A time-space network approach to corporate internationalization.

A theoretical reconceptualization

By

Jan-Åke Törnroos	Susan Freeman	Christopher John Medlin
Åbo Akademi University	University of Adelaide	University of Adelaide
FINLAND	AUSTRALIA	AUSTRALIA
jtornroo@abo.fi	susan.freeman@adelaide.edu.au	chris.medlin@adelaide.edu.au

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Abstract

A review of the underlying concepts in corporate internationalization theories points to the opportunity for research that includes time, timing, place and relative location across and within national borders. Different understandings of time and space are integral to the concept of corporate internationalization; that is expansion and contraction of corporate activities by geographical and country location. Ideas on conceptualizing time and space for corporate internationalization are presented. A process model is presented of corporate internationalization strategic decision-making, where processes are embedded in time and space. A number of research opportunities are discussed.

Keywords: Network, events, time, timing, space, place, location

1. INTRODUCTION

Corporate internationalization, defined as firms with direct investments and trade in at least two countries, is a common phenomenon of the modern world. Theories of corporate internationalization have developed over the past fifty years, while at the same time our technologies for communication and trade and our cultural understanding of similarity, diversity, and difference of resources and human capital have been in continual change. New technologies based on knowledge development, often in local regions but in reaction to global forces, have completely revolutionized our economic world.

In addition, the world has become more accessible, with new countries opened for business and deregulation of markets (Castells 1996; Dicken 2007). But distance, location, and territories as well as other spatial entities and boundaries have not disappeared. Multi-National Enterprises (MNEs) still have to deal with specific locations and manage the timing of their business in diverse and manifold economic, structural, cultural and political "spaces", from local to global and across the continents. Also small and mid-sized enterprises (SMEs) have the potential to internationalize in the deregulated markets of today.

In the era of globalization we have been strongly occupied with speed and time as key components. Faster time to market, as in the notion of the *annihilation of space by time* (Harvey 1989), has lead to new business ideas based on global solutions. Time-space compression is available to corporations because of technological advancements in logistics and communication, and especially with the Internet.

The theory of the internationalization of the firm has developed from around 1960 to the present (cf. Björkman & Forsgren 1997; Buckley & Ghauri 1999; Hymer 1960; 1976). At the outset economic perspectives and later a managerial process perspective, also termed behavioral, were emphasized in an attempt to explain the geographic dispersion of firm economic activity across national borders (Johanson & Vahlne 1977). Later on an eclectic model (Dunning 1981; 1988), which adopted multiple economic as well as geographic location perspectives, was developed. More recently, the idea of business networks has been incorporated into the managerial process theories (Johanson & Mattsson 1988; Johanson & Vahlne 2009). In addition the arrival of so-called "born global firms" has required more novel explanations (Freeman, Hutchings & Chetty 2012 (forthcoming); Oviatt & Mcdougall 1994). However, these theoretical advances have not fully addressed the underlying matters of time and space, which are at the heart of the corporate internationalization concept and which have so strongly been re-shaped by new understandings and technologies.

The objective of this paper is to open new research opportunities in the theory of corporate internationalization. Our focus is on the theoretical concepts that allow an understanding of corporate geographic expansion, contraction and change. Different international operational forms and the ways global corporations are managed are not reviewed. The main theoretical focus of the paper is based on the network approach and the spatial and timing issues related to the internationalization of the firms taking into account both inward as well as outward operations (Luostarinen & Welch 1988).

In the next section we briefly reflect on the underlying theoretical elements within each of the chosen internationalization theories. This allows a summary overview of the elements by theory. Apparent is the underplayed role of time, timing, place, and relative location within corporate internationalization theories, with these constructs implied, forgotten or even rendered invisible. Strangely these concepts are the foundation of all other corporate internationalization constructs. Next is a brief conceptual exploration of time and space. Here the intention is to provide the underlying ontological assumptions for a process based development model of corporate internationalization, from the perspective of strategic management. In the final sections we elaborate the research and managerial implications of including a time-space perspective within corporate internationalization theory.

2. INTERNATIONALIZATION THEORIES

Corporate internationalization concerns firm growth, with the firm extending operations geographically, either as a means to efficiently obtain and internalize new resources or as a means to handle competition from other firms. Usually these two imperatives are handled at the same time and internationalization is the outcome. At the broadest level this suggests two perspectives can efficiently cleave theories of corporate internationalization: economic concepts and managerial process. [1]

Economic Theories

The first theories of corporate internationalization were dominated by economic considerations. The theory of the growth of the firm (Penrose 1959), the internalization theory (Hymer 1960; 1976) and the product life cycle approach (PLC) (Vernon 1966; 1979) formed three main streams in the early economic internationalization theories. Penrose's model (1959) of the firm does not explicitly consider internationalization, but the growth idea explained geographic expansion for later authors (e.g. Buckley 1988; Luostarinen 1979). Interesting is that Penrose's model (1959) also contains what is referred to as behavioral theory, with an explicit focus on managerial decision-making.

Firms grow and internalize resources (Dunning 1980; 1988; 2001), until they are so successful that the best alternative for future growth is geographic expansion (Dunning 1980). Internalization received even greater theoretical significance after transaction cost was elaborated (Williamson 1975). Corporate growth, new market opportunities, internalization and vertical integration were seen as the main driving forces for internationalization (Buckley & Casson 1976; Rugman 1980). Rational decision-making, following the "Economic-man perspective", and a belief in classical markets constituted the theoretical world of the first corporate internationalization theories.

[1] The managerial process concept is used here to highlight the process perspective, rather than propogate the earlier behavioral turn in managerial writing. See also Johanson and Vahlne (2009, 1413). The behavioral term underplays, and even ignores, the role of connectedness in shaping managerial processes over time.

Buckley and Ghauri (1999) continued to hold that the ”dominant paradigm in research on the multinational firm is the internalization approach” (Buckley and Ghauri, 1999, xi). According to Dunning (1995), the basic motive for firms to internalize activities and resources is the existence of imperfect markets. Market imperfections may be structural as well as cognitive. Uncertainty over future markets forms a cognitive reason and government policies and geographic factors form a structural variable. Motives for internalizing activities within the Multi-National Coproration (MNC) are at least the following[2]:

1. Both to generate innovations and ideas and to retain exclusive right to their use (inside the control of the firm) (Dunning, 1995).
2. The desire to minimize risk and/or cost of fluctuating exchange rates; to cushion the adverse effects of government legislation or policy, for example in respect to dividend remittances; to be able to take advantage of differential interest rates and “leads” and “lags” in intra-group payments (Rugman, 1980).
3. To avoid intervention from public policy makers in the allocation of resources.
4. The eclectic approach is mainly connected to the work of Dunning (Dunning 1980; 1995; 2001) on the topic of why multinational firms exist and what logics are driving their expansion and growth. These works have an economic focus even though there is a many-sided approach to why MNCs exist and what reasons or drivers create MNCs and their management.

