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Governance and Social Capital Formation in Buyer-Supplier Relationships

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Governance and Social Capital Formation in Supplier Relationships

Abstract:

Purpose – Building social capital within buyer-supplier relationships is often associated with high performing supply chains. However, little research has examined the mechanisms by which social capital is formed. Our paper examines the effects of relational and contractual governance mechanisms on the formation of social capital under varying levels of demand and supply uncertainty.

Approach – A conceptual framework is developed, grounded in the literature on supply chain management and social capital theory.

Findings – We develop a series of propositions showing that relational governance leads to the formation of social capital under conditions of supply uncertainty, but is subject to opportunism when customer product demand is uncertain. By contrast, in conditions of high demand uncertainty, contractual governance is associated with social capital formation.

Practical implications – Our study illustrates the need for managers to consider both the way in which their choice of governance mechanisms (contractual and relational) contributes to social capital, as well as highlighting the contingent nature of these mechanisms depending on the environmental context.

Originality/value – This work is a novel contribution, applying social capital theory to the literature on supply chain management.

Keywords – Environmental uncertainty, social capital, supplier relationship management.

Paper type – Conceptual paper

1. Introduction

Global competition, rapidly changing technologies and increasing customer expectations have seen supplier relationships become a vital contributor to competitive advantage (Chen, Paulraj and Lado, 2004; Spekman and Carraway, 2006). In particular, social capital formed with suppliers may constitute a valuable asset for the firm, and an enduring source of advantage (Granovetter, 1992; Moran and Ghoshal, 1999). As a stock of goodwill which accrues as a result of behavioural exchange, social capital has been associated with improved performance within a firm's supplier relationships and across its supply chain (Krause, Handfield and Tyler, 2007; Lawson, Tyler and Cousins, 2008b).

Forming close supplier relationships often requires high levels of relationship-specific assets and routines, generating exchange hazards against which the organisation must protect itself. However, little attention has been paid to the choice of different governance mechanisms on social capital development within buyer-supplier relationships. Much of the prior research has focused on the transaction cost elements of the relationship, viewing governance as a cost minimising tool which protects against known exchange hazards (Williamson, 1985). However, a focus on transaction costs limits the ability to explain social and relational characteristics which define the exchange process within long-term supplier relationships (Ghoshal and Moran, 1996; Rindfleisch and Heide, 1997). Sociology scholars such as Granovetter (1985) have argued for increased recognition for the role played by socially embedded relationships in economic exchange. The relational governance literature argues that supplier relationships do not fit neatly on a market-hierarchy continuum, but instead, operate in an 'embedded logic of exchange' (Uzzi, 1997) and are shaped by the structure of social relations (Gulati and Gargiulo, 1999).

Our paper focuses on two types of governance structures, relational and contractual governance, used in the context of buyer-supplier relationships (Ness and Haugland, 2005;

Poppo and Zenger, 2002; Roath, Miller and Cavusgil, 2002). Contractual governance relies on the use of formalised, legally-binding agreements to govern the buyer-supplier relationship, while relational governance is represented through the development of behavioral norms of flexibility, solidarity and information sharing (Macneil, 1980; Poppo and Zenger, 2002). In the context of buyer-supplier relationships these norms indicate mutuality of interest and essentially prescribe stewardship behavior between both buyer and supplier in relation to the conduct surrounding the exchange (Heide and John, 1992). We identify an additional key distinction between relational governance and social capital. Relational governance, and the associated norms of behaviour, refers to the on-going social processes which aid the control, coordination and monitoring of supplier relationships (Yu, Liao and Lin, 2006; Zaheer and Venkataraman, 1995), while social capital refers to the *stock of goodwill* built up from past experience between the buyer and supplier (Tsai, 2000). We add to this literature by theoretically demonstrating the separable effects of contractual and relational mechanisms of governance in developing supply chain social capital. Further, by exploring the effects of supply chain uncertainty this paper contrasts the circumstances under which each governance mechanism is more appropriate in developing social capital between buyers and suppliers.

Moreover, firms have long sought to establish inter-organisational relationships in an attempt to control uncertainty (Beckman, Haunschild and Phillips, 2004; Burt and Doyle, 1994; Pfeffer and Salanick, 1978). Much of this work has focused on technology and market uncertainty in alliances (Cummings, 1991; Kumar and Seth, 1998) or industries as a whole (Badri, Davis and Davis, 2000; Beckman, et al., 2004), with relatively little attention paid to uncertainties embedded within an organisation's supply chain. As a result, insights into the impact of uncertainty on buyer-supplier relationships remain largely unknown. Uncertainty, however, is likely to play a key role in the effectiveness of attempts by the actors to build supply chain social capital. Our goal is to integrate the impact of environmental uncertainty

in governance choice between buyers and suppliers, and examine the impact on social capital development. To do so, we untangle two interlinked yet conceptually distinct types of uncertainty associated with supply chain management: customer product demand uncertainty and supply market uncertainty. We propose that these particular types of uncertainty pose the greatest risk of opportunism for each party in a buyer-supplier relationship, and they are thus likely to impact on the ability to develop social capital within the relationship.

A conceptual model, based in social capital theory, is developed to investigate the moderating effects of different types of uncertainty on the relationship between governance structures and the development of social capital between buyers and suppliers. We propose that relational governance is robust in creating social capital under conditions of supply uncertainty, but subject to opportunism when customer product demand is uncertain. In conditions of high demand uncertainty, formal contractual mechanisms will be more effective in building social capital. Our propositions provide new insights into the development of social capital in buyer-supplier relationships, suggesting that the area is multi-faceted and complex, with considerable scope for further research.

The remainder of the paper proceeds as follows. The next section develops the literature in relation to buyer-supplier relationships, social capital theory and governance structures. We then build a series of propositions and a conceptual model linking these variables. The paper concludes with a series of recommendations for future research and managerial implications.

2. Literature review

2.1. Social capital theory and buyer-supplier relationships

The organisational literature describes social capital as a valuable asset that stems from access to resources made available through social relationships (Granovetter, 1992). Nahapiet and

Ghoshal (1998: 243) define social capital as ‘the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit’. Social Capital Theory (SCT) is one approach for understanding how firms obtain resources that exist outside their boundaries and access the benefits of developing closer ties with other parties (Anand, Glick and Manz, 2002; Inkpen and Tsang, 2005; Koka and Prescott, 2002). The emphasis on social processes and collective action aligns with the need to include the effect and importance of social context on a firm’s actions (Granovetter, 1985; Uzzi, 1997).

Social capital theory is considered one of the more useful perspectives for theorising the nature of connection and cooperation between organisations (Adler and Kwon, 2002; Starkey and Tempest, 2004). SCT supports the idea that people and relationships between organisations are instrumental to competitive advantage. As cooperation between buyers and suppliers increase, it is important that researchers and practitioners alike increase their awareness of social capital and how it can impact the performance of buyer-supplier relationships (Krause, et al., 2007). McGrath and Sparks (2005) summarise the benefits of building social capital in supply chain relationships as: increased ability to create value for both parties; flexibility and speed of joint responses to market or customer; and optimisation of costs and resources. They suggest that, social capital is the ‘relational glue’ that underlies effective supply chains” (McGrath and Sparks, 2005: 216). Cousins *et al* (2006) and Lawson et al (2008a) illustrate how social capital facilitates not only the general buyer-supplier relationship interaction process, but also specific operational metrics within the relationship. Bessant et al (2003) suggest that the collectivity and shared purpose associated with social capital help to establish ‘appropriate practices’ between buyers and suppliers. An increasing amount of research suggests that by building social capital through the enhancement of supplier relationships, the performance of the entire supply chain can be improved and

strengthened. However, as is the case with other forms of organisational capital, social capital will only appropriate value to a relationship if it is effectively managed and governed.

