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A company’s competitive advantage is in great extent embedded and dependent on its supply network (Best, 1990; Lamming et al., 2000; Dyer and Singh, 1998). Similarly, buyer-supplier relationships also have an important impact on company performance and overall business success of a company (Veludo, Macbeth and Purchase, 2006; Ford, 1990; Håkansson, 1982; Håkansson and Snehota, 1995). According to Harland (1996) supply chain management should be viewed as the management of business activities and relationships, with the final goal of buyer-supplier relationship management to achieve a socially desirable and economically acceptable quality of such relationships, which will in turn contribute to the overall goal of the organizations participating in these relationships. While today most buyer-supplier networks are international, not all internationally active companies are the same. The paper examines supply chains as relationship (marketing) networks in transnational companies, a particular type of the generic multinational company under the Bartlett and Ghoshal (1989) typology. It first explores the specifics of transnational companies, looks at key elements and constructs of buyer-supplier relationships through an extensive literature overview and proposes a conceptual model of buyer-supplier relationships that builds both on the use of exploratory network analysis, as well as linear structural model testing methodologies. It approaches the elements and constructs of buyer-supplier relationships both from dyadic, as well as network perspectives to include constructs such as network complexity and structure, distance and experience in the buyer-supplier relationships alongside traditional constructs of trust, commitment, cooperation, communication etc.

Keywords: supply chains, network theory, transnational companies, relationship marketing, conceptual model
TRANSNATIONAL SUPPLY CHAINS AS RELATIONSHIP (MARKETING) NETWORKS: A CONCEPTUAL MODEL PERSPECTIVE

- COMPETITIVE PAPER -

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1. INTRODUCTION

From the viewpoint of globalization multinational companies (MNCs) have come to embody the ‘Zeitgeist’ of contemporary economic structures and socio-cultural contexts, with profound influence and power “over the economic, social, political, and cultural lives of many nations and people” (Hymer, 1979). According to Morgan, Kristensen and Whitley (2003) MNCs are today increasingly viewed as transnational communities and spaces of social relationships. Such a conceptual view to the contemporary MNCs has been triggered by the idea of a “new competition” system (Best, 1990). In Best’s view individual firms no longer compete in the global marketplace. "Rather, it are networks that compete, and competitive advantage in such a scenario is largely determined by the competitive advantage of the network to which the firm belongs” (Kandampully, 2003; Lakhal et al., 1999).

An important shift in understanding the forms, mentalities and mechanisms of action of MNCs was reached by Bartlett and Ghoshal (1989) by the end of the 1980s in their revolutionary book Managing across borders: the transnational solution, where they outlined 4 fundamental managerial mentalities or mechanisms of action of the generic MNC, with a special emphasis on the transnational company (TNC), as the revolutionary new form of the MNC. As outlined by Bartlett and Ghoshal (1989) an internationally active company must fulfil 3 strategic goals in order to develop world-scale competitive advantages and global reach. It has to develop: (1) global efficiency in existing activities, (2) international flexibility (local responsiveness), ensuring appropriate managing of risks and opportunities and (3) world-wide learning through its exposure to international and local contexts and opportunities, being able to use them in their international business. While the (a) multinational mentality focuses on international flexibility (local responsiveness), (b) global mentality on global efficiency (through standardization and centralization), the (c) international mentality aims to take advantage of knowledge and capabilities of the managing mother company through world-scale expansion and adaptations (Bartlett and Ghoshal, 1989/2003). With the first 3 mentalities giving priority to 1 of the 3 listed strategic goals, the (d) transnational mentality is the only one that strives simultaneously towards a unique balance between all 3 strategic goals at the same time.

According to the Bartlett and Ghoshal TNCs may be viewed as the most advanced form of an internationally active company so far, mainly because they are able to balance the 3 key strategic goals mentioned earlier.
What is important in this perspective is that in a sense, a TNC is an idealized concept. Out of all the companies, on which the Bartlett-Ghoshal typology was created, none were an identical match with the TNC in its ideal form. What does this mean? Above all, transnationality as a mentality should be viewed as a relative concept of harmonized attempts to simultaneously strive for global efficiency, international flexibility and world-wide learning. In this view, transnationality, as a managerial mentality, is a dynamic category and a propensity to achieve a higher level of harmonization of the 3 key strategic goals. A company cannot simply be characterized as being transnational or not, a simplistic dichotomous state, but must be evaluated in its attempt to efficiently and sustainably balance global efficiency, international flexibility and world-wide learning. In this context, Bartlett and Ghoshal view transnationality as a "new managerial mentality" (Bartlett, Ghoshal, 1989). Having said this, understanding transnationality calls for a shift from a structured, dichotomous classification to a broader organizational philosophy, which manifests itself in the organizational capabilities and managerial mentalities of an internationally active company (Bartlett, Ghoshal, 1989), where a successful management of inter- and intra-company relationships and networks is key to its success of functioning as an integrated network of business units (Bartlett, Ghoshal, 1989).

Having said this, the purpose of this paper is to examine the management of supply chain relationships and their elements in TNCs (within the Bartlett and Ghoshal typology) in the context of relationship marketing and network theory. The paper aims to provide a theoretical and conceptual platform for the identification and examination of key buyer-supplier relationship elements, both from dyadic and network perspectives. The main goal of this paper is thus to structure a conceptual model of key buyer-supplier relationship elements such as i.e. trust, commitment, loyalty, cooperation, satisfaction, confidence, flexibility and many other possible relational elements outlined by Thakkar, Kanda and Deshmukh (2008) in their overview of over 30 relational elements of business and buyer-supplier relationships.

The paper in the introductory part first briefly outlines transnationality, as 1 of the mentalities of the generic MNC outlined by Bartlett and Ghoshal (1989). Next, it presents a summarized definition of business relationships and business networks on B2B markets and its element, with particular emphasis on buyer-supplier contexts. Based on this, it presents a conceptual model of buyer-supplier relationship elements, and discusses it from the view of dyadic and network contexts, with particular emphasis on how network structures impact buyer-supplier relationship forming and characteristics. In the end, key methodological issues pertaining to the model and its testing are discussed (i.e. data gathering, research instruments, construct measurement, analytical procedures, etc), followed by concluding remarks.

