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The Role of Innovation Hub Networks in Start-up Internationalization

Daniel Schepis*, The University of Western Australia
Sharon Purchase, The University of Western Australia
Chiara Luisa Cantù, Università Cattolica del Sacro Cuore
Bella Butler, Curtin University

Abstract

Innovation hubs are part of a broad range of start-up support organizations which seek to spur new venture development, as well as the diffusion of innovation within business ecosystems. While the localized benefits of innovation hubs are becoming increasingly realized, their role in start-up internationalization is less understood. Businesses expanding overseas at early stages face unique challenges, however for some, these risks are necessary for future growth or sustainability. We present a conceptual overview of the start-up internationalization process, taking into account key drivers and the role of network relationships. We then examine the value provided by innovation hubs and present three propositions relating to how they may contribute to start-up internationalization. Finally, future research directions and a proposed study are discussed.

Keywords: Innovation Hubs, Networks, Internationalization, Start-ups,

*Corresponding author

INTRODUCTION

The success of start-ups is limited by a number of factors relating to their lack of resources, managerial experience, connections and legitimacy (Bøllingtoft and Ulhøi 2005). In seeking to overcome these unique challenges, numerous initiatives have been established in cities around the world to accelerate, incubate, fund and house them (Anthony 2012; Bergek and Norrman 2008). As such, incubating organizations have become an institutionalized component of many policy approaches and have even been labelled an industry into themselves (van Weele, van Rijnsoever and Nauta 2017; Von Zedtwitz and Grimaldi 2006). These spaces act as innovation hubs (His) within ecosystems, enabling them to temporarily shelter start-ups and increase their proximity to partners and resources (Oh, Phillips, Park and Lee 2016).

While His can positively foster innovation-conducive ecosystems locally, this may not be enough for some start-ups. Start-ups are often unbounded by geography and many now assume a global perspective from inception, looking to take advantage of international opportunities and the growing mobility of resources (Engel & del-Palacio 2009). Firms that experience early stage expansion into international markets are particularly susceptible to issues relating to their size, newness and foreignness (Zahra 2005). Given the uniqueness of innovative start-ups within their regional/ domestic markets, they also need a global perspective to evaluate their competitive landscape and stay at the forefront of technology (Spigel and Harrison, 2017). Global ecosystems trends indicate that individual ecosystems are becoming increasingly interconnected, in terms of investment, office locations and staff members (Startup Genome 2017). For hubs to remain internationally relevant and appealing to start-ups, it is imperative that they are integrated in some way with global complementary clusters.

The internationalization process of young firms is known to be impacted by their network relationships, with overseas partners offering market entry avenues to overcome resource and experience constraints (Evers and Knight 2008). While we recognise the importance of networks in the early stages of internationalisation, however there is limited research on the role of His (Blackburne and Buckley 2017). Focusing on the Industrial Network Approach, the business landscape is characterized by constant motion, in which all activities, resources and actors change over time. Given the relative success of the relational models at bridging ties and promoting exchange within ecosystems, there is scope to explore whether this can be effective across international ecosystems. We therefore seek to explore the following research question: *what is the role of innovation hub networks in start-up internationalization?*

DRIVERS OF START-UP INTERNATIONALIZATION

While the drivers of company internationalization have been extensively studied over the past decades, these understandings do not necessarily apply directly to start-up contexts (Cannone & Ughetto 2014). This is especially true for more recent start-ups operating in high-tech or digital spaces whereby geographic implications often hold different meaning. Many firms are now characterized as 'born global' whereby they operate internationally at very early stages without substantial accumulated experience, resources or knowledge associated with more traditional forms of gradual expansion (Knight & Cavusgil 1996). Understanding managerial strategy within turbulent start-up environments, requires context-specific interpretations of concepts such as market opportunity, risk and relational resources (Debrulle and Maes 2015).

Firms' experiences with accelerated international expansion during their start-up phases stem from a mix of factors at individual, firm and network levels (Cannone & Ughetto 2014). Much of the entrepreneurship literature highlights the importance of individual founder characteristics in exploring international opportunities. These include a host of factors such as prior experiences, knowledge of foreign languages, professional and social relationships and managerial focus (Zucchella, Palamara & Denicolai 2007; Debrulle and Maes 2015). Similarly, various managerial processes relating to the acquisition and integration of new knowledge, development of capabilities and marketing orientation (Efrat & Shoham 2012).