Dunning’s (1995) eclectic paradigm is based on three main propositions related to (i) location-specific advantages, (ii) ownership advantages and (iii) internalization advantages. In addition to building on the Ownership Advantages and Internalization (Market Imperfections) Theories, Dunning’s Eclectic Paradigm (1980) adds the location advantages element. This element is especially important because a number of studies have shown that ‘host-country’ factors continue to influence a firm’s decision on whether or not to re-invest in a subsidiary long after the initial FDI (Birkinshaw & Hood 1997; Birkinshaw, Hood & Jonsson 1998). This location factor recognizes the way resources are ‘location bound’, meaning that their value is limited to their country (Rugman & Verbeke 1992).

Traditionally, the most common sources of location advantages have been natural resources, such as oil and minerals, and the geographic location of a particular country between resource supply and many markets. Thus, this paradigm explains why the world’s oil companies invest in locations where the oil is located and also at transport hubs, so that they combine their technological and managerial knowledge with different location advantages (Mina, 2007).

Location advantages can also be acquired (Cantwell, Dunnning & Janne 2004; Dunning 1980; 1988). One example is a low-cost, highly skilled labor force. However, labor is not generally internationally mobile (Hill, 2005). Consequently, according to the Eclectic Paradigm (Dunning, 1980) a firm should locate production facilities where the cost and skills of the local labor force are most appropriate to the firm’s production process. Thus, Silicon Valley has a location advantage in terms of innovation and knowledge generation in the knowledge intensive high-technology information and computer semiconductor sectors (Ketelhohn 2006). Krugman (1991)

[2] This is not an exhaustive list, but covers the main factors in the literature.

argues that this advantage originates from the concentration of intellectual talent embedded in the region, and through informal inter-firm networks within which knowledge is frequently tacitly shared. These regions, which provide externality benefits, have been described by Krugman (1991) as knowledge 'spillovers' locations.

Dunning (1995) epitomizes the economic perspective of internationalization and concludes that, ”the ownership advantages of firms stem from their exclusive possession and use of certain kind of assets. Very often firms acquire these rights by internalizing those previously distributed by the market or public fiat, or by not externalizing those which they originate themselves.” Being multinational offers new internalization advantages for firms. These include e.g.:

1. The access to markets and raw materials not available to competitors
2. Size and scale economies
3. Exclusive possession of intangible assets
4. To take advantage of the different market endowments where the firm operates, skills and locations compared to home based competitors.

Dunning (1998) also notes location in a particular country, as an attraction for mobile investors. In particular, Dunning (1998, pp.50) notes the growing importance of “firm-specific knowledge intensive assets in the wealth-creating process, and the kind of customized assets, e.g., skilled labor and public infrastructure, which [are] needed to be jointly used with these assets”. Also important for Dunning (1998, pp.50) is the change in “spatially related transaction costs”, which have concentrated some industries and dispersed others. Dunning's (1998) explanation for these contrary geographic patterns according to different industries is that the tension between market and internalization is playing out differently in each industry's value chain. This is a particularly economic argument concerning location, rather than a forward looking strategic perspective based on knowledge development and change.

Returning now to the role of competition, this is found in the product life-cycle concept (PLC), where variations in PLC across different geographic zones provide reasons for company internationalization. Vernon (1996; 1976) explains the emergence of international trade and investment by the PLC. The basic theoretical assumptions are that location of new products starts in advanced economies (e.g. USA) and then diffuses to less developed economies. Once the new product arrives at maturity in the home market, opportunities for growth are best in new markets with less competition. According to Vernon (1966) investment in export systems starts first because they are preferable to Foreign Direct Investment (FDI). However, provided wages and costs are lower, then FDI is economically rational and eventually even export back to the home location is expected (Vernon, 1966, 19).

The PLC-approach to internationalization follows firm-specific developmental stages as well as external markets at home and abroad, as the drivers for corporate internationalization and trade. Ways to consider location are left implicit, except that markets at different PLC stages evidently exist in some location way. Further, the notions of technological change and deregulation of markets was not taken into account in the PLC model. Time was always in focus through the concept of market product diffusion, but the markers for time are given in the conditions of the respective market networks. Thus, time in the PLC stages remains relatively static and changes by stages. The processes of firm managers were not accounted for in these economic theories of corporate internationalization, although decisions to internationalize into new markets implies managerial prerogative.

In summary, the economic perspective of corporate internationalization conflates a geographic and economic perspective. Rugman, et al. (1986) presents a general model for the internationalization of multinational corporations, which effectively characterizes the joint economic and geographic perspectives. Rugman, et al. (1986) presents two sets of variables (see figure 1): the environment (i.e. geographic) and the corporation (i.e. economic):

Environmental	**Company**
Country-specific Location specific	Firm-specific Ownership specific
National aggregate production function (Labour, Technology, Management) + Political-cultural system & government	Special advantages of MNCs • Knowledge • Management • R & D skills • Strategic planning skills

Figure 1: Two sets of variables in a model of the MNE (Rugman, et al. 1986)

Managerial Process Theories

Aharoni (1966) was the first to consider managerial factors in a theory of corporate internationalization. Aharoni (1966, 13) states, "Foreign direct investment is seen as a complicated social process". The triggering signals for FDI (Aharoni, 1996, reprinted in Buckley and Ghauri, 1999) are the following:

1. An outside proposal.
2. Fear of losing a market.
3. The 'band-wagon' effect: very successful activities abroad of a competing firm in the same line of business, or a general belief that investment in some area is a 'must'.
4. Strong competition from abroad in the home market.

Aharoni (1966) indicates many different reasons for expanding abroad, and these are on a continuum from either "drifting" abroad or intentionally or strategically planning for internationalization. Aharoni (1999) highlights the essential human and social nature of the firm internationalization process: "It should be reiterated that a human being is not a mathematical programming machine. He has limited faculties and limited ability to focus his attention. A multiplicity of reasonable alternatives always exists. His priorities are driving his time and attention among them depends on many factors. ... What factors make an organization veer off its 'normal' path and look abroad?" (Aharoni 1999, 13).

