

Networks in Internationalisation

By

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Abstract. Since the first articles on the function and role of networks in the internationalisation of the firm appeared in the end of the 1980 we have seen a growing body of articles and book chapters where various types of networks theories are applied. It can even be claimed that theories on relationships and networks have emerged as one of the dominant schools explaining the phenomena of internationalisation. But, still the findings are not coherent and consistent and consequently a review and an analysis of the emerging network theory of internationalisation is need. This paper aims to make a contribution in this direction. 23 papers were selected and accordingly analysed. Various network theories have increased in importance and though having originally mostly been applied on firms coming from developed markets and entering similar markets, there are now as popular in studies of both firms coming from and entering emerging markets. Moreover, the paper highlights the different types of relationships and networks, but comes to the conclusion that the most common approach focus on the role of business relationships and networks in order to explain internationalisation.

Key words. Internationalisation, foreign market entry, networks, relationships

1. Introduction

Network approach (Johanson & Mattsson, 1988; Axelsson & Johanson, 1992) has become one of the major frameworks for studying the internationalisation phenomenon since its introduction in late 80s (Jacklic, 1998; Coviello and Martin, 1999; Whitelock, 2002; Ruzzier et al., 2006). After the publishing of two book chapters, ‘Internationalisation in Industrial System- A Network Approach’ by Johanson and Mattsson in 1998, and ‘Foreign Market Entry – The Textbook vs. Network View’ by Axelsson and Johanson in 1992, the network approach was adopted and popularly used as a theoretical framework for studying firms’ expansion across national borders. A growing number of articles published in various journals contributed to this field over the last 20 years. Academic scholars have shown that

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relationships and networks, indeed, facilitate international business expansion across borders with solid empirical studies.

The network approach views a market as a web of networks and assumes firms are engaged in long-term relationships with various actors in their respective networks. Firms interact with important actors and establish relationships by investing time and resources. Learning and mutual adaption are the consequences from these interactions and result in relationship building. Not only have these relationships and networks been considered as firms' resources and intangible assets, but they also enable firms to access market information and knowledge that is not available for those outside the network (Forsgren, 2008). From a network perspective, internationalisation is seen as a firm trying to enter and establish a position in a foreign business network and develop relationships with foreign business partners. Since knowledge of foreign networks cannot be accessed by firms outside the network, it has to be acquired through first-hand, direct experience and gradual market commitment. Over the last two decades, researchers applying the network approach have produced a large volume of empirical results to support the theory, as can be seen from the collection of the papers presented in this article. On the one hand, through these efforts, relationships and networks are increasingly recognized as key factors in a firm's internationalisation process, and this analytical perspective has been diffused into other internationalisation theories, such as the OLI paradigm that recognises network alliances may provide a strategic advantage for network MNEs (Dunning and Lundan, 2008). On the other hand, the definition and usage of the words "relationship" and "networks" have become fuzzy. Sometimes the usage of "relationship" has become interchangeable with "network", and other times we have to wonder whether the term "networks" holds the same meaning in different papers. The lack of clarity and inconsistent use of the terms among these studies has caused confusion and made it difficult to compare findings. How have the relationships and networks discussed been measured in different papers? What are the constructs that present them? After twenty years, is the framework used by these articles the same as the one introduced by Johanson & Mattsson (1988) and Axelsson & Johanson (1992)?

Furthermore, today's economical and political landscapes are quite different from the early 1990s. For instance, the studies of internationalisation used to be centred on firms from North America (U.S, Canada), Western Europe, and more advanced economies in the Pacific Rim (Australia and New Zealand). However, if we look at articles published in the last few years, there are a number of studies from new emerging economies, e.g., China and India, which previously were not covered when the theory and framework were developed. Though

this article is not trying to pinpoint the potential adaptation ability issue between existing theory and new emerging economies, we do attempt to understand whether the relationships and networks discussed in studies conducted in these areas are the same phenomenon as those described in the initial framework and whether they may bring in new elements broaden the approach.

Through this review process, we seek opportunity to create a systematical mapping in order to understand the relationships and networks studied in the last 20 years. A few questions are asked in this paper including: Who has published these studies and where are they coming from? What kind of focal firm and markets have been included in the studies? What kind of method has been employed in the studies to understand the phenomenon? What is the unit of analysis, what kind of network and most of all, what are the major contributions from this stream of network studies in internationalisation over the last two decades?

The aim of this paper is to provide an overview of the work covering network approach in the internationalisation of firms and identify patterns and characteristics in the literature included in our list. In addition, we also hope this mapping process may provide some insight into the development of the theoretical framework over the last twenty years, and facilitate further research in this field. This paper is organised in the following sections: Chapter 2 will explain the methodology for conducting this review. Chapter 3 is the discussion of our analysis results, arranged under separate sub-headings, while a short conclusion will be presented in Chapter 4.

2. Review Methodology

As this study aims to build up a 20-year review of work that looks at the role of network approach in a firm's foreign expansion, the publication time is set to the period of 1988-2008. Furthermore, as this review attempts to address the employment of network approach in studies of the internationalisation process, the selection of articles has been limited to research that both uses network approach as a methodology, and emphasizes the phenomenon of internationalisation as the object being analysed. In other words, articles that solely discuss network approach outside the context of internationalisation, or internationalisation studies that do not specifically employ network approach will not be included. The reason behind this restriction is to facilitate comparison between articles.

Table 2.1 Keywords

Relationship & Network Keywords	Internationalisation Keywords
Relationship	Internationalisation
Network	International expansion
	Foreign market entry
	International alliances

The collection of papers includes articles from journals and books. They were identified by an electronic keyword scanning, followed by a manual search to ensure the list is complete. Several journals were pre-identified to serve as the database for the electronic scanning, and bibliographic databases such as Ebsco-host and other internet resources were used to facilitate the scanning process. Articles, (either title, abstract or full text) contained both keywords of relationship/ network framework, and the internationalisation phenomenon are selected (Table 2.1).