2.2. *Governance mechanisms*

Following the governance structure literature (Ness and Haugland, 2005; Poppo and Zenger, 2002; Roath, et al., 2002), we examine governance in two dimensions. Contractual-based governance emphasises the use of a formalised, legally-binding agreement to govern the interfirm relationship. Relational-based governance, by contrast, highlights the role of norms of solidarity, flexibility and information sharing in the relationship process.

2.2.1 Relational governance. The term ‘relational governance’ originates from Macneil (1980) who argued that exchange is largely based on a social component. A large stream of literature from a variety of discourses supports this line of reasoning (Dyer and Singh, 1998; Granovetter, 1992; Granovetter, 1985), suggesting that economic exchange consists partially of personally embedded relationships. In this view of governance, some ignore the role of contractual governance (Mohr and Spekman, 1994), while others suggest that contracts represent a costly substitute for relational governance (Dyer and Singh, 1998; Gulati, 1995).

Relational governance identifies form of behaviour that are desirable or undesirable, rather than specifying relevant behaviour directly (Heide, 1994). Relational governance captures how buyers and suppliers manage their relationships and subsequent interactions in order to develop self-enforcing safeguards (Heide and John, 1990) and is defined by a set of informal norms that affect the behaviour of parties when they are dealing with each other (Baker, Gibbons and Murphy, 2002; Mesquita and Brush, 2008). The use of relational forms of governance are commonly cited in the literature as viable and efficient methods to successfully govern and safeguard inter-organisational relationships (Poppo and Zenger,

2002; Sheng, Brown, Nicholson and Poppo, 2006; Yu, et al., 2006), whereby parties avoid opportunistic behaviour in order to preserve their reputation and avoid the termination of a long-term relationship. Relational governance encourages both buyer and supplier to work towards mutual benefits through norms of flexibility, solidarity and information sharing.

In addition, norms of flexibility encourage and facilitate the adaptability of buyer and supplier to unforeseeable events, while norms of solidarity promote a shared approach to problem solving in the relationship (Poppo and Zenger, 2002). The norm of information exchange is the expectation that each party will be willing and able to provide information to the partner (Heide and John, 1992). Governing a relationship in this way is said to encourage both parties to maintain the relationship through fostering mutually beneficial dependencies (Luo, Liu and Liu, 2008; Ryu, Arslan and Nizamettin, 2007). Carson et al (2006) states that relational governance helps to prevent opportunism while offering superior flexibility and lower set-up costs vis-à-vis the available alternatives.

2.2.2 Contractual governance. Contracts are considered a key mechanism of governing inter-organisational exchange (Hart, 1988; Ring and Van De Ven, 1992; Williamson, 1985). A formal contract signifies that the exchange is important to both parties in the relationship, outlining *ex ante* details of the exchange and assisting in its monitoring (Alchian and Demsetz, 1972). Defined as “the extent to which detailed and binding contractual agreements are used to specify the roles and obligations of the parties” (Cannon, Achrol and Gundlach, 2000: 182), contracts incorporate the expectations and obligations of actors in the relationship. The attention to contractual detail helps ensure that unforeseen circumstances are planned for, along with likely contingencies. Building on the central tenets of transaction cost economics (TCE), contracts are designed to ensure that quality, price, quantity and other requirements are to the agreement of the buyer. The more complex the contract, the greater the number of clauses, obligations, penalties for non-compliance, and

specific specifications. Consequently, as a contract increases in detail and content, the cost of its compilation and monitoring compliance increases.

A growing debate exists on the interaction between contractual and relational governance and whether there is a complementary or substitution effect between them (Bercovitz, Jap and Nickerson, 2006; Olsen, Haugland, Karlsen and Johan Husoy, 2005; Poppo and Zenger, 2002). This paper does not seek to determine the nature of the interaction between formal and informal governance mechanisms; instead we aim to encourage a deeper discussion of the circumstances surrounding governance decisions in buyer-supplier relationships and the contingent impact of external factors.

2.3. *Uncertainty*

Dealing with uncertainty and its impact on an organisation's structure and behaviour has long been a central component of many theories of strategy and organisation (Lawrence and Lorsch, 1967; March and Simon, 1958; Pfeffer and Salanick, 1978; Thompson, 1967). TCE first emphasised its importance on decisions concerning the scope of the firm (Williamson, 1985), defining uncertainty as the circumstances surrounding an exchange which cannot be specified *ex ante* (i.e., environmental uncertainty) and the performance which cannot be easily verified *ex poste* (i.e., behavioural uncertainty) (Williamson, 1991). Environmental uncertainty is said to trigger adaptation, which is the central problem of economic organisation as environments are rarely stable and predictable (Williamson, 1991). Defining uncertainty however, is not straightforward, given its wide ranging applicability across subject areas and theory bases. From a supply chain management perspective, we define uncertainty as "the inability to predict partner behaviour or changes in the external environment" (Joshi and Stump, 1999: 293).

The measurement and conceptualisation of uncertainty has been expressed in many different ways and contexts. A common perspective is that uncertainty exists because of insufficient information (Sheng, et al., 2006), creating information processing problems for a firm (Aldrich, 1979; Fynes, De Burca and Marshall, 2004), and making planning and decision making difficult (Achrol and Stern, 1988). It is generally agreed that organisations drive to reduce uncertainty as it “reduces confidence in how to behave and what to expect from the physical and social environment” (Hogg and Terry, 2000: 133). This paper does not propose to add to literature on uncertainty reduction strategies, but instead it seeks to build on the literature examining the effects of uncertainty on buyer-supplier relationships (Kwon, Im and Chang Lee, 2006; Li and Lin, 2006; Pagell and Krause, 2004; Sawhney, 2006; Srinivasan and Brush, 2006).

The impact of uncertainty on supply chains and inter-organisational exchange relations depends greatly on the origin of that uncertainty (Joshi and Stump, 1999; Stump, 1995). With regard to inter-organisational relations, Wernerfelt and Karani (1987) described uncertainty in relation to a four categories: demand, supply, competitive and external. Following this, Davis (1993) suggested three aspects of supply chain uncertainty: demand uncertainty, supply uncertainty and technological uncertainty. It is acknowledged that different aspects of uncertainty are often interrelated and do not always exist in isolation. This paper focuses on two forms of uncertainty – demand uncertainty and supply uncertainty – proposed by Wilding (1998) as key factors impacting on the effectiveness of a supply chain as they “frustrate the prediction of future contingencies” (Cannon, et al., 2000: 182).