2. BUSINESS RELATIONSHIPS AND NETWORKS: A BUYER-SUPPLIER B2B CONTEXT

2.1. Business relationships in B2B markets

Several characteristics of business-to-business (B2B) markets substantially distinguish the socio-economic relationships, vis-à-vis business-to-consumer (B2C) markets. Hutt and Speh (2004) define a B2B market as a market, where companies, organizations, government bodies and institutions purchase and exchange supplies, products, semi-products and services for the consumption, use or re-sale. A key differentiating characteristics of B2B markets is a closer and more interdependent business relationship, where especially buyers are much more active in the whole value-adding process (Kotler and Keller, 2006; Minett, 2002). The reason for this lies in a smaller number of buyers and users, compared to B2C markets, which are in turn bigger and often more geographically focused. In B2B markets only a few organizational buyers can represent a substantial part of sales in the industry. The decision-making process is much more complex, involving a many participants and decision-stakeholders, while the complexity of products and services offered ranges between simple to highly complex and tailored solutions (Möller and Wilson, 2001). The buyer-seller approach (marketing channel perspective) or the buyer-supplier approach (supply chain management perspective) of the business relationship is more individual, as buyers range in size and demand. Products and services on B2B markets are not usually standardized or even specified by the buyers and users (Ford, 1998). Demand is usually derived and fluctuating (Hutt and Speh, 2004). B2B markets are complex, prone to high levels of risk and have a global reach (Spekman, 2004). The relationships on B2B are more close, intense and stable. Transactions are not seen as the final result, but the beginning of a long-term relationship (Hutt and Speh, 2004).

2.2. Defining a business relationship
Morgan and Hunt (1994) have outlined the relationships paradigm in the context of all activities directed towards the establishment, development and maintenance of successful relational exchanges. Within the relationship paradigm business relationships are defined as a link between at least two sides (actors) (Fournier, Dobscha and Mick, 1998) in a business dimensions (Stuart, 1997), with the intent to create value for all sides (Walter, Ritter and Gemünden, 2001). Veludo, Macbeth and Purchase (2006) stress how business relationships in general and the networks consisting of these relationships are "as diverse and complex as the individuals who participate in them".

Håkansson and Snehota (1995) define a business (marketing) relationship as a joint and orientated interaction between two (or more) mutually committed actors. Iacobucci and Ostrom (1996) point out, how the interactions in question are long-term, lasting and represent a dynamic process, opposed to transaction and non-connected exchanges. According to Lemke, Goffin and Szwejczewski (2003) in such a relationship, one side offers a value bundle of products, services, know-how, information, joint goals or trust, which have special meaning and value for the other side(s). The other side in return offers its own value bundle in the form of monetary compensation, long-term collaboration or part of the business. In terms of the exchange dimension of the relationship Day (2000) distinguishes between 3 different levels of relationships: (1) transaction exchange level, (2) added value exchange and (3) collaborative exchange. While transaction exchange is characterized by low trust, complete independence of actors, economic exchange, information asymmetry and manipulation, the collaborative exchange involves trust, interdependence of actors, social exchange, information sharing and mutual adjustment (Jančič and Žabkar, 2002).

Another important point raised by Håkansson and Snehota (1995) is a two-level approach to understanding business relationships. On an organizational level these relationships should be seen as links between two collectives and are hence named as business relationships. The second level represents links between individuals within and between organizations, which are named interpersonal relationships. While definition of business relationship between organizations is key to understanding buyer-seller dynamics, the individual interpersonal relationship shape and influence the whole business relationship context (Čater, 2006).

As one of the key characteristics of B2B markets are mutually interdependent (Minett, 2002), long-term and stable relationships (Brennan and Turnbull, 1997) the relationship paradigm has become a key conceptual approach to the study of business relationships. Parvatiyar and Seth (2000) point to a clear distinction between business relationships and relationship marketing; which should not be seen as synonyms. While marketing (business) relationships can represent all relationships between buyers and sellers in the form of collaborative, competitive or independent relationships, relationship marketing represents a distinct marketing approach focused on the creation, development and management of (only) long-term and collaborative relationships between companies and their buyers and/or direct stakeholders in the market (Parvatiyar and Seth, 2000).
2.3. Characteristics of business relationships

Business relationships are defined by two important dimensions: content and function (Håkansson and Snehota, 1995). (1) Content pertains to all aspects that are affected by such relations on both (all) sides. In a business relationship 3 levels of content can be indentified: (a) activity links, (b) resource ties and (c) actor bonds. Activity links are all activities that can, in the course of the relationship, be linked with the activities from another organization (i.e. purchase activities, administrative activities, etc.). Resource ties on the other hand refer to all resource connections with other organizations (i.e. financial resources, technology, know-how, human resources, etc.). Actor bonds link both organizations and individuals (two levels) and affect both actors’ perception and their identity (Čater, 2006).

The (2) functional dimension refers to the effect of a business relationship on the actors. Håkansson and Snehota (1995) again define 3 different relationship functions: (a) a dyadic function, (b) function for the individual actor and (c) function for other actors. The dyadic functions stems from the two-way, dyadic link between two actors, their resources and activities. The function for the individual actor on the other hand relates to the impact a relationship has on the individual actor, its own internal relationships, as well as external relationships to other actors. The function for other actors represents an opposite view from the function for the individual actor. As each actor is embedded in myriad social networks, the individual actors both shape the network context for other actors, while at the same time the network also shapes them.

Similarly, Veludo, Macbeth and Purchase (2006) developed a framework for examining 4 different dimensions in exploring intra-organizational relationships: (1) organizational context, where the characteristics of the actor are developed, with factors such as national culture, employment system links and subsidiary policies, (2) spatial context, pertaining to the context developed between the subsidiaries and the parent, (3) the relational context, pertaining to the creation of inter-organizational relationships between subsidiaries and external dyadic partners (i.e. supplier, buyers, etc.) and the (4) network context, putting into perspective also the interaction between actors and the network in which they are embedded.

