

A MODEL OF BUYER-SUPPLIER RELATIONSHIPS IN A TRANSNATIONAL COMPANY: THE ROLE OF THE BUSINESS NETWORK CONTEXT

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ABSTRACT: *The paradigmatic shift in marketing from the beginning of the 1990's has transformed the study of economic exchange, towards addressing more the relational aspects of these exchanges, where relationship specificity has replaced transaction specificity. This is particularly true in transnational supply exchanges, where specialization and outsourcing have increased the importance of effective and efficient management of buyer-supplier relationships, and their corresponding networks in which they are embedded in. The purpose of this paper is to analyze the impact of selected dimensions of buyer-supplier relationships within a specific TNC business-to-business (B2B) setting on supply relationship performance from the suppliers' perspective. The paper analyzes the impact of the functional aspect of the business network context on selected elements of buyer-supplier relationships, particular in terms of the impact on business performance. This is analyzed within a confirmatory testing of a reflective structural equation model. A unique feature of the model is its focus on the business network, which is operationalized through 2 dimensions, which are related to (a) network-based information and (b) network spillover effects, as key determinants of the "traditional" elements of buyer-supplier relationships (i.e. transaction-specific investments, trust, flexibility, and joint actions). The dataset includes a sample of 157 suppliers of the focal TNC world-wide (47.9 response rate on a web-based survey). In the end, the paper provides a series of managerial implications to be considered, focusing on the so called network management perspective and the role of a wider business network context.*

Key words: *buyer-supplier relationships, industrial marketing, transnational companies, structural equation model, business network context, economic sociology*

JEL classification: F23, M31, C35, C83.

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1. INTRODUCTION

Today, networks appear to be everywhere. In the face of globalization there is talk of the “*network economy*” (Barabasi, 2003, p. 199), where both *markets* (Araujo, 2004) and *organizations* (Gulati, 2007) are increasingly understood as network forms. Fulik (2001) even talks about the “*netization of economics*” as a scientific field. In this new competitive landscape Best (1990) and Kandampully (2003) believe individual firms no longer compete in the global marketplace, but “*rather, it is 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, p. 444). According to Borgatti & Foster (2003, p. 991) this substantive perspective has been accompanied by a move “*away from individualistic, essentialist and atomistic explanations [of economic behavior, particularly exchanges] toward more relational, contextual and systematic understandings*”. This is particularly true in transnational supply exchanges, where specialization and outsourcing have increased the importance of effective and efficient management of supply relationships, as well as their corresponding networks in which they are embedded in (Nagurney, 2010).

As noted by the 2002 Nobel Prize laureate for economics Vernon L. Smith *Homo sapiens* is defined by a “*universal propensity for social exchange.*” This *propensity* in turn “*finds expression in two distinguishing forms: personal exchange in small-group social transactions, and impersonal trade through markets*” (Smith, 2008, p. 15). However, as Cropanzano & Mitchell (2005, p. 882) note the former (social exchanges) and latter (economic exchanges) should be seen more as different types of transactional contexts, not as different types of relationships – thus fitting well within a common relationship paradigm. This paradigm has become not only dominant within the marketing (Morgan & Hunt, 1994) and management literature (Acedo & Casillas, 2005), but also within the international business literature, and the study of transnational companies (TNCs)⁵ according to Hedaa & Ritter (2005). More specifically, the paradigmatic shift in marketing from the beginning of the 1990’s (Morgan & Hunt, 1994) has transformed our understanding of business exchange altogether. Thus, marketing theory has increasingly started to address the relational aspects of economic exchanges, not just in end-consumer markets, but also in industrial markets. In both cases, we have seen a move away from dyadic to network-embedded analysis of buyer-supplier relationships, where the business network context is thought to be key (Håkansson & Snehota, 1995). A similar shift started to take place in the supply chain and operations management literature, where the issue of relationship quality has been receiving increasing research attention and has recently become a very “*hot topic*” as well (Günter et al., 2011).

Linking to the perspective of trade through markets and economic (supply) transactions the work by Hymer (1979) sees TNCs not only as “*the dominant organizational form of modern capitalism*” (p. 1), but also “*as a [key] method of organizing international ex-*

⁵ For the purpose of this paper we employ the definition of a TNC by the OECD and UNCTC as “*an enterprise that engages in foreign direct investments (FDIs), and owns or controls value-adding activities in more than one country*” (Dunning, 1993, p. 3).

change” (p. 5). In this regard, today the study of TNCs offers an important environment for the understanding and research of formalized economic exchanges, usually in the form of buyer-supplier relationships, as well as their network embeddedness (Borgatti & Li, 2009). While Ellegaard, Johansen & Drejer (2002, p. 348) point to the study of buyer-supplier relationships being covered within many different research areas - i.e. from industrial and relationship marketing, to supply chain management and international management – all these areas acknowledge the importance of supply relationships as the “backbones of economic activities in the modern world” (Nagurney, 2010, p. 200), and view them as being key to organizational competitiveness, performance and long-term success of companies (Veludo, Macbeth & Purchase, 2006).

The purpose of this paper is to analyze the impact of selected dimensions of buyer-supplier relationships within a specific TNC business-to-business (B2B) setting on supply relationship performance. This is done from the focal points of the suppliers and their perceptions of their supply relationship to a specific TNC. The TNC in question is one of Europe’s leading providers of industrial facade and fire proof solutions, and does not wish to be explicitly named.

The goal of the paper is to analyze the impact of the so called functional aspect of the business network context (namely business network information and network spillover effects) on selected elements of buyer-supplier relationships. It further analyzes how the interconnections between these relational elements impact supply and overall performance. This is performed within a confirmatory testing of a reflective structural equation model (SEM) on a sample of 157 suppliers of a focal TNC within *Mplus*. The foundation of our model is taken from Claro’s (2004) study of the Dutch potted plant supply industry, and extended by Claro & Claro (2010) in *Industrial Marketing Management*. A unique feature of their model is its focus on the business network context – namely on information obtained from various actors and levels of the supply network. This information is seen as a key determinant of the “traditional” elements of buyer-supplier relationships, such as: transaction-specific investments, trust, flexibility, and collaboration in buyer-supplier relationships.

However, our paper does not merely provide a cross-validation of an existing conceptual model by Claro (2004), and extension by Claro & Claro (2010), but upgrades it by introducing the issue of *network spillover effects* in buyer-supplier relationships, which have thus far not been incorporated into such models. Having said this, our paper provides three important contributions to the existing buyer-supplier relationship literature. First, it introduces and analyzes the influence of both business network obtained information, as well as network spillover effects on selected buyer-supplier relationship dimensions. In doing so, our analysis of buyer-supplier relationships moves away from a purely dyadic level, and incorporates a wider network perspective, as well as addresses the issue of how network spillover effects can actually motivate specific relationship behavior. In doing so, our model conceptualizes the network context (i.e. business network information and network spillover effects) as key determinants of subsequent dyadic buyer-supplier relationships interaction. Second, the theoretical foundation of

our model, as well as the discussion of its results is grounded both in marketing, as well as supply chain management literature. For the most part, these two streams of literature have remained relatively disconnected from each other. While the marketing literature has mainly addressed the issue of the impact of trust and commitment on buyer satisfaction and loyalty, the supply chain management literature has focused on understanding the determinants of supply flexibility and the optimization of supply chains with little regard for “softer” relational determinants, such as i.e. trust, types of collaboration etc. Third, by addressing the central research question of *how does the business network context influence the overall business performance through various elements of the buyer-supplier relationship*, the results of our analysis provide a series of implications for a better management of transnational buyer-supplier relationships from a network-embedded perspective. In this context, while focusing only on a single TNC can limit the generalizability of our findings to other TNC contexts, it on the other hand eliminates a lot of industry, organizational culture and other company-specific differences. It thus provides us with a more in-depth understanding of the specific nuances of buyer-supplier relationships.

