PAPER TITLE

The impact of business environment factors on supply chain buyer-supplier relationships and supply chain performance

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ABSTRACT

Given the economic turbulence that organisations are facing, it is clear that business environment factors are having an impact on how firms conduct their affairs and how they interact with their supply chain partners. This paper considers the effect of internal and external business environment factors on supply chain satisfaction and performance as mediated by relationship aspects. There is a distinct lack of research on how environmental factors affect performance in a relationship context.

The orientation of a business towards its partners can be likened to a state of flux (Lynch et al, 2012). There is growing recognition throughout the world of purchasing and supply that there is no single optimal buyer-supplier relationship and a "horses for courses" approach to employ the most "fit for purpose" relationship is required (Cox and Thompson, 1997). Supply chain buyer supplier relationships have attracted a lot of attention in the literature (Bensaou, 1999; Cox, 2004b; Håkansson and Snehota, 1995; Trent, 2005) and continue to do so.These relationships can help firms to achieve cost reduction or profit improvement, but also seek to make the supply chain as a whole more competitive (Cox and Thompson, 1997).

The current research aims to address this gap within the context of buyer-supplier relationships using a dyadic approach concentrating on individual supply chains of companies using Chinese organisations for their supply chain partners. This paper reports on qualitative research with these respondents.The results of the research validate the importance of the business environment factors developed in the paper as having significant effects on supply chain satisfaction and performance.The IMP approach which considers relationships

to be at the centre of interactions between organizations was also validated by the respondents as being a key mediating factor of the link between business environment factors and supply chain satisfaction and performance.

KEYWORDS

Buyer-supplier relationships; internal environment; external environment; trust and commitment

INTRODUCTION

Supply chain buyer supplier relationships have attracted a lot of attention in the literature (Bensaou, 1999, Cooper and Ellram, 1993, Cox, 2004b, Dwyer et al., 1987, Håkansson and Snehota, 1995, Lamming, 1993, Landeros and Monczka, 1989, Morgan and Hunt, 1994, Stuart, 1993, Tan, 2001, Trent, 2005). These relationships help firms to achieve cost reduction or profit improvement, but also seek to make the supply chain as a whole more competitive (Christopher, 1992, Macbethet al., 1992, Cox and Thompson, 1997). They also directly influence the "make-or buy" decision and organisational performance (Chen and Paulraj, 2004, Cousins, 2002). The supply chain buyer-supplier relationships literature can be, at this juncture, considered to have left the nascent stage, based on traditional market price orientation, and moved into trust derived from collaboration stage since 1990 (Hoyt and Huq, 2000).

The IMP approach stresses variables such as commitment, co-operation, communication, adaptation and trustin discussing relationships. These issues permit partners to develop a complex, durable and appropriate systematic interaction approach with positive exchange outcomes (Walter et al., 2003). Trust and commitment (Berry, 1995, Dwyer et al., 1987, Håkansson, 1982, Håkansson and Snehota, 1995, Morgan and Hunt, 1994, Sako, 1992, Svensson, 2001) and long term win-win collaborative relationships (Dwyer et al., 1987, Cox, 2004a, Harland, 1996, Jap, 1999, Wasti et al., 2006, Cooper and Ellram, 1993, Stuart, 1993, Trent, 2005)have been formulated to favour partnerships over other types of relationship (Harland, 1996, Jap, 1999, Trent, 2005, Wasti et al., 2006).

However, many authors have argued no one type of supply chain relationship has successfully been applied to supply chains in specific environmental conditions (Burt and Doyle, 1994a, Bensaou, 1999). It is important to note that relationships that work successfully in one business environment may not be as successful when transplanted elsewhere (Cox, 1996). There is growing recognition throughout the world of purchasing and supply that there is no single optimal buyer-supplier relationship and a "horses for courses" approach to employ the most "fit for purpose" relationship is required (Cox and Thompson, 1997). What type of relationship needs to be set up depends on the environmental circumstances (Cox, 2004b) and it is clear that the nature of the interactions and relationship is affected by the environment (Håkansson, 1982).

This paper proceeds by outlining general issues about the business environment that firms operate within. It continues by considering the outcomes of the supply chain from a risk perspective. The model which the paper is built on is then presented and each of the

components is discussed separately. Following on from this the research approach is presented which outlines the methodology applied for this paper and for the overall project. The results of the first stage of the analysis are presented here and conclusions and recommendations for further study are outlined.