2.3.1 Demand uncertainty is linked to the predictability of customer demand for a product (Lee, 2002). The fact that every product has a unique life cycle means that more research is required to understand uncertainties in customer demand and the impact on how organisations coordinate the production of their goods. Demand uncertainty may be

experienced because of rapid and unpredicted changes in downstream market preferences or because of a lack of standardised preference by customers (Fynes, et al., 2004). Described as a key contingency variable that organisations must take into account when managing their supply chain (Germain, Claycomb and Droge, 2008), demand uncertainty arises as customers require more sophisticated choices, better quality, quicker innovation, and improved service delivery.

2.3.2 Supply uncertainty, on the other hand, is defined as “the extent of change and unpredictability of the supplier’s product quality and delivery performance” (Li and Lin, 2006). In situations of high supply uncertainty, the supply chain is in continuous flux which makes supply unstable (Kwon, et al., 2006). Supply uncertainties can exist with regard to lead time, production capacity, changes in suppliers and delivery dependability. Li and Lin (2006) state that increased logistics costs, excess safety stocks, and a general inefficiency in the use of resources, can be attributed to uncertainties in supply. Ultimately, uncertainty in the supply chain results in poorer performance along many performance metrics such as inventory costs, responsiveness and flexibility. Supply uncertainty has the ability to postpone or even cease an organisation’s production process, thereby reducing the competitive position of an organisation.

Both demand and supply uncertainty compound and have the capacity to influence the governance choices in supplier relationships. The impact of uncertainty on governance structures is discussed in the next section.

2.4. Governance responses to uncertainty

The effect of uncertainty on governance mechanisms is a hotly debated and complex topic (Beckman, et al., 2004; Buvik, 2000; Carson, et al., 2006). Reve (1990) highlights the difficulty establishing an effective governance structure that will effectively cope with

ambiguities over transactions and performance. Ouchi (1979) emphasises the importance of considering factors which impact the effectiveness of governance structures in order to better understand how they constrain opportunism. TCE contends that uncertainty is a key factor in the formulation of governance decisions (Madhok, 1996; Williamson, 1985). Indeed, evidence applying TCE appears to signal that uncertainty has a greater impact on governance than originally thought (Chi, 1994; Williamson, 1998; Zajac and Olsen, 1993).

High levels of uncertainty can render contractual governance hazardous, as it can discourage exchange in the absence of safeguards. Contracts may also suffer from higher governance costs due to incompleteness or the difficulties attached to conflict resolution (Hart, 1988; Srinivasan and Brush, 2006). High uncertainty may, for instance, also discourage a supplier from making specialised asset investments absent appropriate safeguards. Williamson (1985) suggests that uncertainty will lead to an increase in the complexity of contracts, adding to the costs of exchange and monitoring of related investments. Building on this perspective, Luo (2002) suggested that in periods of uncertainty, contracts will be made more specific in relation to the terminologies used and detail included. Contingency adaptability will also become more extensive, meaning that more environmental scenarios are accounted in specific, contractual terminology.

Following Granovetter (1985), the relational governance literature holds that the development of social factors in the relationship will help to attenuate opportunistic behaviour in times of uncertainty – thus “cooperation becomes a self-enforcing outcome” (Carson, et al., 2006: 1060). Granovetter’s (1985) seminal work suggests that social embeddedness accounts for much of the order which characterises modern day exchange (Moran, 2005). In uncertain environments, the ability to draw on well-established norms and honest relationships is an important asset. With relational governance mechanisms, the self interest of the parties would motivate both parties to adjust to and accommodate each other’s priorities and behave

reasonably in uncertain times (Srinivasan and Brush, 2006). Unlike contract renegotiations and re-specifications that can sometimes follow a period of uncertainty, adaptations to the relational approach of governance are not as costly, or time consuming.

3. Conceptual model and propositions

Our conceptual model incorporating governance structures, uncertainty and social capital development is depicted in Figure 1. We argue that both relational and contractual governance structures are positively associated with social capital development between buyer and supplier. In addition, we develop a series of propositions highlighting the effect of uncertainty on this relationship. We propose that relational governance mechanisms will be robust under conditions of supply uncertainty, but more susceptible to violation and opportunism when customer product demand is uncertain. Conversely, it is suggested that contractual mechanisms are appropriate under conditions of demand uncertainty. Subsequently, we propose that this type of governance is less appropriate under conditions of supply uncertainty.

Insert Figure 1 about here

3.1. The effect of governance mechanisms on social capital development

Contractual and relational governance represent two mechanisms that can be used to monitor and control relationships. Following a well-developed stream of literature (Dyer, 1996; Poppo and Zenger, 2002; Sundaramurthy and Lewis, 2003), we make the distinction between contractual-based governance and relational-based governance, and examine the effect of both on social capital. The development of social capital in a buyer-supplier relationship depends heavily on the effective management of the exchange which takes place between the actors.

A growing stream of research views the use of contractual governance as a process through which parties in a relationship, can proactively undertake joint problem solving and documentation of their plans for the relationship (Carson, et al., 2006; Mesquita and Brush, 2008; Ryu, et al., 2007). Contractual forms of governance have an important effect on the development of social capital. Contracts document unspoken assumptions at the beginning of the relationship and generate a forum for the ‘meeting of minds’ (Cannon, et al., 2000). In helping to draft remedies for foreseeable contingencies or possible solutions to potential problems, contracts help each party develop a confidence in one-another. They offer a structured framework for the relationship and provide the basis for making adaptations and modifications relating to changes in product cost or process etc (Cannon, et al., 2000). Also, the proactive process of creating an agreement helps to develop more robust communication between a firm and its supplier (Arrow, 1974) – fostering a shared understanding of performance related goals and objectives, which aids the development of trusting relations.

When organisations make specific investments in a relationship, they expose their assets to a certain degree of risk. If one actor in the buyer-supplier relationship is able to leverage a degree of opportunistic behaviour, the other actors involved may become vulnerable as the assets which they have deployed may be specific to the relationship. Some form of contractual governance, which has a regulatory influence on the relationship is warranted so as to protect all parties involved (Buvik and Reve, 2001). Zaharieva et al (2003) illustrate the critical safeguarding role played by legal forms of governance in agri-food supply chain relationships. Recent longitudinal evidence shows evidence of the stabilising effect of contractual governance in long-term buyer-supplier relationships (Zheng, Roehrich and Lewis, 2008). Thus, contractual governance is an important factor in the development of social capital in buyer-supplier relationships.