Certain product characteristics are more conducive to early internationalisation, in particular technology focused innovations that can be standardized to meet similar customer needs (Cannone & Ughetto 2014). Market characteristics have been shown to be important factors, with smaller, emergent or more niche markets often encouraging more rapid internationalisation in order to achieve sustainable scale (Oviatt & McDougall 1995). Broader environmental factors such as market turbulence, industry growth or policy changes will also have a significant influence on start-up internationalisation (Yang & Gabrielsson 2017). In seeking to understand internationalisation processes we must therefore pay attention to firm reactions to these uncontrollable external factors, as well as their proactive strategies to enhance internal capabilities (Efrat & Shoham 2012).

There are also a number of characteristics of modern start-ups which make them well positioned for early international expansion. Many start-ups follow lean development approaches which increase their ability to respond to new opportunities faster than firms burdened by large overheads (Trimi & Berbegal-Mirabent 2012). Similarly, start-ups are often characterized by agile strategies and effectuation, which enable them to adapt objectives and reallocate resources to meet customer needs (Sarasvathy et al 2014; Yang & Gabrielsson 2017). Advances in information and communication technologies allow start-ups to further reduce barriers by being better able to recognise underserved niches and segment suitable customers that can be expertly served (Rasmussen & Tanev 2015).

OVERCOMING INTERNATIONALIZATION CHALLENGES

Start-ups expanding overseas must overcome a number of traditional barriers applicable to foreign firms, while simultaneously dealing with the challenges inherent to early stage enterprises. These challenges can be broadly categorized as the liabilities of foreignness and newness. 'Foreign' firms may struggle due to unfamiliarity with host contexts and lack knowledge in key aspects of local cultural norms, values, systems and business practices (Eden & Miller 2004). Relational challenges facing foreign firms link to the lack of embeddedness in local networks, which restricts their ability to access resources or referrals (Eden & Miller 2004). This is amplified by the relative newness of the firm with limited contacts and a lack of prior interactions with network partners from which to leverage (Sharma & Blomstermo 2003). New ventures may also lack necessary market knowledge and existing processes, leaving them more exposed to turbulent environments (Schwens et al 2017).

Role of network relationships in internationalization

The industrial network approach to internationalisation highlights that firms establish positions in international markets through their exchange relationships (Johanson & Gunnar-Mattsson, 1986). The internationalising actor is developing new relevant international relationship(s) that will allow it to interact within the international market, thereby creating an identity and likely new role (Johanson & Gunnar-Mattsson, 1986). Entry mode is often through relationships developed in the domestic market

acting as a “bridge” to facilitate access into international networks (Ojala, 2009) and can better explain the entry mode of high-technology SME’s than other internationalization approaches (Ojala 2009; Sharma & Blomstermo, 2003). The notion that a third party in the domestic market can bridge into the international market requires that the domestic network have a high degree of internationalization (Johanson & Gunnar-Mattsson, 1986).

SME benefits in using a network approach to internationalization include: (1) the learning developed through obtaining new diverse information (Lofgren, 2014; Sharma & Blomstermo, 2003; Zucchella et al., 2017; Gabrielsson et al., 2008; Chetty & Stangl, 2010); (2) acquiring resources and complementary assets (Chetty & Stangl, 2010); (3) referrals (Sharma & Blomstermo, 2003) and (4) reduction in time to access information/ develop exchange relationships (Sharma & Blomstermo, 2003). Much of the literature focuses on the learning and new knowledge development as important for the internationalisation process, and is considered critical for knowledge-intensive/ high technology start-ups (Sharma & Blomstermo, 2003; Ojala, 2009).

The different types of knowledge generated will influence the internationalisation process, development of the value offering and both innovation and start-up performance. Hohenthal, Johanson & Johanson,(2014) show that experiential network knowledge and customer knowledge both significantly influence the value offering, though this context was for existing SME’s who have a fully developed domestic market and are not necessarily knowledge intensive. While, Chetty and Stangl (2010) indicate that for SMEs offering radical innovative disruptions, diverse knowledge embedded in international universities, capital markets and competitors is important if the SME wants to make fundamental changes to processes within the customer base. Ojala (2009) highlights that knowledge intensive industries require close cooperation with their potential customers due to the newness of the concept and complexity of the offering. This context is probably similar to start-up organizations where the innovation may disrupt current organizational processes both internal and external to the customer.

