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Document Version:
Author accepted manuscript (postprint)

Citation for published version:

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International virtual networking capabilities and firm performance: A study of international entrepreneurial Australian SMEs

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Abstract

The Internet is a critical resource for a new generation of small and medium sized enterprise. Specifically, the Internet is important for small entrepreneurial firms in pursuing international opportunities through increased digital integration. As such, the Internet has been identified as a key enabler of international entrepreneurship (Reuber & Fischer, 2011). By facilitating international business for many entrepreneurial SMEs, the Internet has the ability to increase the quality and speed of communications, lower transaction costs, and facilitate the development of international networks. Although the Internet has been found to play a pivotal role in the creation of international relationships and is a mechanism for the creation of international growth opportunities in SMEs (Mathews & Healy, 2008), the role of the international entrepreneurial decision-maker in the development of international virtual networks for leveraging opportunities in internationalisation remains unclear. The findings of this research indicate that developing an ‘international virtual network capability’ forms an important part of the firm’s resource and more specifically dynamic capability base, which is just one component of a firm’s resource bundle that builds towards successful internationalisation via an Internet platform.

Keywords

International entrepreneurship, international virtual networking capabilities, Internet, firm performance, SMEs.
Introduction

It is widely recognised that the Internet has been one of the most important tools for modern-day international business (see, Petersen, Welch & Liesch, 2002; Loane, McNaughton & Bell, 2004; Mathews & Healy, 2007). For example, the Internet has enabled international firms to improve the efficiency of international market transactions (Prasad, Ramamurthy & Naidu, 2001; Gabrielsson & Manek Kirpalani, 2004; Loane et al., 2004), improve the speed and quality of communications (Reuber & Fischer, 2011), and assist in the development and strengthening of international network relationships (Petersen et al., 2002; Morgan-Thomas, 2009; Overby & Servais, 2005). In particular, the Internet has played a valuable role in providing small to medium sized enterprises (SMEs) new ways to conduct international business through faster access to market and competitor information (Mathews & Healy, 2007). Subsequently, SMEs now have a greater ability to take advantage of international opportunities (Mathews, Healy & Wickramasekera, 2012).

Despite the increased research interest of the Internet’s impact on firm internationalisation, there is limited empirical evidence examining the relationship between the Internet and a firm’s international performance (Prange & Verdier, 2011). To date, the majority of research (see, Aspelund & Moen, 2004; Mostafa, Wheeler & Jones, 2006), identifies links between the Internet and the virtual networking capabilities of firms, limited research examines how international virtual networks can lead to international performance outcomes. As a consequence, recent research (see, Glavas & Mathews, 2013) suggests the need to investigate the influence of international virtual networking capabilities on firm performance through the lens of the resource-based view (RBV), and dynamic capability view of the firm. To investigate the phenomenon of the influence of international virtual networking capabilities on international firm performance, a multiple case study approach was adopted to
investigate the research question: (RQ) ‘What are the international virtual networking capabilities of firms, and how do they influence international performance?’

It is our aim in this article to provide some insight of the international virtual networking capabilities influencing the performance of the form in an Internet environment. Also, we propose that specific international virtual networking capabilities, such as: developing networks with ‘suppliers and distributors’, ‘industry-specific firms’ and with ‘customers and industry authorities’ is associated with Internet adoption, as well as the inclination of the firm to initiate international activity. We also endeavor to offer insight into issues that remain unresolved in existing IE research, namely the lack of research pertaining to the international virtual networking capabilities expected to influence the internationalisation process and international performance of the firm.

In the following sections, we provide a detailed discussion in relation to IE literature, the resource-based view of the firm and international virtual networking capabilities. We then utilise multiple case study methodology to identify how more traditional forms of networks are being influenced by the development of international virtual networking capabilities. Finally, we offer concluding comments and discuss in detail the impact of international virtual networking capabilities on a firm’s international performance outcomes, while highlighting the implications of this study for international business and IE literature, as well as managerial practice. In doing so, we seek to provide direction and offer new opportunities for future research in the increasingly important field of IE.

**Literature Review**

*International entrepreneurship*

IE can be defined as the “discovery, enactment, evaluation, and exploitation of opportunities across national borders to create future goods and services” (Oviatt & McDougall, 2005, p. 540). The IE
literature states that advances in information and communication technologies have been identified as enablers of IE, by decreasing costs and thus making internationalisation more feasible for the resource-constrained firm (Loane, 2006; Loane & Bell, 2006; Reuber & Fischer, 2011). The emergence of IE as a distinct field of research has led researchers to look specifically at the individual entrepreneur in the international business field (Knight, 2001; Zahra, Korri & Yu, 2005; Reuber & Fischer, 2011).

