Going Beyond Relationships: Conceptualising and Assessing Network Orientation in a Business Network Context

Abstract

This research examines the extent to which a firm’s network orientation (NO) contributes to its performance. NO is proposed as a concept to capture a firm’s strategic actions towards its networked environment in which the firm, its counterparts, and numerous other actors are embedded. A preliminary study and some limited support from the literature reveals that being merely market-oriented and/or relationship-oriented is appropriate when dealing with direct interaction partners. The concept of NO will take these developed concepts further to consider the impact associated with other indirectly connected relationships, i.e. taking into account the complexity of network embeddedness. Based on a competence-based and industrial network perspective, this research posits that one needs to take a wider view of the business environment by considering firms’ behaviours at the firm, relationship and network levels in order to better explain their performance. This proposal will outline the background and objective of the research, followed by the theoretical framework and the conceptualisation of NO. Subsequently, the hypothesis development of the NO conceptual model is explicated and the empirical research design is set out as a two-stage research process. Finally, a discussion of the expected contributions to the existing literature and to practitioners will conclude this outline.

Keywords: network orientation, relationship orientation, market orientation, industrial network perspective, competence-based perspective

INTRODUCTION

Networks have been observed as the new form of markets through increasingly intense competition in the marketplace (Achrol, 1997; Gulati et al., 2000; Möller et al., 2005). It has been regarded as a new paradigm (Achrol, 1997; Thorelli, 1986) as well as new era (Möller and Halinen, 1999) in both marketing theory and practice. This realisation reflects on the gradual shift in focus in marketing literature, that is, from dyadic business relationships to business networks. The importance of business relationships has been well established and seen as one of the key drivers of company success (Morgan and Hunt, 1994; Palmatier et al., 2007). In addition, looking at business relationships as part of a dyadic approach has helped in understanding the very essence of exchanges and interactions that take place in a relationship between two parties (e.g. Anderson and Narus, 1990; Barnes et al., 2007; Hallén et al., 1991). However, relationships do not exist in isolation (Anderson et al., 1994; Granovetter, 1985; Ritter, 2000). Instead, they are interconnected and aggregated as business networks, in which firms and numerous others are embedded. While the competition intensifies drastically, how to efficiently and effectively utilise inter-organisational network becomes a critical issue for firms operating in business-to-business markets (Möller and Halinen, 1999). It is evident that firms’ ability to utilise and capitalise on the business network could become a source of competitive advantage, because the social complexity of the
business network make it difficult for competitors to imitate (Barney, 1991; Gulati et al., 2000).

Given the complex environment surrounding firms in business markets, they cannot just look at what happens within themselves alone (e.g. what kind of resources and resource configurations are available to them within their firms), nor within a particular dyadic relationship (i.e. the collaborative and cooperative resources based on relational interactions) to create a superior performance. There are also potential opportunities and hindrances within the wider network in which a firm is embedded. These are spread out in the landscape of the network (‘space’) and across different time periods (‘time’) (Ford et al., 2009). Therefore, understanding firms’ behaviours towards their business networks as the proximity to a superior firm performance is of particular importance to both the existing literature and the practitioners operating in business-to-business markets. By adopting a more holistic view of the social world one can better grasp how a firm makes its way, or muddles through, to success (Gulati et al., 2000). More specifically, by assessing how a firm utilises its relationships and the overall network context, the consequences (e.g. economic outcome) of those behaviours can be more rigorously examined (Dyer and Hatch, 2006; Rivera et al., 2010).

Despite the significance stated above, research into how firms develop and deploy their strategic actions in response to their network context still remains relatively unexplored and untested compared to that in business relationships (Äyväri and Möller, 2008; Dyer and Hatch, 2006). Studies in economic sociology and related domains have deepened our understanding on the fundamental idea of the web of business relations can be both beneficial and constrained to the firms (e.g. Burt, 2000; Granovetter, 1985; Granovetter, 2005; Rivera et al., 2010; Uzzi, 1996; Uzzi, 1997). The central thesis in this school of thought is that a network can yield greater economic performance than the sum of the firms within it (Thorelli, 1986; Uzzi, 1996; Uzzi and Gillespie, 2002). Trust between parties is thought to be the main mechanism to foster the efficiency and effectiveness of knowledge and resource mobilisation in the network. However, it does not follow that all firms embedded in the same network can equally appropriate these benefits. Zaheer and Bell (2005) argue that firms’ abilities to get access to the resources through their networks play a critical part in explaining the differential performance amongst firms. Therefore, there exists the need to provide a deeper understanding of firms’ behaviours in response to their wider network and how they impact upon firm performance, given that the current literature is still scarce on concepts that capture the domain of a firm’s embeddedness in networks and its resulting organisational responses. Furthermore, there is also the need to provide explicit implications for business-to-business practitioners to apply in their managerial decision-making when they are faced with issues of responding to complex multi-firm networks (Brennan and Turnbull, 2002).