With regards to other characteristics of business relationships they are not static, but change in time (Cheung and Turnbull, 1998; Ritter and Gemünden, 2003). They are usually multidimensional and complex, consisting of multiple levels and can at the same time involve conflict, cooperation, deception, manipulation and selfishness (Cheung and Turnbull, 1998; Håkansson and Snehota; 1995; McLoughlin and Horan, 2000; Turnbull, Ford and Cunningham, 1996). Business relationships can also be symmetrical, with all active parties (Håkansson and Snehota; 1995; McLoughlin and Horan, 2000) or they can be asymmetrical, characterized by power and dependence (Gelderman and van Weele, 2004). Business relationships are also often directed (Cheung and Turnbull, 1998), structured as well as to a degree informal (Håkansson and Snehota; 1995). According to Bagozzi (1975) business relationships are both economic and social, often compared to romantic relationship, but usually less exclusive and with a lover personal involvement and commitment degree (Berghäll, 2003).

2.4. Buyer-supplier, buyer-seller and supply chain perspectives in business relationships

The paradigm shift in marketing from the beginning of the 1990’s (Kotler, 1991; Parvatiyar et al. 1992) has transformed marketing in its view of business exchange to increasingly emphasize relational aspects of market exchanges and has given rise to the relationship paradigm. These exchanges can be viewed as exchanges on end markets, or as exchanges in the process of creating products, services and solutions intended for end markets. While the first puts into perspective the traditional buyer-seller relationship, the second focuses on the buyer-supplier relationship as shown in Figure 1.
With its focus on the end customer, the relationship marketing theory has focused on long-term customer satisfaction and value-added selling through customer-oriented strategies (Williams, 1998). In this view the relationship between industrial organization (in the function of seller) and the organization or individual buying (buyer) has become the main focal point of the business relationship. However, the buyer-seller relationship is shaped also by an antecedent relational relationship between the organizational seller and its suppliers, where the organizational seller is in the position of the buyer (from the suppliers). This approach has been emphasized more within supply chain management theory. With the emergence of companies as integrated systems, with frequent outsourcing and collaborative arrangements the hierarchical boundaries between who is buying and exchanging with whom have blurred. Nowhere is this more prevalent than in TNCs. In this context buyer-supplier and buyer-seller distinction may often become obsolete in the perspective of the whole value-chain business relationship, where industrial organizations often play the role ‘moderators’ between the supplier and final buyer networks.

In the broadest of terms buyer-supplier relationships may be understood as a sub-set of business relationships. Stevens (1989) defines a supply chain as a system, consisting of material suppliers, production facilities, distribution services and buyers, who are linked together by a feed-forward flow of materials and feedback flow of information and financial value. Similarly, Christopher (1998) sees a supply chain as a network of organizations involved in upstream and downstream links in different value-adding processes and activities in the form of products and services for the end buyer. Importantly, Coyle, Bardi and Langly (2003) outline buyer-supplier relationships in two ways: as (1) vertical relationships, as traditional linkages among organizations in the supply chain from material and parts supplier to retailer, and as (2) horizontal relationships, referring to more collaborative ties between organizations on same supply levels.

Davis-Sramek, Fugate and Omar (2007), Gibson, Mentzer and Cook (2005); Lambert (2004), and Mentzer, Flint and Hult (2001) point out, how today the concept of supply chains is associated with a plethora of different definitions, typologies and methodological frameworks, which in turn all give merit to the their complexity, relativity and contextual rationality. Bowersox, Closs and Cooper (2002) stress that despite the illusiveness and ambiguity of a more general definition, the main focus in supply chain management is and should be, how to strategically design all business processes in a systematic way, to optimize long-term success of all units and entities engaged in creating and maintaining value to final buyer and user through collaboration and partnerships. Regardless of the definition, Lambert and Cooper (2000) have outlined 4 important characteristics of a supply chain: (1) a stage by stage evolution of increasing intra- and inter- organizational coordination, going from the initial supplier’s supplier to the end buyer’s buyer; (2) it usually consists of many independent organizations, implying the importance of managing relationships between them; (3) the supply chain is characterized by a two-way flow of materials, products, services, value and information, with associated managerial and operational activities; and (4) the ultimate goal of a supply chain is to provide high value to the end buyer and user through an appropriate utilization of resources that build long-term competitive advantage.

Van der Vorst (2000) on the other hand views supply chains as an intermediate supply system between a fully vertically-integrated system on one side, and a system where all members operate independently on the other side. Even in more detail, Slack, Chambers and Johnston (2001) define 5 types of organizing relationships in a supply-chain: (1) short-term trade, (2) semi- and long-term trade, (3) coordinated profit-sharing, (4) long-term
alliances and (5) joint ventures. Ford (1980) developed a 5-stage model for understanding industrial purchase relationships, consisting of the following stages: (1) pre-relationships, (2) initial phase with high uncertainty and physical distance, (3) developmental phase aimed at reducing uncertainty, distance and increasing commitment, (4) long-term phase, where long-lasting relationship evolve based on experience and (5) conclusion phase. Following Ford, Håkansson (1982) with his interaction model of buyers and sellers in B2B markets determined industrial purchase relationships as long-term and close relationships, and thus defined the work of the Scandinavian IMP group (Industrial Marketing and Purchasing group), which I will address in more detail in the next subsection. Håkansson's model is based on a complex pattern of interactions, influenced by both the participants as well as the interaction environment itself (the network). Campbell (1985) later upgraded Håkansson's interaction model to include also a concept of interaction strategies, as well as outlining 16 key variables effecting the selection and use of an appropriate interaction strategy from the suppliers and buyers point of view and grouped them into 3 basic groups: (1) competitive strategies, (2) cooperation strategies and (3) command strategies (Theng Lau and Goh, 2005).

Dwyer, Schurr and Oh (1987) posit that the relationships developed between buyers and suppliers in B2B markets developed within a 5-stage model, with the following stages: (1) awareness, (2) exploration, (3) expansion, (4) commitment and (5) disappointment. Within the most important phase – exploration they furthermore define 5 additional sub-phases: (1) attraction, (2) communication and bargaining, (3) development and use of power, (4) development of norms and (5) development of expectations (Theng Lau, Goh, 2005).