2. LITERATURE REVIEW

Contemporary neoclassical economic analysis is based on the assumptions of rational self-efficiency and atomistic individualism of actors in any type of exchange (Kahneman, 1994; Thaler, 2000). Thus, “*traditionally, economists have studied social and economic phenomena by using a framework in which interaction is centralized and anonymous*” (Goyal, 2009, p. 4). However, rational self-efficiency and the behavior of atomized individuals, which are assumed to be guiding Adam Smith’s invisible hand and theories of the general equilibrium, have been proven to be “*inadequate*” not only for phenomena such as i.e. innovation diffusion, intra-firm alliances or functioning of labor markets (Goyal, 2009, p. 4-5), but have also disregarded the social embeddedness of economic phenomena which provides a powerful explanation of trust, commitment and cooperation in myriad economic and organizational settings, including buyer-supplier relationships (Smelser & Swedberg, 2005; Dobbin, 2004; Manski, 2000).

On the one hand, social structure within the structural perspective of network research seems to be widely present in a plethora of economic contexts. By studying it, we can see how economic phenomena are embedded in various types of network structures, as well as how these structures ‘constrain’ economic action and shape the very notion of rationality which is by no means universal, or detached from other actors. On the other hand, the “*functional aspect*” of networks facilitates information exchange (Goyal, 2009), and acts as an information repository (Gulati, 2007). It “*suggests that the structure of interaction may be viewed as an instance of informal institutions that supplement formal markets in the presence of imperfect or asymmetric information*” which further “*suggests a potentially major role for patterns of connections in shaping economic activity*” (Goyal, 2009, p. 6).

Building on the exchange perspective, as well as on the markets and hierarchies model of Williamson (1975), economics and organizational studies have mainly focused on networks as economic structures, which lay between markets and hierarchies (Thorelli, 1986). In this sense, in economics most of the contemporary understanding of business networks has evolved around the market exchange theory (Easton & Araujo, 1994) or the social exchange theory (Cook & Emerson, 1978). Here, the management and marketing literature has devoted specific attention to issues of trust, commitment and other relational elements of a more social nature.

Based on the social exchange theory (Cook & Emerson, 1978) a business network may be seen as a type of exchange network (Blakenburg & Johanson, 1992, p. 6), and can be defined as a set of interconnected exchange relationships (Prenekert & Hallén, 2006, p. 384). This is directly linked to supply relationships, and underlines the importance of the supply network within the business network context. An alternative approach to the social exchange theory perspective is the market exchange theory perspective (Easton & Araujo, 1994), which builds on the concept of organized behavioral systems (Alderson & Cox, 1948), also reinterpreted by Bagozzi (1974). Alajoutsijärvi, Eriksson & Tikkanen (2001, p. 95) even point out the perspective of “*networks as business systems*”, where the business network is understood as an organized behavioral system of exchange. The main focus of such a system is on the transformation and exchanges of resources, and less on the social exchange component. It is from this perspective that buyer-supplier networks (sometimes referred to as supply networks) are most frequently analyzed. These relationships are however usually embedded in various networks of interconnected buyer-supplier relationships, where both market exchange (transformation and exchange of resources), as well social exchange perspectives (trust, collaboration, etc.) should play equal parts. However, despite this, there still exists a gap in the existing literature in appropriately balancing both of these perspectives in the study of buyer-supplier relationships. Thus, while the marketing literature has so far focused mainly on the impact of trust and commitment on satisfaction and loyalty, supply chain management has focused (too) narrowly on the “hard” determinants of flexibility, like i.e. information optimization and inventory management. Claro (2004, p. 9) also emphasizes how business networks, supply chains (networks) and buyer-supplier relationships are all types of business relationships “*raging from a web of connections to a dyadic relationship*” with often blurred boundaries.

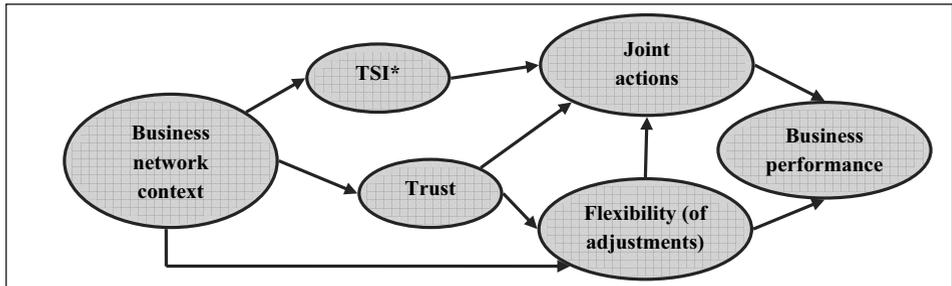
Chen & Paulraj (2004, p. 121) position the business network perspective within what they call a collaborative paradigm. Within this paradigm, business networks emerge as patterns of inter-dependent business relationships “*developed and fostered through strategic collaboration with the goal of deriving mutual benefits*” (Chen & Paulraj, 2004, p. 121). Within this perspective, Parker (2008, p. 628) points to the following benefits that may be derived from various types of business networks: (1) *learning and development*; (2) *innovation and competitive advantage*; (3) *value creation*; and (4) *growth and survival*. Mouzas (2006, p. 1124) extends two key parameters of business performance – *efficiency* and *effectiveness* – to different organizational network contexts, including strategic alliances, joint ventures, sourcing and outsourcing agreements, etc. By look-

ing at business and organizational networks as a “*metaphor for exchange relationships in the marketplace*” Mouzas’ empirical evidence on manufacturer-retailer German and Swiss networks shows the inherent complexity of extending, understanding and evaluating business performance in a business network context, where network externalities (spillover effects) also play an important role. Mouzas sees efficiency in a network mainly as operational excellence and productivity, achieved through cost minimization and operational margins, which lead to better performance. On the other hand “*effectiveness is linked to the ability to design a unique model of embracing business opportunities*” (Mouzas, 2006, p. 1125) “*through a firm’s exchange relationships and the generation of sustainable growth in its surrounding networks*”. At the same time, the supply chain relationship management literature has also become aware of the need for a wider understanding of the key supply chain management determinants, such as i.e. supply chain flexibility, particularly its relational aspect, and the “softer” relationship determinants of this type of flexibility, as well (Günter et al., 2011).