Table 2.2 Articles Selected from Journals and Books

Bibliographic source	Articles included in the review	No. of Articles
International Business Review (IBR)	Björkman & Kock, (1995); Bridgewater (1999); Chetty & Blankenburg Holm (2000); Coviello & Munro (1997); Gilmore et al. (2006); Harris & Wheeler (2005); Hadley & Wilson (2003); Scott-kennel & Enderwick (2004); Sharma & Blomsermo (2003)	9
Strategic Management Journal (SMJ)	Blankenburg Holm, Eriksson & Johanson (1999)	1
Journal of International Business Studies (JIBS)	Chen & Chen (1998); Coviello (2006); Elango & Pattnaik (2007); Ellis (2000); Zhou et al. (2007)	5
European Journal of Marketing (EJM)	Coviello & Munro (1995)	1
International Marketing Review (IMR)	Johanson & Vahlne (1990)	1
Journal of International Entrepreneurship (JIE)	Johanson & Vahlne (2003)	1
Management International Review (MIR)	Johanson & Vahlne (2006)	1
Journal of International Marketing (JIM)	Welch & Welch (1996); Welch et al. (1998)	2
Journal of International Management (JIM)		
Book chapter	Axelsson & Johanson (1992); Johanson & Mattsson (1988)	2
Total		23

A manual search was performed after the scanning process to double check that selected articles complied with the established requirements. The manual search was also used to include book chapters that fit into our methodological selection. Following the strategy adopted by Rialp et al. (2005), a citation based search was also employed to identify related

book chapters, and any journal articles that are highly related to this study but were not included in our journal database.

The electronic scanning process produced 58 papers containing keywords from both categories. After examining the content, articles that did not fit our requirements, (either they did not deal directly with internationalisation, or they only loosely referenced relationships or networks), were eliminated. Through this filtering process, 23 papers remained in the selection (Table 2.2).'

3. Networks in Internationalisation

Internationalisation theories have been developed mainly based on studies of firms from open and developed economies, in Europe and North America. This bias has been identified by scholars (Sim and Pandian, 2003), and also applies to the network approach. .This is probably because the development of the theory reflects the reality of the business world and the economical landscape during the post-war era, in which Western MNEs possessed stronger economic power required for international expansion. Another reason for this bias may be that the researchers who joined the theory development were predominately from Western countries. Nevertheless, in these early studies, the internationalisation phenomenon seemed to be exclusive to resource-powerful Western multinationals expanding east, (to Eastern Europe, Middle East, and Asia Pacific) or south (in the Southern Hemisphere). However, this bias has raised criticism regarding the ability of these theories to apply to firms from developing countries, such as Dragon Multinationals (Mathews & Zander, 2006). In addition, nowadays trends in international trade have changed significantly in comparison to 20 years ago, and we have seen firms from emerging countries expand across their borders. Whether the research findings have kept up with the current situation would be interesting to see from this review.

3.1 Who has been publishing, from where and when

The early works looking at network approach in internationalisation (Johanson & Mattsson, 1988; Axelsson & Johanson 1992) came from two chapters of two different books, as well as marketing journals (Johanson & Vahlne, 1990, Coviello & Munro, 1995) and international business journals (Björkman & Kock, 1995). It seems that for the first ten years, the majority of the papers came from researchers located in Scandinavia, or those with a strong affiliation with this region (Table 3.1). The explanation for this phenomenon could be the strong role that Nordic scholars tend to play in the IB field (Bjorkman and Forsgren 1997). In addition, scholars close to this region may have more awareness of the introduction of the network

approach and hence are more inclined to adopt it as their research framework. As Foresgren (2008) suggests, there is a clear connection between the Uppsala Internationalisation Model developed in the late 1970s and the network approach appearing in the late 1980s as both involve a learning process that opens doors and leads to further commitment in foreign markets.

Table 3.1 Time frames

Time Frame	Articles	No. of articles
1988-1992	Axelsson & Johanson (1992); Johanson & Mattsson (1988); Johanson & Vahlne (1990);	3
1993-1997	Björkman & Kock (1995); Coviello & Munro (1995); Coviello & Munro (1997); Welch & Welch (1996);	4
1998-2002	Blankenburg Holm et al (1999); Bridgewater (1999); Chen & Chen (1998); Chetty & Blankenburg Holm (2000); Ellis (2000); Welch et al. (1998);	6
2003-2008	Coviello (2006); Elango & Pattnaik (2007); Gilmore et al. (2006); Harris & Wheeler (2005); Hadley & Wilson (2003); Johanson & Vahlne (2003); Johanson & Vahlne (2006); Scott-Kennel & Enderwick (2004); Sharma & Blomsermo (2003); Zhou et al. (2007);	10
Total		23

Throughout the first twenty years in the development of the network approach (Figure 3.1), we can see both the quantity of the articles and the diversity of the regions covered has been growing. From the collection of the papers, the result show not only focal firms from open, developed economies have been included, [e.g., Sweden, Finland, Australia and New Zealand been featured at the very beginning of the stream of the studies, and firms from UK/Northern Ireland (Haris and Wheeler, 2005; Gilmore e al., 2006) are also included], but there are also studies covering firms from emerging economies, [e.g., Taiwan (Chen and Chen, 1998), HK (Ellis, 2000), India (Elango and Pattnaik, 2007), and China (Zhou et al. 2007)]. It seems that scholars from these regions are increasingly picking up the network approach and adopting it as a research framework (Table 3.2).

Table 3.2 Type of country of origin

Type of Country of Origin	Articles	No. of articles
Developed / Open Market	Axelsson & Johanson (1992); Björkman & Kock (1995); Blankenburg Holm et al. (1999); Bridgewater (1999); Chetty & Blankenburg Holm (2000); Coviello (2006); Coviello & Munro (1995); Coviello & Munro (1997); Ellis (2000); Gilmore et al. (2006); Harris & Wheeler (2005); Hadley & Wilson (2003); Johanson & Vahlne (2003); Scott-kennel & Enderwick (2004);); Sharma & Blomstermo (2003); Welch et al. (1998)	16
Emerging / Transitional Market	Chen & Chen (1998); Elango & Pattnaik (2007); Ellis (2000); Zhou et al. (2007)	4
No Specification	Johanson & Mattsson (1998); Johanson & Vahlne (1990); Welch & Welch (1996); Johanson & Vahlne (2006)	4

* If there are different focal firms from different hosting countries included in one article, this article will be listed in corresponding category accordingly.