Later, Evans and Laskin (1994) developed mostly a conceptual model of efficient management of relationships with suppliers, consisting of 3 parts: (1) inputs, (2) results and (3) an evaluation of the relationship. On the other hand Dion, Easterling and Miller (1995) in their research focused mainly to explore the impact of personality traits on the level of trust and development of relationships between buyers and sellers in supply chains, while Leuthesser (1997) proposed and tested a model, based on a connection between 5 characteristics of links (relationships) between buyers and sellers, and the perceived quality of relationships between them.

### 2.5. Different theoretical and research streams of buyer-supplier relationship study

According to Ellegaard, Johansen and Drejer (2003) the study of buyer-supplier relationships falls within many different theoretical and research areas like: (1) organizational studies, (2) industrial economics, (3) industrial and relationship marketing, (4) strategic supply chain management, (5) international management, (6) purchasing, (7) strategic development, (8) network analysis and even (9) economic geography. Similarly, Robicheaux and Coleman (1994) note, how (a) transaction cost, (b) political economy, (c) economic sociology, (d) social exchange and (e) resource dependence theories have been applied in explaining buyer-seller relationships. Yet despite this vastness of theoretical and research areas Claro (2004) points out, how the study approach of buyer-supplier relationships and their management has primarily been based on economic and organizational theories, where he outlines 3 main strands: (1) transaction cost economics, represented by Williamson (1985); (2) marketing channels perspective, represented by Stern, El-Ansary and Coughlan (1996) and (3) relational contracting perspective, represented by Macneil (1978).

Having outlined several relevant theoretical strands with regards to buyer-supplier relationships and their management, I will briefly outline relationship marketing and the interaction-based model of the IMP group as the 2 most relevant theoretical strands, relevant to the proposed conceptual model in the paper.

#### 2.5.1. Relationship marketing

Relationship marketing evolved conceptually as an extension or upgrade of the basic transaction cost economics (TCE) view. According to relationship marketing theorists, buyer-seller interaction resembles more a relationship and not a distanced interaction, absent of trust and based solely on transaction costs and the bottom line. In this context, relationship marketing in addition to underlying economic parameters, also takes into account complementary non-economic characteristics also important in exchange-based relationships (Grönroos, 1997; O'Malley and Tynan, 2003; Zaheer and Venkatraman, 1995). The most frequently referred and cited factors associated with relational exchanges in include the following 6: trust, commitment, cooperation, keeping promises, shared values and communication (Hunt, Arnett and Madhavaram, 2006). Žabkar and Makovec Brenčič (2004) outline: values, trust and relationship commitment as key components of relationship marketing. Adding to this, Rojšek and Matajić (2002) distinguish between socio-psychological factors (i.e. trust, commitment, duration and interpersonal relationships, etc.) and organizational factors (i.e. adaptation in inter-firm relationships, relationship specific investments, contractual terms, etc.) relevant to
relationship marketing. Based on extensive empirical data the following key variables, important for understanding relationship marketing were noted: trust, commitment, cooperation, common goals, interdependence and power, satisfaction with results, comparison with alternative partners, adjustment, irreversible investments, joint technology and structure and social ties (Wilson, 1995). A similarly extensive outline of the key variables in terms of relationship marketing was conducted by Harker (1999), who outlined 7 conceptual stages: creation, development, maintenance, interactive, long-term, emotional content and output. In 2004 Hunt and Arnett introduced an expanded model of factors contributing to relationship marketing success, which moved from the prevalent focus on only (1) relational factors (the 6 most widely referred factors) and included (2) resource factors, (3) competence factors, (4) internal marketing factors, (5) information technology factors, (6) market offering factors, (7) historical factors and (8) public policy factors.

Despite relationship marketing putting a greater emphasis on social interaction, some authors like Cannon, Achrol and Gundlach (2000) still believe that relationship marketing represents just an extension of transaction cost mentality, with the interaction between actors not being so one-sided and distant (Ellegaard, Johansen and Drejer, 2003). Similarly, Achrol (1997) also believes, how relationship marketing just adds a dyadic approach to an old transaction cost view and neglects the impact of the network.

2.5.2. Interaction-based model of the Industrial marketing and purchasing (IMP) group

The mostly Scandinavian IMP group developed a special interaction model for studying B2B markets, based on extensive experience in the area of researching industrial relations from the 1980s onwards. The initial approach of the IMP group was to study individual links between 2 companies in a dyadic relationships (i.e. buyer-seller). The model was soon upgraded to included the whole network where the dyad was embedded, and thus the interaction model of the IMP group is today associated with network analysis, where a network being examined consists of myriad dyadic relationships, all based on actor interaction, activities and resources (Håkansson and Johanson, 1994; Ellegaard, Johansen and Drejer, 2003).

The IMP interactive model introduces a new social component to the study of industrial relationships, which manifests itself in the social interaction and exchanges between actors (companies or employees between companies). This social component and the development of relationships through a process of social exchanges in the area of B2B markets was acknowledge also by Anderson and Narus, 1990; Dwyer, Shurr and Oh, 1987, and Morgan and Hunt, 1994, while McLoughlin and Horan (2000) point out, how such relationships may be based on financial and economic interaction, technological interaction, exchange of know-how, legal interaction and exchange of information.

The implication of the interaction model of the IMP group is a high level of interdependence of one actor with regards to other actors in the network. This can be directly linked to Kristensen’s and Zeitlin’s (2005) view of companies as transnational communities. Different to transactional economics and relationship marketing view, a buyer within the IMP model does not have any power per se on the buyer-seller relationships. Both actors engaged in the dyad have incomplete control over own activities and only partial control over the activities of others. Such interconnectivity and interdependence triggers a high level of interaction and co-influence, because "a company cannot single-handedly develop and control its relations with other actors. Even less, it can develop and influence the wider network surrounding it” (Ford, 1992). Ellegaard, Johansen and Drejer (2003) note this is not only true for industrial and business relationships, but all social relationships in general.

In the end, some scholars (Cannon, Achrol and Gundlach, 2000; Achrol, 1997) clearly distinguish between relationship marketing and the work of the IMP group, while others see them more connected, with the work of the IMP group representing just a network upgrade of the basic dyad model outlined by relationship marketing theorists. In a sense, trying to distinguish between the 2 may seem pointless, since both examine relationship aspects between interdependent industrial actors, embedded in different contexts, some in the form of networks, other model individual.