Several scholars have contributed to the conceptualisation and operationalisation of network management by developing the concepts of network competence (Ritter, 1999; Ritter and Gemünden, 2003) and network capabilities (Walter et al., 2006), both of which focus on direct inter-organisational relationships. The conceptualisation and operationalisation of how firms ‘network’ beyond their ‘intentional networks’ (i.e. a firm’s web of direct relationships) is lacking in the literature with the exception of one conceptual (Hill and McGowan, 1996) and one case study research (Äyväri and Jyrämä, 2007), both of which suggest the networking ability is critical to micro-sized entrepreneurial firms and is seen as an individual-level phenomenon. However, it is
arguable that in other research settings, such as in larger scale firms, this ability is still deemed critical under the increasingly competitive and challenging business environment. By taking a competence-based perspective, the present study considers the ability to respond to network dynamics and web of relationships as an organisational level of phenomenon since it involves internal and external resource configurations (Sanchez, 2004; Sanchez et al., 1996). An individual alone cannot accomplish these strategic actions in larger (than micro-sized) organisations; thus, the development of this competence is the product of the organisational collective continuing learning.

Building upon these concepts and further expanding the scope of network management, this study aims at conceptualising and operationalising, testing and validating a network management framework by taking into account the interconnectedness of a firm’s direct and indirect relationships. That is to consider the interactive aspect of relationships that goes beyond the direct relationships, understood from the industrial network perspective (see Håkansson, 1982; Turnbull et al., 1996; www.impgroup.org). This study proposes the concept of network orientation (NO) to capture organisational competence(s) that firms operating in business markets deploy to utilise their web of direct and indirect relationships to benefit from, and capitalise on, their business networks. NO is therefore defined as the set(s) of strategic actions that firms employ to respond to their web of direct and indirect relationships to efficiently and effectively mobilise and utilise their internal and external resources.

Following from the above discussion, this study is focused on the research questions:

1. What is a firm’s NO?
2. To what extent is being network-oriented beneficial to firms operating in business-to-business markets?

In answering these two questions, two research objectives are set out. First, to identify the constituent elements of a firm’s NO. Second, to conceptualise, operationalise, test and validate a NO framework, indicating how those elements are interrelated and how they contribute to firm performance. By fulfilling these two objectives, this research is attempting to build a more holistic picture of inter-organisational network management, whereby organisational behaviours are taken into consideration in order to reflect firms’ organisational response to their web of direct and indirect relationships.

The rest of the research proposal is organised as follows: first, the theoretical framework is discussed; followed by the conceptualisation of NO, hypothesis development of NO conceptual model, the two-stage research design, and finally, the expected contributions to the body of knowledge and to the business practice are outlined.

THEORETICAL FRAMEWORK

Scholars in different research domains have endeavoured to understand the effect of being embedded in inter-organisational networks through their respective theoretical lenses, which produce diverse knowledge regarding network phenomena. The pivotal argument amongst different schools of thought lies in the ontological stances about the organisation-environment boundary and the degree to which firms hold control of their counterparts. Although the widely used resource-based view (RBV) (Barney, 1991;
Penrose, 1959; Wernerfelt, 1984) in strategic management holds that firms are atomistic actors who 'internally' possess resources. Firms have the ability to decide with whom they want to partner in their business sphere, and they have certain control over their counterparts.

The counter-argument to the RBV approach of network perspective is mainly provided by Industrial Marketing and Purchase group (IMP Group), whose work advocates the notion of industrial network perspective (see Håkansson, 1982; Turnbull et al., 1996; www.impgroup.org). They argue that firms cannot fully control the actors, resources and activities (ARA) resided within their interacting partners, and they even lose part of their own ARA in the interactions with their counterparts (for more details about ARA model, see Ford et al., 2006pp. 27-39). The AAR configuration is constantly changing due to the interactions taking place all over the network. As such the system (i.e. network) is fluid and complex in nature due to the interconnectedness of all relationships embedded in the networks (Halinen and Törnroos, 1998). This results in network being the governing mechanism that no single firm can design or manage the network.

The aforementioned two theoretical perspectives seemingly conflict with each other at the first glance, but they are not completely incommensurable when they have been closely inspected. The more contemporary studies in strategic networks have moved away from the traditional RBV perspective and contend that only by taking a relational perspective firms’ differential performance can be better assessed (Gulati et al., 2000). RBV has been further elaborated and developed into various subsets (i.e. dynamic capabilities and competence-based perspectives) to account for the strategic importance of ‘external resources’ (e.g. social capital embedded in the network) and the impact of complex environment. As such firms are no longer separated from their environment in the form of business networks, which can be synthesised with the ontological assumptions of industrial network perspective.

In addition, Möller and Rajala (2007) argue that the manageability of network is the key difference between these two perspectives. This difference lies in how these two perspectives treat ‘network’; to RBV, network is designed and confined by the firms as ‘intentional network’ or ‘strategic network’, whereas it is spatially borderless to the industrial network perspective. However, they further argue that these two views should be considered at the same time if one is to understand how firms try to efficiently and effectively cope with and manage their business networks. This research attempts to understand how firms manage their ‘intentional networks’ of direct relationships and beyond them, and therefore in agreement with Möller and Rajala (2007), two perspectives enrich each other and together provide a more fertile ground than for this study. It is also suggested by several scholars that combining industrial network and RBV and other RBV rooted perspectives (i.e. dynamic capabilities) is a fruitful way of examining network management from an organisational actor’s perspective (Foss, 1999; Möller et al., 2005; Möller and Svahn, 2003).