More recently, there has been a growing emphasis placed on the increasingly active role played by international entrepreneurs in the internationalisation of the firm (Bell, McNaughton, Young & Crick, 2003; Welch, 2004; Oviatt & McDougall, 2005; Loane, 2006). This interest reflects the fact that the decision-making power in SMEs and the impetus for firm internationalisation often lies with the international entrepreneur, as opposed to the management team, which is responsible for decision making in larger multi-national firms (Bhuian, Menguc & Bell, 2005). In SMEs the owner and/or the international entrepreneurial founder is likely to be working at the front line of the firm, and is most likely to possess the decision-making power for firm internationalisation decisions.

**Resource-based view of the firm**

While a number of theoretical frameworks have been developed and advanced over the past decade to explain international firm performance, one of the predominant perspectives has been the RBV (Wernerfelt, 1984; Barney, 1986, 1991). Referred to in the literature as being ‘sticky’, firm-level resources are unique because they cannot be readily assembled through markets (Teece, 1982), nor can they be brought or sold. RBV theories suggest that firms with valuable, rare, inimitable, and non-substitutable resources have the potential to achieve superior international market performance (Barney, 1991). Firm-level resources are inputs into the firm’s production process or strategy (Barney, 1991; Wiklund & Shepherd, 2003), and have been considered as ‘bundles’ of tangible and intangible assets, including a firm’s management skills, its organisational processes, and the information and
knowledge the firm possesses. Recently, researchers have expanded on the RBV literature to include the dynamic capabilities approach, which attempts to explain how firms achieve performance in markets that are characterised by rapid change (Eisenhardt & Martin, 2000; Makadok, 2001). In this regard, Teece and Pisano (1994) proposed the dynamic capability view to include dynamic markets.

Dynamic capabilities are the responses to the need for change required to identify new international opportunities (Easterby-Smith, Lyles & Peteraf, 2009). These key changes can involve the allocation of resources and operations. This changing nature and allocation of resources is a crucial component of the dynamic capability view (Easterby-Smith et al., 2009). That is, a firm’s international performance is contingent firstly on a portfolio of capabilities, and secondly, the firm’s potential to reconfigure, diversify and deploy dynamic capabilities for international market performance (Prange & Verdier, 2011). Research also suggests that when firms extend their international activities, they often accumulate resources to improve their international performance (Barney, 1986, 2001).

**International virtual networking capabilities**

Network theory depicts markets as a web of relationships among a number of players, encompassing customers, suppliers, distributors, competitors and private and public support agencies (Coviello & Munro, 1995; Oviatt & McDougall, 1995; Etemad, 2001; Loane, 2006). International entrepreneurial firms seeking to internationalise can leverage and take advantage of these network players. Numerous scholars (see, Coviello & Munro, 1995; Oviatt & McDougall, 1995; Poon & Jevons, 1997; Hite & Hesterly, 2001; Coviello & Cox, 2007; Rothaermel, 2007) have suggested that network relationships play an important part in internationalisation, particularly allowing firms to overcome resource constraints. Case study research further suggests that firms with extensive international networks internationalise quicker and more successfully than established firms (Oviatt & McDougall, 1995; Mort & Weerawardena, 2006).
The value of international networks as an integral part of the explanation of international entrepreneurial success is also acknowledged in the literature (Coviello & Munro, 1995; Dimitratos & Plakoyiannaki, 2003; Mort, 2006; Loane, 2006; Loane & Bell, 2006). For instance, drawing from IE theory, Mort and Weerawardena (2006) found that international networking capabilities enable exploitation of international market opportunities. For instance, Andersson and Wictor (2003) identified that the international entrepreneurs they studied all had a vision for their strategy to be enacted globally, and that all had extensive international experience, either in business, as students or through informal ties. It is also widely suggested that the Internet has provided entrepreneurial SMEs with new ways to conduct and develop international business, communicate ideas, and exchange information (Aspelund & Moen, 2004; Bell & Loane, 2010).