The growing diversity of the research can also be seen in terms of the type of focal firms included in the studies. As we can see from the review, focal firms in the studies are coming from various industries, although firms from primary industries seem to be less represented here (Table 3.3). It seems to be firms from secondary and service industry are getting more attention from the researchers.

Table 3.3 Types of focal firm

Type of Focal Firm	Articles	No. of articles
Primary Industry (Food Production & Distribution)	Gilmore et al. (2006); Welch et al. (1998)	2
Secondary Industry (Manufacture, Consumer product,)	Axelsson & Johanson (1992); Chetty & Blankenburg Holm (2000); Elango & Pattnaik (2007); Ellis (2000); Harris & Wheeler (2005); Bridgewater (1999); Hadley & Wilson (2003)	7
Service Industry (Software, Medical, Accounting, Tourism)	Axelsson & Johanson (1992); Coviello (2006); Coviello & Munro (1995); Coviello & Munro (1997); Sharma & Blomstermo (2003) ; Johanson & Vahlne (2003); Bridgewater (1999); Harris & Wheeler (2005)	8
No Specification	Björkman & Kock (1995); Blankenburg Holm, Eriksson & Johanson (1999); Chen & Chen (1998); Scott-kennel & Enderwick (2004); Zhou et al. (2007)	5

3.2 Type of entry market included in the studies

In regards to the markets of entry of the focal firms covered in these studies, the results show a fairly balanced picture, with both developed and emerging markets represented (table 3.4). However markets located in Africa and South America appear to be the exception as they are missing from the literature. One possible reason for this could be that cases from firms investing in these regions may be difficult to obtain for various reasons. Another explanation might be that studies have been conducted but were reported in journals published in the local languages, resulting in their exclusion from our review.

It should be noted that there are a substantial number of studies that do not specify the type of entry market. Some simply do not mention it, and others fail to specify it clearly. Whether the type of entry market will affect the focal network in the studies is arguable as the development of network relationships might be contextually bonded. For instance, a Swedish firm's expansion to the U.S. or to China will probably require different kinds of interaction with actors in local networks, thus the relationship building and network investment in the U.S. or China will probably be quite distinctive to each other. In addition, from the network

approach perspective, the experiential knowledge required for a firm's international expansion can only be obtained through first-hand interaction, after which the firm will make incremental commitments in the market. It is a path-dependent process and failure to specify the type of entry market in the research might potentially cause confusion for comparison in the future.

Table 3.4 Types of market entered

Type of Market Entry	Articles	No. of articles
Developed / Open Market	Axelsson & Johanson (1992); Blankenburg Holm, Eriksson & Johanson (1999); Chen & Chen (1998); Chetty & Blankenburg Holm (2000); Coviello & Munro (1995); Gilmore et al. (2006); Harris & Wheeler (2005); Johanson & Vahlne (2003); Scott-kennel & Enderwick (2004);); Sharma & Blomstermo (2003); Welch et al. (1998)	11
Emerging / Transitional Market	Axelsson & Johanson (1992); Björkman & Kock (1995); Bridgewater (1999); Chen & Chen (1998); Chetty & Blankenburg Holm (2000); Coviello & Munro (1995); Johanson & Vahlne (2003); Welch et al. (1998)	8
No Specification	Coviello (2006);); Coviello & Munro (1997); Elango & Pattnaik (2007); Ellis (2000); Hadley & Wilson (2003); Zhou et al. (2007); Johanson & Mattsson (1998); Johanson & Vahlne (1990); Welch & Welch (1996); Johanson & Vahlne (2006)	10

* If there are different focal firms from different hosting countries included in one article, this article will be listed in corresponding category accordingly.

From this review we may want to consider the local firms that conduct business with the foreign multinationals, and know more about who they are, what they do, and what impact the foreign firms may have on them when they enter the local network? Little has been said about the local partners of these international firms. Theoretically, network studies should cover not only the focal firm but also those firms that they interact with and other firms that have been impacted by this internationalisation relationship. However, we have not come across this kind of study in our collection.

3.5 What kind of the methodology has been used?

In terms of methodology, there are slightly more papers conducted as qualitative case studies than other methods. It is probably not surprising that case study has become one of the preferred methods as it allows researchers to explore the complexity of the network of the focal firm when they are expanding across borders for further theory building (Esinhardt, 1989). These focal firms included in the studies are either selected from theoretical sampling, or are rare cases offering researchers extensive access (Yin, 2003). Articles that employ case

studies tend to focus on how the process of internationalisation proceeds, and why the decision was made. These articles normally present a detailed, contextual view of the business network that focal firms are located in or desire to expand to, allowing the reader to establish a good understanding of the process. Examples of this include, Coviello and Munro (1997), which examines four entrepreneurial firms from New Zealand to build up an understanding of the firms' selection of foreign market entry locations and their entry mode; and Gilmore et al. (2006), which studies 12 food distributors in Northern Ireland to understand how firms' owners and managers use networks as a marketing tool when facing competition from large, foreign MNCs entering the local market.

We can also see (table 3.5) that many studies have applied various quantitative methods to understand firms' internationalisation process and what the impact is from different networks. Papers that adopted quantitative methods tend to establish patterns, relationships, or causality between different variables during the internationalisation process. For instance, Elango and Pattnaik (2007) tries to identify the relationship between the character of firms from emerging countries and their internationalisation; and Zhou et al. (2007) attempts to establish the mediating role of networks in firms' performance.