This research adopts a competence-based perspective, which has its foundation in RBV thinking, but stresses a great extent on firms’ ability to respond to the dynamic environment and manage the interactions with their counterparts. However, the central tenant of competence perspective is that firms should develop “the ability to sustain the coordinated deployment of assets in ways that help a firm achieve its goal” (Sanchez, 2004, p. 521). In that it lacks elaboration on the understanding of the dynamic (networked)
environment and the interactions taking place in it. Therefore, the industrial network perspective can inform this research on the nature of network dynamics and connectedness. By combining these two perspectives, it provides a more comprehensive framework for studying NO from a firm’s perspective.

THE CONCEPTUALISATION OF NO

It is important to precede the conceptualisation of NO with the distinction between the meaning of orientation and that of competence and how they are used respectively in this study since the conceptualisation involves the transition from the former to the latter.

DEFINING ORIENTATION AND COMPETENCE

According to the Cambridge Dictionary, orientation is the particular preferences, tendencies, beliefs or opinions that a person has (or a firm has, in this context). In this study orientation is employed to describe the organisational state of mind, i.e. the tendencies towards any economic action they undertake to respond to their environments. Orientation, thus, conforms firms to behave in accordance to their attitudes. Although it is an attitudinal term (which is more obscured to observe), the manifested behaviours can be observed to indicate a firm's orientation in many parts of economic life. For instance, market orientation (MO) is a set of organisationwide customer-oriented behaviours (Kohli and Jaworski, 1990; Narver and Slater, 1990); relationship orientation (RO) is a firm's tendency towards its partners (e.g. Palmatier et al., 2008). Orientation is also a matter of strength. It can be said that a firm has a high (or low) level of MO, or is highly (or unfavourably) market-oriented.

Furthermore, a set of behaviours corresponding to a certain subject (e.g. customer, relationship or market) can be seen as an indicator of the degree of that orientation (e.g. network orientation). Only if a firm is in possession of a certain level of competence, can its orientation be deemed substantial. For instance, market intelligence generation, dissemination and responsiveness are constructed to describe a firm's MO. If these three sets of behaviours are observed from a firm (i.e. it is capable of carrying out these actions), it is market-oriented. As such, the observed behaviours corresponding to a firm's certain orientation can be seen as competence, which refers to the ability to do something well according to the Cambridge Dictionary. It is a widely used term in strategy research since Prahalad and Hamel (1990) introduced the concept of 'core competence' which refers to firms' collective learning in order to produce 'core products' that subsequently bring about competitive advantage. Sanchez (2004) further defines competence as “the ability to sustain the coordinated deployment of assets in ways that help a firm achieve its goals” (Sanchez, 2004, p. 521).

THE CONSTITUENT ELEMENTS OF NO

To understand the essence of NO an initial qualitative and exploratory research was carried out in order to explore how organisational actors in a business network recognise the opportunities and the challenges from various sources in the environment. It examines how they utilise the resources amongst their web of relationships to reach the opportunities and cope with the changes in the environment. The objectives of this pre-study were twofold. First, to conceptualise NO, which
captures the way in which a company interacts with other network members in response to various network characteristics (e.g. interconnectedness) and network effects (i.e. changes derived from the networks). Secondly, to synthesise the relevant developed concepts in a conceptualisation of NO, as well as to position NO in relation to the relevant research areas: MO and RO. Some network concepts (i.e. network competence, embeddedness and connectedness), were examined in order to provide a grounded understanding of NO.

In fulfilling these objectives, this pre-study adopted a single case study design, employing a focal network to collect qualitative data through semi-structured interviews. Seven participant firms were recruited, with a total of 10 participants from their top and middle management. Content analysis was employed to analyse transcribed qualitative data, using techniques of coding and categorising (Glaser and Strauss, 1967; Kvale, 2007). The research results, summarised in Table 1, show that themes extracted from the data can be categorised into three subsets according to their attributes, labelled as firm (intra-organisation), relationship (inter-organisation) and network (beyond inter-organisation). As can be seen in the table, the firm and relationship element of NO can be synthesised with the well-established research area in MO and RO respectively. On the contrary, the strategic actions in the network element that go beyond direct relationships require further conceptualisation and operationalization since the existing literature has not provide a comprehensive framework to cover all three aspects of them.