2.6. Elements of buyer-supplier relationships: a literature overview

While trust, commitment, satisfaction and loyalty are seen as the main elements of relationships from a marketing perspective, almost 30 other such elements, dimensions and constructs have been identified up to date and researched in the context of buyer-supplier relationships. Reflecting this complexity and
multidimensionality of both business, as well as buyer-supplier relationships. Table 1 presents a summary of the different elements, dimensions and constructs outlined by a plethora of researchers and theorists, linked to the field of buyer-supplier relationships and their management.

### Table 1: A summary of the main elements and dimensions in the area of buyer-supplier relationships

<table>
<thead>
<tr>
<th>ELEMENTS</th>
<th>REFERENCE</th>
<th>SHORT DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust</td>
<td>Morgan and Hunt (1994); Anderson and Narus (1990); Kwon and Suh (2005)</td>
<td>Favorable attitude based on confidence in exchange regarding partner’s reliability and integrity. Trust is a key component of a long-term, collaborative and partnership relationship.</td>
</tr>
<tr>
<td>Adaptation</td>
<td>Burt et al. (2004)</td>
<td>Pertains to readiness of buyer/supplier in getting adapted to the new system, technology and environment. Such adaptation frequently occurs by way of investing in transaction specific assets such as product/process technology and human resources.</td>
</tr>
<tr>
<td>Commitment</td>
<td>Håkansson and Snehota (1995); Ramsay (1996)</td>
<td>Key ingredient in setting and maintaining long-term relationships. An inclination to persevere without any apparent reasons.</td>
</tr>
<tr>
<td>Dependence</td>
<td>Anderson and Narus (1990)</td>
<td>The degree of importance of an actor to the other actor, based on volume of business, amount of risk and expectations for future benefits.</td>
</tr>
<tr>
<td>Interdependence</td>
<td>Anderson and Narus (1990); Shank and Govindarajan (1992)</td>
<td>It ensures both actors to stay in the relationship. It motivates actors to develop long-term relationships, based on stability, cooperation and mutual benefit.</td>
</tr>
<tr>
<td>Cooperation</td>
<td>Frazier and Rody (1991)</td>
<td>It reflects an attitude of actors towards helping each other while working together.</td>
</tr>
<tr>
<td>Distributive justice</td>
<td>Morgan and Hunt (1994); Griffin et al. (2006)</td>
<td>Perceived fairness with a decision outcome. Short term balances are allowed, if long-term results mirror (perceived) inputs by actors.</td>
</tr>
</tbody>
</table>

Source: Adapted from Thakkar, Kanda and Deshmukh, 2008.
Table 1 (continued): A summary of the main elements and dimensions in the area of buyer-supplier relationships

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<tr>
<th>ELEMENTS</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Relational behavior</td>
<td>Olorunniwo and Hartfield (2001); Johnston et al. (2004)</td>
<td>Modification of an actors’ behavior as a response to the other actor. Relational behavior is perceived to increase satisfaction.</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>Huang et al. (2003); Burt et al. (2004); Oliver (1996)</td>
<td>Feel of fulfillment an actor derives from a relationship. Is based on expectations and perception of perceived actual outcome.</td>
</tr>
<tr>
<td>Intent for long-term relation</td>
<td>Ganesan (1994); Olorunniwo and Hartfield (2001)</td>
<td>Expected to have 3 related outcomes: relational behavior decreased conflict and increased satisfaction.</td>
</tr>
<tr>
<td>Direction of communication</td>
<td>Anderson and Narus (1990)</td>
<td>Communication can be uni-or bidirected. Communication defined as meaningful and timely sharing of information between actors.</td>
</tr>
<tr>
<td>Sense of security-safety</td>
<td>Huang et al. (2003); Choi and Hartley (1996)</td>
<td>Form of confidence between of actors. Important when uncertainty and high risk relates to lead times, demand and product/service features.</td>
</tr>
<tr>
<td>Mutuality</td>
<td>Ford et al. (2002)</td>
<td>A measure of how much an actors is willing to give up in order to increase positive outcomes of others.</td>
</tr>
<tr>
<td>Ability to withstand competition</td>
<td>Cox (2004)</td>
<td>Reflects actor’s ability to withstand competition and to support the other actor(s) in competition based crisis</td>
</tr>
<tr>
<td>Willingness to help customer</td>
<td>Ford et al. (2002); Shin et al. (2002)</td>
<td>Reflects buyers or suppliers readiness to help each other in adversarial situations like unprecedented demand, financial crisis, quality problems, etc.</td>
</tr>
<tr>
<td>Degree of power dominance</td>
<td>Ramsay (1996); Freathy and O’Connell (1998)</td>
<td>Channel power defined as ability of one channel member to influence and/or control the decisions and behavior of other channel members.</td>
</tr>
<tr>
<td>Long-term costs</td>
<td>Ganesan (1994); Morgan and Hunt (1994)</td>
<td>Actors long-term outflows while operating in a supply chain with specific kind of relationship.</td>
</tr>
<tr>
<td>Individual excellence</td>
<td>Cox (2004)</td>
<td>Measure of individual’s competence in their area of working. Impact the degree of dependence between actors.</td>
</tr>
<tr>
<td>Importance</td>
<td>Ramsay (1996)</td>
<td>Reflects the relative position of actor in the whole supply chain.</td>
</tr>
<tr>
<td>Integration</td>
<td>Shank and Govindarajan (1992)</td>
<td>Reflects linkages of business functions of buyer and supplier organization.</td>
</tr>
<tr>
<td>Institutionalization</td>
<td>Huang et al. (2003)</td>
<td>Degree to which supplier or buyer makes the other actor part of their own organization.</td>
</tr>
<tr>
<td>Integrity</td>
<td>Huang et al. (2003); Ford et al. (2002)</td>
<td>Reflects individual’s quality of having his/her own moral principles.</td>
</tr>
<tr>
<td>Flexibility</td>
<td>Huang et al. (2003)</td>
<td>Reflects the extent to which a supplier’s capacity exceeds buyer’s requirements.</td>
</tr>
<tr>
<td>Confidence</td>
<td>Huang et al. (2003)</td>
<td>Measure of trustworthiness in a buyer-supplier relationship.</td>
</tr>
</tbody>
</table>

Source: Adapted from Thakkar, Kanda and Deshmukh, 2008.