Table 3.5 Method applied

Method	Articles	No of the articles
Case Studies	Axelsson & Johanson (1992); Bridgewater (1999); Chetty & Blankenburg Holm (2000); Coviello (2006)*; Coviello & Munro (1995); Coviello & Munro (1997); Gilmore, Carson & Rocks (2006); Harris & Wheeler (2005); Johanson & Vahlne (2003); Sharma & Blomstermo (2003); Welch et al. (1998)	11
Interviews	Björkman & Kock (1995)	1
LISREL	Blankenburg Holm, Eriksson & Johanson (1999)	1
ANOVA, MONOVA	Chen & Chen (1998); Hadley & Wilson (2003)	2
Multiple Regression	Elango & Pattnaik (2007); Zhou et al. (2007)	2
Survey	Ellis (2000)	1
T-test	Scott-kennel & Enderwick (2004)	1
Conceptual paper	Johanson & Mattson (1988); Johanson & Vahlne (1990); Welch & Welch (1996); Johanson & Vahlne (2006)	4
Total		23

* Also employed social network software UCINET

However, among of the selection of papers there are few that combined both qualitative and quantitative methods in their studies. One example of this is Coviello (2006), which presents research that begins by using case studies to illustrate the structure of the network, and then adopts social network analysis software to examine the change of the network in different stages of the internationalisation process.

3.6 What is the level of analysis?

The concepts of relationships and networks have been applied in the field of marketing before they evolved into the arena of international business. In particular, the management of buyer-seller relationships is considered to be the core issue of industrial marketing and purchasing (Ford, 1980). Business networks are defined as a set of connected exchange business relationships between actors controlling business activities (Forsgren and Johanson, 1992). Inherited from this tradition, the network approach to internationalisation, deals exclusively with business networks. Thus, in the early literature covering network approach, [e.g., Johanson and Mattson (1988), Johanson and Vahlne (1990), and Axelsson and Johanson (1992)] business networks and inter-firm relationships are specified and are the central focus of the studies. Apart from business actors, other actors outside the business network, such as family and friends from social networks, or government from institutional networks, are not addressed. In other words, in the early stages of the work on network approach, the unit of study was exclusively confined to business networks between different business units. Business managers were assumed to be a part of the whole unit and their relationships at an individual level were not considered. If we combine the level of relationships ranging from between individuals to between business units as one dimension, with the context of the relationship ranging from personal to professional relationships as another dimension, the analysis can be separated into different levels (Table 3.6).

Table 3.6 Types of relationships

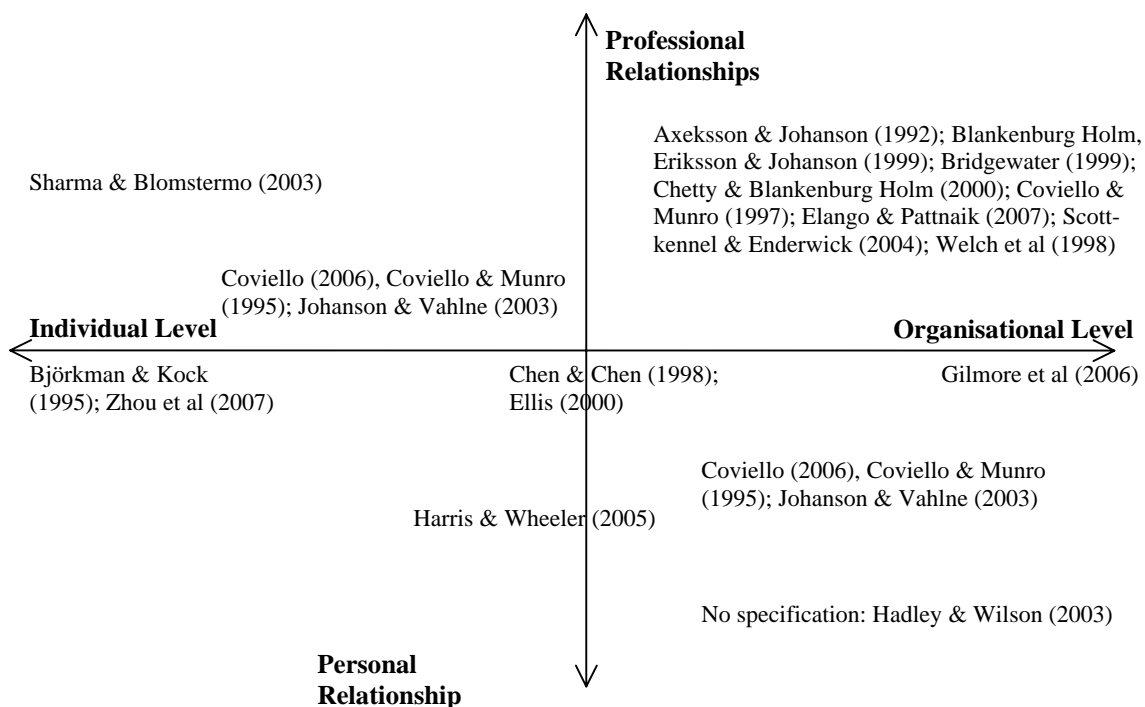
	Individual level	Organisational level
Personal relationships	Relationship between family members and friends (Social relationship)	Relationship between entrepreneurial firms (presented by entrepreneur) and other firms
Professional relationship	Relationship between work colleagues & acquaintances (Business relationship)	Relationship between supply chain (vertical), strategy alliance (horizontal) (Inter-firm relationship)

The network approach traditionally focused only on the relationship between firms or business units, and in contrast other categories have received little attention. However, as the research adopting network approach is increasing, the boundary of the theory framework seems to be loosening. More papers are explicitly or implicitly dealing with internationalisation phenomenon that is not restricted to business networks. For instance, Björkman and Kock (1995) indentify social relationships as a prerequisite for business exchange and for firms who intend to enter local Chinese business networks it is impossible

not to deal with the social network. Sharma & Blomstermo (2003) state weak ties between work colleagues and acquaintances are important for firms to seek knowledge and conduct an evaluation process when entering foreign markets.