The networking activities undertaken in the internationalisation process can be categorized as either active or passive. Where active networking is initiated and undertaken by the internationalising actor, while passive networking is where the initiative is taken through the initial international relationship, often the first international customer (Ojala, 2009). Previous literature highlights that knowledge intensive firms undertaken a more passive networking approach where an actor already positioned within the international network develops opportunities for the firm. Yet, there are cases highlighting that knowledge-intensive firms have taken an active approach where the target international market is perceived as strategic for the firms success (Ojala, 2009). In each of these cases the firm has utilized a developed domestic market to springboard into the international market and have used mediating relationships to facilitate international market entry. Similarly, the start-ups in our context will be actively initiating their internationalization process through accessing the resources and assets of the international IH.

The initial relationship developed in the international market is important and critically influences the initial internationalisation steps undertaken (Hohenthal et al., 2014) and is often called a bridging relationship. They can be a customer, intermediary or supplier relationships (Ojala, 2009) with previous research emphasising the importance of the customer, particularly as customer knowledge is critical for building relational value (Hohenthal et al., 2014). Yet, if the domestic market itself does not have a high degree of internationalization, then being able to bridge from existing domestic relationships may not be possible (Johanson & Gunnar-Mattsson, 1986). Therefore, other types of

relationships need to be considered as bridging relationships, and these can include intermediary relationships.

Intermediary relationships have been described as relationships where “there is no direct contact between the seller and the buyer [...] but rather facilitates the establishment of the network relationship between the buyer and seller” (Ojala, 2009, p. 52). These relationships may be non-economic relationships such as with: government bodies facilitating export programs (e.g. Welch, Welch, Wilkinson & Young, 1996); social\informal networks (e.g. Ellis, 2000); home market & international market industry bodies (e.g. Ojala, 2009) and potentially as this research seeks to explore - innovation hubs.

Addressing Internationalization Challenges through Innovation Hub Networks

IHs have been characterized as organizations within ecosystems which support the generation, incubation and acceleration of ideas (O’Hare, 2008). They have also been presented as centers for the research and development of innovative ideas, which act as catalysts to transform ideas into solutions (Giaccone and Longo 2016). IHs have also been conceptualized more broadly as encompassing innovation activities within certain geographic areas (Baark and Sharif 2006), although for the purposes of this paper we focus at the organizational level.

In both theoretical conceptualization and practical application, IHs incorporate many aspects associated with science parks, business incubators, accelerators and co-working areas. While IHs facilitate knowledge and technology transfer between research institutes and firms within the market, they differ from science parks by applying less formal and direct management of these relationships. Similarly, in comparison to incubators and accelerators, IHs tend to offer similar value added support for new ventures, but in a more flexible and less structured format (Hackett and Dilts 2004). Moreover, IHs seek to cultivate a diverse membership community in line with many co-working centres, however, taking a more strategic approach to building and fostering networks to support innovation.

In recognising the role of IHs in innovation and new venture support, many activities seek to create value through the development of networks. IHs seek to bring together a diverse range of members in terms of industries, maturity and size, in order to provide an ideal context for innovation. As stated by Dhanaraj & Parkhe (2006), the network design and network management are crucial to the orchestration in innovation networks. Critically, IHs are not only inward facing networks but seek to draw in opportunities from members’ extended networks and occupy central positions in broader innovation ecosystems. The networking mechanisms offered by IHs help start-ups to identify and shape key strategic partnerships and attract expertise and interest.

IHs are considered to improve the networking capability of start-up members, while also amplifying their networking capacity by leveraging existing links (von Zedtwitz and Grimaldi 2006). Networking has been described as a dimension of international entrepreneurial culture (Dimitratos & Plakoyiannaki, 2003). This network orientation within companies reflects to what extent companies participate in alliances, cooperative ventures and other forms of similar social connections. Strong inter-personal relationships form optimal foundations for international strategy and inform firm knowledge, vision and strategy (Harris and Wheeler 2005). Cooperative arrangements provide tangible and intangible resources to realize international plans, often relying on informal networks such as those developed through IH membership (Kingsley & Malecki 2004).