The literature suggests that international networks in an Internet context are an important and unique firm resource (Loane, 2006; Etemad et al., 2010; Reuber & Fischer, 2011). The Internet has also been found to be associated with increased international business outcomes, allowing firms to identify new international market opportunities through integration of international networks via the Internet (Mostafa et al., 2006; Bell & Loane, 2010; Reuber & Fischer, 2011). Further, the Internet has also been found to play a pivotal role in the creation of international relationships and is a mechanism for the creation of international growth opportunities in SMEs (Mathews & Healy, 2008). As such, it can be said that international networks remain an important part of any international firm operating in a complex Internet environments. Although the Internet has been found to play a pivotal role in the creation of international relationships and is a mechanism for the creation of international growth opportunities in SMEs (Mathews & Healy, 2008), the role of the international entrepreneurial decision-maker in the development of international virtual networks for leveraging opportunities in internationalisation remains unclear (Mort & Weerawardena, 2006). That is, the explicit link between
international virtual network capabilities and international market performance outcomes remains vague.

**Methodology**

*Multiple case study methodology*

The purpose of the research was to identify the international virtual networking capabilities expected to influence the international market performance of the firm. Research has suggested that multiple case study inquiry is an all-encompassing logical research method with a unique strength of dealing with a full variety of evidence, such as documents, artefacts, observations and interviews (Eisenhardt, 1989; Yin, 2009). Case study methodology has evolved into a well-accepted and widely utilised research method in the marketing and international business fields, particularly in the areas of Internet international marketing. For example, researchers have recently used case study methodology to analyse the Internet’s impact on firm internationalisation (Loane, 2006; Mathews & Healy, 2008).

*Data sources*

In terms of the number of the cases for analysis, Perry (1998) argues that there are no precise guides to the number of cases that should be included. The literature also rarely specifies how many cases should be developed. Eisenhardt (1989) recommends that cases should be added until theoretical saturation is reached. Although there is no specified number of cases that should be in a case study inquiry, a number of authors advocate that there should be no less than four cases in any given case study research design (Perry, 1998; Eisenhardt, 2002). Selection of fewer than four cases can lead to issues for the researcher in trying to generate credibility in the development of theory (Perry, 1998). Given these recommendations, the use of 12 cases across the Australian goods and services sectors was considered appropriate. The careful selection of cases within the goods and service sectors ensured the
research met the criterion of literal replication; predicting similar results within industries was ensured, and, contrasting results across industries for robustness to satisfy validity through theoretical replication (Yin, 2009). Multiple cases also assist in generating analytic generalisability (Yin, 2009). Central to the purposive sampling strategy, this research maintains a cross-sectional focus including sources from the Australian goods and services sectors including: professional business services, tourism, information communication technology services and consumer goods firms trading in manufacturing of textiles, food products and jewellery. The Australian goods and services industries have been selected as they represent five out of the top nine Australian export industries, the total value of goods and services exported from Australia in 2009-10 around US$217 billion (Austrade, 2011).

Level of analysis

The objective of this research study was to investigate and explore the firm-level resources and dynamic Internet capabilities that are expected to be related to the firm’s international market performance. For the purpose of the research, international entrepreneurs from Australian SMEs were selected, from which eight cases were constructed based on in-depth interviews with owner/founders. This research adopted the level of analysis used by Loane (2006) who conducted interviews with key decision-makers in SMEs, which in most cases was a member of the founding team, for a firm-level analysis of the role of the Internet in the internationalisation of SMEs. Research papers in international business have argued that the international entrepreneur can be seen as the single representative of the firm in relation to internal decision-making processes (Loane, 2006; Mostafa et al., 2006). As such, interviews were conducted at the individual level with international entrepreneurs.
Analysis and Findings

A total of 12 international entrepreneurial firms were selected for this research. The participant demographic data file accompanying the case studies is presented in Table 1. The categories in Table 1 include: *case number, gender, year of establishment, product orientation and customer type*.