LITERATURE REVIEW

It is important however to note that relationships that work successfully in one business environment may not be as successful when transplanted elsewhere (Cox, 1996). While Cox (1996) refers to organisations operating in multiple business environments (countries/regions), the concept can also be applied to the dynamic nature of business environments currently. Yaibuathet et al (2008) for example consider how the institutional environment a firm faces has consequences for buyer-supplier relationships.It is clear therefore that the type of relationship depends on environmental circumstances (Cox, 2004) but also needs to be malleable in the face of change. This requirement has led, in some cases, to closer relationships being built between supply chain partners (Cao and Zhang, 2011). This literature review begins by considering two generic issues that affect buyer-supplier relationships: that of the business environment(s) the relationship is within and also the outcomes of the relationship in terms of risk and performance.

BUSINESS ENVIRONMENT

The business environment is a complex set of variables. Many authors have been studying this area (Badri et al., 2000, Chen and Mohamed, 2008, Gouldson, 2008, Heizer and Render, 1993, Kinra and Kotzab, 2008), and some attention has been given to supply chain buyer supplier relationships in this context (Frolich and Westbrook, 2001, Hobbs and Young, 2000, Jap, 1999, Lindgreen and Hingley, 2003, Robson and Rawnsley, 2001). The business environment enables buyers and suppliers to understand the potential limitations and opportunities for exploiting the idiosyncratic combinations of capabilities, assets and knowledge that exist between them (Jap, 1999).

Business environment themes have been viewed in the literature as broad considerations in supply chain buyer–supplier relationships (Frolich and Westbrook, 2001, Hobbs and Young, 2000).The type of relationship operated will naturally depend on the parties involved and the external environment conditions (Burt and Doyle, 1994). A firm has both an internal environment and an external business environment (Cousins, 2002, Needle, 1994). Cox et al (2003) claimed that the kind of interaction approach a firm should undertake depends on a range of complex choices both internally within the buyer/supplier’s organisation and

externally in the supply chain context of buyer and supplier. This study classifies two global dimensions that collectively shape the business environment as either internal or external to the dyad and identifies major elements of internal and external business environment that affect risk and performance. These elements not only are the main elements in the business environment according to IMP approach (Håkansson, 1982) but they are also challenging factors for supply chain management in general ((Prasad and Sounderpandian, 2003, Schmidt et al., 2000, Manuj and Mentzer, 2008). The IMP approach (1982) believes that the firm is embedded in a complex business environment. However, it either doesn't specify the environmental elements or explore how these environmental elements relate to buyer-supplier relationships.

MITIGATING RISK RELATED TO SUPPLY CHAIN PERFORMANCE

There is a wealth of research investigating trust (Bretherton and Chaston, 2005, Dwyer et al., 1987, Håkansson, 1982, Håkansson and Snehota, 1995, Halldorsson et al., 2007, Morgan and Hunt, 1994, Svensson, 2001, Wasti et al., 2006)and commitment (Magnan and Cooper, 2006, Morgan and Hunt, 1994, Nielson and Arizona, 1998) on supply chain buyer-supplier relationships and supply chain performance (Chen and Paulraj, 2004, Zaheer et al., 1998). Cox (1999) notes that trust cannot be enforced and that it is volunteered by the parties to the relationship. The reason for the existence of relationships in business interactions is to deliver value (Cousins, 2002). How trust and commitment within the relationship creates supply chain value is an important issue that has not been sufficiently analysed with respect to outcome of supply chain relationships. Some studies have found supply chain buyer-supplier relationships improve satisfaction and buyer performance (Cai and Yang, 2008, Cambra-Fierro and Polo-Redondo, 2008), as well as supplier performance showing the need to consider both perspectives.

Mitigating risk is the key element in supply chain risk studies, with many authors investigating this area (Faisal et al., 2006, Jüttner et al., 2003, Miller, 1992). However, the business environment impact on the effect of power and mitigating risk on supply chain performance has been paid less attention than other areas in previous studies.

This area needs a common framework that will support the understanding of the existence and strength of the relationships among elements of the business environment and supply chain buyer-supplier relationships and supply chain performance. The proposed model illustrates business environmental factors by collectively shaping them into two dimensions respectively internal and external. These factors are identified by considering of challenges of supply chain management such as technology development (Bartlett, 2007), supply chain risk

(Cousins et al., 2004), culture distance (Locke, 1996), political environment (Ling and Lim, 2007) and the environment elements in IMP approach such as social matters. In addition, supply chain buyer-supplier relationships four dimensions: trust, commitment, power, mediating risk as mediating variables have been added, as well as the outcome of business environment influence on supply chain relationships, supply chain satisfaction and supply chain performance developed as separate constructs within the framework. The framework is presented in Figure 1 below.