Proposition 1: Contractual-based governance is positively related to the development of social capital in a buyer-supplier relationship

Relational governance mechanisms and the intrinsic norms of flexibility, solidarity and information exchange are associated with safeguarding the exchange process and helping to alleviate the hazards of relationships which formal contracts are designed to minimise (Gulati, 1995; Yu, et al., 2006; Zaheer, McEvily and Perrone, 1998). Cannon et al (2000) found support for the ability of relational governance (independent of the effect of contractual governance) to enhance the operational performance of buyer-supplier relationships. Behavioural norms of flexibility, solidarity, and information exchange are proposed to promote the development of social capital between buyers and suppliers. The literature suggests that as these norms become reinforced over time, buyers and suppliers develop confidence in the relationship and trust in the other partner (Mesquita and Brush, 2008; Uzzi, 1997). Norms of information sharing facilitates interaction, communication and problem solving between actors in the supply chain, enabling them to locate key information, and share idiosyncratic knowledge sharing routines for the dissemination of tacit information (Dyer and Singh, 1998; Kale, Singh and Perlmutter, 2000). Both parties become more willing to share private information with one another, including short and long-term plans and goals (Poppo and Zenger, 2002). Mutuality and cooperation develop as parties in the relationship commit to these norms, and foster the development of trust and commitment in the relationship. Thus,

Proposition 2: Relational-based governance is positively related to the development of social capital in a buyer-supplier relationship

3.2. The moderating effect of demand uncertainty

Cannon et al (2000) state that uncertainty is a major factor affecting the organisation and governance of exchange between buyers and suppliers. We suggest that the effect of governance structure on the development of social capital in buyer-supplier relationships may vary depending on the level of demand and supply uncertainty. Sharing demand information and synchronised planning across the supply chain is important in a situation of uncertain customer demand. Also, general information sharing and tighter coordination between buyers and suppliers can be instrumental in helping actors forecast the length of product life cycles, thus preventing suppliers from overproducing at the end of the life cycle of a certain product (Lee, 2002).

Whilst this paper acknowledges these issues, it is proposed that the assurance and safeguarding capabilities which contractual governance offers makes it a more appropriate form of governance in periods of uncertain customer demand, when compared to relational governance. TCE argues that as exchange hazards increase, so too must the level of contractual safeguards (Williamson, 1985). We argue that contractual mechanisms of governance become more effective in developing social capital between buyer and supplier in times of demand uncertainty. The completion of a detailed contract indicates that both parties have formalised problem solving *ex ante* through the development of a range of contingency plans. There is less incentive for either firm to behave opportunistically as they are both better prepared, are legally safeguarded in advance, and can verify the behaviour of the other actor (Carson, et al., 2006).

Demand uncertainty requires both actors in a supplier relationship to make adaptations to the unforeseen problems which have arose in the marketplace. In instances such as this, it is crucial that all parties have the capabilities to make adaptations that are required to respond to the uncertainty. Contracts – the key component of contractual governance - are a

mechanism through which this capability can be efficiently and uniformly accessed (Ness and Haugland, 2005).

It is widely acknowledged that most contracts by their very nature are incomplete. However, this characteristic of contractual governance allows a degree of manoeuvrability in times of demand uncertainty, as they can facilitate greater flexibility between buyer and supplier and a more effective exchange process, which in turn encourages the development of trust and commitment (Klein, Hillebrand and Nooteboom, 2005; Luo, 2002).

In times of demand uncertainty, it is proposed that relational methods of governance would be less effective as a method of governance when compared to contractual mechanisms. Demand uncertainty in the supply chain is more unpredictable for many industries given the increasing demands from consumers, and the rate of innovation of new products. From a resource allocation perspective, in times of uncertain customer demand, it is more efficient to funnel resources into short term decision making processes (ie. short term forecasts and predictions (Wilding, 1998), rather than the long-term investments associated with relational governance. Standardised contractual forms of governing a relationship with key supply chain partners would then be most cost efficient and straightforward, as these type of contracts conform to a checklist of criteria and do not require expensive long-term investments in building trust and confidence.

Relational governance requires mutual consent from both parties (Williamson, 1996), and therefore delays decision-making (Sheng, et al., 2006). It also presents the opportunity for strategic positioning, reducing the likelihood that social capital (as an equitable outcome) will be fostered (Williamson, 1996). As a period of demand uncertainty continues, it is probable that neither party will want to make specialised investments in each other. Instead, they will more than likely want to re-evaluate the market and customer demand patterns in their product. An investment in each other through contract serves to tie organisations and

signal longevity, which would be counter-intuitive given the decline in customer demand. The risk of opportunism and lack of contingency planning often associated with relational governance can make this form of governance less effective in the development of social capital when demand uncertainty is high.

Proposition 3: The positive association between contractual governance and the development of social capital is stronger under conditions of high demand uncertainty than under conditions of low demand uncertainty

Proposition 4: Under conditions of high demand uncertainty, the relationship between contractual governance and social capital will be stronger than the relationship between relational governance and social capital

3.3. *The moderating effect of supply uncertainty*

Supply uncertainty adds to the complexity of the production process, and can stress relationships which organisations have developed with their suppliers. The global marketplace has increased the physical distance separating buying firms and their suppliers (Bhatnagar and Sohal, 2005; Prater, 2005), resulting in increased order lead times and increased uncertainty with respect to production schedules and time to market (Frohlich and Westbrook, 2001). The adoption of flexible systems of production is a viable approach to managing uncertain supply, while supplier relationships, if governed appropriately, can help organisations plan for these supply uncertainties. In conditions of high supply uncertainty, organisations are concerned with securing sources of supply, both immediately and in the future. An uncertain supply market can refer to situations when there is a scarcity of suppliers (Bensaou and Anderson, 1999) or unpredictable supply of product in the market (Chen, Reilly

and Lynn, 2005), which tends to encourage buyers to forge a closer relationship in the hope that that they will be better served (Dyer and Singh, 1998).

Our argument builds on evidence presented by Cannon et al (2000) showing that behavioural norms provide complementary apparatus for dealing with uncertainty in buyer-seller relationships. Similar to our conceptualisation of supply uncertainty, uncertainty was measured by Cannon et al (2000) as the level of dynamism in the supply market surrounding the buyer-seller relationship. Where there are high levels of supply uncertainty, relational governance can overcome the inflexibility disadvantages of other forms of governance (Carson, et al., 2006; Lee, Lee and Pennings, 2001), and facilitate the development of social capital between buyers and suppliers. Relational governance can foster reciprocated obligations between buyers and suppliers through the use of social norms, as opposed to formal contract re-negotiation. For example, when there is uncertainty in the supply environment, such as the unstable supply of parts, buyers are unable to schedule when and how much of the product is arriving (Ryu and Eyuboglu, 2007). Governing the relationship through norms of behaviour, particularly norms of information sharing, helps to reduce the information advantage which resides with suppliers. Through the norms of flexibility associated buyers and suppliers can adjust unexpected difficulties and reduce uncertainties related to supply disruptions (Mesquita and Brush, 2008). This flexibility makes the adjustment of plans in response to new information more feasible rather than having both actors hold tightly to the specifics of a contract (Bercovitz, et al., 2006). Norms of information sharing promote interaction and freer flows of communication, and also engenders the development of trust – “the basic active ingredient of social capital” (Moran, 2005: 1136).

In periods of supply uncertainty, holding the supplier to the letter of the contract through inflexible contractual mechanisms of governance is unlikely to invoke a desirable

response. For example, if a manufacturer faces an unstable supply of parts, the supplier can easily benefit out of this situation by offering their product to other buyers who are willing to pay a higher price. ‘Holding the supplier to the contract’ in this case would be counter-productive as the buyer does not hold the leverage advantage. Striving for control over supply, and trying to prevent opportunistic behaviour through contracts in this situation, would be a less preferable approach than adopting a relational approach to the supplier in which mutual dependencies can be fostered. Detailed contractual agreements to mitigate against exchange hazards are less relevant in a supply uncertainty context – the ‘hazard’ will be if the supplier defaults at a time when the market is less than saturated with options.