Based on the presented literature overview and myriad relationship elements, we propose a new, network-based conceptual model in the next section of the paper and briefly discuss its theoretical foundations.
3. PROPOSED NETWORK-BASED CONCEPTUAL MODEL OF BUYER-SUPPLIER RELATIONSHIPS

3.1. Theoretical foundations of the model

The proposed model approach is based on Claro’s tentative conceptual model of buyer-supplier relationships depicted graphically in Figure 2. As can be seen from the corresponding figure transaction specific investment (TSI) and trust act as important antecedents of buyer-supplier collaboration, which are in turn influenced by the network context (i.e. structure, size, etc.) in which both buyers and suppliers are embedded. The final buyer-supplier relationship (manifested through collaboration) is evaluated based on its performance. Here economic (sales growth rate and profitability) should be taken into account (Mohr and Speckman, 1994; Moorman and Miner, 1997), as well as perceived satisfaction (by organizational buyers, suppliers and end consumers) and buyer loyalty (Anderson and Narus, 1990).

Figure 2: Claro’s tentative conceptual model of buyer-supplier relationships

Source: Adapted from Claro, 2004.

The presented tentative model of Claro (2004) is important primarily in terms of a division between antecedents of collaboration and different collaboration elements mirroring specific buyer-supplier relationship characteristics and dimensional connections. Equally important is the context of networks, since buyer-supplier relationships do not exist in vacuum, but are rather contingent on many other relationships forming reference business networks, which in the end manifest in business performance.

In the next step, the basic Claro structure was expanded with several additional relationship dimension variables grouped into 3 groups: business network (pertaining to the network context and its impact on dyadic relationship), antecedents of collaboration and collaboration itself.

3.1.1. The business network context

From a social science perspective, society is not an aggregate of individuals and their characteristics, as assumed by statistics, but rather a social structure of inter-actor ties (de Nooy, Mrvar, Batagelj, 2006). Business networks are defined as interconnected business relationships (Prenkert and Hallén, 2006; Blakenburg and Johanson, 1992). They are not a sum of business relationships, but contingent on each other (Prenkert and Hallén, 2006). This contingency relates to the influence of one network relationship to other relationships in the network and vice versa (Håkansson, 1982; Håkansson and Johanson, 1994; Håkansson and Snehota, 1995). Similarly, Claro (2004) emphasizes the contingency of connected relationships that influence a focal relationship, while Holmlund and Törnroos (1997) outline 3 dimensions of relational concepts in business networks: (1) structural dimension (links, direction of links, institutional bonds), (2) economic dimension (investments and economic bonds) and (3) social dimension (commitment, trust, atmosphere, attraction and social bonds). The authors stress the problem of grouping relational terms into the 3 dimensions, due to their interconnectedness through communication mechanisms.

The number of actors in a network is one of the most basic determinants of network size that trough interaction complexity impacts the functioning of any network (de Nooy, Mrvar and Batagelj, 2006). Another important element of the basic network characteristics pertains to distance between network actors. According to Hallen and Sandstörm (1991) it refers to the degree of unfamiliarity between actors in a business relationship. In addition, Kadushin (2004) posits, how all other things equal, 2 vertices in a network are more
likely to be connected, if they are ‘geographically’ nearer to each other. Such a view is confirmed by empirical evidence of friendship relationships (Feld and Carter, 1998), impact of housing positions on friendship patterns (Festinger, Schachter and Back, 1950) and organizational structures of MNC. Having said this, distance is thought to have a negative impact on communication flows and patterns (Ford, 1980), level of commitment (Ford, 1980), intra-actor dependence (Hallen and Sandstöm, 1991) and level of actor cooperation (Stern and Reve, 1980).

3.1.2. Antecedents of collaboration

Trust has been identified as an essential component of any semi- or long-term relationships, be it in a buyer-supplier relationship (Anderson and Narus, 1990; Geyskens, Steenkamp and Kumar, 1998; Rousseau et al., 1998) or a personal relationship. Morgan and Hunt (1994) have also within the relationship marketing stream identified trust as a basic requirement of a buyer-supplier relationship. The marketing channel perspective understands trust namely in the context of a partner’s reliability and integrity (Morgan and Hunt, 1994), while applying a more network perspective, trust is seen as a context in which the probability of a partner performing a beneficial or non-detrimental action is high enough to facilitate some form of cooperation between actors (Håkansson and Snehota, 1995). The function of trust in a relationship is to act as a lubricant, binding actors and having important future orientation implications (Ganesan, 1994). Trust has been empirically confirmed to positively impact commitment (Anderson and Weitz, 1989; Anderson and Narus, 1990; Morgan and Hunt, 1994; Andaleeb, 1996). Through confidence, trust also facilitates joint behavior for reaching mutual goals – cooperation (Hunt and Nevin, 1974; Schurr and Ozanne, 1985; Morgan and Hunt, 1994). In addition, trusting relationships facilitate cooperative and constructive behavior, which leads to positive outcomes that facilitate satisfaction (Driscoll, 1978; Dwyer, Schurr and Oh, 1987; Anderson and Narus, 1990).

TSI represent the view of transaction cost economics (TCE) led by Williamson (1985). The concept of TSI has been extensively researched in the context of buyer-supplier relationship (Heide and John, 1990; Klein, Frazier and Roth, 1990; Bensaou and Anderson, 1999) and is usually divided between (1) Human TSI and (2) Physical TSI (Rindfleisch and Heide, 1997). Human TSI refer to investments in human resource management (staff training and knowledge about the other actor), methods for dealing with the other actor and other business practices and activities specific to the operation with a given actor (Claro, 2004; Heide and John, 1992; Bensaou and Venkatraman, 1995). In addition, human TSI can be either from the individual actor’s perspective or from the relationship perspective. Physical TSI on the other hand on the other hand pertain to investments in equipment, machinery, special transportation modes, assets, etc (Claro, 2004, pp. 75; Bensaou and Venkatraman, 1995). Initial research has shown that high levels of TSI may negatively affect buyer-supplier relationships by facilitating dependence and opportunism (Williamson, 1985) however, more recent research has also shown that high levels of TSI may enhance coordination and cooperation (Bensaou and Venkatraman, 1995; Dyer, 1996). From a strategic perspective, TSI in specific assets may also play an important part in building long-term competitive advantage (Dyer and Singh, 1998).

