cross case analysis–software firm size, type, growth and market entry

Firm	B	C	E	D	J	A	F	H	G	I
Size	Large	Large	Large	Medium	Medium	Small	Small	Small	Small	Small
Type	B2B	B2B	B2B	B2B	B2C	B2C	B2C	B2B	B2C	B2C
Growth	High	High	High	Low	Low	Low	Low	Low	Low	High
Small home market	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
Low acceptance of products	[a]	[a]	[a]	[a]						
Low desire to pay for online services (home)					[a]	[a]	[a]			
Low funding (home)						[a]	[a]	[a]	[a]	[a]
USA market dominance	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
Japan market entry						[a]		[a]		
Australian market entry	[a]	[a]	[a]	[a]		[a]				[a]
UK entry (geographic distance)				[a]						[a]
Establish with partners	[a]	[a]	[a]			[a]				[a]
Open overseas office	[a]	[a]	[a]							[a]
Present in psychically distant markets	[a]	[a]	[a]			Finland, Iceland (planned)			China	[a]
Delay entry	[a]	[a]	[a]			[a]			[a]	[a]
Avoid entry				[a]	[a]		[a]	[a]		

Note: [a] Represents firm pre-entry and market selection preferences

> […] it is really hard to get investors involved at the early stage in New Zealand. However, investors from San Francisco who have not even seen our products, just heard of them, can provide funding in a relatively short period of time.

Further, all firms, irrespective of their size, perceived the level of risk involved when exporting software to be low. For example, the Founder of Company A, a small B2C firm (Personal Finance Management) reported, "The risk that we have is much lower. Selling and exporting our products overseas cost us nothing […] the internet is good for small businesses selling around world". Similarly, the Founder of Company I, which is now a medium-sized B2B firm, explained, "Software as a service products are a weightless export, so we just export the product that businesses subscribe to". Furthermore, the Chief Operating Officer of company E, a large B2B clinical firm, said "software does not have inventory. When we sell our application to business customers overseas […] we don't have to ship anything".

Market selection criteria

Foreign market – favorable dissmilarities and similarities. Our second research question focused on the influence of seller-oriented psychic distance on market selection. The Internet was found to be instrumental in helping small B2C Companies F, I and A reach potential customers. When considering internationalization, these firms did not experience psychic or cultural distance, as they dealt with their customers via Facebook and had a global presence from inception. Founder of Company G, a small B2B, advanced decision support software firm, explained:

> […] people overseas are interested in something new and something that they can use. They are open to new ideas, maybe there are cultural differences between people, but it does not seem to matter.

We also found psychic distance to be less relevant to market selection for proactive entry by B2B firms, while geographic distance was relevant. Market size was the most important influence on the internationalization trajectories of proactive firms, and the dominance of the USA as the largest market for software firms was evident.

The USA was the first and also the main market for the software firms in our sample, despite having greater psychic distance from New Zealand than Australia or the UK. Often large software firms did not differentiate between the three markets. Company C Co-founder and Head of Global sales said, "the UK (people) are used to doing business with New Zealand, and Australia and the USA do not seem strange to us, they are just normal".

Others, such as small B2C Company A, targeted the USA because "the people are more educated when it comes to using the software to manage their money". The B2C software firms knew their "niche product" was likely to appeal to more people in the US market given its size and US customers' openness to new ideas and willingness to pay for the use of online software. This was explained by the Director of online gaming at Company F:

> […] we make a niche product that can appeal to 1 per cent of the global population. Therefore, we decided to go the USA, which has a bigger market with more than 300 million people, although the market is very competitive. If we can get a small piece of the pie in the USA market, it will be good enough for us.

Large, English–speaking, markets were preferred by all of the software firms, as they offered their product in English and also because they considered those markets as "similar to the way of New Zealand". The second biggest market for the INVs was Australia followed by the UK. Japan was not ruled out, but only two small firms (A and H) had entered, suggesting psychic distance was a factor despite the large market size. Of the two, Company H, in healthcare information, marketed a product that was conceived in Japan by its Japanese CEO who later moved to New Zealand for the development of the software. Smaller markets were definitely not the initial entry choice for any firms. For example Co-Founder of company A (B2C) said:

> Finland and Iceland […] these two countries were not part of our initial strategy because of the small size of those markets and the language barrier. However, we are currently negotiating a contract with buyers, in those two markets, who contacted us about one year ago. If we do sign the contract with them, we have to develop a specific version for them which requires more resources.