Table 1. Demographic data file of case study firms

<table>
<thead>
<tr>
<th>Case #</th>
<th>Gender</th>
<th>Year established</th>
<th>Product orientation</th>
<th>Customer Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>CASE Gs001</td>
<td>Female</td>
<td>1989</td>
<td>Goods: Heath</td>
<td>B-to-C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B-to-B</td>
</tr>
<tr>
<td>CASE Gs002</td>
<td>Male</td>
<td>1984</td>
<td>Goods: Manufacturing</td>
<td>B-to-B</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B-to-C</td>
</tr>
<tr>
<td>CASE Gs003</td>
<td>Female</td>
<td>1980</td>
<td>Goods: Jewellery</td>
<td>B-to-C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B-to-B</td>
</tr>
<tr>
<td>CASE Gm004</td>
<td>Male</td>
<td>1985</td>
<td>Goods: Jewellery</td>
<td>B-to-C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B-to-B</td>
</tr>
<tr>
<td>CASE Gm005</td>
<td>Male</td>
<td>2002</td>
<td>Goods: Hospitality</td>
<td>B-to-B</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B-to-C</td>
</tr>
<tr>
<td>CASE Gm006</td>
<td>Male</td>
<td>2002</td>
<td>Goods: Manufacturing</td>
<td>B-to-B</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B-to-C</td>
</tr>
<tr>
<td>CASE Ss007</td>
<td>Female</td>
<td>1990</td>
<td>Services: Marketing</td>
<td>B-to-B</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B-to-C</td>
</tr>
<tr>
<td>CASE Ss008</td>
<td>Male</td>
<td>2009</td>
<td>Services: Finance</td>
<td>B-to-C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B-to-B</td>
</tr>
<tr>
<td>CASE Ss009</td>
<td>Female</td>
<td>2000</td>
<td>Services: Software</td>
<td>B-to-B</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B-to-C</td>
</tr>
<tr>
<td>CASE Sm010</td>
<td>Male</td>
<td>1996</td>
<td>Services: Tourism</td>
<td>B-to-B</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B-to-C</td>
</tr>
<tr>
<td>CASE Sm011</td>
<td>Male</td>
<td>1994</td>
<td>Services: Manufacturing</td>
<td>B-to-B</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B-to-C</td>
</tr>
<tr>
<td>CASE Sm012</td>
<td>Male</td>
<td>1989</td>
<td>Services: Hospitality</td>
<td>B-to-B</td>
</tr>
</tbody>
</table>

Notes. All firms are wholly owned Australian businesses. # - Primary customer type orientation.

All firms were asked: *(i) to describe the business’s current relationships, (ii) to describe the Internet’s impact on networking relationships, (iii) if the Internet had impacted the development and maintenance of networks, and (iv) if networking capabilities had influenced the international performance of the firm.*

Four firms (Gm004, Gm005, Gm006, Sm010), viewed international virtual network capabilities overall to be ‘very strongly important’. Six firms (Gs001, Gs002, Gs003, Ss008, Ss009, Sm012) indicated
‘strong importance’, while a further two firms (Ss007, Sm011) indicated ‘moderate importance.’ Developing relationships with suppliers online, as seen in column (B), was noted in 11 firms (Gs001, Gs002, Gs003, Gm004, Gm005, Gm006, Ss007, Ss009, Sm010, Sm011, Sm012). Similarly, developing relationships with distributors online, as seen in column (C), was noted in nine firms (Gs001, Gs002, Gs003, Gm004, Gm005, Gm006, Ss009, Sm010, Sm012). Creating ties with industry-specific competition, as shown in column (D), was seen in nine firms (Gs001, Gs002, Gs003, Gm004, Gm005, Gm006, Ss008, Ss009, Sm010). Creating ties with customers online, as seen in column (E), was identified in eight firms (Gs002, Gm004, Gm005, Gm006, Ss008, Ss009, Sm010, Sm012). Maintaining relationships with industry-relevant authorities, as shown in column (F), was evident in eight firms (Gs002, Gm004, Gm005, Gm006, Ss008, Ss009, Sm010, Sm012). Paying for international networks was identified in five firms (column G: Gm004, Gm005, Gm006, Ss008, Sm010). Very high levels of international virtual network capabilities, as shown in column (H), are present in four firms (Gm004, Gm005, Gm006, Sm010), high levels in three firms (Gs002, Ss008, Ss009), moderate levels in three firms (Gs001, Gs003, Sm012), and low levels in two firms (Ss007, Sm011).

Three key factors from the data were identified in relation to how international virtual networking capabilities influence the international performance of the firm: (1) developing relationships with suppliers online, (2) developing relationships with distributors online, (3) creating international virtual network relationships, and (4) maintaining international virtual network relationships.

(1) Developing relationships with suppliers online

Developing relationships with suppliers in an online environment was identified as important for international business practices. For instance, evidence of these key supplier relationships was found in 11 firms out of the 12 firms in this research (Gs001, Gs002, Gs003, Gm004, Gm005, Gm006, Ss007, Ss009, Sm010, Sm011, Sm012). For example, Case Ss008 (no-deposit finance) noted that: ‘Networks
are all important. If you look at our business model and our key stakeholders – suppliers become very important to us. These are banks and finance brokers...it's critically important to maintain these relationships they make our business run...’ Case Ss008 (no-deposit finance) also noted that networks had assisted the business in raising capital to support the growth of the firm. Conversely, Case Ss009 (plug-and-play software) highlighted that pre-established Internet-enabled networks with suppliers in international markets such as India posed many barriers, for example, ‘...originally we thought the way that we would sell is through resellers overseas [in India]. So we built up all of our infrastructure and business around the idea of reselling through the Internet overseas. Suppliers didn’t like to sell our product because our product is subscription-based, it caused many problems and networking through the Internet in this case was impossible...’