This process and manager oriented internationalization process, named at the time the behavioral perspective, was strongly positioned by the Uppsala internationalization model (Johanson & Vahlne 1977; 1990). Internationalization was hypothesized to take place through incremental steps into new markets, according to least psychic distance (Johanson & Wiedersheim-Paul 1975). The concept of psychic distance, introduced as a 'stage' model' by Johanson and Wiedersheim-Paul (1975) was seen as a factor disturbing the flow of information between firm and market. Factors included consisted of differences in language and culture, education, and political differences (Johanson and Vahlne, 1977, 1990).

A more important element of the Uppsala model is the concept of process (see Figure 2). The model expounded that commitment to a market lead to new knowledge and so further changes in commitment in the current or new markets. The underlying theoretical element is that processes are required to undertake corporate expansion. Implied is that time is a resource, and that processes such as learning and commitment take time to enact.

However, the Uppsala model leaves time and timing as implied and focuses instead on knowledge as an outcome of process, and in turn an input for corporate expansion and change processes. The view is that internationalization requires both general knowledge as well as market specific knowledge. Market specific knowledge is obtained mainly through experiences from specific markets and transferring of knowledge takes place through business activity. Decisions to commit to a market are concerned with how much of the current resources are used for foreign operations (Andersen 1993; Johanson & Vahlne 1977).

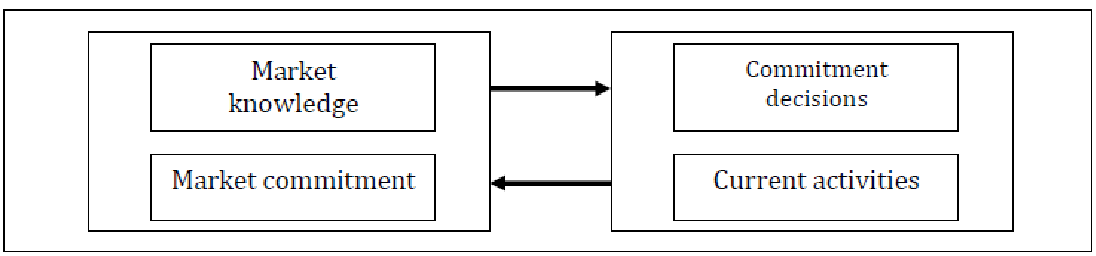

Figure 2: The internationalization process of the firm (Johanson and Vahlne, 1990)

An interesting conceptualization is that of "backward internationalization" (Luostarinen and Welch 1988), where learning processes lead to a re-configured commitment and so a contraction of corporate operations. Similarly following a process perspective, Andersen (1993) connects the phases of technological innovation (Rogers 1983) to an incremental model of firm internationalization and refers to four sets of authors that expound a phase process perspective of internationalization (Bilkey & Tesar 1977; Cavusgil 1980; Czinkota 1982; Reid 1981). In all of these managerial process perspectives, there is an underlying assumption that corporations are strategically planning their commitments according to some timing and location criteria. Of course whether planning eventuates in international operations remains captive to many other factors, including chance.

Most recently the business relationship and network perspective has been integrated into the Uppsala model. One can argue that the process perspective spawned both the Uppsala model and the IMP business relationship and network model. In 1988 Johanson and Mattson (pp. 297-306) gave guidelines on how networks might influence a corporation's internationalization processes (see figure 3). They start from the assumptions that a firm's position in the network is a key factor to maintain and develop if the firm is to achieve objectives. Both the degree of internationalization of the firm, as well as the internationalization of the market, influences the process. Noteworthy is the role of time in development of the firm and the networks; in fact time and geographic variation underlie both dimensions of figure 3. However, the way time and location are conceptualized remain implied.

		Degree of internationalization of the market (The production net)	
Degree of firm internationalization	Low	The Early Starter	The Late Starter
	High	The Lonely International	The International Among others

Figure 3 Internationalization and the network model (Johanson and Mattson, 1988).

The role of business relationships and networks in corporate internationalization is explicitly recognized by Johanson and Vahlne (2009; 2011), as the conduits for the learning processes that create market knowledge. Johanson and Vahlne (2009) also note the role of time and see interaction occurring within a structure elaborated as past, present and future. They do not however elaborate space.

Finally, a comment regarding the size of the corporation is required. More recent internationalization literature has discussed Small and Medium Enterprises (SMEs). These corporations can internationalize quite quickly in an Internet connected environment (Oviatt & McDougall 1994). The literature on Born Globals (Chetty & Blankenburg Holm 2000; Freeman, Edwards & Schroder 2006; Freeman et al. 2012 (forthcoming)) also recognizes the role of business networks in taking small firms into international markets. In contrast to Johanson and Vahlne (2003, 90), who emphasize ''market specific experience and operation experience'', Freeman, et al. (2010) emphasize ''technological experience'' in a specific field. They argue that technological experience is similar to operation experience and so can be utilized across a wide range of markets. However, the technological connections in the network also allow fast meeting of firms across larger distances and so allows expansion via business relationships to distant network locations. Further, competition leads to faster technological adoption and the creation of new co-dependencies between firms. Thus, Freeman, et al. (2010) emphasize the importance of networks, explaining that as "an outcome of the born-global manager's ability to locate new partners through existing networks, new international links may be quickly developed, with internationalization being an outcome, but not necessarily a driver of behavior in smaller born-global supply chains" (p. 70).

The successful establishment and subsequent growth of SMEs involved in high-technology knowledge intensive enterprises is frequently argued to ”benefit from location within a geographical cluster, or regional technology-oriented complex (TOC)” (Keeble, Lawson, Lawton Smith, Moore & Wilkinson 1998, 327). This regional clustering provides advantages through formal and informal networking, connections and various information flows (Chetty & Campbell-Hunt 2004), especially within an ’innovative regional milieu’ (Hansen 1992; Senik, Scott-Ladd, Entrekin & Adham 2011). From a theoretical perspective, transitional economic theories do not adequately address the phenomenon (Bangara & Freeman 2012 (forthcoming); Keeble et al. 1998), whereas network theory and international entrepreneurship provide some understanding of these firms fast expansion (Dimitratratos, Plakoyiannaki, Pitsoulaki & Tuselmann 2010).

Conclusion

Table One presents a summary of the corporate internationalization theories in two groups: the economic and managerial process perspectives. In addition the ontological status of the theories is noted along with the key constructs.

In concluding this section we note that theories of firms and managerial action usually seek answers to the questions of *why*, *when*, *where* and *how*. In examining the elements of corporations engaging in international expansion we found a focus on the *why* and *how* questions. The internationalization theories are strangely quiet on the *when* and *where* questions. In table two we summarize key construct treatment in corporate internationalization theory, and present our initial thoughts on how the *when* and *where* questions are addressed in past conceptualizations. In the next two sections we develop a human apprehension of time and space in a network framework, which allows presentation of a supplemented model of decision processes for a time/space internationalization perspective.