Foreign market – unfavorable dissimilarities. Our research revealed an absence of language proficiency and institutional familiarity were critical factors when deciding against entering subsequent/smaller markets. Company C enjoyed a 107.4 per cent growth between 2011 and 2014. However, this large accounting software firm, whose main markets were the USA, the UK, Australia and Canada, explained it did not readily take up opportunities in non-English-speaking markets, as they were more resource-intensive and they distracted them from their core markets. In 2011, the Co-Founder and Head of Global Sales, explained:

> We got an opportunity to do business with Egyptian Telecom, but we turned it down. It was not because we did not want to do business with them, we knew that we could not have supported it properly. It was just a matter of resources and decisions. If we were going to Egypt, we would have to provide support for our product. However, we do not speak the language and have no ability to do it now. It would take our focus off the other markets.

While small B2C Company A did try to enter Japan, it found negotiating with Japanese partners was very difficult, "culture is definitely a barrier […] not easy to overcome without resources" (Co-Founder). The Company tried to translate their software into Japanese, but were not effective in the market and found that, "a different culture involved lot of changes and cost money and time". The Japanese market was not a major market for small B2B company H either, as it was viewed as, "more conservative" (Business Manager).

Company I, now a medium-sized B2B retail web software firm, also had avoided the non-English speaking markets, even though their financial product worked for all currencies:

> Just from the support point of view […] we have a lot of non-English speaking interests because the interface in very intuitive […] but it makes it hard for our customers if they are trying to communicate with our support team in English, it can be difficult for both sides.

Some contextual influences served to override the perceived risks of psychic and cultural distance to these smaller non-English speaking markets. In 2010, at the time of our study, the software companies in our sample acknowledged the difficulties of investing in the USA and Europe as the areas most affected by the global financial crisis. We found the fast-growing firms, such as Company E and C (large) and Company I (small to medium), had begun to proactively expand to more psychically distant smaller markets that had experienced less fallout.

Post-entry evaluation

Market experience. Our results suggested that initial perceptions of cultural dissimilarity were heightened when smaller firms entered large markets (e.g. the USA) and underwent a post-entry "reality check". Assumptions of cultural similarity were challenged when the firm actually conducted business in the USA. For example, Company H found that US customers were finding it difficult to use their online diet tool, as American food items (very different from those in New Zealand) were not included in their database. As noted by Co-Founder and CEO from Company J, a medium-sized online service for manufacturing software firm, "we assumed that we understood American idiom, behavior, and cultural content, because we have the same language, food, and media, but we did not". Cultural distance to the market was identified by managers of slower growing firms' *after* market entry to USA.

On the other hand, for all types of fast-growing firms, no significant cultural differences between New Zealand and Australia were encountered, although funding practices in the Australian medical sector were found to be much more "complicated" and often required the firm to locate a local partner (e.g. Companies A [small] and E [large]). However, Australia was considered more favorable than the UK as a direct export destination, demonstrating the importance of both geographic and psychic proximity. For example, as the Managing Director of Company D (medium-sized), which had since restricted its direct exports to Australia, explained:

> […] we did try to export to the UK a while ago, but it was not successful with the differences in time zone, the cost of travelling […] so we have licensed someone to sell our product in the UK.

Founder and Managing Director of Company I (now medium-sized), the web-based retail point-of-sale and inventory management software firm, also indicated that geographic distance was a problem:

> The biggest challenge is being in the same time zone with our customers. Because, I guess, one of the fears of using online services is that there is an impression that perhaps no one is there other than just a computer. To capitalize on this point […] we want to set up original sales office services. However the geographic distance is not allowing the business to establish networks and meet new business partners.

Often products that were unique in New Zealand faced multiple competing offerings in offshore markets, particularly in the key markets of the USA, the UK and Australia. In these large markets, competition was mostly from local players but also occasionally from foreign players based in other countries, such as Estonia and the Philippines. The competitive pressure confronting the relatively inexperienced INVs was reported as challenging, especially because they had yet to establish a strong brand reputation for their software. In the beginning, building reputation was difficult for all firms given their newness and limited resources. Larger, fast-growing firms were successful in building their brand reputation in multiple large markets. Company C, a B2C accounting software firm, which is now a very successful online accounting software firm globally, achieved brand recognition by initially establishing itself "with a big brand such as

British Telecom in the UK and Telstra in Australia. Our brand association helped us gain credibility" (Company C, Co-Founder and Head of Global Sales).