<table>
<thead>
<tr>
<th>Levels</th>
<th>Themes</th>
<th>Relevant Field of Study</th>
</tr>
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<tbody>
<tr>
<td>Firm</td>
<td>Information sharing</td>
<td>Market Orientation (Kohli and Jaworski, 1990; Kumar et al., 1998; Narver and Slater, 1990; Narver et al., 2004)</td>
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<tr>
<td></td>
<td>Flexibility to reconfigure resources and activities</td>
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<td></td>
<td>Coordination across different functions</td>
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<tr>
<td>Relationship</td>
<td>Trust</td>
<td>Relationship Orientation (Anderson and Narus, 1990; Hallén et al., 1991; Morgan and Hunt, 1994; Palmatier et al., 2008; Rauyruen and Miller, 2007)</td>
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<tr>
<td></td>
<td>Loyalty</td>
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<td></td>
<td>Cooperation</td>
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<td></td>
<td>Communication</td>
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<td></td>
<td>Adaptation</td>
<td></td>
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<tr>
<td>Network</td>
<td>Coordinating amongst different network members</td>
<td>Networking abilities (Äyväri and Jyrämä, 2007)</td>
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<tr>
<td></td>
<td>Acquiring information/knowledge in order to identify potential partners/business opportunities</td>
<td>Embeddedness (Granovetter, 1985; Granovetter, 2005; Ingram and Lifschitz, 2006; Uzzi, 1996; Uzzi and Gillespie, 2002)</td>
</tr>
<tr>
<td></td>
<td>Acquiring information/knowledge in order to identify potential partners/business opportunities</td>
<td>Network Competence (Ritter, 1999; Ritter and Gemünden, 2003)</td>
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</table>
At the firm level, companies employ a set of behavioural-based activities to cope with the changes in their environment, e.g., changes in customer needs or the sudden loss of an important partner. Through fostering information sharing and reconfiguring and coordinating internal resources, firms can change to accommodate the impacts derived from the environment to better grasp current and future customer needs, in line with the concept of MO (Kohli and Jaworski, 1990; Kumar et al., 1998; Narver and Slater, 1990; Narver et al., 2004).

At the relationship level, various actions taken by firms are aimed at building trust, loyalty, cooperation, communication and adaptation. These mechanisms of relationships have been widely discussed in the business relationship literature and proven to be beneficial to firm performance (see Anderson and Narus, 1990; Hallén et al., 1991; Morgan and Hunt, 1994; Palmatier et al., 2008; Rauyruen and Miller, 2007). The role of communication, cooperation and adaptation (behavioural mechanisms) is of particular importance in defining the problem facing a dyad, outlining the issues to be addressed and eventually taking actions to solve the problem. The problem-solving arrangements can be established between two parties in a relationship through interacting with each other. On the other hand, trust and loyalty are seen to be the two important attitudinal factors for 'going through difficult time' hand in hand as well as 'going that extra mile' for the partner in a focal dyad. The results of the pre-study corroborate that a relationship is an continuous interactive process, in line with the central tenet of the interaction approach (Håkansson, 1982). These mechanisms cannot be placed in a specific order; instead, they are intertwined continuously.

At the network level, firms employ three types of networking strategies, with which they get access to exclusive information, mobilise resources amongst relationships, reach new opportunities and manoeuvre themselves into a desired network position. While these behaviours enable firms to gain insights into their embedded networks that goes beyond directly connected relationships, these strategic actions can only be accomplished through interacting with (and through) their counterparts (Jack, 2005; Uzzi, 1996).

Conceptually NO is therefore an overarching construct, and the empirical results of the preliminary study suggest a nested model, depicted as Figure 1, within which the relevant bodies of research, MO and RO reside. Following from this, firms' organisational behaviours as part of the NO construct can be further stratified by the

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1 Most studies examine these relational mechanisms using cross-sectional data, which casts doubts on the causal relationships between the variables. For instance, Anderson and Narus (1990) argue that even their cross-sectional data reveals that cooperation is an antecedent to trust, but the causal order can also be reversed at different points of time.
three-level structure. First, at the firm level, a company needs to equip itself with customer-related organisational competence in response to their customer needs, which is analogous to the concept of MO (Kohli and Jaworski, 1990; Narver and Slater, 1990). It provides the prerequisites to efficiently and effectively organise itself vis-à-vis other actors. Second, at the relationship level, it needs to have relational competence to initiate, develop and maintain relationships across all sorts of counterparts (business partners) that interact with it (Walter et al., 2006). Third, at the network level, it needs to have networking competence to consider the impacts derived from its embedded network and to respond to them in order to exploit the opportunities and reduce the risks through the interactions with other firms. Thus, NO consists of three behavioural elements: customer-related organisational competence, relational competence and networking competence.

Relational competence denotes a construct that captures the unique part of RO that goes beyond MO. Networking competence, on the other hand, represents the difference between NO and RO. In other words, market-oriented firms need to equip themselves with customer-related organisational competence and relational competence in order to deal with their direct interacting partners, and on top of which, networking competence is a means of dealing with indirectly connected relationships or effects derived from the business network environment. The two identified constructs, customer-related organisational competence and relational competence, can be synthesised with some already developed concepts within the research areas of MO and RO respectively. In addition, the pre-study has identified a new element in relation to a firm’s “networking competence” which refers to the ability to affect a company’s network position through strategic actions. The four types of strategic actions identified by the pre-study are coordination amongst network members, reaching new opportunities, strengthening network identity, and network information gathering. In contrast to the other two competences, there is no single concept that can capture the complete conceptualisation of networking competence. It is more divergent in the sense that its elements can be only partly linked to several concepts in the network literature (see Table 1 for the relevant studies in the literature to these three competences).

