How do international entrepreneurial firms shape their network relationships using the web?

Pór Sigfússon

Viðskiptafræðideild
Ritstjóri: Ingjaldur Hannibalsson

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Each individual inherits imposed family relations at birth but soon after the individual begins to develop her own network of relationships. Various factors have been shown to affect the construction and development of the individual’s personal network. The entrepreneur’s ability to construct and enhance network of relationships has been shown to be affected by various factors such as institutional development (Kiss & Danis, 2008) and social capital (Batjargal, 2003).

This study builds on arguments that network theory is a fundamental tool for international entrepreneurship research (Oviatt & McDougall, 2005). The paper examines international entrepreneurs in INV’s (International New Ventures) and how they construct their network of relationships with emphasis on new social networking tools on the web. It is important to observe the most recent trends in development of social networks with regards to international entrepreneurship. The reason is that internationalization requires more weak ties as foreign contact is not as likely to be or develop into a strong tie as the domestic contact (Duque, Shrum, Barriga, & Henriquez, 2009). Researchers of internationalization have also recognized the importance of weak ties in the internationalization process of new ventures (Harris & Wheeler, 2005). The web has provided users with new tools in networking which opens further the opportunity for individuals to have links with large group of people. Scholars have long recognized the potential of web-based communication technologies for improving networks. On the other hand this field remains underexploited (Lewis, Kaufman, Gonzalez, Wimmer, & Christakis, 2008). The web has transformed ‘community’ and social capital and made them less dependent on physical space (Wellman, 2001). Current formation of different networks at Facebook, LinkedIn, Twitter and other such web social network sites, which can easily extend all borders, is a challenging aspect to explore further. Scholars have suggested that these web-based services, allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system (Boyd & Ellison, 2007). Research has been conducted on Facebook regarding issues such as social capital (Ellison, Steinfield, & Lampe, 2007) and taste sharing (Lewis et al., 2008). Research on LinkedIn is much more limited. In international business, Facebook or LinkedIn have not been researched specifically. This paper explores how the international entrepreneurs are using the social network of LinkedIn and Facebook and possibly other similar web based media in their activities.

Collaboration is particularly important in small, open, isolated economies (Chetty & Campbell-Hunt, 2003). Nowhere in the world is Facebook as widely used as in Iceland and LinkedIn is also popular among business professionals. Icelandic entrepreneurs in various INVs in Iceland are utilizing LinkedIn and Facebook in their activities. This trend in Iceland is probably a result of the fact that firms with very small domestic market have less chance of achieving economies of scale within their domestic market (Kutschker, Baurle & Schmid, 1997). The firms are therefore forced to go global at early stages of their
development but as these firms are located relatively far from markets, traditional methods of international networking, as international conferences, are costly. This provides an opportunity to use Iceland as an interesting base in the research on how these entrepreneurs use the web to build their network of relationships abroad.

A Review of Related Literature

Entrepreneurs, acting in the role of resource coordinators and agents for their firms, often bring their personal social networks to the firm, which then become one of the firm's most valuable strategic assets for providing the resources necessary for successful development (Hite & Hesterly, 2001). In this paper the entrepreneur in the INV is viewed as a resource coordinator. The foundation of this paper lies therefore in the Resource Based View (RBV) of the firm (Wernerfelt, 1984). The paper is also based on social network theory (Burt, 1992, Coleman, 1988; Granovetter, 1973, 1985) and international entrepreneurship (Oviatt & McDougall, 1994, 2005). The link between RBV, the entrepreneur in the INV and social network theory lies in the argument that social networks provide the international entrepreneur with access to resources they are unable to access themselves.

Wernerfelt (1984) suggests that rather than looking to market characteristics to infer which resources are required by a firm to succeed, the focus might be on the resources the firm possesses. This has been referred to as the Resource-Based View (RBV). These resources include physical, social and financial capital. International entrepreneurship research focuses on how social networks enable the INV to acquire and mobilize resources for early internationalization. The RBV sees the firm as a unique bundle of resources which are often costly to imitate or substitute (Barney, 1991). The RBV assumes that the resources are heterogeneously distributed within industries and are imperfectly mobile.