The medium-sized, slow-growing B2B Company D learned to sell its medical software to market influencers and leaders, such as clinical professors in universities (Australia) and to large charitable agencies operating in smaller markets (Pacific Islands, e.g. the Fred Hallows Foundation). "It is necessary to sell to the market leaders first, then we can use it as a reference guide" (Company D, Managing Director). Likewise, to market its personal finance management software, Company A, a small, slow-growing firm, had signed a partnership agreement with an Australian firm who had a strong link with all Credit Unions in Australia. Company I, which has now become a medium-sized firm, had over 100 business partners globally.

More than half of the software firms had co-founders who were overseas nationals (three Americans, and one each of French, Malaysian and Japanese) and thus had a more global outlook. International experience of senior managers of larger firms, combined with their network contacts gained in previous job positions, were directly useful for the INVs. As noted by the Managing Director of Company B, "if you look at our executive team, they all worked for large multinational companies, have international experience, and have travelled a lot". Even smaller firms reported hiring global-minded staff:

> We are hiring people from different cultures. The Polish lady is back in Poland doing marketing, and the Director in Russia is a Russian. Yet, in Russia some work is done through intermediaries that have the experience of supplying to that market (Company H, Managing Director).

Other fast-growing firms, such as Company E, made a decision to invest in the US market by putting staff into the USA "It was a financial risk and […] was very difficult for a number of years to get the return on investment" (Company E, Chief Operating Officer). Today, an increasing number of this large firm's staff reside overseas; for example, ten are located in Oslo for a new project, while others have been moved from the USA and Australia to Singapore for the start of another new project.

While most firms displayed resourcefulness in dealing with the challenges encountered following entry to markets, B2B respondents, in general, felt under-resourced when approached to do businesses with non-English-speaking countries. Their decision to delay entry was based on lack of cultural capability (primarily language), which was needed to understand customers' needs and provide support. During subsequent entries, language-related cultural barriers, managerial risks and lack of overseas market knowledge and experience were heightened. In this and other such instances, rather than entering culturally distant markets, a focused approach to expanding in the current markets was adopted. Thus, firms experienced a delay in entry to new markets different from large and less psychically distant existing markets.

B2C firms did not experience problems with psychic or cultural distance relating to market entry, as they dealt with their customers via Facebook. However, as Company F noted, experiential knowledge attuned their perception of potential risk and influenced their decision to not enter the Philippines online games market. While the size of market was large, the company realized these customers may not be willing, or able, to pay for online software games.

Post-entry market learning. The INVs learned to use less resource-intensive modes for market presence. For example, Company I learned that word-of-mouth was an effective referral mechanism used by their customers that helped promote their product to others. Use of online blogs, participation at conferences and social events and publishing in journals was found to increase the trustworthiness of their products with corporate customers. Post-entry, firms also learned that their foreign customers' perceptions of product quality could be improved by adopting relevant international standards (e.g. International Organization for Standardization 9000 or Health Level 7).

Building networks in the focal market was essential. Business networks were established through the internet, social media, partnerships with people or businesses that influenced the industry, executive team networks, recruitment of local people or people who have local networks, social activities, trade shows and contacts with the New Zealand Ministry of Foreign Affairs and Trade. Partnerships with foreign distributors, suppliers, complementary manufacturers, specialist firms and customers facilitated internationalization. B2B firms made their software complementary to larger manufacturers, and thus accessed established distribution channels to increase their market share.

Development of internal resources, such as recruiting staff with market-specific experience and international experience, was seen as crucial to success in a market, and slower-growing firms were planning to do so. "There are certain tasks, such as marketing, that I will definitely want to employ the locals who have had experience dealing with Americans" (Co-founder and CEO, Company J). For large INVs whose management team was predominantly New Zealand and Australian based, learning that pyschic distance could be managed by recruiting employees who were culturally similar to the focal market was important to achieve faster growth. "The guy whom we have appointed in the Middle East is Indian. He's got a deep respect for hierarchy and good understanding about cultural sensitivity" (Managing director, Company B).