3. MODEL CONCEPTUALIZATION AND HYPOTHESES DEVELOPMENT

According to Diamantopoulos & Siguaw (2008) the success of structural equation modeling (SEM), or any statistical modeling process for that matter, depends first and foremost on the model conceptualization and “*the extent to which the model is characterized by sound conceptualization*” (p. 13). Figure 1 displays the proposed conceptual model to be tested with *Mplus* as a reflective SEM, based on the adjustment and extension of Claro’s (2004) model from the Dutch potted plant industry. We have decided to use this model as our base, since it is a rare model, which incorporates the business network context and through it addresses specific individual dyadic buyer-supplier relationship elements. As can be seen from the Figure 1 traditional buyer-supplier relationship elements, such as i.e. trust and transaction-specific investments (both physical and relational) are believed to be influenced (and constrained) by the business network context. While trust and transaction-specific investments may have a direct impact also on types of joint actions and flexibility, the model tests an indirect impact of the business network context on them, also. In the end, both the business network context and the dyadic relational elements impact business performance, including satisfaction in the buyer-supplier relationship.

With regards to the business network context a fundamental starting point of the model is the premise that “*relationships within a network are based on the content of information that is disseminated through the network and affects the likelihood of engaging in collaborative relations, trust and transaction-specific investments*” (Claro, 2004, p. 51).

Figure 1: *The proposed conceptual model of buyer-supplier relationships in a TNC*

Source: Adopted from Claro (2004); Claro & Claro (2010), and authors' own review of the literature. *Note: TSI=transaction-specific investments.

Furthermore, the access to business network-based information is also determined by the structural position of an actor in the network, and the network spillover effects (externalities) which shape actor behavior, as well as motivate network membership. The starting point of the model is actually one of sociology's main assertions, on how social structure represents social interaction, which in turn "*unavoidably transmits information*" (Granovetter, 2005, p. 36). Thus, the information obtained from the business network may be a very good proxy of the whole network, and the actor's structural position within the network. Claro (2004) also outlines the importance of flexibility which business networks offer to overcome problems in declining mass-production (Powell, 1990) and the production of saturated standardized products (Stern, El-Ansary & Coughlan, 1996). In such a competitive landscape the pivotal source of competitive advantage is achieved through collaboration and actor cooperation – usually in the form of joint actions and types of adjustments, which are enabled and constrained by the very network in question (Hamel, Doz & Prahalad, 1989).

In fact, collaboration and cooperation are common core determinants of business network competitive advantage (Jap, 1999), where actors enhance network value, as well as profit from being in the partnership (Kothandaraman & Wilson, 2001). Important elements of business network competitive advantage building further include: trust (Barney & Hansen, 1994); resource sharing (Barney, 1991) and transaction-specific investments (Dyer & Singh, 1998), which all lead to reducing risk of opportunism and shortages (Claro, 2004), and better information flow and knowledge management (Stern, El-Ansary & Coughlan, 1996). According to Claro (2004) this in turn leads to higher added value and costs optimization, impacting business performance, as well as long-term competitiveness (Anderson & Narus, 1990; Mohr & Speckman, 1994), and relationship satisfaction (Bensaou & Venkatraman, 1995; Zaheer, McEvily & Perrone, 1998). Having provided a brief substantive description of our model Table 1 first provides an overview of the key conceptual definitions of our model constructs, and their theoretical background. This is followed by a summary of the main research hypotheses, in which our model is based on. This is also accompanied by keytheoretical references, on which our hypotheses are based on.

Table 1: *An overview of the key conceptual definitions of the studied concepts**

Concept	Definition	References
Business network context	(1) Business network information related to the exchange of 5 different types of information among connected actors in the business network, which are related to setting prices and product quantities, coordinating logistic operations and production processes, as well as providing the basis for estimating future behavior (actions) of the other actors. (2) Network spillover effects defined as the perceived attractiveness and benefits of an actor as a network exchange partner, based on its connections to other actors in the network, including their resources and activities.	(1) Claro, 2004, p. 74; adopted from Anderson, Håkansson & Johanson, 1994; and Blankenburg Eriksson & Johanson, 1999. (2) Anderson, Håkansson & Johanson, 1994.
Transaction-specific investment (TSI)	(1) TSI in physical assets defined as "capital investments that tailor processes to particular exchange partners". (2) TSI in people defined as "the degree to which the skills, knowledge and experience of firm personnel are specific to the requirements of dealing with another firm".	Claro, 2004, p. 39; adopted from Heide & John, 1992; Bensaou & Venkatraman, 1995.
Trust	(1) Inter-organizational trust defined as "the extent of trust placed in the partner organization by the members of the focal organization". (2) Inter-personal trust defined as "the extent of boundary-spanning agent's trust in her counterpart in the partner organization".	Zaheer, McEvily & Perrone, 1998, p. 142; adopted from Rempel & Holmes, 1986.
Joint actions	(1) Joint planning defined as the "collaborative activities by which future contingencies and consequential duties and responsibilities in a relationship are made ex ante". (2) Joint problem solving defined as "joint activities to resolve disagreements, technical failures and other unexpected situations".	(1) Claro, 2004, p. 44; adopted from Heide & John, 1990; Heide & John, 1992. (2) Claro, 2004, p. 44; adopted from Lush & Brown, 1996; Heide & Miner, 1992.
Flexibility (of adjustment)	Flexibility as an adaptive capacity and as an effective response to change, where effective means with minimal impact on performance. It includes effective response to (1) short-term (tactic), (2) medium-term (operational) and (3) long-term (strategic) changes, and is as well also related to the (4) robustness of responses to change, the (5) versatility of responses to change, and the (6) self-initiation (proactiveness) of adaptive behavior to changes.	See Golden & Powell (2000).
Business performance	(1) Perceived profitability of the supply relationship and perceived competitiveness effects of the supply relationship for the supplier in the relationship. (2) Growth of sales volume of the supplies within the last 3 years. (3) Satisfaction with the supply chain function, communication with the TNC, problem solving and general business terms for the supply relationship.	(1) Claro, 2004, p. 77; adopted from Lush & Brown, 1996. (2) Claro, 2004, p. 77; adopted from Mohr & Speckman, 1994; Lush & Brown, 1996. (3) Claro, 2004, p. 77; adopted from Bensaou & Venkatraman, 1995; Doney & Cannon, 1997; Zaheer, McEvily & Perrone, 1998.

Source: Authors' own review and synthesis of the literature. *Note: Due to a large amount of the referenced literature in Table 1 this literature list is available upon request to the authors.

As can be seen from Table 1 the key exogenous latent construct of business network context relates to two network-embedded dimensions, namely: network-exchanged information and network spillover effects. Transaction-specific investments are linked to both investments made into physical assets and into people, while trust is linked to both the inter-organizational and inter-personal level. Joint actions, as types of collaborative behavior, are linked to joint planning and joint problem solving, while flexibility is related to the response to different types of temporal changes, as well as to the robustness, versatility and proactiveness of supply behavior and its changes. Business performance

is linked to perceived aspects of supply relationship growth and profitability, as well as satisfaction with specified dimensions of the supply relationship.

