



**BRITISH ACADEMY
OF MANAGEMENT**

BAM
CONFERENCE

3RD-5TH SEPTEMBER

ASTON UNIVERSITY BIRMINGHAM UNITED KINGDOM

This paper is from the BAM2019 Conference Proceedings

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The dark side of entrepreneurial networks: exploring the failure of a medical device international new venture

Abstract

In this qualitative study, we explore *how* and *why* networks negatively impact on the internationalisation of new ventures. It is widely acknowledged in the international entrepreneurship (IE) literature that networks are an important enabler for new venture internationalization. Despite a well published body of literature on the benefits that networks provide for the early internationalisation process, there is now emerging consensus that networks also have a “dark side” which can harm new venture internationalization. Based on a longitudinal multiple case study over a seven-year period, we explore the negative impact of entrepreneurial networks which led to failure of a medical device international new venture (INV). Taking a contextualised explanations approach, our study seeks to develop causal explanations of a failed internationalisation process in a contextually-sensitive manner. Our preliminary report on underlying mechanisms at the pre-inception, development and failure phases which indicate that the INV network structure and content had a sequential negative impact on both survival and growth.

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Introduction

Networks as enablers of entrepreneurial internationalisation are critical to the success of international new ventures (Al-Laham & Souitaris, 2008; Coviello & Munro, 1997; Domurath & Patzelt, 2015; Jones et al., 2011; Musteen et al., 2013; Oviatt & McDougall, 1994). By drawing on their networks, entrepreneurs may access resources in the shape of funding support (Fernhaber & McDougall-Covin, 2009), early information about international market opportunities (Coviello, 2006) and international market knowledge (Fletcher & Harris, 2012). Studies also show that different types of networks ties may influence the new venture's internationalisation in different ways. Domurath & Patzelt (2015) for instance found that network heterogeneity, as well as the number and strength of network ties, all had a positive effect on international opportunity assessment by INV entrepreneurs. On the other hand, a study by Presutti et al. (2007) found that weak ties were more important than strong ties in reinforcing the process of knowledge acquisition and exploitation in an INV. As a result, how entrepreneurs use their networks - in other words, entrepreneurs' networking capabilities (Mort and Weerawardena, 2006) - are critical for the INV's successful internationalisation.

However, contradictions also exist on the positive or negative influence of networks on new venture internationalisation (Jones et al., 2011; Nummela et al., 2014; Prashantham & Dhanaraj, 2010). While Gassmann and Keupp (2007) argue that internationalisation speed is enhanced by a firm being embedded in global networks, Nummela et al. (2004) found that it was adversely affected by firms having an extended network. Separately, Musteen et al. (2010) found that while geographically diverse networks can improve international performance, extensive reliance on *personal* ties may hinder the INV's first international venture. These contradictions are not isolated: the literature points out that networks can indeed have dark sides, such as constrained internationalisation network horizons (Ellis, 2011; Fletcher & Harris, 2005; Ojala, 2009), as well as presenting risks due to network over-embeddedness (Ellis, 2011; Prashantham & Dhanaraj, 2010). In addition, Nummela et al. (2014) report that low levels of managerial experience and overall business competence in high-technology networks heavily contribute to the failure of INVs.

Another critical factor in explaining why networks may influence international venturing positively or negatively appears to be time (Jones et al., 2011; Jones & Coviello, 2005). Jones et al. (2011) argue that 'entrepreneurial internationalization involves a time-sensitive and self-reinforcing cycle of relationships' (Jones and Coviello, 2005); and Eberhardt & Craig (2012) found for instance that networks did not immediately affect internationalisation: instead, they had to introduce a time lag effect in their study of small firms international venturing before they were able to highlight the facilitating role of networks as significant. With inconsistent results on the role of networks on early internationalisation success and performance, what remains unclear is *how* and *why* networks may negatively impact new venture internationalisation over time. This is an important question as a continued argument in the international entrepreneurship (IE) literature is that entrepreneurial internationalisation is related to INV survival and growth (Sapienza et al., 2006; Zettinig & Benson-Rea, 2008), with internationalisation positioned as an antecedent to INV's performance and survival (Jones et al. 2011). In order to fill this gap, we ask: *How and why do networks negatively impact the internationalisation of new ventures?*

Methodology

Research Design and Context

To answer this research question, we study the early internationalisation of a UK medical technology venture which we anonymise as “FemHealth”, from its pre-inception in 2007 and until the firm went into administration in 2015. The process-based (how) and explanatory (why) nature of the question led us to follow a critical realist ontology (Baskhar, 2013) and a contextualised case study approach (Welch et al., 2011) in order to investigate and explain how and why INVs’ networks may result in failed internationalisation. The approach sees case-studies as ‘contextualised explanations’ (Welch et al, 2011: 747) and allows researchers to develop causal explanations of a process in a contextually-sensitive manner, whilst identifying underlying mechanisms.