3. ELABORATING TIME

Corporate internationalization is a process and so occurs over time, with firms expanding and contracting foreign investment as they seek resources, access to markets and to position themselves relative to competitors. Internationalization is a dynamic process of internalization as well as ways for corporations to act and compete with other firms.

In the internationalization literature time is treated in two main ways. First, time is treated as static, with a period of time frozen, as in the economic theories. Second, time is conceptualized as sequential phases as in the managerial process theories. However, we contend that a deeper elaboration of time opens new ways to understand the corporate internationalization process as strategizing through time. The strategic perspective is necessarily organizational and across time (Gavetti & Rivkin 2007) and involves working from the present into the future (Mcmaster 1996).

Time and timing have been conceptualized as a mixture of objective and subjective meanings by Orlikowski and Yates (2002). In the objective view time operates as an environment, or backdrop, for business interaction. In this view, the metronome of clock time enables synchronization of business interaction (Halinen, Medlin & Törnroos 2012).

	Ontology/perspective	Theories of internationalisation	Key constructs
ECONOMIC	**Positivist ontology** • Positivist/ logical empiricist • Quantitative • Nomological • 'Rational'	• Internalisation theory • Theory of the growth of the firm • PLC-theory • Transaction cost theory	• Internalising and control • Productive opportunities • 'Economic man' • Transaction costs • Control and co-ordination • PLC • Economic efficiency
		• The Eclectic paradigm of FDI/MNE	• Locational advantages • Ownership advantages • Internalising advantages of MNCs
MANAGERIAL PROCESS	**Process ontology** • Managers decision-making • Bounded rationality • Partly socially constructed reality	• Stepwise FDI-decision models • The "Uppsala school" • Innovation process models	• Market knowledge • 'Psychic distance' • Market and corporate commitment • Incremental stepwise growth of international operations • Innovation processes
		• Network approach to internationalisation • Born Globals • SMEs internationalising	• Connected exchange • Relationships and networks in management • Interdependence • Connections takes firms abroad

Table 1: Ontological viewpoints and theoretical models and constructs within the corporate internationalization theory

Table 2: Time and Space within Internationalization Theories

		Dimensions			
Theory	**Authors**	**Actor and Environment**	**Change mechanism**	**Time**	**Space**
Economic Theories	Buckley and Casson 1976	Firms in markets	Hidden in market (see Johanson and Vahle 2011)	Static period (market is cleared in the given time period)	No distance (Resources perfectly mobile)
Step-wise /"Stage Model" Exporting/FDI decision	Johanson and Wiedersheim-Paul 1975	Firms in markets	Hidden in market	Static period	No distance
Eclectic Paradigm/ OLI Model	Dunning 1998	MNEs in multiple markets	Market and managers (HQs and subsidiary managers)	Stages	Geographic locations Heterogeneous space
Uppsala School/ Internationalization Process (IP) Model	Johanson and Vahlne 1977; 1990;	Firms disconnected/ countries	Experiential Learning-Commitment	Incremental States	Psychic distance is important in the original experiential learning-commitment interplay IP model
Networked internationalization	Axelsson and Johanson 1992	Network of firms	Experiential Learning-Commitment	Incremental States -Timing -Position -Orientation	Network comprising actors determines how a new entrant can position themselves. New firm determines the timing of entry and their orientation.
New Uppsala	Johanson and Vahlne 2003; 2006; 2009; 2011	Business Networks as sets of connected relationships (2011, p. 484)	Experiential Learning-Commitment. Processes focusing on Relationships	Sequenced Phases Events that stepwise increase the firm's international commitment (2003, p. 91) Time to develop relationships (2011, p. 486)	Connected and heterogeneous space of firms implied. Psychic distance downplayed.
SMEs/Born Global	Chetty and Blankenburg-Holm 2000; Freeman et al. (2010)	Network of relationships	Commitment Learning Specific knowledge Relationships Relational trust	Sequenced / Phases implied for SMEs. Born global firms may skip, leap frog or miss phases.	Connected heterogeneous space implied, following relationships across network

The additional perspective is that time and timing are created by the way actors interact (Bluedorn 2002; Nowotny 1994; Sorokin & Merton 1937). In this perspective time is considered as relational (Halinen & Törnroos 1995), with actors creating a past-present-future. Johanson and Vahlne (2010) rely on this time perspective in elaborating internationalization as a process of present interaction within an interaction structure composed of the past-present-future.

The metronome role of time in internationalization is within the objective meaning of time. Clock time, in the form of Greenwich Mean Time, is a socially created and objective means of synchronizing business activity around the globe. However, time is a purely human construct, which is known inter-subjectively (Halinen et al. 2012). In this constructivist perspective, time is not absolute. Rather time refers to social time, where events are connected to each other in meaning. Time and events are thus a property relative to the entity and the nature of the entity shapes time (Bergmann 1992; Hedaa & Törnroos 2008). For example, Kavanagh and Araujo (1995) consider time as a social creation, resulting from contestation between two entities with regard to a third.

Taking this perspective, when managers conceptualize and manage international strategy they apply contested forms of time, create timescapes (Adam 2000), prepare timelines, set up timing and coordination of activities, and envisage outcomes against a financial period. The objective time of financial periods is applied as one set of times to achieve activity coordination across space and time. The other times are those created through coordination between internalized firm activity, coordination of business relationships and events in markets.

Halinen, Medlin and Törnroos (2012) have argued that five elements of time: "before time (individual sense apprehension), time flow, time periods, the connected nature of time flow and periods, and different times" can be aplied to process research in business networks. In particular the concept of time flow and periods offer alternate ways to envisage the managerial processes of corporate internationalization. *Time flow* is described as punctuated on-going duration, where events mark *time periods* for manager appraisal and action. These two time concepts would seem to allow considerable differentiation and so deeper understanding of internationalization processes.

Time and Network Internationalization

Humans are intentional, especially in economic matters. Managers act in a context where past investments and experiences, the current situation and their purposeful plan for the future all matter. This way of acting also concerns internationalization, with the important context of relational time playing a necessary role in configuring action. The temporal, non-spatial continuum of time deals with *when* entry strategies into a country are pursued and the duration of entry processes, along with any changing circumstances that affect the process of internationalization.