Table 2: Summary of the research hypotheses and their theoretical background*

Hypothesis	Relationship link	Content	Selected key literature
H1	Positive link between business network context and TSI	Higher TSI are based on lower uncertainty and risk of opportunism, and as well act as resource ties and activity links of an actor to other actors in the network	Carney (1998); Uzzi (1996); Claro (2004); Claro, Claro & Zylbersztajn (2005); Anderson, Håkansson & Johanson (1994); Håkansson & Snehota (1995); Burt (1997); Gulati, (1998); Blankenburg, Eriksson & Johanson (1999)
H2	Positive link between business network context and trust	Network generated information safeguards against opportunism, and reduces risk and uncertainty, which all facilitate trust	Anderson & Narus (1990); Mohr & Nevin (1990); Morgan & Hunt (1994); Uzzi (1996); Selnes (1998); Olkkonen, Tikkanen & Alajoutsijärvin (2000); Burt (2001); Claro & Claro (2010)
H3	Positive link between business network context and flexibility	A better business context facilitates better understanding of the other partner's position, needs and challenges. It also facilitates greater flexibility in working towards new compromises	Heide & John (1992); (Bello & Gilliland (1997); Dabholkar, Johnston & Cathey (1994); Williams (1998); Cannon, Achrol & Grundlach (2000); Olorunniwo & Hartfield (2001); Johnston et al. (2004); Thakkar, Kanda & Desmukh (2008); Claro & Claro (2010)
H4	Positive link between TSI and joint actions	Joint actions are an essential management tool in coordinating activities and resources of high stake TSI	Treleven (1987); Leenders & Blenkhorn (1988); Heide & John (1990); Williamson (1996); Dyer & Singh (1998); Zaheer, McEvily & Perrone (1998); Mukherji, Francis & Mukherji (2009)
H5	Positive link between trust and joint actions	Trust in a relationship acts as a lubricant that binds actors together and facilitates joint actions. It also has a profound impact on future intentions of actors in a relationship	Zand (1972); Dwyer, Schurr & Oh (1987); Anderson & Narus (1990); Moorman, Zaltman & Deshpande (1992); Ganesan (1994); Heide (1994); Zaheer & Venkatraman (1995); Holmlund & Törnroos (1997); Gadde & Snehota (2000); Claro, Claro & Zylbersztajn (2005); Forrström (2005)
H6	Positive link between trust and flexibility	Trusting relationships are characterized by higher levels of flexibility and tolerance, as well as a supportive atmosphere which fosters compromise and adjustment	Anderson & Narus (1990); Heide & John (1992); Morgan & Hunt (1994); Ganesan (1994); Kumar, Scheer & Steenkamp (1995); Holmlund & Törnroos (1997); Hewett & Bearden (2001); Yilmaz & Hunt (2001); Sezen & Yilmaz (2007)
H7	Positive link between flexibility and joint actions	Interorganizational cooperation (joint action) is relationship-specific and evolves through an ongoing interaction. The interaction pattern itself influence the degree and type of cooperation, thus linking the degree of flexibility (type of interaction pattern) to types of cooperation	Macneil (1978, 1981); Heide & Miner (1992); Williams (1998); Thakkar & Desmukh (2008); Claro & Claro (2010)
H8	Positive link between joint actions and business performance	Supply chain collaboration, particularly through joint action, builds competitive advantage in the form of "pie extension" as it enables the pooling of resources, capabilities and activities	Dwyer & Oh (1988); Anderson & Narus (1990); Mohr & Speckman (1994); Lee, Padmanabhan & Whang (1997); Jap (1999); Mentzer, Foggin & Golcic (2000); Lumms, Duclos & Vokurka (2003); Sheu, Yen & Chae (2006)
H9	Positive link between flexibility and business performance	Flexibility as a governance mechanism which also has a profound impact on performance in buyer-supplier relationships.	Macneil (1981); Heide & John (1992); Lush & Brown (1996); Bello & Gilliland (1997); Beamon (1999); Cannon, Achrol & Grundlach (2000); Cassivi (2006); Kannan & Tan (2006); Aramyan et al. (2007)

Source: Authors' own review and synthesis of the literature. *Note: Due to a large amount of the referenced literature in Table 2 this literature list is available upon request to the authors.

4. DATA AND METHODOLOGY

4.1 Data collection and survey instrument

The data was collected through a web-based survey in the period between July 2011 and October 2011.⁶ In collaboration with the TNC and their 11 local purchasers 328 suppliers world-wide were identified as the target population for the research. From the identified population of 328 suppliers the final obtained sample of 157 suppliers corresponds to a 47.9 per cent response rate. Table 3 provides more detailed information on the employed survey instrument and its administration.

Table 3: Summary of survey administration details

Pre-testing	Local languages	Number of reminders	Total number of questions	Number of SEM constructs	Number of SEM items	SEM item to sample ratio	Average survey duration
TNC supply management and a sub-group of suppliers	Slovenian English Serbian Russian	2 reminders around week 2 and week 6	18 questions	6 constructs (from Figure 1)	Originally 41 items for 6 constructs; later 8 items dropped	Originally: 1: 3.8 Final model: 1: 4.8	19 minutes 16 seconds

Source: Authors' own work.

Claro's (2004) original survey instrument included 60 items within 6 constructs (as shown in Figure 1). In our case the main adjustment of Claro's survey instrument was linked to the first construct of the *business network context*. In the original survey instrument this construct was operationalized with 25 items.⁷ Due to a different supply nature of our TNC's supply network and a smaller population of their suppliers, we reduced the 5 separate types of network actors to a single network level, which we then linked to the 5 different information types. In addition to this, we have also extended the *business network context* by adding another dimension, related to the so called *network spillover effects* or network externalities, based on the work by Anderson, Håkansson & Johanson (1994) on network identity. Thus, in our research the *business network context* is operationalized through 2 dimensions – the dimensions of *business network information* (5 items) and *network spillover (externality) effects* (4 items).

⁶ Using the www.lka.si web-based free access application developed at the University of Ljubljana, Faculty of Social Sciences.

⁷ These items were related to 5 different groups of network actors – i.e. *first-tier suppliers*, *other suppliers*, *other buyers*, *buyers' customers*, and other *agents of the cooperative network subgroup* – and related to 5 types of information for defining *prices*, *quantities*, *logistic operations*, *production processes*, and *foreseeing future actions* in the buyer-supplier relationship.

Table 4: Scales and their theoretical background for the 41 questionnaire items

Construct	Scale / items	Details	Cronbach α	AVE
Business network context	7-point ordinal scale 9 items	5 items related to the 5 types of exchanged information (prices, quantities, logistics, production, future actions), and 4 items related to network spillover effects.	0.82	0.68
TSI	7-point ordinal scale 6 items	3 items for TSI in physical assets and 3 items for TSI into people.	0.76	0.65
Trust	7-point ordinal scale 6 items	3 items for inter-organizational and 3 items for inter-personal trust.	0.84	0.78
Joint actions	7-point ordinal scale 6 items	3 items for joint planning and 3 items for joint problem solving.	0.73	0.61
Flexibility (of adjustment)	7-point ordinal scale 6 items	1 item for measuring response to short-term (tactic) changes, 1 item for medium-term (operational) changes, and 1 item for long-term (strategic) changes. 1 item for robustness of responses to change, 1 item for the range of possible responses to change, and 1 item for self-initiation of responses to change.	0.85	0.73
Business performance	7-point ordinal scale 8 items	4 items related to satisfaction, 3 items related to profitability and competitiveness, and 1 item related to sales volume growth	0.81	0.70

Source: Adopted from Claro (2004) and authors' own review and synthesis of the literature. *Notes: Growth and profitability measures were operationalized as Likert statements, not as financial data.