In addition, all fast growing INVs learned that local presence was necessary:

> I don't think that it is true what people are saying that you can sell technology everywhere. Actually, you have to be present in the market. People would like to know who is behind the products that they bought (Managing Director, Company B).

Similarly, Company E noted, that:

> […] the health software sector is nationalistic. For example, only when you have a sales office in the USA can you sell to customers in the USA The challenge is always there, that competitors will always tell customers that you are a foreigner.

Even for medium-sized firms, it was considered very important to be seen as a "USA based or USA focused business" (Company I, Founder and Managing Director).

Discussion

This study set out to examine how psychic distance influences market entry and expansion by software INVs from small, open economies. Our study suggests that the decision to internationalize, despite newness (age) and financial pressures (Bell, 1995; Shaw and Darroch, 2004; Scott-Kennel, 2013), is driven by factors such as small domestic market size, high levels of competition for resources locally and low acceptance of locally developed solutions. Software INVs internationalize to large markets because of their need to amortize their initial R&D investments (Burgel and Murray, 2000). Further, we found that smaller New Zealand software firms needed to proactively internationalize to these markets to finance their R&D investments. The

USA, in particular, as the main software market, acted as a magnet, although software firms also proactively targeted other large markets, such as Australia, Japan and the UK. New Zealand entrepreneurs perceived these larger markets to be culturally, and therefore, psychically, closer than the reality. Among the culturally close markets, firms were entering Australia, before the UK. Therefore, initial entry decisions were influenced by other favorable factors, such as market size and geographic distance.

Of the USA, the UK, Australia and Japan, only the three English-speaking markets were identified as favorable markets by the relatively inexperienced firms. The USA was considered the most sophisticated for "niche product" marketing by smaller firms. Cultural dissimiliarity to other markets, such as Japan, was viewed as a barrier to success, particularly by smaller firms given their lack of adequate resources. Post-entry, the perception of psychic distance changed rather unexpectedly for B2B and B2C firms in large English-speaking markets, as noted by other studies (Fenwick *et al.*, 2003; Pedersen and Petersen, 2004). Cultural distance, particularly in the lead USA market, business distance in the culturally close Australian market and geographic distance in the UK market, was acutely experienced by these firms. For all B2C firms, their perception that US customers are more knowledgeable, willing to "self-serve" and have a higher ability to pay for niche software products, was confirmed.

The post-entry experience of the "paradox of psychic distance" in large English-speaking markets, and the cultural distance experienced in Japan, shaped the smaller INV managers' awareness of their firm's liabilities of outsidership (being outside the network) (Johanson and Vahlne, 2009), and their own limitations due to insufficient resources to tackle competition in the large markets. Successful firms had overcome challenges by locating suitable reference leaders and partnering with larger firms who provided them with brand recognition. Thus, our results are consistent with those of previous work, including, Reuber and Fischer's (2005) suggestion that young firms benefit from partnering with reputable others; Coviello's (2006) finding that certain ties can enhance the legitimacy of the INV and offer opportunities for growth; and Ojala and Tyrväinen (2009)'s finding that recruiting managers with knowledge of the target country help minimize the impact of distance. Further, in line with Ojala's (2008) Finnish study and that of Loane and Bell (2006), respondent firms also hired local employees whose local network contacts helped overcome psychic distance. B2B firms managed customers' perceptions of "localness" by opening sales office in each country. Physical proximity was found to be necessary for building trust and legitimacy through face-to-face contact with B2B clients, and following up telephone conversations with registered B2C users. Our findings for B2B firms are in line with others who have suggested that online presence alone does not allow the firms to achieve market penetration, as this requires a local presence (Petersen *et al.*, 2002; Yamin and Sinkovics, 2006).

The B2B software firms in this research also came across exporting opportunities in a "reactive context" based on customer inquiries. However, we found software INVs (large and small) did not pursue buyer inquiries from psychically distant markets. Their decision to delay entry was dictated by their resource constraints and their lack of language abilities. This rational approach to market selection, observed during subsequent entries, was in contrast to when the firms, in their early stages of internationalization, proactively entered the markets in the USA, the UK (moderate distance), Australia (low distance) and Japan (high distance).