Commitment refers to the invested effort of a party into the relationship and the willingness to incur short-term losses in order to obtain positive results and long-term benefits for all parties in the relationship (Anderson and Weitz, 1992; Moorman et al., 1992). Commitment also reflects a desire to grow a long-term value adding relationship, despite short-term offsets (Morgan and Hunt, 1994). High levels of commitment foster cooperative behavior (Wilson, 1995; Wilson and Mummalaneni, 1986) that may manifest itself in joint action and higher levels of flexibility. According to Selnes (1998) it also may have a positive impact on satisfaction, through fulfillment of expectations.

Communication refers to the exchange of either formal or informal meaningful and timely information between actors in a relationship (Anderson and Narus, 1984; Mohr and Nevin, 1990; Kim and Frazier, 1997). Information and communication within a network facilitate cooperation and coordination of processes (Håkansson and Snehota, 1995; Håkansson, Havila and Pedersen, 1999), logistics (Gadde and Snehota, 2000) and also facilitate definition of sales and purchase strategies (Stern, El-Ansary and Coughlan, 1996). The decrease in information asymmetry further reduces opportunistic behavior and reduces costs (Burt, 1997; Williamson, 1996). Better communication also builds trust in between actors in a relationship (Weitz and Jap, 1995; Coote, Forrest and Tam, 2003) and also has an impact on satisfaction through a better understanding (Selnes, 1998).
Another important element that we believe to have an important impact on a relationship is the level of experience that a given actor has with regards to interactions and their outcomes regarding past and present business relationships and corresponding actors. While the concept of experience has received little attention in the exploration of business relationships, it is in our opinion influenced by network characteristics (size and number of actors) and number of past business relationships. We also believe it to have a direct and positive impact on the level of both trust and cooperation. Like in human relationships past experience influences our level of trust, while at the same time influencing our current behavior, as well as creating certain expectations regarding results that have an impact on the level of satisfaction as well.

### 3.1.3. Collaboration (cooperation)

Collaboration or cooperation refers to a desire to fulfill both inter- and intra-actor goals through coordinated effort, joint behavior, balanced exchange, reciprocity and mutuality (Stern and Reve, 1980; Anderson and Narus, 1990). Similarly, the element of collaboration should also be understood as a course of actions when actors work together to achieve mutual goals (Anderson and Narus, 1990; Morgan and Hunt, 1994). According to Claro (2004) "collaboration is a departure from the anchor point of discreteness that underlies spot-market transactions toward a relational, bilateral exchange." Heide and John (1992) distinguish between 2 different dimensions of collaboration in buyer-supplier relationships: (1) flexibility to make adjustments and (2) joint action. According to Leonidu, Palihamadana and Theodosiu (2006) collaboration is thought to have a positive impact on the level of adaptation, as well as increased satisfaction (Dwyer, 1980; Michie and Silbey, 1985). Similarly adaptation is often closely associated with flexibility and also important with regards to trust (Hallen, Johanson and Seyed-Mohamed, 1991).

### 3.2. The proposed conceptual model

Based on the outlined theoretical foundations and literature overview above Figure 3 represents the proposed conceptual model and hypothetical associations between listed constructs of the model. The model shows, how the 3 network dependent constructs (number of actors, network complexity and distance) are thought to have an impact on experience, which closely relates to trust, as a key construct of any relationship and thus a profound “multiplication” impact on many other constructs like communication, cooperation, commitment and in the end satisfaction.
4. METHODOLOGICAL ISSUES RELEVANT TO THE MODEL

4.1. The basic methodological approach of the model

In terms of the basic methodological approach we propose a twofold research approach, consisting of a qualitative research phase, based on a series of in-depth interviews at the reference transnational company focusing on both sides of the relationship (buyer side and supplier side). The focus in the in-depth interviews should explore the dyadic, as well as the network context of buyer-supplier relationships. The quantitative phase of the research should be based on 2 surveys conducted among the supplier and (organizational) buyer populations of the selected transnational company. Figure 4 depicts the two research vantage points in question.

Figure 4: A graphical representation of the two relationships views and network contexts

The depiction in Figure 4 examines the selected TNC as an integrated transnational business system, consisting of myriad interdependent and empowered units (Bartlett and Ghoshal, 1989). As a whole, it acts as sort of an
interface with its suppliers. On the other side, a similar relational view also exists in relation to its organizational buyers.

4.2. Outline and description of the main quantitative methods applied

4.2.1. The network context

The first part of the model, the business network context, will be based on exploratory network analysis and will be used for analyzing the linkages between the selected TNC, its suppliers on one side and its buyers on the other side (2 networks) taking into account a more interaction-based approach, where the actors’ embeddedness in the network and the network itself influence the individual dyadic relationships. Such an analytical approach is in line on one side with the interaction model of the Industrial and Marketing Purchasing group (Håkansson and Johanson, 1994; Ellegaard, Johansen and Drejer, 2003), while on the other side it also emphasizes the importance of structure and inter-actor ties within that structure, the two main focuses of social network analysis (de Nooy, Mrvar and Batagelj, 2006). One of the key analytical approaches proposed within network analysis will be the application of generalized blockmodelling for the purpose of identifying specific structural characteristics of the networks. For this the Pajek software package can be used.

As outlined by de Nooy, Mrvar and Batagelj (2006) the approach of exploratory social network analysis consists of 4 parts: (1) the definition of a network, (2) network manipulation, (3) determination of structural features and (4) visual inspection.

a) Network definition

To oversimplify, a network is a group of interrelated actors. It consists of a graph and some additional information about the vertices (units of observation) and the links (lines) between them. The links between vertices can be directed, called arcs, or they can be undirected, called edges. In addition there can also be self-directed links, where the initial and terminal vertex is the same, this is called a loop.