For the purpose of further refining the construct of networking competence, relevant network constructs were reviewed, compared, and analysed, as summarised in Table 2. They are assessing different aspects of the network context:
embeddedness (Granovetter, 2005; Uzzi, 1996; Uzzi and Gillespie, 2002) is used to explain the effects of interpersonal ties to organisational behaviour; network competence (Ritter, 1999; Ritter and Gemünden, 2003) is an organisational competence regarding network management (understood as a web of relationships); connectedness (Anderson et al., 1994) is a construct that can be used to describe how a firm works with a specific partner, with consideration of other indirectly connected relationships in mind. All of these have been linked to positive firm performance, either conceptually or empirically, and therefore, they lend support to the conceptualisation of networking competence used in this study. However, the intention here is not to develop a construct to include all of these network constructs. Instead, the pre-study suggests that there are four types of strategic actions that can be employed by firms to exploit their network through interacting with their partners. Further refinement is needed in order to develop the appropriate measurement for this construct, which will be discussed in the section on research design.
<table>
<thead>
<tr>
<th>Concept used</th>
<th>Embeddedness</th>
<th>Network competence</th>
<th>Connectedness</th>
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<tbody>
<tr>
<td><strong>Field of Study</strong></td>
<td>Economic sociology</td>
<td>Business Marketing</td>
<td>Business Marketing</td>
</tr>
<tr>
<td><strong>Theoretical perspective</strong></td>
<td>Social Exchange Theory (SET)</td>
<td>Industrial Network and competence-based perspective</td>
<td>Resource Dependence Theory (RDT)</td>
</tr>
<tr>
<td><strong>Basic assumption</strong></td>
<td>Personal relations and structures (networks) of these relations are seen as concrete in nature, from which trust is derived and opportunism is discouraged.</td>
<td>Interconnectedness and accompanied risks of relationships necessitate a need for company to consider its whole network and cope with the situation.</td>
<td>The effect of business networks bringing about is superior to the total contribution of all dyadic relationships. This is due to the considerations within dyadic relationships about the connectedness with other connected relationships.</td>
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<tr>
<td><strong>Definition</strong></td>
<td>The extent to which economic action is linked to or depends on action or institutions that is non-economic in content, goals or processes. (Granovetter, 2005)</td>
<td>The degree of network management task execution and the degree of network management qualification possessed by the people handling a company’s relationships. (Ritter, 1999)</td>
<td>The consideration of the interdependencies that exist between firms doing business with one another and the resultant need for cooperation. (Anderson et al., 1994)</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>The usage of embedded ties to connect to a network</td>
<td>• Task execution • Relationship-specific • Cross relational • Task Qualification • Specialist • Social</td>
<td>• Anticipated constructive effects on network identity • Anticipated deleterious effects on network identity</td>
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<td></td>
<td>Uzzi and Gillespie (2002)</td>
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<td>Granovetter (2005)</td>
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<td>Ingram and Lifschitz (2006)</td>
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<tr>
<td><strong>Analysis unit</strong></td>
<td>Relationship (tie)</td>
<td>Firm</td>
<td>Focal firm in a focal relationship</td>
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</table>
NO AS CONCEPTUAL FRAMEWORK: HYPOTHESIS DEVELOPMENT

This conceptual model is developed to capture the multi-level behaviours that firms employ in response to their network dynamics. Zaheer et al. (2010) contend that network phenomena are inherently structural (i.e. multi-level structure), and therefore making explicit the structural levels of analysis will help provide a more complete understanding of the actions and consequences behind these phenomena. The development of the hypotheses explicated below will follow the logic of the structural levels in the nested model of NO in an accumulating manner, i.e. starting with a MO model, then a RO model and finally a NO model.

MO MODEL: THE ROLE OF CUSTOMER-RELATED ORGANISATIONAL COMPETENCE

Customer-related organisational competence concerns the inter-functional coordination and information sharing to better respond to customer needs. This research defines customer-related organisational competence as the organization-wide generation, dissemination and responsiveness to market information, i.e. customer needs and competitor actions (Kohli and Jaworski, 1990). Since 1990s a steady stream of research has continuously reinforced that the ability to respond to customer needs is an important organisational competence as well as the driver of a company’s success, such as new product success (Narver et al., 2004) or business performance (Jaworski and Kohli, 1993; Narver and Slater, 1990). However, a recent longitudinal study suggests that the effect of such competence on performance diminishes over time due to competitor imitation (Kumar et al., 2011). A wide array of empirical evidence from the stream of MO literature argues that this link is hugely contingent on contextual influences, such as culture (Greenley, 1995; Harris, 2001), environmental turbulence (Cadogan et al., 2009; Kumar et al., 1998; Tsai et al., 2008), etc. Nevertheless, the positive impact that customer-related organisational competence has on performance still holds based on extensive empirical evidences, albeit its contingent nature. This research therefore posits the following:

Hypothesis 1: Customer-related organisational competence has a positive impact on a firm’s performance.

Although the contribution of being market-oriented for a firm is to be closer to its customers (Steinman et al., 2000), it still predominately focuses on inward activities (such as interfunctional cooperation) in order to fulfil customer needs. It focuses mostly on a focal company’s orientation vis-à-vis their customers and ignores the immense role that suppliers and other actors play in the process of fulfilling customer needs. As such, the significance of interactions with business partners (e.g. suppliers) is largely absent from MO conceptualisations (Day, 1994). The above discussion implies that there exists the need to take the concept of customer-related competence further by considering the way in which firms utilise their web of connected relationships in order to further enhance their performance.