When time connections are made between internationalizing firms, emerging events and duration of events and processes including speed and tempo now form key terms of internationalization as a temporal matter. When events are connected the past is re-configured and available to a manager making a present strategic decision. These events from elsewhere in the network and also spatial configurations derived from elsewhere in the network are unintentional to the manager, but derived and received through network connections.

In looking to future corporate internationalization temporal notions of path dependence are also an issue as business networks and relationships develop over time (Håkansson et.al. 2009, Ford et.al 2010, Araujo & Rezende 2003). The past matters in the creation of the future. The processes of corporate internationalization and competition require coordination of path dependencies into specific future times. We next focus on how future times are created intentionally through the coordination processes within a firm and between firms.

First, the subjective time of organizations and business relationships, as past-present-future, also termed relational time (Halinen & Törnroos 1995), offers a backdrop for strategy, which is relative to the corporation and its internationalization partners. This relational time backdrop can be mapped to clock-calendar time, but that task is not a requirement unless the managers wish to report outcomes to a public audience. Managers know and apply the categories of past-present-future naturally as they sense and enact within their corporation and its environment. Harvey, Griffith and Novicevic (2000) suggest how past-present-future is applied to the stages and timescapes of communicating and building commitment in international business relationships.

However, a second time element is required to arrive at the contestation processes that create future times, which also then create the timing contests of the present. That second time element is the concept of future periods. That is periods that divides the future into lengths that can be communicated, coordinated and negotiated. The contestation of times is open to understanding when the future of relational time is elaborated by the concept of periods.

Periods are the way managers categorize parts of time, and future periods are the way managers envisage periods of firm activity. According to Halinen, et al. (2012) a period is ”a socially constructed portion of time flow that is stabilized in meaning.” However, future periods are not so easily stabilized, contestation over timing is natural. A country entry decision and the phases or periods of the implementation are open to negotiation within a corporation and with reference to external entities. Intentionality is important, but agents and business partners are also involved in these negotiations to intentionally create the future time periods. Events and outcome events are agreed upon to stabilize the intended future period in the flow of time. In this vein, Medlin and Saren (2012) describe a theoretical process whereby actors speed up or slow down change by controlling aspects of information and knowledge flow.

The past also plays a part in the negotiations to secure a future period. This is so because of path dependence. However, finding agreement on what constitutes a past period is not necessarily easy. Different managers and firms will constitute the past as periods of different natures and lengths. However, agreement on the nature of activity in past periods is required to strategize the future.

The concept of future periods is not a wholly new idea. The concept of intention is well recognized in IMP literature. Within the original IMP cases (Håkansson 1982) the managers of firms spoke of their intentions to commit to partners and sales intentions. Håkansson and Snehota (1995, 200) comment that since firms are acribed intentions they can be considered actors. Further, "intentions and interpretations, the frame of ends and means, are guiding the behaviour of actors, collective and individual" (ibid, 194) and that "intentions and interpretations held by actors are the result of bonds to others as much as they are determinant of their behaviour." (ibid, 194) That is to say, a firm's future intentions are built on understandings that rely as much on the expectations and intentions of other firms as on the strategic intentions of the firm. Thus strategizing to internationalize requires sound business relationships, if intentions are to be realized.

However, intention is distinct from future periods. Intention speaks to ends and outcomes, while a future period recognizes lengths of flowing time in which intended activities and processes are to be enacted. Coordination between firms requires that future periods are negotiated otherwise intentions, or outcomes, are impossible. Eventually a future period becomes the present, the period in which strategy un-folds. Also in the present period, events and opportunities become apparent, through interpretation and sensemaking of information that is received via business relationships from other firms in the network. These events and information are signals from past actions of firms and events that take time to pass through the firm network. That is the information is *received* from the past of other firms in the network, and from the focal manager's perspective these events are unintentional.

Together the past-present-future backdrop and the idea of negotiated future intentions by periods provide significant opportunities for understanding corporate internationalization strategy. The role of managers, as individuals and in groups within a corporation as well as in partner firms is a key to understanding corporate intentions. But the way future time periods are categorized and connected to each other and to past periods provides some new objective perspectives of corporate internationalization.

4. ELABORATING SPACE

In his section we focus on how the network approach can integrate the geographical and spatial dimensions into a corporate internationalization model. The IMP network literature has recently discussed mental network maps (or pictures) and structures as well as locations in and over space (Ford, Gadde, Håkansson, Snehota & Waluszewski 2010; Henneberg, Naudé & Mouzas 2010). Also at a more theoretical level IMP literature has begun to consider the role of space in the network approach to marketing (see Håkansson et.al. 2009, ch. 4, Ford et.al. 2010).

In focusing on corporate internationalization the geographic and spatial relates to *where* international investments are directed and located (*places*) and *how* these places exert an impact for business and how they are located relative to other places by using other spatial concepts (for example mental constructs, distance, borders, transport links). Considering the network of locations and relationships where the company is embedded in space forms the central issue. Some key components concerning the business network and space are taken to the fore in the following.

The network of connected firms and the spatial dimensions in the process of internationalization must deal with a number of geographical realities. At least following dimensions can be noted:

- The *territorial* place and space where firms are embedded and connected into their existing relational web can form local to global connections. Place, as initial territory, and places located globally are connected through the activities of the firm, as an internal network between resources and markets.
- The *physical-structural space*, that is the nodes, links, and ties; where and over which production, services and information flows takes place.
- The *spatio-cultural* spaces where relational issues are handled and interacted.
- The *relative* location of places connected to other places; and also the "stickiness" of places in relation to other locations, regions and territories (Markusen 1996).
- The human, mental, experiential spaces forming *mental* maps for interactants, surrounding interaction and the communication in focal networks (cf. Buttimer 1976; Fu Tuan 1975).

Taking these issues into consideration the network space consists of structural, physical, social and mental dimensions that all are related to a specific spatial entity. That is, the spatial entity and the connectedness of geographic space provides the specific features of a networked business environment; thus providing for a strategic manager the specificity of possible options for expanding or contracting corporate activities. Each place and relative location offers advantages and disadvantages for access to resources, to markets, and to new knowledge and so future opportunities; and also importantly relative to competitors.

Thus, places and contexts are of strategic importance to firms in their corporate internationalization processes. Many examples of this idea exist in the internationalization literature. For example, Markusen (1983) discusses changes in thinking about industrial districts by looking at traditional versus new models. Also, Senik, Scott-Ladd, Entrekin and Adham (2011) argue that networking sources and roles for SME internationalization in emerging economies differ from developed economies. Similarly, Freeman et al. (2010) suggests that high-tech knowledge intensive industries are better located in environments that are fast moving, exhibit constant change and are globally connected in nature. The issue with all of these location considerations remains how to take geographic context into a theoretical domain of space, while at the same time also dealing with the geographical realities mentioned above.