In respect to supporting internationalization processes, IHs can offer value to both incoming and outgoing start-ups, helping to bridge the gap between innovation ecosystems. Through their portfolio of services, IHs can connect start-ups to actors with the relevant experience, competencies and resources to succeed in different geographic locations. In relation to inbound start-up support, Blackburne and Buckley (2017) found that during business incubation stages, networks built and maintained by firms would have been slower without the availability of incubation services within the foreign market. Simultaneously, IHs provide a natural meeting place for international actors to gather and connect with local start-ups and innovations. This supports the perspective that internationalization within innovative sections relies not only on identification and contracting with foreign partners but also strong, focused interactions and cooperation with knowledge partners to develop effective innovation solutions (Powell et al., 2005; Håkansson and Olsen, 2011).

CONCEPTUAL PROPOSITIONS

This conceptual paper seeks to bring together a number of theoretical perspectives in order to develop an understanding of the potential for IHs to support start-up internationalization. In doing so, we identify some of the main drivers and barriers for start-up internationalization, as well as the value offered by IHs which can facilitate this process. Based on this discussion, we present three conceptual propositions to align this literature and support further research.

A number of internal and external contextual factors have been associated with the early internationalization of new ventures. A key driver in start-up growth generally, is accessing necessary knowledge and resources at crucial development stages. In certain circumstances, local knowledge bases or resources may be insufficient or inaccessible to needs of the start-up; while in contrast foreign sources may be more readily available or better suited. Given the value proposition offered by IHs, the services and environment they provide may be well positioned to help start-ups attain necessary knowledge and resources. We therefore present the following proposition:

P1. *Innovation hubs support start-up internationalization by facilitating connection to foreign knowledge bases and resources.*

Much has been written regarding the role of networks in the internationalization process. As well as offering means to access resources, network relationships also encourage crossover between diverse ideas and perspectives, enabling opportunities to be recognized and acted upon. These boundary-spanning interactions are fundamental to the development of innovation and therefore critically important for many start-ups. Given the diversity of actors participating in IHs, they offer a fruitful source of potential relationships with foreign customers, suppliers and collaborators. Critically, IHs offer a context through which these interactions can take places, as well as a reliable bridge for start-ups with limited networks, particularly in foreign markets. Based on this understanding, we present our second proposition:

P2. *Innovation hubs support start-up internationalization by bridging relationships to foreign customers, suppliers and collaborators.*

Finally, ecosystem perspectives of innovation recognize that innovation emerges through complex series of actor interactions and resource combinations over time, within a certain context. These ecosystems are unique and their processes not replicable in other settings. While the embeddedness of IHs occupying central positions with their ecosystem offer start-ups considerable local support, they

are less able to provide the same degree of support across other ecosystems, particularly in geographically distant locations. Complementary partnerships between IHs may present alternative solutions to this divide, serving as bridges between innovation ecosystems which in turn can stimulate interaction between geographically dispersed actors. As start-ups are constrained by limited time and resources, leveraging these partnerships may enable them to pursue international opportunities. Our third proposition is therefore:

P3. *Partnerships between innovation hubs bridge innovation ecosystems and stimulate interaction between geographically dispersed actors.*

FUTURE RESEARCH DIRECTIONS

These three propositions are intended to stimulate wider discussion as to the role of IHs in start-up internationalization. While each is grounded in different theoretical perspectives, there is a need to explore these propositions empirically in order to refine them further and consider their application to managerial practice. In particular, contextual differences between locations may present difficult challenges to overcome for IHs supporting start-up internationalization. Similarly, the diverse nature of different industries and broad variation in innovation practices may limit the generalizability of IH service models. Finally, the realities of managing IHs so as to develop supportive capabilities which satisfy diverse member needs may require revised service models and strategic approaches in order to extend their support to start-up internationalization

To investigate these issues further, we propose a study examining how start-ups utilise the networks created by innovation hubs to access overseas growth opportunities. A case study is to be undertaken based on an Australian hub specialising in resources sector innovation and its recently established partnerships with similar hubs in the U.S and Chile. The study seeks to understand how members interact within these hub networks and the influence of specific activities and partnerships on start-up strategy. We also examine the hub level, by taking into account different strategies and engagement in local ecosystems to encourage innovation in the resources sector. A cross-case comparison will then contrast this network with a more centralized multi-hub European innovation network to gain a deeper understanding of the effectiveness of the practices employed to leverage networks across locations.

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