RO MODEL: THE ROLE OF RELATIONAL COMPETENCE

The nested structure of NO implies that the existence of customer-related organisational competences serves as the foundation for firms to further explore and
develop the needed capabilities at present and for the future (Day, 1994). It implies that companies equipped with this competence not only can better develop exchanges with customers but also with their suppliers; the latter is crucial for providing customers with a better offering. Such an argument is in line with Jüttner et al. (2010) who suggest that relationships upstream with suppliers and downstream with customers should be managed integrally and simultaneously, because of the interactive nature of resource and activity configuration. Within such an integrative perspective, customer relationships are facilitated by strategic supplier alignment. Smirnova et al. (2011) suggest that the information collection and dissemination regarding customers and competitors will help companies in developing relational capabilities, because they can utilise the knowledge to better manage important business relationships. This provides the second hypothesis:

**Hypothesis 2:** The level of customer-related organisational competence has a positive impact on a firm’s relational competence.

The challenge for a firm is not only to fulfil customer needs, but to develop and maintain relationships with other partners who contribute in this process (Morgan and Hunt, 1994). A firm’s other interacting partners, such as suppliers, play a critical role in impacting upon a focal company’s offerings to customers. Extensive research adopting several different theoretical perspectives (e.g. transaction cost economics, resource dependence theory, social exchange theory and the interaction approach) has been employed to understand various aspects of business relationships, showing that relationships with a multitude of business partners are of importance in relation to outcome performance (for summaries, see Brennan et al., 2007; Donaldson and O’Toole, 2002).

Walter et al. (2006) argue that the ability to coordinate with various business partners in an innovative collaboration can increase the success rate of the innovation, because the knowledge accumulated through the interactions amongst them can better prevent failures. Although the empirical evidence suggests that the direct relationship does not hold, its role of strengthening the outcome of the collaboration is asserted. Palmatier et al. (2007) argue that managing and maintaining successful business relationships is critical to a firm’s overall performance due to the contribution of cooperated partners and the synergy of resource utilisation from other parties. Based on the above discussion, it follows:

**Hypothesis 3:** A firm’s relational competence has a positive impact on its performance.

However, when firms develop beneficial relationships with their counterparts, not only do they have directly connected relationships in mind, but also those indirectly connected ones (Anderson et al., 1994). These can be used not only to mobilise resources in current relationships, but are linked to other indirectly connected ones. Therefore, direct interaction partners serve to act as media or conduits for firms to reach opportunities afforded by the network, and as buffers for them to cushion the impact of developments in a volatile environment. Ritter and Gemünden (2003) suggest that the management of the web of connected relationships (called ‘network competence’) can bring about the synergy of working relationships and increase economic outcomes (e.g. innovation success). Nevertheless, the means of reaching rich information and resources afforded by the network are not included. This research proposes that networking competence is the more appropriate construct in capturing
the ability to access to and capitalise on the resources that exist beyond the reach of the firms, and that only can be accessed through interacting with their counterparts.

**NO MODEL: THE ROLE OF NETWORKING COMPETENCE**

The direct relationship between customer-related organisational competence and networking competence is not supported by empirical studies. However, this inference can be based on some conceptual studies and initial findings in the literature (Jack, 2005; Seevers, 2010). Seevers (2010) proposes in his conceptual study that customer-oriented behaviours can be linked to social network relationships. The essence of customer-related organisational competence is to generate, disseminate and respond to the information related to customer needs and competitor actions. It is in some way related to a firm's ability to access to new opportunities (e.g. perspective customers) and desired information (e.g. information related to competitors or customers dispersed in the network) (Seevers, 2010). However, without close interactions with directly connected counterparts, these actions would not come to full fruition (Jack, 2005). In other words, networking competence can be enhanced by customer-related organisational competence through the ability of managing successful relationships. The above discussion gives the following two hypotheses:

**Hypothesis 4:** The level of customer-related organisational competence has a positive impact on a firm's networking competence.

**Hypothesis 5:** Relational competence mediates the effects of a firm's customer-related organisational competence on its networking competence.

Uzzi (1996) argues that embedded ties, which are relationships characterised with high levels of trust, information sharing and problem-solving coordination, enable a firm to get access to desired information and new opportunities provided by the networks. It can be inferred that when a firm has strong relationship management skill, it raises the possibility of strengthening the ability to capitalise on its network. This gives:

**Hypothesis 6:** The level of relational competence has a positive impact on a firm's networking competence.

The pre-study reveals that when a firm monitors the dynamics linked to its network context, it acquires knowledge about these dynamics, and therefore can subsequently respond to them proactively to better adapt to the changes and exploit them in its favour. More specifically, through direct interaction partners a firm can gain a better understanding of the changes in other indirectly connected relationships, which might subsequently affect its activity, resource, and actor (ARA) configurations, i.e. its network position (Ford et al., 2003; Håkansson and Johanson, 1988). Therefore, the interactions in directly connected relationships are necessary for a firm to position itself in the network context and to respond to the wider opportunities and threats related to the network.