Network internationalization and space

Space takes its specific form and is problematized depending on our research focus and the questions we are dealing with. The *network space* is the issue taken to the fore here related to corporate internationalization. This extends the literature concerning previous theoretical writings.

Corresponding to the managerial and temporal views above we define space in a general sense as the human construction of place, territory and relative location, and we note that such space is relative to the business networks that create and are inside human space. The following three basic characteristics networked space are:

1. Networks are generally defined as connected threads and nodes that form through exchange relationships between actors. These threads, nodes and links and the actors exist and change through a process over time, as well as in and over space. This interplaying spatio-temporal and structural process, which forms and transforms the network, is defined as *network space*.

2. Local, regional, national and global geographic levels and especially the network where the firm is embedded form the extended *action space* for internationalization of the firm. Internationalization deals with new territories as well as a novel networks to enter (or deepen and change) a previous relational landscape of actors and territories.

3. Space also forms a *relative* entity where networks are embedded and change due to events taking place at different levels of the action space, so affecting their relative roles and positions in networks.

Tidström and Hagberg-Andersson (2012) have coined the terms inner and outer network spaces in order to deal with the action space within the focal network, denoting the inner part and the larger action space where the core network is embedded. This closely accords with the two first dimensions presented above. In the first one, the space concerns both the mental as well as the structural spaces. Also the other two have a mental character in the mindsets of actors. In addition they all have competitive and other dimensions.

These more basic notions of network spaces are considered here as a part of the potential relative action space that can be used for a firm to develop new roles and positions in international networks within the broader action space.

Structural, 'physical' notions of network space

In this perspective a business network can be seen as existing structural spatial reality with specific nodes (e.g. production and sales units) along with communication patterns, logistics and financial transactions and activities between the connected firms at a specific point in time. Production is always situated in specific places and interaction over space takes place between the nodes.

Places are points or bounded geographic territories in space. In the first meaning places are connected by networks of business relationships, or by the internalized firm network, to other places. Thus, there is a network of geographically displaced places; with each place providing access to resources, knowledge, and/or markets, with each place having a strength-weakness from a competitive perspective.

The second meaning of place notes that within a geographic boundary firms are also connected to other firms and so again to different resources, knowledge and/or markets. This, the second meaning of place, accords with the inner space of Tidström and Hagberg-Andersson (forthcoming 2012). In the local network space firms are close together and the concepts of insider and outside firms (Johanson & Vahlne 2009) take on their specific meanings. That is, spatial concepts are an important element of whether a firm is treated as an insider or outsider when internationalizing.

The relative notion of network space

Network space is necessarily spatially relative. Location is the special term that recognizes the relative positioning of a place in space. Location can be described in two ways, as with the meaning of place. Either a location is the place relative in space to another place or set of places (in which case direction, distance and time are some useful qualifiers, another is transport mode); or the location of a place is relative to a boundary (eg. Paris, France). Each relative location description provides a different way to think strategically about corporate expansion and/or contraction. Also relative location approaches again the concepts of inner and outer space (Tidström and Hagberg-Andersson forthcoming 2012).

The notion of interdependence (Ford et al. 2010) denotes relative network space as a core issue in using resources and skills of connected actors. Also the issues of resource connections, activities and actors have relative spatial connotations.

The mental network space

According to Buttimer (1976) phenomenologists provide us with preconsciously given aspects of behavior and perception in relation to what she calls the *Lifeworld.* "The lifeworld consists of the culturally defined spatiotemporal setting or horizon of everyday life"(p. 277). This Humanistic Geography (HG) is an phenomenological geographic science and it belongs both to the humanities and the social sciences. The aim is to provide an accurate picture of the human world. HG aims to achieve an understanding of this human world by e.g. examining how people relate to nature, their geographical behavior and feelings and ideas related to space and place in particular" (Tuan 1976, 266).

How can we grasp ideas from this HG view into corporate internationalization as a managerial process? First, this view can be seen as an avenue for looking at the lifeworld of international managers when doing decision-making concerning their internationalization and by looking at how they experience and feel the network and its spatial configuration at a specific point in time. Second, the business and the network of relationships and the world around the business and the connected relations form the "business lifeworld" that shape the network action space. Within this network, including its spatiotemporal dimensions, internationalization is related to the following issues:

- Where to invest (in network space, regional space and local space) and how this is related to the experience and "feel" of the business environment.

- How our experiential and human knowledge affects the processes that connect the firm in relations to an existing web of relationships (the structural space).

- How the managerial mental network affects the decisions made and creates social and interactive space (atmosphere, trust, commitment, interaction) between actors of the network.

These views form one cornerstone of the model presented shortly. These ideas are in-tune with how we can understand the process and structure of the network and how it evolves as a spatial construct. The processes of management form the mental map of the networks as well as the action space where decisions about internationalization are made.

5. TIME-SPACE NETWORKING MODEL OF INTERNATIONALIZATION

A relational and networked view of corporate internationalization deals with the interplay between the temporal process and the spatial network structure (see figure 4). This means time is composed as the present, with a strategically thinking manager focused on a decision. The manager sees the present internationalization of their corporation as sets of networked connectedness in space. Time also provides another lens. From the manager's perspective the present provides an understanding of past times, of past spaces with their places and territories connected in a geographical manner, but with relative network locations more emphasized in a spatio-temporal way.

Space and Networking for Internationalization

The *network itself* is forming the spatial structure and relative location of the relational web at a specific point in time where firms are embedded. Internationalization in this sense means to connect actors in different locations within and across countries for creating value and access markets of inputs as well as outputs and getting hold of resources where available.

Conceptualizing network connectedness within space requires apprehending two nested concepts. As with place, two different and related sets of constructs play their role in elaborating network connectedness. First geographically spatial networks are either homogenous or differentiated in their connectedness. Second the geographic boundary is either global, and so encompasses all firms in the network; or is composed as a number of boundaries such as regional and global, or insider and outsider mental boundaries. In each of these later boundary conditions the networks within and between can be either homogenous or differentiated in structure at a point in time.

In figure four we portray only the network space dimension of homogenous versus differentiated in a global network, and leave for future research the issues around different boundaries and internal versus external network distinctions. Even in taking only the nature of network space within a global boundary the forms of differentiation are multiple: mental, social, geographic, infrastructural, technological, political and so on.