(2) Developing relationships with distributors online

Developing network relationships with distributors in an online space was identified to be important in nine firms (Gs001, Gs002, Gs003, Gm004, Gm005, Gm006, Ss008, Ss009, Sm010, Sm012). Firms used the Internet to establish and also to maintain ties with distributors. For example, Case Gs001 (heath and wellbeing services) maintained that ‘...the Internet has expedited the process of information flow between companies and suppliers and distributors. There are language barriers with distributors in China and email easily overcomes this.’

(3) Creating international virtual network relationships

Creating network relationships with industry-specific competition was recognised as important by nine firms (see Table 4.12: Gs001, Gs002, Gs003, Gm004, Gm005, Gm006, Ss008, Ss009, Sm010). Cases Gm005, Gm004, Gm006, Sm010 and Sm012 invested time in maintaining these key relationships with competitors. For example, Case Gm004 (jeweller) stated, ‘...there’s so much competition in the
jewellery industry. My efforts to maintain relationships with them [competition] is not for malevolent reasons, it’s because we all share industry knowledge and we all benefit…” Establishing ties with customers in an online environment is also considered a network. Eight firms (Gs002, Gm004, Gm005, Gm006, Ss008, Ss009, Sm010, Sm012) claimed that maintaining relationships with customers served two purposes. Firstly, developing ties with customers enabled the firm to gain access to important information about repeat consumers, and secondly, networks with customers were used to further promote the business in targeting new potential business within current customer social groups. For example, Case Gs001 (health and wellbeing services) said, ‘We contact our current client base regularly. Through email, Facebook updates and also blogs. Potential interested customers can also register to receive information about our new services and products...We try to tap into further clusters of potential customers by asking for referrals and providing discounts.’

(4) Maintaining international virtual network relationships

Maintaining relationships with industry authorities was identified in eight firms (Gs002, Gm004, Gm005, Gm006, Ss008, Ss009, Sm010, Sm012). Case Gm005 (coffee roasting business) has extensive networks with authorities and local businesses with similar business interests. It has been suggested that as these dynamic interactions take place, increased trust and knowledge is generated between participant firms, in turn, leading to greater international market commitment and internationalisation (Loane, 2006). Five firms in this research (Gm004, Gm005, Gm006, Ss008, Sm010) also indicated that they had bought into a pre-existing international technology-mediated network. For instance, Case Ss008 used network ties extensively to raise business capital and fund business growth: ‘I’ve actually used key business network functions to raise capital, where business people talk to other business people. I sold the business concept to one person in the network, the person who really owned the network, and then they sold it to everybody else.’ The findings indicate that firms in this research were
also developing entirely new networks. Case Gm005 (coffee roasting business) was partly responsible for developing a new online international network for like-minded young entrepreneurs and explained: ‘...the purpose of the club [is] to provide entrepreneurs with a trustworthy environment, a group of similar like-minded people can connect and learn from each other...it’s a very trustworthy environment.’

**Discussion and Conclusion**

The findings from the data show that: (1) developing relationships with suppliers online, (2) developing relationships with distributors online, (3) creating international virtual network relationships, and (4) maintaining international virtual network relationships are important components of the networking capabilities associated with international entrepreneurial SMEs operating in an Internet environment and highly influence the internationalisation process.

The findings from the data suggest that developing an international virtual network capability (IVNC), comprised of international technology-related networking capabilities, can enhance the firm’s progression and successful pursuit of international opportunities in Internet markets. Specifically, the IVNC (i) develops IVNC with suppliers; (ii) develops IVNC with distributors; (iii) creates IVNC with industry specific; (iv) creates IVNC with customers; (v) maintains IVNC with industry authorities. The Internet itself has become an IVNC. An important finding of the data is that more firms involved in the research were developing new IVNCs rather than maintaining and leveraging off established networks. This development of new IVNCs was not confined to the firm’s export market, but was also seen in subsequent internationalisation. As such, it can be said that developing an IVNC forms an important part of the firm’s resource and more specifically dynamic capability base, which is just one component of a firm’s resource bundle that builds towards successful internationalisation via an Internet platform.
Reference List