Studies concerning firms' networks focus on the effects of firms' social capital (i.e. a set of social resources that are embedded in networks) (e.g. Burt, 2000; Burt, 2007; Granovetter, 1973; Granovetter, 1985; Granovetter, 2005; Gulati and Sytch, 2007; Jack, 2005; Uzzi, 1996; Uzzi, 1997; Uzzi and Gillespie, 2002; Vanhaverbeke et al., 2009). Empirical evidences regarding the effects of a firm's networking competence on the performance are limited. Zaheer and Bell (2005) argued that ‘network-enabled
capabilities’ (i.e. the combination of a superior set of internal resources and a beneficial network structure) is crucial to firms’ performance, especially for firms who are in a superior network position. Although the internal resources in their study are not directly linked to networking competence, it provides some grounding to examine the relationship between firms’ behaviours towards the networks in relation to performance. It also implies that advantages related to a superior network position alone would not warrant a superior performance without the ability to access to the desired information and resources through interacting with their business partners. Hence:

**Hypothesis 7:** *A firm’s networking competence has a positive impact on its performance.*

The above discussion of how the constituent elements of NO relate to each other and to firm performance can be summarised in the nomological models of **Figure 2a, 2b and 2c.** It is posited that customer-related organisational competence, relational competence and networking competence contribute to a superior performance as a whole, and that without any of these three elements, firms cannot fully exploit their own competences to benefit from their counterparts and the network context. This research will test the full NO conceptual model against two competing models, namely a MO model and a RO model. The conceptual model is currently being refined and consolidated; for instance, additional antecedents will be evaluated, as well as possible other moderation and mediation effects amongst constructs.
This research examines the effects of firms' behaviours in response to their embedded networked environment, whereby their direct and indirect relationships are enmeshed. Therefore, examining the behaviours of firms that are operating in business markets with multiple customers, suppliers and/or other business partners, is well suited for testing the conceptual model. The research design envisages a two-stage empirical study, the details of which are outlined below.

STAGE ONE: SCALE CONSTRUCTION AND PILOT TEST

The first stage of the empirical study is to develop the research instrument, i.e. a questionnaire, by which the conceptual model is tested. However, before the full instrument is pre-tested, measurement items of the construct of networking competence for the four aspects already identified in the pre-study need to be developed. To aid forming an appropriate set of multi-item scale and ensuring its reliability and validity, this research follows the rigorous procedure suggested by Churchill (1979). This procedure is employed for the scale construction, because it has been extensively used in a wide range of studies under different research settings, particularly in relationship research (e.g. John and Reve, 1982; Palmatier et al., 2008). While Churchill’s (1979) procedure provides some guidelines in using analytical techniques, Gerbing and Anderson (1988) enhanced this procedure by providing an even more rigorous construct assessment, which mainly tackles the issue of unidimensionality of the scale.

For the purpose of developing and assessing the new

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It refers to “the existence of one latent trait underlying the data” (Hattie, 1985, p. 139). It is presumed that the measurement items developed for the construct of networking competence are reflexive since networking competence is the latent factor that causes the manifestation of the three aspects of behaviours identified by the preliminary qualitative research. Unidimensionality is an essential criterion for ensuring the validity of reflexive measurement (Bollen and Lennox, 1991).
construct, these two approaches will be combined to form the framework of scale construction.

To begin the process of scale construction a further literature review and fieldwork are required in order to accomplish a list of suitable items. It is necessary at this stage to consult practitioners in the industries as well as the academics to ensure its content validity, which will in turn strengthen the overall construct validity (Peter, 1981). The amended scale (based on the discussion with industry and academic experts) will be tested on a small group of experienced MBA students. This test is to further purify the scale and aim to finalise the measurement. To analyse the data an exploratory factor analysis will be employed for the initial scale purification. The items might be amended accordingly based on the results of the initial analyses and the qualitative feedback from the respondents (e.g. the wordings of the questions). After the initial examination, a confirmatory factor analysis will be carried out to assess its unidimensionality. This is to ascertain that all the items are indeed measuring the same underlying construct. Lastly, an assessment of coefficient alpha on the scale would reveal its reliability.

After the newly developed scale is deemed of satisfactory standard, the full instrument, including measurement items adapted from the existing literature for all other constructs, will be pre-tested on an appropriate group of academics and practitioners (see Table 3 for the list of planned measurement models and items for each construct). Before collecting pre-test data, in-depth interviews with industry experts will be necessary. They can contribute on the issues, such as the relevance and importance of the research to their relationship management practice. The opinions from industry experts will provide practical insights and help improve the quality of the questionnaire. A pilot test will be employed to identify any aspects of the questionnaire that may need modifying, and more interviews with academic and field experts will also be needed to purify the measurements and establish content validity of all measurements. The possible sample could be Manchester Business School alumni, who meet regularly through events hosted by the School. The collected data will be analysed, following the aforementioned analytical procedure suggested by Gerbing and Anderson (1988).