In terms of validity, content validity was checked through a discussion of the scales and individual items with a scientific panel from University of Ljubljana, Technical University of Eindhoven, MIT, and Harvard University. Next, convergent validity was tested through exploratory factor analysis. In this step 8 items were omitted from the final measurement model, based on the guidelines by Hair et al. (1998) related to the appropriate levels of total explained variance and factor loadings, as well as due to linear dependence of some of the items in question. Thus, the final number of 33 employed items in SEM corresponds to a 1: 4.8 item-to-sample ratio. Discriminant validity was additionally tested by calculating the level of the average variance extracted (AVE), which was above the 0.6 for all 6 constructs. Table 4 also shows the calculated Cronbach alpha reliability statistics. Lastly, we have tested the quality of the whole measurement model within *Mplus* prior to running complete SEM, also. The measurement model testing in *Mplus* produced the following goodness-of-fit statistics: *Chi-square*: 1801; *df* = 480; *Chi-square/df* = 3.75; *p* = .000; *CFI* = .946; *TLI* = 0.938; *RMSEA* = .0377.

4.2 Sample characteristics

Table 5 provides a brief overview of the key descriptive characteristics of the suppliers in the sample (n=157). As can be seen from the data in Table 5 almost half of the suppliers to the focal TNC come from Slovenia (47%), followed by Russia (22%) and Serbia (12%). The suppliers from the remaining EU countries represent jointly about 17% of the sample.

Two thirds of the suppliers supply mainly to production in Slovenia, followed by Russia (20%) and Serbia (13%).

Table 5: *Supplier sample descriptive statistics (n=157)**

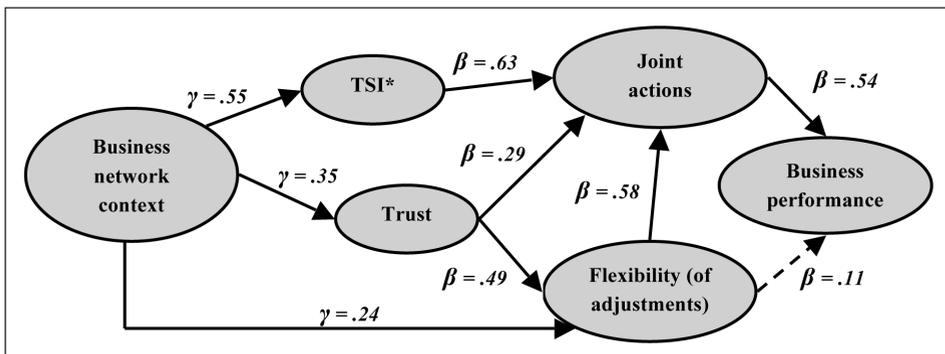
Supplier's Country	Slovenia: 47%; Russia: 22%; Serbia: 12%; Rest of EU: 17%
Most important TNC unit being supplied	Slovenia: 67%; Serbia:13%; Russia: 20%
Type of supplies	Components for gluing: 17%; Painted steel panels: 9%; Steel and black metallurgy: 9%; Other installation services: 9%; Glass and mineral wool: 8%; Protection foils: 7% etc.
Duration of supplying to TNC	Average length: 6.8 years (std. deviation: 5.1 years)
Supplier's annual turnover in the last 3 years	22.4% of suppliers with average annual turnover of up to 25,000 EUR; 44.9% of suppliers with turnover up to 20 million EUR; 18.4% of suppliers with turnover over 20 million EUR
Average number of employees	36.5 % of suppliers have between 10 and 50 employees, 23.1% between 0 and 9 employees, and 21.1% between 51 and 250 employees
Share of total revenues generated by the focal TNC	For 50% of suppliers the TNC represents up to 1% of revenues, for additional 32% of suppliers it represents up to 5% of revenues

Source: Authors' own analysis of the data set. *Note: more information about the sample is available upon request to the authors.

In terms of supplier size, most of suppliers in our sample are small (36.5%) or medium-sized (23.1%) in terms of the number of employees, usually with an average annual turnover of between 500,001 and 20 million EUR. For one half of the sampled suppliers the focal TNC represents up to 1% of their revenues, while for 82% of the sampled suppliers the TNC represents up to 5% of their annual revenues.

5. RESULTS

Based on the conceptualized model in Figure 1, and its specification in Table 2 the final results of the SEM testing are shown in Figure 2. Furthermore, the following goodness-of-fit statistics were produced: *Chi-square: 1857; df=486; Chi-square/df = 3.82; p = .000; CFI = .964; TLI = 0.959; RMSEA = .0503.*



Source: Authors' own analysis of the data set. *Note: TSI=transaction-specific investments. Dashed line represents a non-significant coefficient and corresponding relationship ($p > .05$).

As can be seen from the results in Figure 2 only the relationship between *flexibility (of adjustment)* and *performance* is non-significant. Related to the *business network context* it more strongly affects *transaction-specific investments* ($\gamma = .55$), and less *trust* ($\gamma = .35$) or *flexibility (of adjustment)* ($\gamma = .24$). With regards to the former, the coefficient between *transaction-specific investments* and *joint actions* ($\beta = .63$) is the highest in the model, and shows a strong impact of *TSI* on *joint actions*. *Trust* significantly impacts *flexibility (of adjustment)* ($\beta = .49$), however it has a much weaker effect on *joint actions* ($\beta = .29$), where this relationship was actually non-significant in Claro's (2004) results. While *flexibility (of adjustment)* quite strongly impacts *joint actions* ($\beta = .58$), it does not seem to have a direct influence on performance (whereas this relationship was quite strong in Claro's results with $\beta = .69$; despite his sample being mainly comprised of small suppliers, also). On the other hand only *joint actions* seem to directly influence *performance* in our model ($\beta = .54$).

With regards to the role of control variables in our model, all control variables from Table 5 were included in the model as exogenous formative constructs influencing the construct of business performance. Among the employed control variables, the only one to show a statistically significant influence on business performance was the suppliers' country, where 3 dummy variables were created to differentiate between 4 supplier groups in terms of country, namely: Slovenia, Russia, Serbia, and the rest of countries (mainly EU). Among these countries, Slovenian suppliers on average indicated a higher level of satisfaction with the focal TNC supply relationship, compared to the other suppliers, while the suppliers from other (mainly EU) markets indicated on average a lower level of satisfaction with the selected aspects of the supply relationship with the focal TNC.