Our findings support those of Sousa and Lages (2011), as we found that managers were deciding not to enter additional markets when they perceived a gap between their current resources and abilities and those required to satisfy the needs and wants of foreign customers. For example, uncertainties related to dealing with more foreign (i.e. psychically distant) customs and cultures were avoided proactively when markets were smaller. Even reactive entry, following buyer inquiry from psychically distant markets, was avoided, as managers felt the differences in language meant the opportunity was too "resource consuming". Thus, extending Ellis' (2008) conclusions, we find that in the software industry, rather than seller-oriented perceptions of psychic distance, language distance remains relevant for market-entry decisions to small markets for all the INVs. Transactions with non-English-speaking markets are essentially viewed as much more resource-intensive. Hence, our findings differ from those of Dow and Karunaratna (2006), who suggest language differences increase the risk of transaction.

Key contributions

Our findings contribute to the extant literature by extending our understanding of the psychic proximity paradox arguments of O'Grady and Lane (1996) as they apply to software INVs from small, open economies. Perceptual psychic and cultural distances are seemingly ignored as criteria for decision-making during initial and proactive entry to larger markets. Managers' perceptions are more favorable, but not necessarily accurate, during entry to larger English-speaking markets, as highlighted by Fenwick *et al.* (2003) for MNEs.

In addition, entry decisions by smaller software INVs to large non-English speaking and culturally distant markets, such as Japan, are less well planned and often result in failure. Our findings confirm those of previous studies, such as Ojala (2009) and Loane and Bell (2006), that have suggested young software firms eventually learn to develop resources and networks post-entry in English speaking or culturally close markets. However, developing such networks, including finding suitable people to work with in non-English speaking markets, is challenging for the inexperienced firms due to higher cultural distance and limited resources.

Our second contribution is the identification of a second paradox that is observable during the internationalization of software INVs. We found that the founders and managers of respondent firms had positive attitudes toward risk-taking initially, but this attitude was not apparent during subsequent entries. The psychic distance paradox encountered during initial entry to larger markets, and learning from the "shock effect" (Pedersen and Petersen, 2004) that occurred post-entry, shaped subsequent entries in a less intuitive, more risk-averse way.

These findings are in contrast to those of Chetty and Campbell-Hunt (2003b), who indicated that the success of some firms was attributed to the founder, who had the determination, drive and willingness to take risks. For example, unlike what is suggested by the stages model (Johanson and Vahlne, 1977), the software firms actually displayed less confidence about their ability to successfully enter smaller psychically distant markets (i.e. Egypt and other non-English speaking markets), despite being more experienced. Both large and small software firms were found to avoid proactive entry, and even to reject or delay opportunities for reactive entries to these smaller non-English-speaking markets. Therefore, subsequent entries by the firm are clearly neither driven by entrepreneurial spirit that would ignore psychic distance to a market nor by a learning outcome that would suggest diminishing relevance of psychic distance. Rather, it seems they are based on a more conservative view of the firm's ability to overcome limitations in resources and networks.

In sum, for software INVs, initial market-entry decisions are based on the importance of a single factor: market potential (size), whereas subsequent entries are based on managerial selection criteria (as opposed to growth opportunities), such as translation costs, communication difficulties and distribution partner presence. This approach to market selection actually results in expansion opportunities being ignored rather than created; however, unlike the slower-growing firms, the fast-growing firms do eventually develop these opportunities.

The contribution of this study is not only in detailing how software INVs' internationalization trajectories contrast with the stages model, where the firm enters more psychically distant markets as it gains experience but also in depicting how, paradoxically, software INVs become more risk-averse, in terms of cultural distance, as they gain international experience. Consequently, we argue that while initial entry to larger, more developed markets occurs rapidly, ignoring resource constraints, as well as psychic and cultural distance, expansion to smaller markets is avoided by software INVs because it is viewed as beyond their ability. Hence, software INVs' entry to a non-English-speaking market that is smaller (usually a smaller psychically distant market) remains the most difficult to achieve, even for an experienced software firm, due to inherent language limitations.