**Table 3 Conceptualisations and Operationalisations**

<table>
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<tr>
<th>Constructs</th>
<th>Definition</th>
<th>Measurement</th>
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| Organisational Competence| The organization-wide generation, dissemination and responsiveness to market information, i.e. customer needs and competitor actions (Kohli and Jaworski, 1990). | • Customer Orientation  
• Competitor Orientation  
• Interfunctional Orientation  
Adapted from Narver and Slater (1990) |
| Relational Competence    | The ability to initiate, build, maintain and utilise relationships with business partners (Walter et al., 2006). | • Coordination  
• Relational skills  
• Partner knowledge  
Adapted from Walter et al. (2006) |
Networking Competence

The ability to affect a company’s network position through strategic actions towards its direct and indirect interacting partners.

- Coordinating amongst different network members
- Acquiring information/knowledge
- Strengthening network identity

To be developed and tested by this research.

Firm Performance

The combination of a firm’s economic outcome and that in relation to its competitors.

- The assessment of the overall performance of the business and its overall performance relative to major competitors.
- Objective financial indicators (i.e. growth rate).

Adapted from Jaworski and Kohli (1993)

STAGE TWO: SURVEY

I expect to collect data through a large-scale survey across several industries in the UK. Broadly speaking, suitable respondents will come from managers in firms that are operating in business markets. The procedure of data collection and data analysis is outlined as follows.

Sampling and data collection

This study will utilise as the sampling frame a list of top 1,000 UK companies by R&D investment, according to a report published by UK Department for Business Innovation & Skills (2010). It is considered appropriate, because these firms have a high amount of investment in R&D, which means that they are likely to have capacity to build sustained relationships with other members in their business networks. The composition of these companies cuts across major industry sectors, with which the external validity can be achieved. It allows this research to investigate across different business networks. The targeted number of participant firms is estimated to be 15% of the total population (1000 firms) approximately, which will bring it to around 150 firms in total.

In addition, relevant information will be collected using the combination of telephone and e-mail communications before the official investigation commences. This is to ask for firms’ participation in this research and to identify suitable respondents within the organisations. The research design will call for a multiple-source and multiple-informant approach; whereby predictor variables will be collected from two key respondents in each firm and responses predictor variables (i.e. firm performance) will be obtained from the report provide by BIS. It is to mitigate the measurement error related to common-method bias derived from collecting predictor and response variables from the common source (Podsakoff et al., 2003; Rindfleisch et al., 2008). Two appropriate contact persons in the firm will be addressed through the aforementioned communications between firms and the researcher, who are authorised, capable and knowledgeable in giving the required information. If however, multiple-respondent approach is proven to be infeasible (e.g. firms would/could not provide more than one respondent, time and cost restrictions, etc.), a single respondent approach coupled with multiple sources of data (i.e. predictor and response variables...
are from different sources) can still reduce the risk of common method bias (Rindfleisch et al., 2008).

DATA ANALYSIS

With consideration among different constructs, structural equation modelling (SEM) is deemed appropriate for analysing various effects among them, as well as considering the fitness of the model. All the analyses mentioned below will be executed using statistical programs, mainly SPSS (version 16) and AMOS (version 16).

A two-step SEM approach, suggested by Anderson and Gerbing (1988), will be employed in this study. Firstly, a reliability coefficient will be used to assess the consistency of the different scales with Cronbach’s alpha measures. To help ensure unidimensionality, items in each multi-item scale will be examined individually using factor analysis. Following this, confirmatory factor analysis (CFA) will be employed to assess construct reliability (CR) and the measurement model validity. The purpose of CFA is to understand whether a model fits and displays construct validity, if so, the measurement theory is supported (Hair et al., 2007).

After confirming that the measurement model is deemed sufficiently valid, hypotheses in the study can then be tested using SEM. Firstly, the structural model fit will be assessed, with which the purpose is to compare CFA fit. Secondly, an examination of hypothesised dependence relationships will be carried out, where mediating and moderating effects will be analysed separately, using the method of competing models and multi-group SEM respectively (Baron and Kenny, 1986; Hair et al., 2007).
EXPECTED CONTRIBUTIONS

The expected contributions of this study to the existing literature are twofold. First, the study is aimed at providing a framework of NO to analyse firms’ behaviours at different levels: firm, relationship, and network. It is built upon the interaction approach to respond to Zaheer et al.’s (2010) call for a more complete understanding of network phenomena by providing how and why firms behave in response to their networks at different levels of analysis. As such it increases our understanding on how firms’ behaviours are shaped by their surrounding environment, and how they respond to the dynamic nature of the network morphology in order to benefit from it. It deepens our understanding of the effects of firms’ embedded context from an organisational actor’s point of view, differentiated from the established research in network literature concerning social capital (e.g. embeddedness).

Secondly, the research also contributes by providing a better understanding of the linkage between relationship management and network management and how these link to firms’ performance. To better explain performance, a wider view has to be taken by considering relationship management as well as the impact of network dynamics linked to network embeddedness of actors. In addition, the new construct developed by this research, networking competence, goes beyond directly connected relationships, which has added another layer of implications to the developed network concepts in the literature, such as Ritter’s (1999) network competence (i.e. the competence in managing the web of directly connected relationships).

At a practical level, the study contributes to practitioners operating in industrial markets by providing different levels of managerial suggestions in response to the complex network and volatile environment. Simply put, it will offer implications to practitioners operating in business markets as to how they can best utilise their network contexts.
References