The embeddedness, or level of strong and weak ties in social networks, can enhance the ability of entrepreneurs to acquire resources (Batjargal, 2003). Granovetter (1973) introduced a theory on the spread of information in social networks. He emphasized that all business transactions take place in a social context and therefore a full understanding of economic phenomena is not possible without consideration of this context. Embeddedness is the degree to which individuals are enmeshed in the social network (Granovetter, 1985). This idea of embeddedness is the foundation of the role of networks in the activities of individuals and organizations. Economic relations between individuals or firms are embedded in social networks and these social networks consist of various ties. Granovetter (1973) suggests that the strength of the tie is a “combination of the amount of time, the emotional intensity, the intimacy and the reciprocal services that characterize the tie” (p.1361) These ties are either weak or strong. Strong network ties have high levels of social relationship or personal interaction with high frequency (Granovetter, 1982). The strong network ties means that members are motivated to be of assistance and protect actors in insecure positions (Hite & Hesterly, 2001). Weak ties, on the other hand, are not as heavily based on personal interaction among members of the network but may provide strategic advantage in terms of resource availability (Granovetter, 1973). Aldrich, Elam and Reese (1996) label network ties as “friends, acquaintances and strangers”, reflecting strong, weak or market ties. Krackhardt (1992) views the weak ties as “local bridges” to parts of the network which would otherwise be disconnected (1992). Burt (1992) suggests
that the weak ties offer opportunities. The structural holes in networks create competitive advantage for those individuals whose networks spans these holes.

Hite & Hesterly (2001) argue that the entrepreneur’s personal network evolves through time. To begin with the network is identity-based dominated by strong ties but develops into an intentionally managed network which is rich in weak ties. Jenssen & Koenig (2002) argue that in the process of new venture creation, the entrepreneur's personal friendship ties are crucial for the initial firm growth. Therefore, a focus on strong and more embedded ties can be more important in the start-up and early growth stage than in later stages (Starr & MacMillan, 1990). Whatever the role weak or strong ties play in the life of the emerging entrepreneurial firm, the appropriate use of personal relations can transform the entrepreneur’s personal network into an effective tool for achieving a good firm performance (Bratkovic, Antoneic, & Ruzzier, 2009) and be the best foundation to build an international strategy (Harris & Wheeler, 2005).

At the early days of new electronic communication, researchers had recognized the potential of electronic communication in potentially stimulating bridging social capital (Lin, 1999). After a short hiccup at the beginning of this century, the web ‘has become a pervasive mechanism for the conduct of international trade, and this is particularly true in industrial markets’ (Pitt, van der Merve & Berthon, 2006, p. 607). Researchers have also recognized how electronic communication plays a vital part in bridging emotionally distant and geographically diverse actors (Kavanaugh, Reese, Carroll, & Rosson, 2005; Wellman, 2001). Creating an effective virtual system is suggested to lower co-ordination costs and accrue timely responses for an effective instrumental social system of exchange (Lee, 2009). Lee suggests research in communication media regarding business and management and social capital should ask the question ‘How does electronic and face-to-face interaction affect bridging and bonding networks’” (p. 266). Leek, Turnbull & Naude. (2003) highlight a number of potential research areas in IT business communication. Such as the question on how the personal contact via electronic methods is similar and different to personal contact via a face to face meeting. Also, does IT communication change the nature of the relationship?

As technology changes and the potential of new web technology affecting business relationships develops, this new communication media becomes increasingly more important in international business ventures. At the same time new communication media in relation to international business has rarely been studied. Therefore, this article addresses an important gap in the literature by considering the interdependent influences of the new social networks on the web on venture internationalization processes within a known theoretical frame of social capital and networks and international entrepreneurship. The research may provide a starting point for additional theoretical and empirical work in this field.