The global medical technology sector is a useful context for conducting IE research. Since the early 1990’s it has been reported that new venture internationalisation is often a prerequisite for medical device firms given the nationalisation of most European healthcare markets (Oviatt, McDougall, Simon, Shrader, 1993). Moreover, since the US medical technology sector remains the single largest and often the most competitive medical device market in the world, there has been a long tradition of advanced medical technology start-ups pursuing the US as an initial foreign market (Industry Canada, 2013; Ernst and Young, 2018). With this said, research has conceptually (Oviatt and McDougall, 1994) and empirically (Burgel & Murray, 2000; Jones, 1999; Symeonidou et al., 2017) shown that INVs do pursue multiple cross-border activities such as R&D, production and sales in multiple foreign markets. This emphasises that internationalisation of technology markets and products is not confined to one region of the world (Baum et al., 2015; Bloodgood & Sapienza, 1996; Symeonidou et al., 2017). Indeed, there is growing evidence that INVs are choosing to focus on emerging markets to take full advantage of political, economic, legal opportunities that are unavailable in mature domestic markets (Haskell et al., 2016; Khavul et al., 2010; McHenry and Welch, 2018). As a result, our theoretical sample is based on a single case INV whose internationalisation process is attributed to several networks – venture capital, R&D, production and sales – which connect several regions of the world. We therefore explore how and why networks negatively impacted on an international new venture that ultimately failed to grow into an established international business.

Data Collection

Our longitudinal data was collected between 2008 and 2014 and unfolded over three iterative phases. Both authors collected data at different and overlapping time-periods, where the first-author collected data at the INV’s pre-inception and development phase, while the second-author collected data at the development and failure phase. Data collection involved a (1) series of repeated semi-structured interviews with the founding entrepreneur, (2) unstructured interviews with actors – investors, mentors, suppliers and customers – in the INV’s network, including unstructured interviews with industry experts and policy makers. Both authors also (3) attended domestic and international industry conferences, while (4) extensively collected archival documents, including internal/external press reports, emails, corporate materials, and the monitoring of each case firm’s website from pre-inception to failure. Finally, our data collection is enhanced with memos from participant observation of sensitive sales negotiations and strategy consulting sessions during the development and failure phases. In total, 25 repeat interviews were conducted with the CEO and co-founder amassing 45 hours of interview data

which were tape recorded, transcribed, and triangulated against our other primary and secondary data sources as shown in Table 1.

Data Analysis

Our data analysis is grounded in exploring *how* and *why* networks *negatively* impact the internationalisation of new ventures. Using Jones and Coviello (2005) event-based approach, we intend to develop a timeline of the INV's internationalisation patterns and processes across stages relating to the firm's pre-inception, development and eventual failure.. To support a contextualised explanation (Welch et al., 2011), we plan to use Nvivo12© software as an organizing tool to analyse the three phases of our data collection by slicing and recoding data into temporal brackets (Langley, 1999), whilst identifying emergent themes across the temporal periods. In doing so, our analysis intends to use visual maps (Langley, 1999) to demonstrate *how* and *why* the INV networks – in terms of both network structure and content (Hoang & Antoncic, 2003) – has had a negative impact on early internationalisation process.

Preliminary findings and expected contribution

Our preliminary findings indicate that although the INV was proactive in networking, many of the early ties at the pre-inception stage had a negative impact on development and contributed to overall failure. Our initial data analysis shows the INV network structure at the pre-inception stage was heavily reliant on domestic ties such as government agencies and mentors who made referrals to international ties such as foreign investors, subcontractors and distributors which proved to be a significant cost to the firm.

Secondly, an analysis of the INV network content, shows at both the pre-inception and development phase, there was a significant lack of foreign market knowledge and technical knowledge which was needed to conduct international business in emerging markets such as China. This lack of foreign market and technical knowledge was a major barrier for internationalisation and significantly contributed to the failure of the organisation.

Thirdly, the network structure and content at each temporal period emphasises the issues associated over-embeddedness as our data pinpoints that the INV's financial network at start-up configured with gaps in market knowledge that prevented the firm from obtaining the necessary venture capital to grow at the development phase. As a result, our longitudinal findings provide preliminary support for the view that over-embeddedness of networks can heavily contribute to the failure of international new ventures.

Overall, our study intends to contribute to the IE literature on the role of networks in entrepreneurial internationalisation by developing new mechanisms that link network characteristics with internationalisation outcomes. We therefore aim to explain *how* and *why* network structure and content may lead to failure of international new ventures.

Table 1 Summary of data collected

Interviews							
<i>Number of interviews per year</i>							
<i>Interviewees</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>
Beta1	1	1	1	4	10	6	2
Beta1, Beta2					1		
Beta4							1
Sina1,Sina2					1	1	1
Sina2							1
Sina6							2
Sina1, Sina2, Sina3					1		
Sina1,Sina2, Sina3, Sina4						1	
Sina2, Sina3,Sina4, Sina5						1	
UK/China trade experts					3		1
Pages of transcript data	15	25	35	27	191	30	110
Observation							
<i>Number of days</i>							
<i>Participants</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>
Beta1, Sina1, Sina2				3			
Beta1, Sina1						1	
Beta1, Beta2, Sina3					1		
Beta1, Beta2					1		
Beta1, patent attorney					1		
Beta1, Beta3, Beta5					1		
Sina1,Sina2, Sina4, Sina6						1	
Sina1, Sina2					1	1	
Sina1, Sina2, Sina5							2
Memo and Field notes (number of pages)				26	17	13	7

Archival Data							
<i>Number of items per year</i>							
<i>Type of Archival Data</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>
Emails					22		
PowerPoint presentations	2		3	6	3		
Reports, agreements, brochures	1	5	7	10	53	4	
Media articles and public company information	15	25	35	24	12	5	12

Beta1: Founder and CEO

Beta2: Regulatory Officer

Beta3: Sales Manager Europe

Beta4: Non-executive company director

Beta5: Sales Manager Middle-East & Africa

Sina1: General Manager

Sina2: Assistant General Manager

Sina3: International Assistant

Sina4: Sales Manager

Sina5: R&D Manager

Sina6: Regulatory officer

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