Conclusions and future research

Rather than testing the water, the experience of the software firms in this study has been one of diving in and, in some cases, wading through torrents. First-hand experience of the psychic distance paradox has rendered managers "once bitten, twice shy" and, coupled with resource constraints, has tempered enthusiasm for proactive entry into smaller, more psychically distant markets. In contrast to the findings of the "stages" theorists, therefore, we find that such market experiences increase rather than lessen managerial perceptions of psychic distance. This process is influenced heavily by the operating environment of these firms, which is highly competitive, somewhat volatile and dominated by large players. In terms of implications, the managerial tendency to view lead markets as psychically close may facilitate proactive entry, but managers must learn to recognize key differences. The avoidance of internationalization to culturally distant markets should be balanced against the potential opportunity costs of selecting a narrow market. Overall, due to the unique nature of their product range, and the specialist knowledge involved in the creation of innovative niche products, INVs should seek to expand globally, as there is likely to be greater demand for their products and services than they are aware of.

Therefore, as suggested by Fernhaber *et al.* (2007), any new venture in the software industry must learn to expand its international presence to exploit their accomplishments more completely. To this end, we argue that firms in the software industry should sow widely and reap widely, by establishing partnerships with foreign distributors, suppliers, complementary manufacturers, specialist firms and customers, in multiple markets to facilitate their rapid and globally oriented internationalization process. In line with Moen *et al.* (2004), our findings suggest that software firms from small economies need to learn to balance the allocation of resources between expanding their network and market presence, through current relationships, while simultaneously recognizing the strategic value of establishing new relationships and customers in psychically distant markets. Government agencies can offer additional support for entry to culturally different markets by helping the firm develop networks in underrepresented countries.

In this research, we have focused on established software INVs who successfully compete in the international arena. Interviews were only carried out in New Zealand; hence, the concept of psychic distance asymmetry was neither fully explored across international units (if any) nor among staff of the firms. In future studies, it may also be fruitful to interview firms from the UK, Australia and the USA that are targeting culturally distant markets to get a wider perspective on local/global dynamics. These aspects of the present study also provide interesting opportunities for future research in other small, open economies, whose firms are reliant on early and rapid internationalization, such as Finland and Norway. A comparison of interviews with software firms from non-English speaking-countries, who also target larger English-speaking markets initially, and with those who have overcome the barriers to internationalisation to culturally distant markets, is also likely to provide interesting results.

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Appendix

Table AI. Respondent profile: New Zealand INVs in the software industry

Firm	Software type (participant designation)	No. of Staff (2011) 2014	Year established	First year of export	First export destination	Initial markets	Subsequent markets	The main competitors (level of competition)	(%) sales from exports
A B2C	Personal finance management (Co-Founder)	(3) 7	2008	2009	USA, UK	USA, Australia, UK, Japan	Finland, Iceland	USA (medium)	67
B B2B	Logistic, investigation and intelligence, financial service, (Managing Director)	(300) 500	1978	1982	Australia	Australia, Europe, North America	Middle East, China	USA (low)	70
C B2B	Accounting (Co-founder and Head of Global sales)	(100) 758	2006	2008	UK	UK, USA, Canada, Australia	Advanced economies	USA, UK (medium)	60
D B2B	Medical record and practice management Systems (Managing Director)	(22) 22	1988	1992	Australia	Australia	South Pacific countries	Australia (high)	60
E B2B	Clinical information (Chief Operating Officer)	(400) 700	1993	1997	USA, Australia	USA, Canada Australia	Spain, France, Ireland, Saudi Arabia	USA (medium)	95
F B2C	Online gaming (Director)	(6) 6	2009	2010	USA	USA, Canada, Australia, UK	No change	Australia, USA,UK (low)	99
G B2B	Advanced decision-support (Co-Founder)	(2) 2	2003	2007	USA	USA, UK	China	USA, UK (low)	40

(continued)

Table AI.

Firm	Software type (participant designation)	No. of Staff (2011) 2014	Year established	First year of export	First export destination	Initial markets	Subsequent markets	The main competitors (level of competition)	(%) sales from exports
H B2B	Healthcare information (Business Manager of New Zealand)	(8) 10	2010	2010	USA	USA, Japan	None	USA (low)	90+
I B2B	Retail web-based point-of-sale and inventory management (Founder)	(5) 100	2009	2010	USA	USA, Australia, UK	Saudi Arabia, South American countries, Africa	Europe, The Philippines, Estonia (low)	85
J B2C	Online service for manufacturing (Co-Founder, CEO)	(12) 15	2007	2008	USA	USA	Europe	USA (low)	99

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