Method of Research

The case study method is used in this research (Eisenhardt, 1989). The unit of analysis is the international entrepreneur and multiple-cases are used rather than a single case. In multiple case studies we compare different individuals by asking the same questions to draw conclusions. The purpose in this study is to compare the phenomenon being studied in a systematic way and by that exploring different dimensions of the issue to be researched. Iceland was chosen as the country of origin due to its small and open economy with an extremely limited domestic market (population 315,000). All the case entre-
preneurs have been involved with the software business for more than 5 years, their firms are independent startups in software development with international exposure and all of them pursue business-to-business activities. By focusing on networks of eleven entrepreneurs in high tech SME’s which base their business mainly on software technology, a good comparison can be made with studies in this field (e.g. Elfring & Hulsink, 2007, Hite & Hesterly, 2001, Komulainen et al., 2006, Sharma & Blomstermo, 2003).

The interviewing was based on ‘native category’ approach (Buckley & Chapman, 1997; Harris, 2000), involving extensive conversations about beliefs and perceptions around non-directive questions rather than directed questions derived from theory. The interviews were partly structured to direct discussion to relevant topics, such as the web, and to achieve equivalent data (Eisenhardt, 1989). To obtain a list of the most important relationships (the strong ties), each participant was asked: ‘What do you think about when you consider the future of your business?’, with a follow up question: ‘Who do you discuss [this issue] with, or consult with?’ (Harris & Wheeler, 2005).

Creswell (2007) encourages researchers designing qualitative studies to include new and creative data collection methods. Researchers have argued that online communication technologies improve network research (Watts, 2007). Lewis et al. (2008) argue that open, evolving social network sites represent remarkable new research opportunities which are ideally suited for data collection and analysis. The procedure pursued in analyzing the web networks of the entrepreneurs being studied involves:

1. Open interviewing process with all the entrepreneurs regarding their social networks, weak and strong ties, and their usage of communication techniques on the web.
2. Participant observation which included establishing a Business Network Research Group on LinkedIn where all the participants in the study were members which opened the possibility for the researcher to follow their networks and actions.
3. Mapping the individual’s networks in terms of number of links and geographic setting of links.
4. Observing how the participants used other web networking tools which included Small World, Xing, blogs and Twitter.
5. Analyzing data.

The participant observation consist of actively following the development of the networks of the participants on LinkedIn and Facebook. LinkedIn is a professional social network on the web with 75 million members while Facebook is a more general social network on the web with over 400 million users. The following started in April 2010 and the researcher observed the number of ties over 3 months period, geographical setting of ties and background of those linked to the individuals being studied.

**Discussion of research results**

This study has explored ties of international entrepreneurs and how they shape their network relationships using the web. The web is of particular interest as its global diffusion if often perceived as a positive catalyst that streamlines many social, organizational and technical processes (DiMaggio, Hargittai, Neuman, & Robinson, 2001). One finding observing the cases in this study is that the entrepreneurs with the largest number of links on the web tend to have few strong ties as indicated in the open interviews with
these entrepreneurs. The entrepreneurs with the smallest number of links on the web have,
on the other hand, the greatest number of strong ties as indicated in the interviews. When
a participant in the study, with one of the largest number of links on the web, was asked
whom he discussed the future of his firm, which was the name generating question to
confirm strong ties, he responded:

‘I send out my thoughts to a group of 40-50 investors and specialists on the web’

Other coding of the interviews also indicated that portfolio of weak ties are playing a
more vital role in the strategic decision making of the entrepreneurs than previously,
partly because of new communication technology on the web. Even though various
indicators show a sign of ever increasing web of weak ties of international entrepreneurs
and this article has suggested that large amounts of weak ties seems to suit best for the
strategy of exploration, the interviewed also expressed concerns regarding this develop-
ment. These concerns are twofold: Serving a large portfolio of weak ties can be time
consuming and many of the participants indicated that their social network on the web did
not necessarily reflect their optimal business network. Secondly, there is a growing
problem of “buggers” as one participant phrased the issue of people, which they have
never met but are linked up with on the internet, who are sending various requests and
comments on these web sites. These hollow relations can take a lot of time and be
questionably efficient.