The article of Sharma and Blomstermo seems to present another dilemma for researchers following the network approach, since when the focal firm in the studies is dominated by an entrepreneur's behaviour, the internationalisation of the firm is consequently influenced by the personal relationships and networks of the business owner. Constructs such as weak ties and strong ties, drawn from social network theory by Granovetter (1973; 1983), have continually been incorporated into the network studies to explain entrepreneurial firm's internationalisation process, and paradoxically, these constructs are established upon person to person interaction, rather than at an organisation level, between business units. Do these networks belong to the entrepreneurs themselves, or to the firms they create?

Figure 3.1 Types and levels of relationships



Recent studies from emerging countries will likely just add to the complexity. Chen and Chen (1998) studied Taiwanese firms using network linkages to decide locations for overseas investment. They discovered firms could stretch cultural and ethnic ties to build linkages with networks in foreign countries. These inter-personal links and trust are not limited to business

networks but expanded to local governments in areas where they invested. In the case of these Taiwanese firms, it seems there is also no distinction between their personal relationships and professional relationships, and they can occur at either an individual level or an organisational level. A similar situation can also be found in Ellis (2000), which examined toy manufactures from Hong Kong using social ties to identify foreign market opportunities.

From Figure 3.1, we can see that most of the articles included in this review involved studying professional relationships at the organisational level, which is in line with the original position that network approach initiated. We can also see growing numbers of studies that are diffused from the initial position and move into different fields. Whether this means that the network approach needs to extend its boundaries in order to be more realistic and include different units of analysis is a question worth discussing.

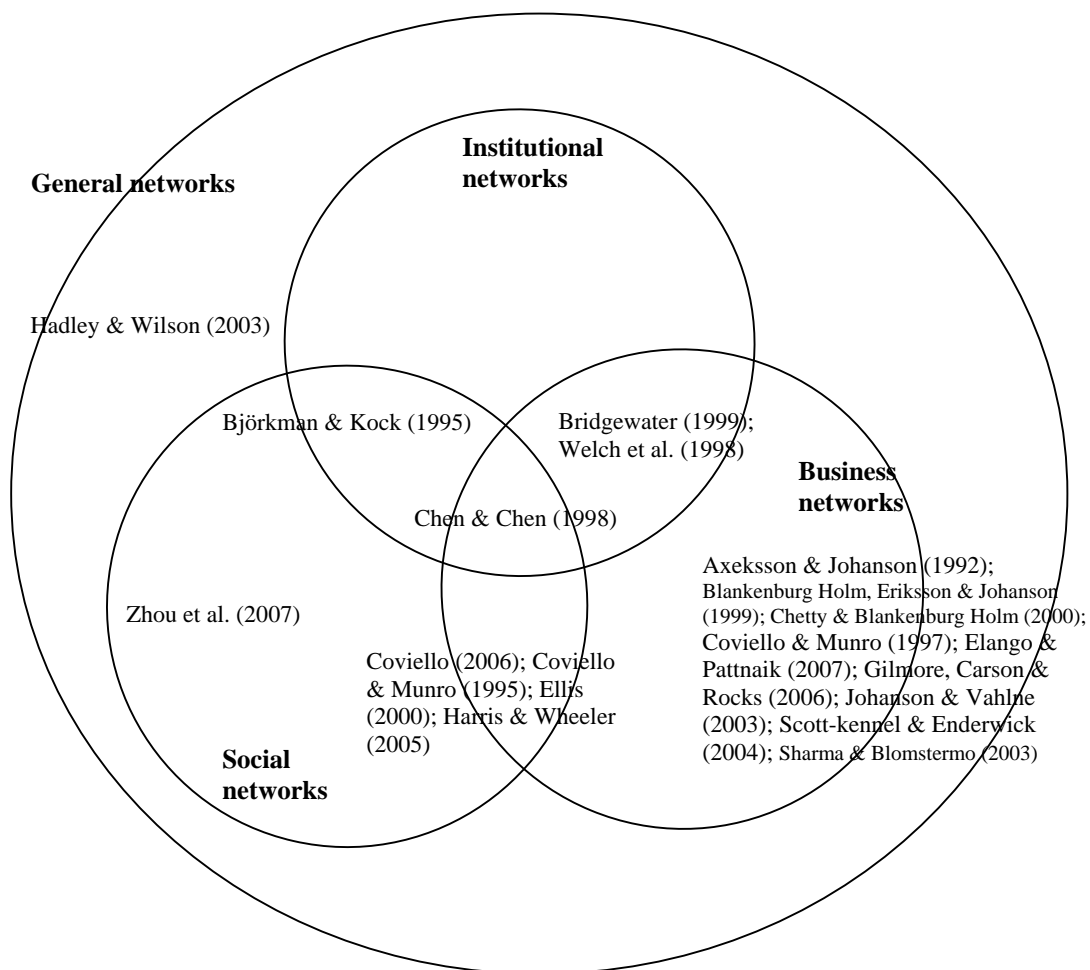
3.7 What kind of network?

As mentioned before, the articles looking at the impact of network approach on internationalisation in the early stages only focused on business networks. Other kinds of networks, for instance, social and institutional networks, were simply not covered in these studies. Even though there might have been an impact from non-business actors on the focal firm's business networks (Blankenburg Holm and Johanson, 1997), they have largely been left out. It seems to have been assumed in the early literature that social and institutional networks are consequences derived from continued business exchanges. This "business-network only" strategy seems to encounter certain conflicts when studies focus on Western MNEs entering emerging countries. Björkman and Kock (1995) later argue that in some contexts, social relationships are a prerequisite, rather than the outcome of ongoing business exchanges as assumed in early literature. These authors demonstrate that in some countries, (e.g., China), where the social network has generally penetrated all aspects of social functions including business transactions, it seems to be impossible to begin conducting business without first establishing social connections.

On the other hand, consideration of the networks between focal firms and various institutions are also missing from the research. Institutional networks can be described as connections to non-commercial agencies (Blankenburg Holm and Johanson, 1997), such as government bureaus, banks, law firms, and others which have an impact on the focal firm and its relationships. The influence of relationships with institutions seems to be a persisting issue in firms' internationalisation process but has been rather neglected or lacks clarification in early research. The study by Zhou et al. (2007) focuses on social networks and their role in

mediating firms' performance. One of the variables they looked at, 'guanxi' (Chinese term for network) actually includes 'cultivating ties with local government agencies (p.682). The research from Welch et al. (1998) is probably one of the few that specifically deals with institutional networks. It found that the role of government trade promotion agencies can provide the legitimacy that a business network needs and have a positive impact on facilitating the growth of the business network.