Proposition 5: The positive relationship between relational governance and the development of social capital is stronger under conditions of high supply uncertainty than under conditions of low supply uncertainty

Proposition 6: Under conditions of high supply uncertainty, the relationship between relational governance and social capital will be stronger than the relationship between contractual governance and social capital

4. Discussion

The goal of this paper was to explore the effect of governance mechanisms on social capital development under conditions of uncertainty. By separating uncertainty into demand and supply uncertainty, and considering their effects on both contractual and relational governance, this paper illuminates the link between governance options and social capital development. We proposed that both contractual and relational forms of governance are effective in enhancing the development of social capital between buyers and suppliers. Contractual governance was argued to be a relatively more effective means of governance (compared to relational governance), when demand uncertainty was high. In this situation,

contingencies are clearly specified in the contract, and the process of adaptability is laid out. Relational governance, on the other hand, was more strongly associated with social capital development (compared to contractual governance) when supply uncertainty was high.

Contractual and relational governance structures have made rich contributions to our understanding of the nature of governance. In relation to buyer-supplier relationships, there is a need for further exploration and theoretical development. This paper goes part way to addressing this issue. We highlight the importance of exploring the effect of environmental and exchange characteristics (i.e. demand and supply uncertainty) on governance in a buyer-supplier context. A developed understanding of the source of supply chain uncertainty is important as this will influence the governance form which is used to safeguard the relationship. At the same time, this research helps illustrate the limits of usefulness of two forms of governance, providing deeper insights into relationship behaviour and the contingent factors which can influence the nature of governance.

4.1. Implications for theory

The development of social capital theory within buyer-supplier relationships is nascent (Krause, et al., 2007; Lawson, et al., 2008b). In particular, we address an underdeveloped, yet increasingly important, concept within that body of literature – how social capital is developed and maintained. We add to social capital theory by exploring the contextual factors which encourage adaptability and the development of trust in the supply chain. Our propositions point to the proficiency of relational governance and social norms of exchange when used under appropriate circumstances.

Additionally, many studies have sought to explore the development of buyer-supplier relationships from a transaction cost economising perspective. In other words, TCE is often applied to explain relational governance, with the relationships examined in isolation to the

environmental context which impacts upon them. This paper contributed to the literature by assessing the effect of two types of environment uncertainty. Rather than examining traditional firm-level performance outcomes, we examine the impact of governance from a social capital perspective. Through this, we address the criticisms of TCE and add to the literature exploring social capital development in a buyer-supplier context.

4.2. Implications for managers

This paper adds to an increasing body of literature exploring buyer-supplier relationships, and the development of social capital in these relationships. Contractual and relational governance can foster the development of social capital between buyers and suppliers, and managers should be aware of their potentially complementary impacts. In addition, uncertainty is inherent within buyer-supplier relationships (Fynes and Voss, 2002). To effectively manage and coordinate the activities between actors in a supply chain, it is necessary for organisations to understand their environment, the complexities introduced by uncertainty and the effect of different governance mechanisms in different circumstances (Olsen, et al., 2005). This paper, in its exploration of the effects of demand and supply uncertainty, acknowledges that it is unlikely that a firm will have a complete and comprehensive understanding of the uncertainties which influence its operations. Nevertheless, the more knowledgeable managers are of the different types of uncertainty which exist, the more likely they will be able to devise an effective strategy to deal with the anticipated consequences.

Many organisations confer that through the rationalisation of their supply base they have been able to unlock value and add to their competitive advantage in the marketplace. The importance of developing social capital in supplier relations is supported by this paper. We show that the maintenance of high quality supplier relationships is a complex process

which requires considerable investment in resources. In order to maximise gains and the social capital developed, these relationships should be regarded as important investments, especially in times of uncertainty. When demand and supply is volatile, organisations should first monitor the accuracy of forecasts, in relation to timing and quantities and manage the relationship accordingly (Fynes, et al., 2004; Li and Lin, 2006), raising important implications in how contracts should be approached and utilised to govern. Their usefulness is acknowledged, alongside the suggestion that they can create more damage than repair if inappropriately amended or enforced (Cannon, et al., 2000). Lusch and Brown (1996) propose that the misuse of contracts can create irreconcilable conflicts and other forms of dysfunctional behaviour. In addition, it must also be considered that the time, effort, and expense of building a system of relational governance may not be a productive investment when particular types of uncertainty are present.

4.3. Limitations and direction for future research

This paper highlights several areas for extending and enhancing current research in this area. One important avenue for future research concerns the link between uncertainty in the supply chain and other indicators of firm performance. Future research should move to more comprehensively examine the environment and organisation as an open system. This requires further investigation of the impact of environmental factors on performance outcomes, such as the development of social capital. The collection of longitudinal data would significantly help to improve our understandings of the development of social capital and the nature of the dynamic relationship between social capital and relational governance mechanisms. It would provide insight into the evolution of exchange norms and would enhance our understanding of how these norms operate under different environmental conditions in impacting social capital development and the performance of the relationship generally. Although beyond the scope

of this paper, a longitudinal study would also offer valuable insights into the interrelationships between contractual and relational governance.

Exploring the influence of objective measures of uncertainty, versus perceived levels of uncertainty would also be an interesting area for development. We need to consider that demand and supply uncertainty are likely to never be in equilibrium, thus we cannot consider one form over the other – a holistic approach must be adopted. Further research could also differentiate between uncertainty at the level of the supply chain and uncertainty in the market. The assessment of uncertainty in supply chain activities and relationships needs to be given due consideration, as “uncertainties, irrespective of where they originate, have the potential to be passed to different partners along the value chain” (Sawhney, 2006: 478).

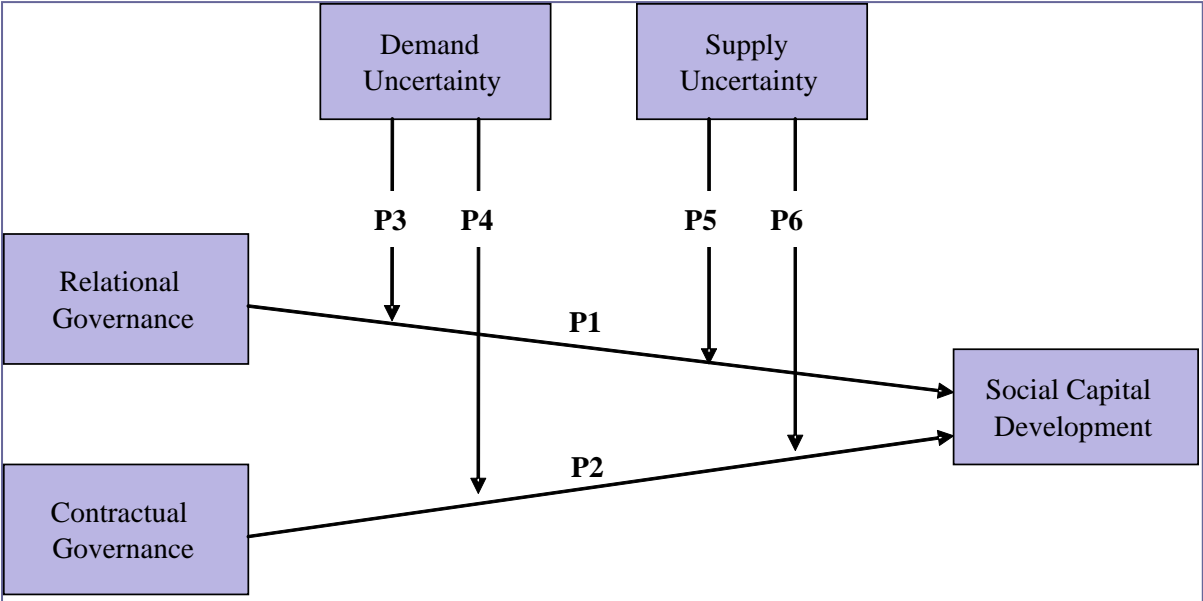
While the propositions of this paper contribute to a more complete understanding of the influence of uncertainty on the relationship between governance and social capital development, some limitations are acknowledged. Our paper is limited in that it is conceptual and is not grounded in empirical data. Given the conflicting debates which exist in the literature, future empirical work is needed. Also, with a closer examination of the effect of asset specific investment between buyers and suppliers, the paper may be more comprehensive in its analysis of factors which can impact on the governance of supplier relationships. Nevertheless, this paper has begun to unpack the question of as to the contingent effects of how social capital develops and is maintained in the supply chain, and in doing so has made certain contributions to theory.