From the viewpoint of the two outlined samples (suppliers and buyers) related to my research, they, due to their characteristics, correspond to a two-mode data set of a multi-relational nature. A two-mode network, also know as an affiliation network, is a network defined by two sets of units (i.e. suppliers and TNC representatives/organizations or TNC representatives/organizations and organizational buyers). The underlying characteristic of a two-mode network is that vertices (units) are divided into two sets and that a given vertex (unit) can only be linked to vertices in the other set. Defining a two-mode network mathematically \( N = (U, V, R, w) \), it is characterized by (Doreian, Batagelj and Ferligoj, 2004):

- two sets of vertices \( (U \text{ and } V) \), where \( U = \{u_1, u_2, \ldots, u_i\} \) and \( V = \{v_1, v_2, \ldots, v_j\} \);
- where \( U \) and \( V \) are totally different and do not share a single vertex \( (U \cap V = \emptyset) \);
- the relation between \( U \) and \( V \) \( (R \subseteq U \times V) \) represented by a line with one end point in subset \( U \) and another endpoint in subset \( V \);
- a weight \( w \) representing the value of the relationship \( (w : R \rightarrow \mathbb{R}) \).

Thus an example of a two-mode data set would be the value \( (w) \) of sales of supply component X \( (R) \) between suppliers \( (U) \) and a selected TNC \( (V) \).

Having said this, the two provided samples (supplier and organizational buyers) in turn constitute two separate two-mode networks. The first two-mode network is connected to relations between suppliers and the TNC as an integrated transnational business system (dyad view 1), while the second two-mode network is connected to relations between the TNC as an integrated transnational business system and its organizational buyers (dyad view 2). Because myriad aspect of their relationships will be examined, the two separate two-mode networks will thus also be multi-relational.

b) Network manipulation

As with all complex problems, the simplest approach to their research lies in breaking the problem in a series of simpler parts. Such an approach is often carried out also in social network analysis. In terms of size, the supplier-TNC two-mode, multi-relational network (dyad 1) consisting of a few hundred vertices, corresponds to a middle-sized network (de Nooy, Mrvar and Batagelj, 2006). Each TNC as an organization is divided into
different business divisions. Units (companies) in each division will be extracted along with their supplier relational ties and examined independently. In addition, only a specific relational dimension will be examined at a time, again using extraction.

While the supplier-TNC network corresponds to a middle-sized network, the TNC-buyer network (view 2) will most likely be a small or also middle-sized network, consisting of several dozen or up to some hundred units (de Nooy, Mrvar and Batagelj, 2006). While visual inspection of this network will probably be easier, similar extraction approach will also be applied.

c) Determination of structural features

In terms of analyzing structural features of a two-mode network, the **indirect analysis approach** will be first applied, where a two-mode network is transformed into a one-mode network, on which all standard analysis techniques may be applied (de Nooy, Mrvar and Batagelj, 2006). These standard techniques include: (1) **connectivity measures**, with determining strongly and weakly connected components, (2) **centrality measures** (centrality, support, influence, closeness, betweenness, hubs and authorities), (3) **cohesion concepts** (islands and cores) and (4) **clustering and blockmodelling**. Blockmodels group vertices into clusters and determine the relations between these clusters in terms of specified structural characteristics. In the indirect approach, a dissimilarity matrix is created from the original two-mode data set, based on which hierarchical clustering is performed and blockmodels are created, where the blockmodel assigns the vertices to clusters and specifies the allowed types of relation within and between the clusters (de Nooy, Mrvar and Batagelj, 2006).

In the **direct analysis approach**, which is performed on the original two-mode data set, only the following analysis may currently be performed using Pajek: (1) **hubs and authorities**, (2) **(p,q)-cores**, (3) **K-rings** and (4) **clustering and blockmodelling**. While the indirect approach uses an intermediate dissimilarity matrix as a basis for hierarchical clustering, the direct approach to blockmodelling uses a direct criterion function (sensitive to considered level of equivalence). By applying a local optimization algorithm a good clustering solution may be obtained.

d) Visual inspection

In social network analysis, both calculations of selected structural indices, as well as visual inspection are used to analyze network and sub-network structures. Indeed, visualization remains a powerful tool in analyzing social networks, since the human sight is highly skilled for pattern recognitions (de Nooy, Mrvar and Batagelj, 2006). Having said this, all analytical procedures will be complemented by visual outputs, using both automatic (i.e. Kamada-Kwai, Fruchterman-Reingold, etc), as well as manual editing procedures.

### 4.2.2. Linear structural modeling

Based on the results of exploratory network analysis, its results could provide us with a more in-depth and network-based view of buyer-supplier relationships in the selected TNC, as well provide inputs for the creation of ordinal and relational construct variables for our linear structural model testing. Thus, based on the results of exploratory network analysis, constructs such as: (1) **number of actors** associated with each TNC unit, (2) **distance** between actors in a network and (3) **the level of complexity** (with regards to the number of relational connection an observed TNC unit has with other buyers and suppliers in the network) could be used also for linear structural model testing. Having said this, the presented constructs in Figure 3 will be tested using LISREL software package to provide information about the nature and intensity of relationships among the selected constructs. According to Hair et al. (2002) linear structural modeling provides an effective analytical approach for exploring multiple relations among constructs at the same time, while ensuring statistical efficiency, and at the same time enabling the assessment of explored relationships comprehensively in a systematic and wholesome manner.

### 5. CONCLUDING REMARKS

The purpose of the presented paper was to provide a conceptual model platform that could be used to help explain the management of supply chain relationships and their elements in a TNC setting within the Bartlett and Ghoshal (1989) typology. In such a setting flexibility, adaptation, cooperation and communication are key component of their functioning as integrated networks balancing all 3 strategic goals of internationally active
companies. The proposed model is like other similar empirical-based models divergent with respect to the complementing relationship dimensions considered in theory today (Fynes and Voss, 2002). While it may not offer any revolutionary new constructs (apart from perhaps the construct of experience, a complex meta-construct that is to a large extent network-dependant) its analytical approach, combining exploratory network analysis and using its results both as final results, as well as input for structural model testing proposes a new research approach in the relationship paradigm that goes beyond usual dyadic exploration under the alleged umbrella of a network perspective. To our best of knowledge little or no research attempts have tried to combine exploratory network analysis with structural model testing with regards to the relationship paradigm. It is here, that this paper may be used as a source of inspiration for other papers, and hopefully empirical data to follow.

6. REFERENCES

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