Figure 3.2 Three types of networks



From our review, it can be seen that the majority of the articles only look into business networks, with relatively little attention given by researchers to exploring fields in connection with social and institutional networks. Nevertheless, this review process also found that most of the articles failed to clarify what kind of networks were discussed in the papers. Hadley and Wilson (2003) propose to understand whether firms' internationalisation knowledge

contributes to the process. However these knowledge constructs do not explain what kind of actors and in which networks the focal firms are dealing.

The clarification of unit of analysis should be greatly appreciated as it will facilitate easier comparison between studies. In addition, without specifically addressing the unit of study, readers may assume the choice of study (e.g., business network) may be the sole factor contributing to the internationalisation process. Vice versa, studies that cover all kinds of networks without clearly identifying them can also cause confusion.

3.8 What has been studied?

Networks, by definition, refer to sets of inter-connected exchange relationships surrounding the focal firms. Then in terms of business networks, we are studying the web of exchange relationships between business units (Blankenburg & Johanson, 1992). Firms in the network are dependent on each other, and their activities need to be coordinated (Johanson and Mattsson, 1988). Hence, it is arguable that a study that only focuses on relationships from a single dimension, lacks interaction and interdependence, and does not lead to any form of coordination and cooperation, can hardly be really described as a network study. In other words, a study of a firm's relationships cannot automatically be considered a network study, if there is no connection between these relationships.

However, there are also various challenges to researching and presenting a network study that fits the explicit format. Studies that manage to capture both sides of the relationship, for instance, a supplier and customer pair, are rare. Besides this issue, the limited space in a journal article likely requires researchers to be selective on what content he or she presents. If not careful, the characteristic of networks can be lost in the research design and report. Qualitative methods, in particular case studies, continue to be one the favoured methodology for researchers who wish to capture a holistic and contextual view of the networks. However, the research questions posed become vital to achieving a network study. For example, studies that exclusively emphasize relationship development of the firms or entrepreneurs risks potentially missing the network and becoming a presentation of relationship management (Harris and Wheeler, 2005).

Quantitative methods used in studying networks can also cause confusion or mismatch due to the choice of proxy being measured. For instance, the measurement of the 'Guanxi network' in Zhou et al (2007) contains a mixture of social networks and ties with local governments and communities. Without further explanation, it will be difficult to understand what exactly has been measured in this guanxi network variable. A case of mismatch can

unfortunately be found in the studies by Hardy and Wilson (2003). Building on the assumption made in the article by Johanson and Mattsson (1998), the network was introduced as an independent variable that will have an impact on the firm's internationalisation, and the level of foreign institutional and foreign business knowledge acquired. However, the proxy data used to refer to the level of network internationalisation is actually secondary, industry-based data showing the percentage of goods exported by this industry. Hence, the variable presented in the study can hardly be argued to be the same as the network in Johanson and Mattsson's model.

Network researchers should have the understanding and intention to analyse and illustrate the network of the focal firms being studied, and carefully chosen methods may also assist to achieve this. Welch et al. (1998) present a study of two groups of Australian exporters, (hay and grain exporters) organised by a government trade promotion agency (Austrade) to collaborate in entering selected foreign markets (Japan and China). By obtaining information from different actors (exporters, government agencies), the study gives a vivid illustration of the interaction between various actors, and inter-dependencies inherent in the relationship. The study also showed that the network structure evolved as the project developed. The withdrawal of the government agency after two years had a negative impact on the network providing an extremely valuable case to compliment numerous studies that focus solely on the 'bright' side of business development.

Through our review, we have also identified that studies of network theory in internationalisation can apparently be divided into two areas of focus. The first group, which we labelled the 'structural group', focuses on the structure or elements of the network at the time when firms become internationalised. Scholars in this group attempt to understand the source of these networks and relationships that are important for firms' expansion (Harris and Wheeler, 2005), who the actors in the networks are (Bridgewater, 1999), and where these networks may lead them to (Chetty and Blankenburg Holm, 2000). The second group, which we named the 'functional group', tries to establish the impact that the network and the internationalisation process have on the focal firms. The emphasis is placed on understanding what networks and internationalisation mean to these firms, in terms of asset seeking (Chen and Chen, 1998), capability building (Elango and Pattnaik, 2007), marketing behaviour (Gilmore et al., 2006), and future performance (Zhou et al., 2007).

We also noted that some studies attempt to combine both the structure and influence of the networks and internationalisation process. Coviello's (2006) work on INV provides an in-depth understanding of the content of the network (family/friend, or business), the

direction (inward or outward), and the duration (short /medium /long term). In addition, the design of the studies also compares the changes of the network's structure with the stages of a firm's business development. The studies discover a strong link between the pattern of the network that the firm is engaged in and their stage of maturity, hence constructing unique and more compelling evidence of the influence networks have on a firm's internationalisation process. In other words, a carefully designed, protracted study which allows the researcher to observe both the structural and functional sides of networks may result in a more solid understanding of the impact a firm's networks have on their internationalisation process.

4 Conclusion

This paper represents an attempt to review articles that apply network approach to studying the internationalisation phenomenon and thereby establish an understanding of the development of this framework since it was first published in 1988. This article has used the origin of the publication, the type of the markets, the methodology, the level of analysis, the type of networks, and the focus of the studies to approach literature collected through a systematic search. We can see the network approach was initiated by research in Sweden and other Scandinavian countries, but gradually it has been adopted by scholars from various backgrounds. The markets represented in the papers have also begun expanding to cover different regions of the world, and cover open, developed economies as well as emerging and transition markets. Initial studies looked at business networks between focal business units, and later on growing attention has been drawn to social and institutional networks. Empirical results have also provided potential opportunity to include different levels of analysis in the network studies. By examining what has been studied, this article aims to establish a constructive view of what can be done in the future, and encourage more research in this field.