5. Conclusions

Our paper has developed a conceptual framework incorporating elements of governance structures, uncertainty and social capital development within buyer-supplier relationships. We proposed that relational and contractual governance each play an important role in the

management of supplier relationships. We also argued that uncertainty also has a major role in determining the effectiveness of these governance structures, with both supply market uncertainty and product demand uncertainty shown to have differential effects on governance effectiveness and social capital. Future research should take into account these different types of uncertainty in buyer-supplier relationships. This conceptual work helps shed light on the larger picture of the ways in which buyer and supplier relationships are built, managed and maintained.

FIGURE 1
Conceptual Model



REFERENCES

- Achrol, R. S. and Stern, L. W. (1988). "Environmental determinants of decision-making uncertainty in marketing channels", *Journal of Marketing Research*, Vol. 25 No. pp. 25-35.
- Adler, P. S. and Kwon, S.-W. (2002). "Social capital: Prospects for a new concept", *Academy of Management Review*, Vol. 27 No. 1, pp. 17-40.
- Alchian, A. A. and Demsetz, S. G. (1972). "Production, information costs, and economic organisation", *American Economic Review*, Vol. 62 No. 5, pp. 777-795.
- Aldrich, H. E. (1979). *Organizations and Environments*. Prentice-Hall.
- Anand, V., Glick, W. H. and Manz, C. C. (2002). "Thriving on the knowledge of outsiders: Tapping organizational social capital", *The Academy of Management Executive*, Vol. 16 No. 1, pp. 87-101.
- Arrow, K. J. (1974). *The Limits of the Organisation*. W. W. Norton & Company.
- Badri, M. A., Davis, D. and Davis, D. (2000). "Operations strategy, environmental uncertainty and performance: a path analytic model of industries in developing countries", *Omega*, Vol. 28 No. pp. 155-173.
- Baker, G., Gibbons, R. and Murphy, K. J. (2002). "Relational contracts and the theory of the firm", *The Quarterly Journal of Economics*, Vol. No. February.
- Beckman, C. M., Haunschild, P. R. and Phillips, D. J. (2004). "Friends or strangers? Firm specific uncertainty, market uncertainty, and network partner selection", *Organization Science*, Vol. 15 No. 3, pp. 259-275.
- Bensaou, M. and Anderson, E. (1999). "Buyer-supplier relations in industrial markets: when do buyers risk making idiosyncratic investments?", *Organization Science*, Vol. 10 No. 4, pp. 460-481.
- Bercovitz, J., Jap, S. D. and Nickerson, J. A. (2006). "The antecedents and performance implications of cooperative exchange norms", *Organization Science*, Vol. 17 No. 6, pp. 724-740.
- Bessant, J., Kaplinsky, R. and Lamming, R. (2003). "Putting supply chain learning into practice", *International Journal of Operations & Production Management*, Vol. 23 No. 2, pp. 167-184.
- Bhatnagar, R. and Sohal, A. S. (2005). "Supply chain competitiveness: measuring the impact of location factors, uncertainty and manufacturing practices", *Technovation*, Vol. 25 No. pp. 443-456.
- Burt, D. and Doyle, M. (1994). *The American Keiretsu: A Strategic Weapon for Global Competitiveness*. Irwin.

- Buvik, A., Gronhaug, K. (2000). "Inter-firm dependence, environmental uncertainty and vertical co-ordination in industrial buyer-seller relationships", *Omega*, Vol. 28 No. 4, pp. 445-454.
- Buvik, A. and Reve, T. (2001). "Asymmetrical deployment of specific assets and contractual safeguarding in industrial purchasing relationships", *Journal of Business Research*, Vol. 51 No. 2, pp. 101-113.
- Cannon, J. P., Achrol, R. S. and Gundlach, G. T. (2000). "Contracts, norms, and plural form governance", *Academy of Marketing Science*, Vol. 28 No. 2.
- Carson, S. J., Madhok, A. and Wu, T. (2006). "Uncertainty, opportunism, and governance: the effects of volatility and ambiguity on formal and relational contracting", *Academy of Management Journal*, Vol. 49 No. 5, pp. 1058-1077.
- Chen, I. J., Paulraj, A. and Lado, A. A. (2004). "Strategic purchasing, supply management, and firm performance", *Journal of Operations Management*, Vol. 22 No. 5, pp. 505-523.
- Chen, J., Reilly, R. R. and Lynn, G. S. (2005). "The impacts of speed to market on new product success: The moderating effects of uncertainty", *IEEE Transactions on Engineering Management*, Vol. 52 No. 2, pp. 199.
- Chi, T. (1994). "Trading in strategic resources: necessary conditions, transaction cost problems, and choice of exchange structure", *Strategic Management Journal*, Vol. 15 No. 4, pp. 271-290.
- Cousins, P. D., Handfield, R. B., Lawson, B. and Petersen, K. J. (2006). "Creating supply chain relational capital: the impact of formal and informal socialization processes", *Journal of Operations Management*, Vol. 24 No. 6, pp. 851-863.
- Cummings, T. (1991). "Innovation through alliances: Archimedes' Hall of Mirrors", *European Management Journal*, Vol. 9 No. 3, pp. 284-287.
- Davis, T. (1993). "Effective supply chain management", *Sloan Management Review*, Vol. No. pp. 35-46.
- Dyer, J. and Singh, J. (1998). "The relational view: cooperative strategy and sources of interorganizational competitive advantage", *Academy of Management Review*, Vol. 23 No. 4, pp. 660-679.
- Dyer, J. H. (1996). "Does governance matter? Kieretsu alliances and asset specificity as sources of Japanese competitive advantage", *Organization Science*, Vol. 7 No. 6, pp. 649-666.
- Frohlich, M. T. and Westbrook, R. (2001). "Arcs of integration: an international study of supply chain strategies", *Journal of Operations Management*, Vol. 19 No. pp. 185-200.
- Fynes, B., De Burca, S. and Marshall, D. (2004). "Environmental uncertainty, supply chain relationship quality and performance", *Journal of Purchasing & Supply Management*, Vol. 10 No. 4/5, pp. 179-190.