6. IMPLICATIONS AND DISCUSSION OF THE RESULTS

6.1 General implications

Our analysis confirms the general importance of the business network context as determinant of transaction-specific investments and trust, which in turn impact business performance through joint actions and flexibility of adjustments. Based on Best's (1990) perspective on the new competition, and sociology's concept of embeddedness (Granovetter, 1985), dyadic buyer-supplier relationships seem to be heavily influenced by their corresponding business networks, which should be seen as a key force shaping and constraining the individual dyadic interaction between a specific industrial buyer and its supplier. This undoubtedly holds important implications for the management of such relationships, which are discussed in a separate section of this paper (see also Wathne & Heide, 2004).

From the suppliers' perspective the information obtained from the business network appears to importantly influence transaction-specific investments, as well as trust. This information is important not only in determining the decisions related to pricing, quantities, production and logistic operations, but also provides suppliers with queues for estimating

future behavior (actions) of a specific buyer. In this respect the perspective of networks as information repositories (Gulati, 2007) seems to be particularly important. On the other hand the importance of network externalities in motivating the network-based behavior of a particular supplier highlights the importance of interaction, not atomized individualism in supply relationships (Claro & Claro, 2010). This information, however, is by no mean just dyadic, but heavily network influenced. Thus, the supplier's membership and position in the network offers important network externalities (spillovers) which influence the behavior of the supplier at the dyadic buyer-supplier relationship level, as well as signal its current structural network position, and motivate its future network behavior. This can be directly related to Burt's (1995) research on network structures and actors' structural positions, and at the same time outlines the question of motivation of the actor in a supply relationship which needn't be related to direct economic benefits only.

Another important implication of our analyses is also linked to the issue of collaborative behavior in the supply relationship (Kim, 1999) which calls for both joint actions and flexibility of adjustments (Claro & Claro, 2010). In this regard transaction-specific investments are based on the business network context, and importantly determine the nature of joint actions. As our results show the whole business network context, not just past experience and buyer-related information, influence the level of trust in a specific buyer-supplier relationship. This holds important implications for the study of the antecedents and determinants of trust in buyer-supplier relationships, where most of the research thus far has been conducted only at the dyadic relationship level, with limited regard for spillover effects. While the study on trust in exchange relationships has mainly focused on the multiple levels of analysis – i.e. *interpersonal* and *interorganizational trust* – the complex and sometimes blurred relationship between trust and performance according to Zaheer, McEvily & Perrone (1998) may be more easily understood by incorporating multiple units of analysis – i.e. the dyad and the network – and more specifically incorporating a business network perspective.

Lastly, business performance in terms of profitability and growth of sales, as well as in terms of satisfaction and overall competitiveness of the supplier seems to be directly affected by the degree of joint actions, and only indirectly by flexibility (of adjustments) through joint actions. While this may in part be linked to the subjective and perceptive nature of our business performance measures, particularly related to satisfaction, we have used the same scales as Claro (2004), where satisfaction was also included in the performance measurement. However, while Claro's results, as well as an extensive body of literature (see Table 2) suggest a direct impact of both joint actions and flexibility (of adjustments) on business performance, the current economic crisis may have changed these relationships. In addition, while Claro's research also mainly rested on small suppliers within the Dutch potted plant industry, in our case focal TNC is in fact a large industrial buyer. Thus, there is also a difference in supplier (small) and buyer (large TNC) sizes in our studied relationships.⁸ Assuming a changed context due to the crisis,

⁸ Due to the small sub-sample of large suppliers in our data set, we could not directly check the differences in our SEM between large and smaller suppliers.

one might argue that joint planning and joint problem solving could have a more direct impact on overall business performance, while flexibility (of adjustments) should be seen more as their determinant, and as a buffering relationship tool. In any case, the difference in our results only emphasizes Rahaman's (2011) view on how existing theories should be cross-validated in new crisis contexts.

6.2 Managerial implications: the business network context

Apart from the general managerial implications, which can be derived from the relationships between relational constructs in our model, the most important implication which can be derived from our analysis is centered around the importance of the business network context that Knight & Harland (2005, p. 281) call "network management".⁹ While this perspective has been emphasized in the international management literature by Bartlett & Ghoshal (1989), it has mostly followed a very strong structuralist perspective in how "certain attributes of the multinational, such as resource configuration and internal distribution of power" relate to "certain structural properties of its external network" (Ghoshal & Barlett, 1990, p. 603). Alternatively, Knight & Harland (2005) emphasize the action-interaction aspect of supply relationship management in their conceptualization of managing supply networks, and point to the perspective of understanding actors as collections of different roles types. While this perspective has attracted less research attention, due to its economic sociology influence, Broderick (1999) was the one to connect this role theory perspective to the relationship marketing theory, and thus introduce it to the marketing literature.

Relating this beyond-structuralist view of networks to specific managerial implications, TNC purchasing managers engaged in industrial purchasing behavior will be better equipped and more effective in managing specific aspects of a focal supply relationship, if they understand also the background of their suppliers' business networks. Thus, know thy suppliers' suppliers, and thy customers' customers could not be more emphasized. In this context, we would especially like to address three key managerial issues.

First, purchasing managers within a TNC supply network should not only strive to understand their suppliers' business network, as this impacts their behavior and pattern of interaction with them, but they should also try to assess both the structural position of the supplier within its business network, as well as the roles particular supplier may play within such a network. This may be derived from the estimation of the suppliers' position in the network, and consequently the types of situations this supplier is likely to encounter within its business network based on that position. If networks are indeed to be understood as information repositories, gaining insight into what kind of information a supplier derives from its business network, as well as its quality, and how this impacts

⁹ According to Watson (1994, p. 32-33) network management can be related to the perspective of "Managerial work [which] is concerned with shaping the productive cooperation of individuals and groups within the organization and matching these efforts with the demands of those outside the organization with whom there has to be trading for the organization to continue in existence."

specific buyer-supplier interaction (particularly transaction-specific investments and trust) is pivotal for the effective management of buyer-supplier relationships. This network behavior modeling approach, based on actor roles, was outlined by Montgomery (1998) to show that the behavior of network actors is by no means driven only by individual utility maximizing behavior, but imposed by rules, according to their roles within their networks.

Second, Anderson, Håkansson & Johanson (1994) introduce the motivational aspect of network spillover effects in the context of specific benefits for a particular actor (i.e. supplier) in terms of its network position. In this regard, they address the issue of network identity, which is according to them linked to anticipated resource particularity, anticipated activity irreconcilability and anticipated actor-relation incompatibility. Hence, purchasing managers in TNCs will be able to more effectively configure transaction-specific assets, as well as manage their supply relationships more efficiently, if the can: (1) assess the potential network benefits related to the issue of sharing, tying up or extending specific resources; (2) clearly outline all key contingent activities related to the focal supply relationship; and (3) identify potential types of competitiveness and performance signaling to other business network actors based on the focal supply relationship.