Taking the perspective of the strategizing manager in the present; figure four shows the past as unintentional events arriving from the firm network through firm relationships. Conversely the future is extended before the manager as intended corporate actions. Taking now the space dimension, when networks are homogenous the events pass quickly and evenly through the firm network. These events appear as continuous unintended change and the manager's see their strategic future as continual and incremental intended changes. Thus, corporations follow an internationalization path with a specific future role and position, played out in an internationally embedded network.

This ”global based” approach to internationalization contains a notion of space in connection with the network logic, as potentially extending over the globe(i.e. global space internationalization). This encompasses a *global rationale for business development* of the firm and its products/services as well the network it is embedded into. The computer and mobile phone business of gaming can exemplify this (e.g. ‘Angry Birds’).

However, when networks are differentiated, places take on specific meanings and the distance between raises issues with the communication of events. Some events are not passed between firms; while others are, but in an un-patterned manner. Thus firms find gaps in market knowledge, and there are distances between resource and market locations, which lead to unintended global business opportunities for trade between places. Meanwhile the strategic futures appear as opportunities located in differentiated space, from which the manager selects some for intentional action. Thus, sticky locations are sought and investments are made to gain specific location advantages.

From only the space perspective, the ”sticky” places notion deals with space from a specific location angle; where the business logic of being in a specific place offers specific spatial advantages in internationalization (i.e. local space internationalization). Here place is both within a boundary and relative to other places and so the specific locale and connecting to other actors and resources within these locales is important, e.g. in Silicon Valley, the Johore Triangle around Singapore, Route 128 or in Shanghai might.

Time and Networking for Internationalization

All corporate internationalizing strategy is spread through time. This means managers must prepare and enact intentional strategic options, as well as provide strategy to deal events that arrive through the network of connected firms. In figure four, time is shown flowing in one direction, but also shown is relational time, where past-present-future are connected. Relational time is shown with arrows in both directions to signify the way future and past times are re-configured continuously in the ever flowing present period.

Looking to the past the manager see the existing business network, a result of earlier networking processes where connections and resource constellations have been made between the actors in the course of both planned activities and reactive activities. The manager understands, in an incomplete way, the network of firms that join raw material and resource places to marketplaces. Within that broader space and time, the manager understands in a more complete way their local business network. This broad and also narrow understanding of how the business network connects raw material places to market places through time via connected firms we refer to as the spatio-temporal business network.

Moving now into the present, already the firm network is in the past. Events and outcomes of previous strategy are also in the past, unknown are some outcomes of strategic intention yet to eventuate. The manager in the present considers their corporations strategic opportunities: their supplier and customer decisions differentiated across time and space within the network. Also in the present are events, coming to the firm from other firms in the network. Some events are signifying past actions just now arriving as news to the manager, some events are indications of other firm's future intentions, some events signify network level outcomes that are unintended outcomes of many firms' intentions and activities, some events signify chance happenings.

Looking forward to the possible futures, the managers see opportunities connected and forthcoming from the current understanding of the spatio-temporal business network. The manager selects a new opportunity by looking both back as well as forward and takes into consideration the current and potential interdependent effects for other actors in making decisions.

When firms internationalize they change their firm's relative geographic locations and their network positions in relation to their previous activities, resources and actors, and also relative to their activity space in relation to other firms and their own activity patterns. These changes in spatial and network position are important relative to the future network.

The unplanned processes are a reality where managers meet (e.g. by chance) and the interaction they start might connect their businesses and develop the networks where their companies are embedded. This is a mostly forgotten area of research. Researchers do not like "chance", "ambiguities" and "mess". Thus, management theory, including internationalization, is seen as a planned managerial process. In figure 4 the chance and planned aspects on internationalization are both considered.

The firm seeks also to manage the internationalization process through an intentional strategy for growth and development of the activities, including those activities that cross national frontiers. This intentional strategizing takes place in an incremental manner as the present time flows into a specific future, which the firm co-creates with partner firms. Medlin and Saren (2012) elaborate one way that this dynamic is managed in business relationships.

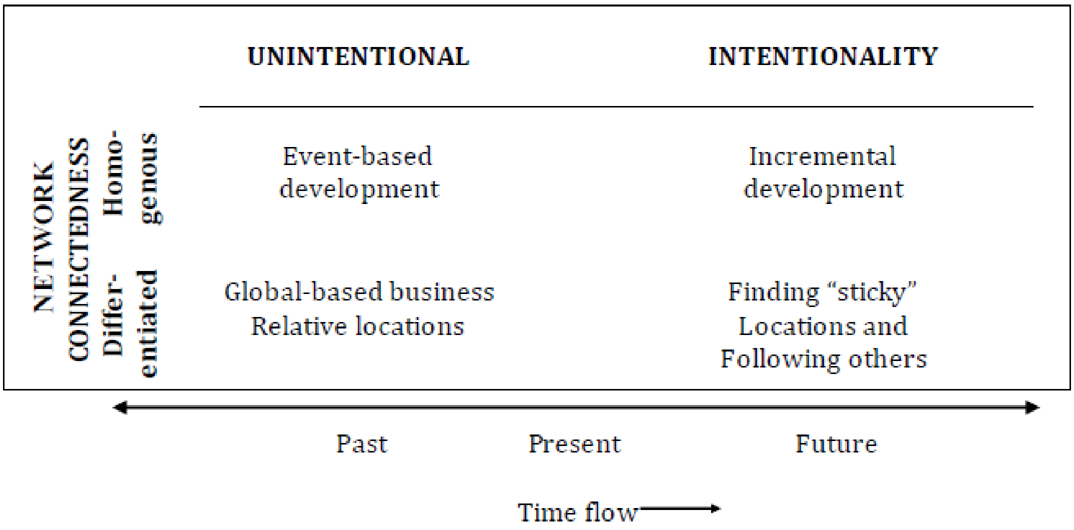

Figure 4: Time and Network drivers for corporate internationalization.

Figure four seeks to connect time and space concepts in the corporate internationalization process. The network space and the relative location alternatives form the strategic alternatives for corporate internationalization from a network perspective. Taking both space and time as alternatives forms the key. How to be connected in network space has both local and global dimensions affecting the business logic alternatives of firms. Timing in connection with ”spacing” and finding advantageous network spaces for value creation is possible within a spatio-temporal perspective, whether the strategies are international expansion or contraction, or internalization and/or external operation modes.

In addition firms also exist in time and in the flow of events that have been explicated earlier on in this paper. These events affect internationalization alternatives and create adaptation needs and create also novel opportunities to act and react to different stimuli. These events might also open doors to new markets due to deregulation or political changes. They might also close doors due to new competition, technological advancements in emerging markets or the like.