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Appendix 1 Theoretical framework, purpose and research finding

Empirical papers

Authors	Theoretical framework	Purpose	Research findings
AxeKsson & Johanson (1992)	Network theory (Johanson & Mattsson, 1988); Foreign market entry (Root, 1982)	To compare the difference between traditional foreign market entry and network theory.	<ol style="list-style-type: none"> 1. Foreign market entry is a process which takes place over time, rather than a single event suggested by the traditional theory. 2. The foreign market entry process involved various actors in various field, it is not controlled by any single actor. 3. The entry process can be seen as a set of connected learning processes.
Björkman & Kock (1995)	Network theory (Håkansson & Johanson, 1992)	To analyze the role of social relationship when penetrating new business network in foreign markets.	<ol style="list-style-type: none"> 1. Social relationships (in particular in the China context) often are a prerequisite for information and business exchanges. 2. Foreign firms' local presences provide possibility to access social network directly.
Blankenburg Holm, Eriksson & Johanson (1999)	Social exchange theory (Kelly & Thibaut, 1978; Burt, 1992), network theory (Granovetter, 1985)	To investigate the relation between interaction, interdependence and value creation in business network relationships.	<ol style="list-style-type: none"> 1. Building and sustaining of mutual commitment are critical in developing the interfirm value-creating workflow system. 2. Business is created through interaction between the firms concerned. 3. Though strategy space for individual firms will be limited by network embeddedness.
Bridge-water (1999)	Internalisation theory (Hymer, 1960; Knickerbocker, 1973; Buckley & Casson, 1976); incremental theory (Johanson & Wiedersheim-Paul, 1975; Johanson & Vahlne, 1977); Network theory (Johanson & Mattsson, 1988; Axelsson & Johanson, 1992, Blankenburg, 1995)	To understand the extent to three main internationalisation theories hold regarding firms enter Ukraine market.	<ol style="list-style-type: none"> 1. While economic-based and incremental theories have found certain proves from firms' entry into Ukraine, neither of them can fully explain the entry decisions among firms. Richer insights into the complex influence upon these entry decisions are offered by network theories of internationalisation.
Chen & Chen (1998)	Strategic linkage theory (Nohria & Garcia-Port, 1991), network approach (Johanson & Mattsson, 1987), FDI (Dunning, 1995 & 1997)	How network linkage interact with firm-specific assets and location-specific factors to determine the locational choice in FDI (Taiwan's outward FDI).	<ol style="list-style-type: none"> 1. The availability & ease of establishing network linkages are significant determinant in the location choice of FDI. 2. Strategic linkage active in high-tech & relational linkage more in mature industry.
Chetty & Blankenburg Holm (2000)	Network theory (Johanson & Mattsson, 1988)	What network relationships drove interationalisation for the firms in the 4 categories of Johanson & Mattsson's (1988) model?	<ol style="list-style-type: none"> 1. A wider network of relationships to internationalise maybe needed. 2. Other actors' internationalisation may affect firms in the business network. 3. Firms can use intermediaries in the internationalisation process. Firms' current business networks can form a bridge to enter new markets. 4. The decision maker of the firms play an important role in pursuing opportunities arose in the network.
Coviello	Network theory (Granovetter, 1973;	The network structure & interaction of	<ol style="list-style-type: none"> 1. Support networks facilitate INVs by market access, financing, distribution

(2006)	Larson & Starr, 1993; Hite & Hesterly, 2001) & International entrepreneurship	INVs.: do INV networks follow a linear path of evolution (social embedded ties w smaller networks to economic ties w larger network)?	<p>etc.</p> <ol style="list-style-type: none"> 2. Network relationships are intangible, salient to organisational growth. 3. Network is important to pre- int' (from inception) & is economic ties rather than social. 4. No single networks pattern across INVs. 5. Network size tend to increase as density decrease through time.
Coviello & Munro (1995)	Network theory (Johanson & Mattson, 1988)	To examine network theory in the context of the entrepreneurial firm.	<ol style="list-style-type: none"> 1. For high-tech entrepreneurial firms, foreign market selection and entry initiatives emanate from opportunities created through network contacts, rather than solely from the strategic decision.
Coviello & Munro (1997)	Uppsala Model (Johanson & Vahlne, 1977); network theory (Johanson & Mattson, 1988; Johanson & Vahlne, 1992)	To understand how network relationships influence the small firm's approach to internationalisation, particularly in terms of foreign market and entry mode selection.	<ol style="list-style-type: none"> 1. Inward relationship facilitated outward expansion. 2. While network relationship enhanced the internationalisation actives, they also constrained the pursuit of other opportunities. 3. Market experience and success over time led to increased knowledge and increased commitment to foreign market development.
Elango & Pattnaik (2007)	Uppsala model (Johanson & Vahlne 1977, 1990); network theory (Johanson & Mattsson, 1987, 1988)	<p>What's the relationship between underlying firm characteristics & internationalisation in the emerging market?</p> <p>How is this relationship facilitated by parental network capabilities?</p>	<ol style="list-style-type: none"> 1. Learning within network is a viable option to build capabilities for international operations. 2. Emerging market firms belonging to the networks can access scarce resources from business group members. 3. Bridge ties with foreign partner is a source for information and opportunities.
Ellis (2000)	Social network (Burt)	Relationship initiation, particular in the context of internationalisation, is absent from major theories.	<ol style="list-style-type: none"> 1. The awareness of foreign market opportunities is acquired via existing social ties.
Gilmore, Carson & Rocks (2006)	Networks theory (Chetty & Holm, 2000); International marketing, marketing mix	How SMEs owners/managers use networks to do marketing during at the period when foreign MNEs entering the regional market.	<ol style="list-style-type: none"> 1. SME owners/managers can be categorised into clusters based upon how they do marketing. There is wide variation in marketing behaviours, extent and usage.
Harris & Wheeler (2005)	IMP group and network theory	To understand what are the functions of relationships in the internationalisation process; where do these relationship come from, and what strategy to pursue relationship development.	<ol style="list-style-type: none"> 1. Relationship does not come from particular networking events; they may come from all kind of resources and venues. 2. These relationships all have strong social and personal elements. 3. Relationships are not planned, but evolved with trust and knowledge.
Hadley & Wilson (2003)	Network theory (Johanson & Mattsson, 1988; Eriksson et al, 1997)	Whether firms' knowledge – foreign business knowledge, foreign institutional knowledge, internationalisation knowledge will contribute to their internationalisation	<ol style="list-style-type: none"> 1. Internationalisation knowledge is related to the firm's market diversity. 2. Foreign institutional knowledge is related to the level of firms& market internationalisation.
Johanson & Vahlne (2003)	Uppsala model (Johanson & Vahlne, 1977); network model (Johanson & Mattsson, 1988)	To outline the business network model of the internationalisation process.	<ol style="list-style-type: none"> 1. Internationalisation in network perspective is associated with relationship establishment and development, while entry mode and country of entry appear to be not concerned.