Third, understanding the business network contexts and their role as a determinant of buyer-supplier relationship performance, is particularly crucial for managing changes in the current economic setting, since according to Halinen & Törnroos (1998, p. 187) actor *“embeddedness functions as a force for change in the evolution [or dynamics] of networks”*. Within this perspective, network authors (like i.e. suppliers) distinguish between (1) different types of embeddedness (i.e. structural, cultural etc.), (2) different levels of vertical and/or horizontal embeddedness, and (3) different representational roles of embedded actors. Building on this, TNC purchasing managers should be thinking along all of these dimensions, in their understanding and assessment of their suppliers’ business networks, not just acknowledging that suppliers are embedded in their own business networks.

In-line with Håkansson & Ford’s (2002) first network paradox,¹⁰ sustainable and effective change can only be achieved *“through the network”* which requires a clear formulation of the benefits for the network, and the potential spillover effects for the other actors within the network (p. 135). Another important implication within this perspective should also be the realization that *“because change in a network is initially dependent on the existing structure and resources, it is more difficult for a company to achieve change by seeking new counterparts”* (*ibid.* p. 135). Furthermore, according to Håkansson & Ford (2002, p. 136): *“Managers have to accept that change must often be accomplished within existing relationships, where some investments have already been made and where costs and benefits are*

¹⁰ Håkansson & Ford (2002, p. 135) describe the first network paradox as: *“The first network paradox means that companies within a network are not free to act according to their own aims or to circumstances as they arise. They do not operate in isolation from others, or in response to some generalized environment as “one-against-all”. Instead, each companies’ considerations and actions can only be fully understood within a structure of individually significant counterparts and relationships. Both companies and their relationships are “heavy” with the experience and resources that have been built up through previous interactions and investments.”*

more apparent.” This seems to be quite the opposite to the behavior of most of the TNC within the current crisis, which have often taken drastic consolidation measures in their supplier bases and started quickly replacing existing suppliers in order to achieve any type of optimization, including cost.

7. LIMITATIONS OF THE RESEARCH

The first limitation of our research is linked to incorporating only the suppliers’ perspective in our analysis, whereas Claro (2004) surveyed both the suppliers’ and the buyers’ sides of the dyad. In our case, the results from the suppliers’ side were only discussed with the focal TNC purchasers (buyers) due to their count being only 11. As already pointed out to in the discussion of the results, the second limitation of our research may be linked to the timing of our research, which took place during a severe economic crisis in Europe in 2011. While undoubtedly the crisis context has influenced our results, the timing of our research on the other hand provides a new context for the research, and thus provides us with new insights.

As also outlined by Claro & Claro (2010) in their research limitations, further research should pay more attention to the issue of the quality of the obtained network information. At present, all the business network information in our analysis is assumed to be correct and of high quality. Furthermore, the current model does not address specific types of causality between selected constructs, as i.e. the causal relationship between types of collaborative behavior and the obtained information.

Lastly, due to the very nature of TNC operations cross-cultural differences should be more directly incorporated into the model, not just as control variables, but also as a construct which i.e. directly impacts trust through differences in psychic distance (Dow & Karunaratna, 2006). At present, we were unable to pursue this research stream, since a large part of our n=157 sample were local (mainly Slovenian) suppliers supplying to local TNC units (mainly Slovenian).

LITERATURE

Acedo, F.J. & Casillas, J.C. (2005). Current paradigms in the international management field: An author co-citation analysis. *International Business Review*, 14, 619-639.

Alajoutsijärvi, K., Eriksson, P. & Tikkanen, H. (2001). Dominant metaphors in the IMP network discourse: ‘the network as a marriage’ and ‘the network as a business system’. *International Business Review*, 10, 91-107.

Alderson, W. & Cox, R. (1948). Towards a theory in marketing. *Journal of Marketing*, 13, 137-152.

Anderson, J.C. & Narus, J.A. (1990). A model of distributor firm and manufacturer firm working partnerships. *Journal of Marketing*, 54, (1), 42-58.

Anderson, J.C., Håkansson, H. & Johanson, J. (1994). Dyadic business relationship within a business network context. *Journal of Marketing*, 58, 22-38.

Araujo, L. (2004). *Markets, market making and marketing*. Paper presented at the 2004 IMP annual conference in Copenhagen.

Bagozzi, R. P. (1974). Marketing as an organized behavioral system of exchange. *Journal of Marketing*, 38 (4), 77-81.

Barabási, A.-L. (2003). *Linked: How Everything is Connected to Everything Else and What it Means*. New York: Plume Book.

Barney, J.B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17 (1), 99-120.

Barney, J.B. & Hansen, M.H. (1994). Trustworthiness as a source of competitive advantage. *Strategic Management Journal*, 15, 175-190.

Bartlett, C. & Ghoshal, S. (1989). *Managing Across Borders: The Transnational Solution*. Boston, MA: Harvard Business Press.

Bensaou, M. & Venkatraman, N. (1995). Configurations of inter-organizational relationships: a comparison between U.S. and Japanese automakers. *Management Science*, 41, (9), 1471-1492.

Best, M. H. (1990). *The New Competition*. Cambridge, MA: Harvard University Press.

Blakenburg, D. & Johanson, J. (1992). Managing Network Connections in International Business. *Scandinavian International Business Review*, 1 (1), 5-19.

Blakenburg, D., Eriksson, K. & Johanson, J. (1999). Creating value through mutual commitment to business network relationships. *Strategic Management Journal*, 20 (5), 467-486.

Borgatti, S. P. & Foster, P. C. (2003). The Network Paradigm in Organizational Research: A Review and Typology. *Journal of Management*, 29 (6), 991-1013.

Borgatti, P. S. & Li, X. (2009). On social network analysis in a supply chain context. *Journal of Supply Chain Management*, 45, (2), 5-22.

Broderick, A. (1999). Role theory and the management of service encounters. *The Service Industries Journal*, 19 (2), 117-131.

Burt, R.S. (1995). *Structural Holes: The Social Structure of Competition*. Cambridge, MA: Harvard University Press.

Chen, I. J. & Paulraj, A. (2004). Towards a theory of supply chain management: the constructs and measurement. *Journal of Operations Management*, 22, 119-150.

Claro, D. P. (2004). *Managing business networks in buyer-supplier relationships: how information obtained from the business network affects trust, transaction specific investments, collaboration and performance in the Dutch Potted Plant and Flower Industry*. Doctoral dissertation. Wageningen, The Netherlands: Wageningen University and Research Centre.

Claro, D.P. & Claro, P.B.O. (2010). Collaborative buyer-supplier relationships and downstream information in marketing channels. *Industrial Marketing Management*, 39, 221-228.

Cook, K.S. & Emerson, R.M. (1978). Power, Equity, Commitment in Exchange Networks. *American Sociological Review*, 43 (Oct.), 721-738.

Cropanzano, R. & Mitchell, M. S. (2005). Social Exchange Theory: An Interdisciplinary Review. *Journal of Management*, 31, 874-900.