6. FUTURE RESEARCH

Mental space is forming a vital part of the behavioral and managerial process related to internationalization and strategy. This issue relates also to managers *mental network maps* of the relational landscape of their present activities, resources and actors and how they are embedded in a spatial sense. Therefore the mental network space and internationalization go hand in hand and should be considered as an important issue from a managerial standpoint. Future research can use the notions from HG to look at this matter in empirical studies and develop models and research methods.

Increasingly, business networks are being integrated into the managerial process theories (Johanson & Mattsson 1988; Johanson & Vahlne 2009). Additionally, research into ”born global firms” requires further clarifications (Oviatt & McDougall 1994, Freeman, Hutchings and Chetty, 2012). Nevertheless, we are failing to address fundamental matters of time and space, at the core of the corporate internationalization concept, which are powerfully shaped by new knowledge and technologies.

Changing international operational forms and how global corporations are managed are not receiving sufficient research attention. To drive research we provide a theoretical focus based on the network approach and the spatial and timing issues related to the internationalization of the firms integrating both inward and outward operations.

The managerial process concept highlights the process perspective, rather than the previous behavioral notion in managerial research (Johanson and Vahlne 2009). We show that the Uppsala model considers time and timing as implicit and focuses instead on knowledge (transferring of which takes place through business activity) as an outcome of process, and in turn an input for corporate expansion and change processes. The view is that internationalization requires both general knowledge and market specific knowledge (obtained mainly through experiences from specific markets), with commitment to a market concerning how current resources are used (Johanson and Vahlne 1977; Andersen 1993, 2011). We show that more research is now incorporating the business relationship and network perspective, which has now also been integrated into the Uppsala model (Johanson & Vahle 2009, 2011). We suggest future research focus on the role of time in development of the firm and the networks, as time and geographic variation trigger both dimensions of our Figure 4. However, research to date conceives time and relative location, distance, and the role of network space as implied conceptualizations in internationalization theory.

In Table Two we summarize key construct treatment in corporate internationalization theory, and provide a platform for future research by presenting our initial thoughts on how the *when* and *where* questions are addressed in past conceptualizations. We then provide more conceptualization on the human apprehension of time and space in a network framework, and present a supplemented model of decision processes for a time/space internationalization perspective. We suggest this model should be initially refined through qualitative approaches in empirical research.

Most noteworthy, Johanson and Vahlne (2009) note time and see present interaction as occurring inside a past, present and future interaction structure. Yet, they do not detail space. We suggest research focus on the heterogeneous nature of resources and markets in spaces. Future studies should view the network from the perspective of specific contextualized, as well as “spatialized”, resources through to contextualized customers. Thus we argue, that internationalization is seeking business relationships to access resources and customers and vendors; the interactive process are more dynamic and commence and develop via relationships given the sets of contexts.

Specifically, the temporal, non-spatial continuum of time (timing of entry); and how long processes and changing circumstances affects the process of internationalization, should be given more research focus. These temporal notions of path dependence have been raised (Araujo & Rezende 2003; Ford et al. 2010; Håkansson, Ford, Gadde, Snehota & Waluszewski 2009). Yet the social dimensions of time have more important angles to tackle from an internationalization perspective, and this requires closer examination and empirical research.

Moreover, places, regions and contexts are of strategic significance to firms in their corporate internationalization processes. The research question to be addressed is how to take geographic context into a theoretical domain of space, while simultaneously dealing with the geographical realities. Figure Four provides the network space as dimensions of homogenous or differentiated network connectedness, but ignores the many ways of differentiating networks with geographic and mental boundaries. The areas of differentiation offer rich future research directions

Thus, Figure four articulates a model for corporate internationalization in the context of relational time and across space. It is conceived as the concept of embedded firms in a business environment, both international and geographic in nature, but includes the notion that business networks differentiate relative locations. Thus, future research is needed where the lens focuses on the corporation and where and when it is affected by events (creating the building block of process), in space, which we perceive as the international/global environment.

The model as presented in figure 4 can be also used as a starting point when analyzing internationalization decisions and how firms have coped with events from the networks and the network space around them as well as the location and territorial strategies.

The role of future and past periods and how they influence internationalization strategy of corporations deserves attention from researchers. Intentionality speaks to stabilizing periods in the flow of time. Thus intentionality and unintentionality, or taking advantage of chance events, are open to research via comparing the way time periods are stabilized and connected through relational time.

Space has many dimensions and offers many research avenues to explore. One concerns the ways we deal with space from the local place to regions, nations and regional groupings as well as global dimensions of space. All these are human conceptions about space and "order" of reality. Being local does not exclude the idea of being global at the same time. The "glocalization thesis" or noting the local-global interface denotes this. Internationalization through the connected web of relationships offers a good possibility to look at the process of internationalization by the use of the models presented in this conceptual article empirically.

From a methodological viewpoint we can potentially offer more constructionist and qualitative research concerning the role of mental network maps that affect managerial decision- making concerning internationalization of the firm. Sensemaking as a method and looking at interaction between network actors that exerts and impact on the process should also be considered when having this type of a research approach. Also narrative analysis offers a method to grasp how managers describe these processes and how they were enacted and experienced. These qualitative research avenues can later on offer potential to study these processes more in a quantitative manner based on qualitative pre-understanding.

7. MANAGERIAL IMPLICATIONS

The economic and managerial process theories of corporate internationalization having space in the background largely note space as an un-problematized issue. Dunning (1998, p. 49) states that: "…we suspect that the fact that this subject has not been given much attention by international business scholars is partly because scholars have believed that the principles underlying the location decisions of firms within national boundaries can be easily extended to explain their cross-border location preferences". See also Dunning (1981, 1988, 1998) and e.g. Rugman (1986) and Krugman (1991) that have considered the role of location advantages. They have been mainly related to physical resources or markets, but also other location advantages. The issues of network spaces take a more holistic view of explicitly spatial issues. The network approach allows neatly a spatial consideration to be offered about how space makes a difference for the theory of internationalization seen from a network approach to the issue.

Managers can understand more deeply what processes lie behind internationalization processes as a networked phenomenon. In doing this the offered perspective opens up both what difference time and space makes in a joint manner and in connection to a networking process in particular (Halinen et al. 2012).

In addition the perspective might take new ways to the fore about looking at internationalization alternatives and the notion of space in a more accentuated and strategic manner than before. Spatial perspectives are inherent for internationalization and the positioning of corporations in and over space by networked relationships. The global interdependent world of business today requires re-conceptualizing, as the technologies for transcending space and time continually shift.

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