Cross, Nohria and Parker (2002) suggest one of the myth of social networks is that to
build better networks, we have to communicate more. The concerns which the
interviewed expressed regarding their increasing network size, is in line with this myth.
Many of them have for the past 1-3 years been expanding their web network rapidly,
communicating more with a larger set of links, but they are not sure whether their net-
work and their links are the ‘most effective ones’; whether more means less. Network
literature cautions that size of personal network is not necessarily correlated to the
business success. According to the participants, their new social networks on the web
have increased their relationship network and their number of weak ties. Hollow em-
beddedness has increased in the cases being studied but the question is which affects it
will have on the ventures of the international entrepreneurs? Even though the entre-
preneurs seemed to value large number of weak ties the coding of the interviews indicated
that the entrepreneurs valued more efficient and creative use of the personal network
rather than size. The growing tendency of large networks, increased bugging and
ineffectiveness has led to a search of these entrepreneurs for more specially tailored and
closed networks on the web where the level of trust is greater. At the same time, the
importance of network identity in the cases being studied seems to have increased.

Geographic analysis and analysis of the background of the linked individuals in the
studied entrepreneur’s network showed a significant difference between the entrepreneurs
regarding the geographical positioning of the links (i.e. domestic or foreign). On average,
foreign links on LinkedIn account for about 40% of total links. As the number of links
increased so did the proportion of foreign links. Of the 171 weak ties defined by the
international entrepreneurs in the open interviews, 41 were foreign or 24%. Observing the
links on LinkedIn, totaling 2834 links, 39% were foreign. This may indicate that LinkedIn
is opening further doors for foreign contacts for the case entrepreneurs. Facebook,
totaling over 8500 links, had fewer foreign contacts, or 23%. The interviews indicated a
very mixed results regarding the use of Facebook of these international entrepreneurs.
Many of the high users of the web, use the Facebook more as a domestic network and less for professional purpose.

In the coding of the interviews one of the issues drawn out as an interesting theme to observe further was general views about relationships and their importance. The international entrepreneurs showed strong signs of being both aware of their social relationships and the importance of these relationships with regards to the web. They seemed to realize how hollow many of the relations on the web sites are but realize also that new communication tools may increase the trust rating of entrepreneurs on these sites which opens new opportunities to use these sites more efficiently.

Conclusions

This study contributes to the international entrepreneurship literature by recognizing the change in the networking activities of international entrepreneurs in high tech software firms. Existing studies on high tech software firms networking activities indicate that the dominant networking activity of emerging, independent software firms are exploration of weak ties (Elfring & Hulsink, 2007; Hite & Hesterly, 2001) and weak ties pave the way for the internationalization of high tech firms (Komulainen, Mainela & Tahtinen, 2006; Sharma & Blomstermo, 2003). Findings here reveal a strong focus of the international entrepreneurs on weak ties and portfolios of weak ties are playing a more vital role in the network activities making of the entrepreneurs than previously, partly because of new communication technology on the web.

This paper has a number of limitations. First, the focus has been at only software firms. More extensive studies in other settings are required to test the extent to which the findings can be applied more generally. However, this exploratory study contributes to existing theory, by observing an important element of social networking, the web, into the study of social networks of international entrepreneurs and generated arguments to explain why network development differs among different types of entrepreneurs. Secondly, as indicated in this paper, some users of these networks are more popular than others. Using only number of links to indicate network identity or popularity may be misleading as a growing number of web users are collecting links. One method to evaluate individuals might be to find out how many sought to link up with them rather then how many links they have. This might indicate their network strength and separate them from individuals who might be collecting hollow links from similar people for various reasons such as impressing others, shear interest in collecting etc.

As far as implication for international entrepreneurs in high tech software firms is concerned, this paper emphasizes that networks on the web can provide opportunities to enlarge weak ties which are especially important in the development of international enterprises. Entrepreneurs might consider how they should form a strategy on building these networks to access a more diverse array of skill sets, how to use them to build trust and strengthen network identity which can provide new bridging for their ventures. Lee (2009) suggests that creating an effective virtual system will lower coordination cost and the web may increase effectiveness of business communication. This study indicates that the web has in the cases being studied greatly affected bridging opportunities which the INV’s are continuously exploring and observing how best to utilize. The study shows that the entrepreneurs being studied used the social web to obtain new investors. In these days of the web, a global business-to-business of high tech software firms will include global web networks of relationships, whether these are intentional or not. Social network analysis
with special emphasis on various new social networking tools of international entrepreneurs on the web represent an exciting field to explore.
References