- Fynes, B. and Voss, C. (2002). "The moderating effect on buyer-supplier relationships on quality practices and performance", *International Journal of Operations & Production Management*, Vol. 22 No. 6, pp. 589-613.
- Germain, R., Claycomb, C. and Droge, C. (2008). "Supply chain variability, organizational structure, and performance: The moderating effect of demand unpredictability", *Journal of Operations Management*, Vol. 26 No. pp. 557-570.
- Ghoshal, S. and Moran, P. (1996). "Bad for practice: a critique of the transaction cost theory", *Academy of Management Review*, Vol. 21 No. 1, pp. 13-35.
- Granovetter, M. (1992). "Economic institutions as social constructions: A framework for analysis", *Acta Sociologica*, Vol. 35 No. 1, pp. 3-11.
- Granovetter, M. S. (1985). "Economic action and social structure: The problem of embeddedness", *American Journal of Sociology*, Vol. 91 No. 3, pp. 481-510.
- Gulati, R. (1995). "Does familiarity breed trust? The implications of repeated ties for contractual choice in alliances", *Academy of Management Journal*, Vol. 38 No. 1, pp. 85-112.
- Gulati, R. and Gargiulo, M. (1999). "Where do interorganizational networks come from?", *American Journal of Sociology*, Vol. 104 No. 5, pp. 1439-1493.
- Hart, O. (1988). "Incomplete contracts and the theory of the firm ", *Journal of Law and Economic Organization*, Vol. 4 No. 1, pp. 119-139.
- Heide, J. B. (1994). "Interorganizational governance in marketing channels", *Journal of Marketing*, Vol. 58 No. 1, pp. 71-85.
- Heide, J. B. and John, G. (1990). "Alliances in industrial purchasing: the determinants of joint action in buyer-supplier relationships", *Journal of Marketing Research*, Vol. 27 No. 1, pp. 24-36.
- Heide, J. B. and John, G. (1992). "Do norms matter in marketing relationships", *Journal of Marketing*, Vol. 56 No. 2, pp. 324-344.
- Hogg, M. A. and Terry, D. J. (2000). "Social identity and self categorization processes in organizational contexts", *Academy of Management Review*, Vol. 25 No. 1, pp. 121-141.
- Inkpen, A. C. and Tsang, E. W. K. (2005). "Social capital, networks and knowledge transfer", *Academy of Management Review*, Vol. 30 No. 1, pp. 146-165.
- Joshi, A. W. and Stump, R. L. (1999). "The contingent effect of specific asset investments on joint action in manufacturer-supplier relationships: an empirical test of the moderating role of reciprocal asset investments, uncertainty and trust", *Academy of Marketing Science*, Vol. 27 No. 3, pp. 291-305.
- Kale, P., Singh, H. and Perlmutter, H. (2000). "Learning and protection of proprietary assets in strategic alliances: building relational capital", *Strategic Management Journal*, Vol. 21 No. 3, pp. 217-237.

- Klein, W. R., Hillebrand, B. and Nooteboom, B. (2005). "Trust, contract and relationship development", *Organization Studies*, Vol. 26 No. 6, pp. 813-840.
- Koka, B. R. and Prescott, J. E. (2002). "Strategic alliances as social capital: A multidimensional view", *Strategic Management Journal*, Vol. 23 No. 9, pp. 795-816.
- Krause, D., R., Handfield, R., B. and Tyler, B. B. (2007). "The relationships between supplier development, commitment, social capital accumulation and performance improvement", *Journal of Operations Management*, Vol. 25 No. 2, pp. 528-545.
- Kumar, S. and Seth, A. (1998). "The design of coordination and control mechanisms for managing joint venture-parent relationships", *Strategic Management Journal*, Vol. 19 No. 6, pp. 579-599.
- Kwon, O., Im, G. P. and Chang Lee, K. (2006). "MACE-SCM: A multi-agent and case-based reasoning collaboration mechanism for supply chain management under supply and demand uncertainties", *Expert Systems with Applications*, Vol. IN PRESS No.
- Lawrence, P. and Lorsch, J. (1967). *Organization and Environment*. Harvard School of Business Administration Press.
- Lawson, B., Cousins, P. D., Handfield, R. B. and Petersen, K. J. (2008a). "Strategic purchasing, supply management practices and buyer performance improvement: an empirical study of UK manufacturing organisations", *International Journal of Production Research*, Vol. No. pp. 1-19.
- Lawson, B., Tyler, B. B. and Cousins, P. D. (2008b). "Antecedents and consequences of social capital on buyer performance improvement", *Journal of Operations Management*, Vol. 26 No. 3, pp. 446-460.
- Lee, C., Lee, K. and Pennings, J. M. (2001). "Internal capabilities, external networks, and performance: A study of technology-based ventures", *Strategic Management Journal*, Vol. 22 No. 6-7, pp. 615-640.
- Lee, H. L. (2002). "Aligning supply chain strategies with product uncertainties", *California Management Review*, Vol. 44 No. 3, pp. 105-119.
- Li, S. and Lin, B. (2006). "Assessing information sharing and information quality in supply chain management", *Decision Support Systems*, Vol. 42 No. 3, pp. 1641-1656.
- Luo, Y. (2002). "Contract, cooperation, and performance in international joint ventures", *Strategic Management Journal*, Vol. 23 No. pp. 903-919.
- Luo, Y., Liu, Y. and Liu, T. (2008). "Governing buyer-supplier relationships through transactional and relational mechanisms: Evidence from China", *Journal of Operations Management*, Vol. In Press No.
- Lusch, R. F. and Brown, J. R. (1996). "Interdependency, contracting, and relational behaviour in marketing channels", *Journal of Marketing*, Vol. 60 No. 4, pp. 19-38.
- Macneil, I. (1980). *The New Social Contract*. Yale University Press.