- Diamantopoulos, A. & Siguaw, J.A. (2008). *Introducing LISREL: a guide for the uninitiated*. London: Sage Publications.
- Dobbin, F. (2004). *The New Economic Sociology: A reader*. Princeton: Princeton University Press.
- Dunning, J.H. (1993). *The theory of multinational corporations*. London & New York: Routledge.
- Dyer, J.H. & Singh, H. (1998). The relational view: cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review*, 23 (4), 660-679.
- Easton, G. & Araujo, L. (1994). Market Exchange, Social Structure and Time. *European Journal of Marketing*, 28 (3), 72-84.
- Ellegaard, C., Johansen, J. & Drejer, A. (2002). Managing industrial buyer-supplier relationships: the case for attractiveness, *Integrated Manufacturing*, 14 (4), 346-356.
- Fulik, J. (2001). Global network organizations: Emergence and future prospects. *Human Relations*, 54 (1), 91-99.
- Ghoshal, S. & Bartlett, C. (1990). The Multinational Corporation as an Interorganizational Network. *The Academy of Management Review*, 15 (4), 603-625.
- Golden, W. & Powell, P. (2000). Towards a definition of flexibility: in search of the Holy Grail? *Omega* 28, 28, 373-384.
- Goyal, S. (2009). *Connections: An introduction to the Economics of Networks* (2nd ed.). Princeton and Oxford: Princeton University Press.
- Granovetter, M. (1985). Economic action and social structure: the problem of embeddedness. *American Journal of Sociology*, 91 (3), 481-510.
- Granovetter, M. (2005). The Impact of Social Structure on Economic Outcomes. *Journal of Economic Perspectives*, 19 (1), 33-50.
- Gulati, R. (2007). *Managing network resources: Alliances, affiliations, and other relational assets*. New York: Oxford University Press.
- Günter, H. et al. (2011). Collaborative Planning in Supply Chains: The Importance of Creating High Quality Relationships. In Fransoo J.C., Waefer, T. & Wilson, J.R. (eds.), *Behavioral Operations in Planning and Scheduling* (pp. 83-104). Heidelberg: Springer.
- Hair, J.F., Anderson, R., Tatham, R.L. & Black, W.C. (1998). *Multivariate data analysis*. Upper Saddle River, NJ: Prentice Hall.
- Halinen, A. & Törnroos, J-Å. (1998). The role of embeddedness in the evolution of business networks. *Scandinavian Journal of Management*, 14 (3), 187-205.
- Hamel, G. Doz, Y. & Prahalad, C.K. (1989). Collaborate with your competitors – and win. *Harvard Business Review*, 67 (1), 133-139.
- Håkansson, H. & Snehota, I. (1995). *Developing Relationships in Business Networks*. London: International Thompson Business Press.
- Håkansson, H. & Ford, H. (2002). How should companies interact in business networks? *Journal of Business Research*, 55, 133-139.

- Hedaa, L. & Ritter, T. (2005). Business relationships on different waves: Paradigm shift in marketing orientation revisited. *Industrial Marketing Management*, 34, 714-721.
- Heide, J.B. & John, G. (1992). Do norms matter in relationship marketing? *Journal of Marketing*, 56, 32-44.
- Heide, J.B. & Miner, A. S. (1992). The shadow of the future: effects of anticipated and frequency of contract on buyer-seller cooperation. *Academy of Management Journal*, 35 (2), 265-291.
- Hymer, H. S. (1979). *The multinational corporation: a radical approach*. Cambridge: Cambridge University Press.
- Jap, S.D. (1999). Pie-expansion efforts: collaboration processes in buyer-supplier relationships. *Journal of Marketing Research*, 36 (4), 461-476.
- Kahneman, D. (1994). New Challenges to the Rationality Assumption. *Journal of Institutional and Theoretical Economics*, 150, 18-36.
- Kandampully, J. (2003). B2B relationships and networks in the Internet age. *Management Decisions*, 41 (5), 443-451.
- Kim, K. (1999). On determinants of joint action in industrial distributor-supplier relationships: Beyond economic efficiency. *International Journal of Research in Marketing*, 16, 217-236.
- Knight, L. & Harland, C. (2005). Managing Supply Networks: Organizational Roles in Network Management. *European Management Journal*, 23 (3), 281-292.
- Kothandaraman, P. & Wilson, D.T. (2001). The future of competition: Value creating networks. *Industrial Marketing Management*, 30 (4), 379-389.
- Lush, R.F. & Brown, J.R. (1996). Interdependency, contracting, and relational behavior in market channels. *Journal of Marketing*, 60 (Oct.), 19-38.
- Manski, C.F. (2000). Economic Analysis of Social Interactions. *The Journal of Economic Perspectives*, 14 (3), 115-136.
- Mohr, J.J. & Speckman, R. (1994). Characteristics of partnership success: partnership attributes, communication behavior, and conflict resolution techniques. *Strategic Management Journal*, 15 (2), 135-152.
- Montgomery, J. (1998). Towards a role-theoretic conception of embeddedness. *American Journal of Sociology*, 104 (1), 92-125.
- Morgan, R.M. & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58 (3), 20-38.
- Mouzas, S. (2006). Efficiency vs effectiveness in business networks. *Journal of Business Research*, 59, 1124-1132.
- Nagurney, A. (2010). Optimal supply chain network design and redesign at minimal total cost and with demand satisfaction. *International Journal of Production Economics*, 128, 200-208.
- Parker, S.C. (2008). The economics of formal business networks. *Journal of Business Venturing*, 23, 627-640.
- Powell, W.W. (1990). Neither market nor hierarchy: network forms of organizations. *Research in Organizational Behavior*, 12, 295-336.
- Prenkert, F. & Hallén, L. (2006). Conceptualizing, delineating and analyzing business networks. *European Journal of Marketing*, 40, (3-4), 384-407.

- Rahaman, M.M. (2011). Access to financing and firm growth. *Journal of Banking & Finance*, 35, 709-723.
- Smelser, N.J. & Swedberg, R. (2005). Introduction to Economic Sociology. In Smelser, N.J. & Swedberg, R. (Eds.), *The Handbook of Economic Sociology* (pp. 3-25). New York: Russell Sage Foundation.
- Smith, L.V. (2008). *Rationality in Economics: Constructivist and Ecological Forms*. New York: Cambridge University Press.
- Stern, L.W.; El-Ansary, A.I. & Coughlan, A.T. (1996). *Marketing Channels*. Upper Saddle River, NJ: Prentice Hall.
- Thaler, R. (2000): From Homo Economicus to Homo sapiens. *Journal of Economic Perspectives*, 14, 133-141.
- Thorelli, H.B. (1986). Networks: between markets and hierarchies. *Strategic Management Journal*, 7, 37-51.
- Veludo, M. de L.; Macbeth, D. & Purchase, S. (2006). Framework for relationships and networks. *Journal of Business & Industrial Marketing*, 21 (4), 199-207.
- Wathne, K. & Heide, J.B. (2004). Relationship governance in a supply chain network. *Journal of Marketing*, 68 (1), 73-89.
- Watson, T. (1994). *In Search of Management: Culture, Chaos and Control in Managerial Work*. London, UK: Routledge.
- Williamson, O.E. (1975). *Markets and Hierarchies: Analysis and Antitrust Implications*. New York: Free Press.
- Zaheer, A., McEvily, B. & Perrone, V. (1998). Does trust matter? Exploring the effects of interorganizational and interpersonal trust on performance. *Organization Science*, 9 (2), 141-159.