			<ol style="list-style-type: none"> 2. Uppsala Model's internationalisation theory is bound to the market (country), while network perspective is bound to the network and relationship that belong to the firm. 3. However, network theory still have base on network knowledge establishment and development is incremental step, and commitment and learning are still interplay with each other.
Scott-kennel & Ender-wick (2004)	Eclectic paradigm	To address the inter-firm relationship between MNC's subsidiary and external actors by using 'quasi-internalisation' to refer certain ownership-specific resources transferred outside the firm's boundary.	<ol style="list-style-type: none"> 1. Quasi-internalisation occurred most frequently in downstream actives, via relationships with customers and agents for marketing and distribution of the subsidiary's products. 2. Quasi-internalisation was complementary to FDI, both MNC-subsidiary resource transfer & subsidiary competitive advantage were positively related to subsidiary-to-local partner resource transfer. 3. Resource transferred between sub and their local alliance partner tended to be asymmetric in nature.
Sharma & Blom-stermo (2003)	Uppsala Model (Johanson & Vahlne, 1977); Behavioural theory of the firm (Penrose, 1959; Cyert & March 1963); Knowledge sharing (Eriksson et al, 1997), Social network theory (Granovetter, 1973 & 1992, Burt, 1982 & 1997)	<ol style="list-style-type: none"> 1. To understand which theoretical framework should be applied in order to understand and explain the born global phenomena? 2. To propose that models emphasizing knowledge and network ties are suitable to explain the internationalisation process of born global. 3. To argue the internationalisation process of born global is a reactive process. 	<ol style="list-style-type: none"> 1. Knowledge based behavioural internationalisation process models are suitable for explaining the internationalisation process of born global firms. 2. The internationalisation process of born global is a matter of learning through networks. Weak ties are important to the process as improvisation such as knowledge search and evaluation process can be built upon it.
Welch, Welch, Young & Wilkinson (1998)	Network theory (Blankenburg & Johanson, 1992; Johanson & Mattsson, 1992; Håkansson & Snehota 1995)	To address the nature of the network connections that can arise within export grouping schemes, the effect they may have on export success, and the role government can play in encouraging and managing network development.	<ol style="list-style-type: none"> 1. Export promotion is about networking; however, networking should not only be a vehicle for foreign market entry. Network outcome should be value in their own right, and participation is critical to network development and knowledge creation, as well as contribute to firm's strategic foundation for longer term foreign market growth.
Zhou, Wu & Luo (2007)	Social network theory (Ellis, 2000; Harris & Wheeler, 2005) & International Entrepreneurial theory (Zahra et al., 2000; Zahra, 2005)	To identify the mediating role of home-based social network in the internationalisation process and its relation with firms performance.	<ol style="list-style-type: none"> 1. Guanxi network mediate the performance impact of outward internationalisation on export & profitability growth, not on sales. 2. Guanxi network mediate the performance impact of inward internationalisation only on export growth, not profitability nor sales.

Conceptual papers

Authors	Theoretical framework	Purpose	Research findings
Johanson & Mattson (1988)	Buyer-seller / industrial customer – supplier relationship	Aim to explain internationalisation of firms from the perspective that industrial markets can be seen as networks of relationships between firms.	<ol style="list-style-type: none"> 1. The internationalisation of the firms means that the firm establishes and develops positions in relation to counterparts in foreign networks. 2. According to the degree of internationalisation of the firm, and the internationalisation of the market, firms can be categorised as the early starter, the lonely international, the late starter, and the international among others.
Johanson & Vahlne (1990)	Behavioural theory of the firm (Penrose, 1959; Cyert & March 1963); Uppsala Model (Johanson & Vahlne, 1977; Johanson & Wiedersheim-Paul, 1975); Eclectic Paradigm (Dunning 1988); Network theory (Johanson & Mattsson, 1988); advantage package & cycle (Sanden & Vahlne, 1976)	To discuss the mechanism of internationalisation process.	
Blankenburg & Johanson (1992)			
Welch & Welch (1996)	Internationalisation theory (Johanson and Vahlne, 1977), network theory (Ford, 1990), knowledge management (Nonaka et al, 1994).	<ol style="list-style-type: none"> 1. To understand the link between internationalisation theory and strategy issues at both the conceptual and practical levels. 2. To examine internationalisation and networks from the strategy perspective. 	<ol style="list-style-type: none"> 1. Network development is as an outcome of the internationalisation process, contributing to the strategic foundation as part of the continuous loop that international activities set in motion.
Johanson & Vahlne (2006)	Uppsala model (Johanson & Vahlne, 1977); network model (Johanson & Mattsson, 1988), etc.	To argue that opportunity development is an important outcome of commitment.	<ol style="list-style-type: none"> 1. Opportunities are likely to develop as a consequence of the privileged knowledge the partners create through interaction with each other. 2. Opportunity development in a country market is positively related to mutual relationship commitment with firms, and to the partner firms' network embeddedness in the market.