- Madhok, A. (1996). "The organization of economic activity: transaction costs, firm capabilities, and the nature of governance", *Organization Science*, Vol. 7 No. 5, pp. 577-590.
- March, J. G. and Simon, H. A. (1958). *Organizations*.
- McGrath, R. and Sparks, W. L. (2005). "The importance of building social capital", *Quality Progress*, Vol. 38 No. 22, pp. 45-49.
- Mesquita, L. F. and Brush, T. H. (2008). "Untangling safeguard and production coordination effects in long-term buyer-supplier relationships", *Academy of Management Journal*, Vol. 51 No. 4, pp. 785-807.
- Mohr, J. and Spekman, R. (1994). "Characteristics of partnership success: Partnership attributes, communication behaviour and conflict resolution techniques", *Strategic Management Journal*, Vol. 15 No. 2, pp. 135-152.
- Moran, P. (2005). "Structural vs. relational embeddedness: social capital and managerial performance", *Strategic Management Journal* Vol. 26 No. 12, pp. 1129-1151.
- Moran, P. and Ghoshal, S. (1999). "Markets, firms, and the process of economic development", *Academy of Management Review*, Vol. 24 No. 3, pp. 390-412.
- Nahapiet, J. and Ghoshal, S. (1998). "Social capital, intellectual capital, and the organisational advantage", *The Academy of Management Review*, Vol. 23 No. 2, pp. 242-266.
- Ness, H. and Haugland, S. A. (2005). "The evolution of governance mechanisms and negotiation strategies in fixed-duration inter-firm relationships", *Journal of Business Research*, Vol. 58 No. 12, pp. 1226-1239.
- Olsen, B. E., Haugland, S. A., Karlsen, E. and Johan Husoy, G. (2005). "Governance of complex procurements in the oil and gas industry", *Journal of Purchasing & Supply Management*, Vol. 11 No. pp. 1-13.
- Ouchi, W. G. (1979). "A conceptual framework for the design of organizational control mechanisms", *Management Science*, Vol. 25 No. 9, pp. 833-848.
- Pagell, M. and Krause, D. R. (2004). "Re-exploring the relationship between flexibility and the external environment", *Journal of Operations Management*, Vol. 21 No. 6, pp. 629.
- Pfeffer, J. and Salanick, G. R. (1978). *The External Control of Organizations: A Resource Dependence Perspective*. Harper and Row.
- Poppo, L. and Zenger, T. (2002). "Do formal contracts and relational governance function as substitutes or complements?", *Strategic Management Journal*, Vol. 23 No. 8, pp. 707-725.
- Prater, E. (2005). "A framework for understanding the interaction of uncertainty and information systems on supply chains", *International Journal of Physical Distribution & Logistics Management*, Vol. 35 No. 7/8, pp. 524-539.

- Reve, T. (1990). The firm as a nexus of internal and external contracts in Aoki, M., Gustafsson, B. and Williamson, O. E. (Eds), *The Firm as a Nexus Treaties*, Sage Publications, pp. 133-161.
- Rindfleisch, A. and Heide, J. B. (1997). "Transaction cost analysis: past, present, and future applications", *Journal of Marketing*, Vol. 61 No. 4, pp. 30-54.
- Ring, P. and Van De Ven, A. H. (1992). "Structuring Cooperative Relationships Between Organisations", *Strategic Management Journal*, Vol. 13 No. 7, pp. 483-498.
- Roath, A. S., Miller, S. R. and Cavusgil, S. T. (2002). "A conceptual framework of relational governance in foreign distributor relationships", *International Business Review*, Vol. 11 No. 1-16.
- Ryu, S., Arslan, H. and Nizamettin, A. (2007). "The effect of interfirm dependence structures on governance mechanisms", *Journal of Purchasing and Supply Management*, Vol. No. 13, pp. 17-25.
- Ryu, S. and Eyuboglu, N. (2007). "The environment and its impact on satisfaction with supplier performance: An investigation of the mediating effects of control mechanisms from the perspective of the manufacturer in the U.S.A", *Industrial Marketing Management*, Vol. 36 No. 4, pp. 458-469.
- Sawhney, R. (2006). "Interplay between uncertainty and flexibility across the value-chain: Towards a transformation model of manufacturing flexibility", *Journal of Operations Management*, Vol. 24 No. pp. 476-493.
- Sheng, S., Brown, J. R., Nicholson, C. Y. and Poppo, L. (2006). "Do exchange hazards always foster relational governance? An empirical test of the role of communication", *International Journal of Research in Marketing*, Vol. 23 No. pp. 63-77.
- Spekman, R. E. and Carraway, R. (2006). "Making the transition to collaborative buyer-seller relationships: An emerging framework", *Industrial Marketing Management*, Vol. 35 No. 1, pp. 10-19.
- Srinivasan, R. and Brush, T. H. (2006). "Supplier performance in vertical alliances: The effects of self-enforcing agreements and enforceable contracts", *Organization Science*, Vol. 17 No. 4, pp. 436-452.
- Starkey, K. and Tempest, S. (2004). "Bowling along: Strategic management and social capital", *European Management Review*, Vol. 1 No. 1, pp. 78-83.
- Stump, R. L. (1995). "Antecedents of purchasing concentration: A transaction cost explanation", *Journal of Business Research*, Vol. 34 No. pp. 145-157.
- Sundaramurthy, C. and Lewis, M. (2003). "Control and collaboration: Paradoxes of governance", *The Academy of Management Review*, Vol. 28 No. 3, pp. 397-415.
- Thompson, J. D. (1967). *Organizations in Action*. McGraw-Hill.
- Tsai, W. (2000). "Social capital, strategic relatedness and the formation of interorganizational linkages", *Strategic Management Journal*, Vol. 21 No. 9, pp. 925-939.

- Uzzi, B. (1997). "Social structure and competition in interfirm networks: the paradox of embeddedness", *Administrative Science Quarterly*, Vol. 42 No. 1, pp. 35-67.
- Wernerfelt, B. and Karnani, A. (1987). "Competitive strategy under uncertainty", *Strategic Management Journal*, Vol. 8 No. 2, pp. 187--194.
- Wilding, R. (1998). "The supply chain complexity triangle: Uncertainty generation in the supply chain", *International Journal of Physical Distribution and Logistics Management*, Vol. 28 No. 8, pp. 599-616.
- Williamson, O. E. (1985). *The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting*. Free Press.
- Williamson, O. E. (1991). "Comparative economic organization: the analysis of discrete structural alternatives", *Administrative Science Quarterly*, Vol. 36 No. pp. 269-296.
- Williamson, O. E. (1996). "Economic organisation: the case for candor", *Academy of Management. The Academy of Management Review*, Vol. 21 No. 1, pp. 48-57.
- Williamson, O. E. (1998). Transaction Cost Economics and Organization Theory in Dosi, G., Teece, D. J. and Chytry, J. (Eds), *Technology, organization, and competitiveness : perspectives on industrial and corporate change*, Oxford University Press, pp. 17-66.
- Yu, C.-M. J., Liao, T.-J. and Lin, Z.-D. (2006). "Formal governance mechanisms, relational governance mechanisms, and transaction-specific investments in supplier-manufacturer relationships", *Industrial Marketing Management*, Vol. 35 No. 2, pp. 128-139
- Zaharieva, E., Gorton, M. and Lingard, J. (2003). "Procurement mechanisms and the emergence of new governance structures in the CEECs: evidence from the Bulgarian wine industry ", *Journal of Purchasing & Supply Management*, Vol. 9 No. pp. 235-245.
- Zaheer, A., McEvily, B. and Perrone, V. (1998). "The strategic value of buyer-supplier relationships", *International Journal of Purchasing and Materials Management*, Vol. 34 No. 3, pp. 20-26.
- Zaheer, A. and Venkataraman, N. (1995). "Relational governance as an interorganizational strategy: An empirical test of the role of trust in economic exchange", *Strategic Management Journal*, Vol. 16 No. 5, pp. 373-392.
- Zajac, E. J. and Olsen, C. P. (1993). "From transaction cost to transaction value analysis: implications for the study of interorganizational strategies", *Journal of Management Studies*, Vol. 30 No. 1, pp. 131-145.
- Zheng, J., Roehrich, J., K. and Lewis, M., A. (2008). "The dynamics of contractual and relational governance: Evidence from long-term public-private procurement arrangements", *Journal of Purchasing & Supply Management*, Vol. 14 No. pp. 43-54.