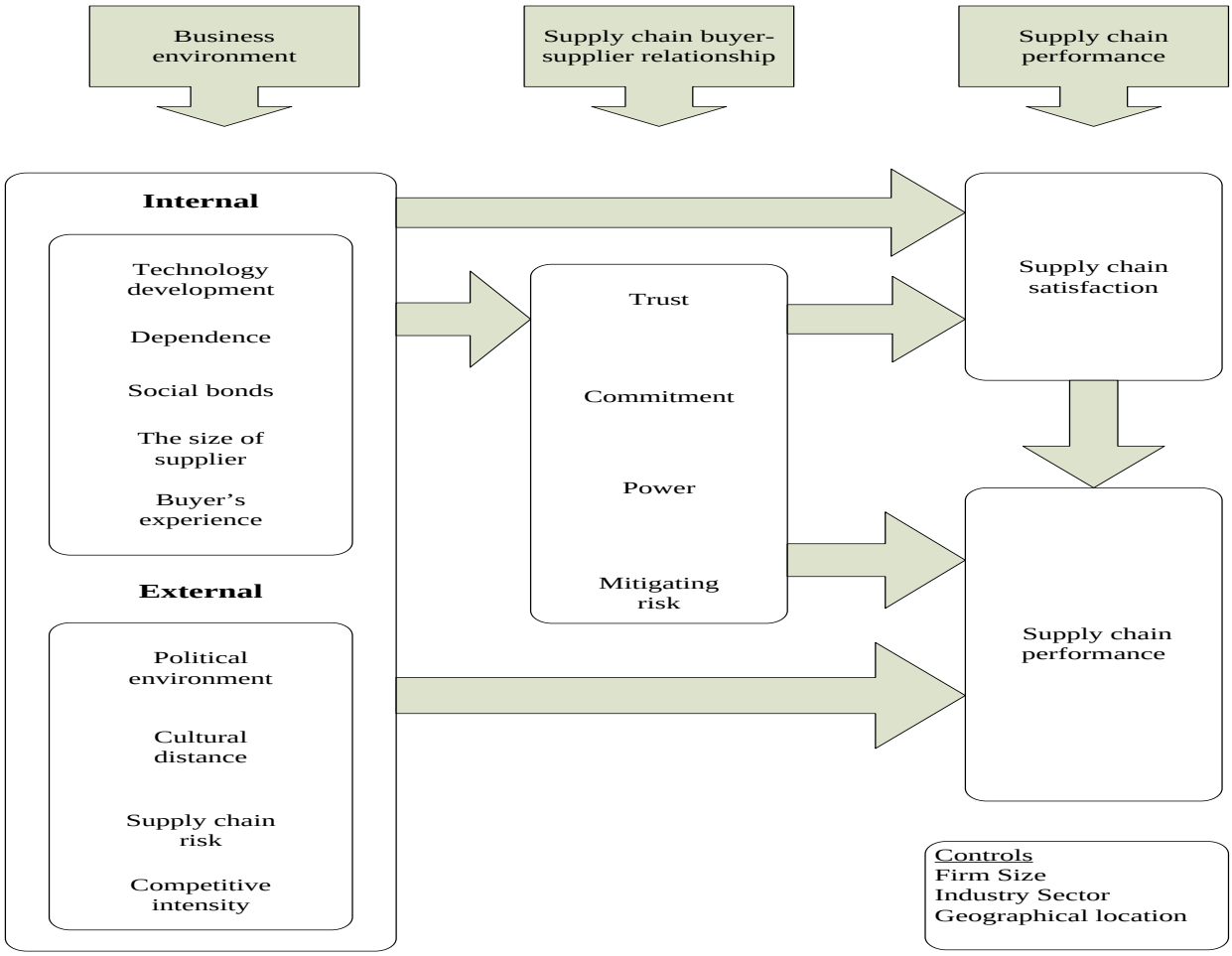

Figure 1: Proposed Model

INTERNAL ENVIRONMENT - TECHNOLOGY DEVELOPMENT

Chen (2008) proposed that the technological environment is a key aspect of the internal business environment for the organisation. It will enable firms to identify firm's technological needs, and to update to morerelevant technologies. Technology development as a major element in business environment has attracted a lot of attention particularly in a supply chain context (Blankley, 2008, Dawson, 2002, Forrest and Martin, 1990, Kim et al.,

2005, Shayan and Ghotb, 2000). Supply chains are becoming more dependent on technology and it plays vital role in supply chain management (Schoenthaler, 2003) to help the supply chain to achieve global competitive advantage (Motwani et al., 2000) and increase productivity and profitability (Dawson, 2002). Technology is merely a tool to build and enhance buyer-seller relationships (Rudberg and Olhager, 2003). Its development pushes partners in the supply chain to join together to gain competitive advantage (Forrest and Martin, 1990). The greater the utilization level of business technology, the greater the relationship based benefits for the buyer and supplier (Kim et al., 2005). In a supply chain where dyadic channel relationships prevail, the adoption of advanced information technology for is expected to improve the coordination activities of partners (Clemons and Row, 1992), and thus its performance.

INTERNAL ENVIRONMENT - DEPENDENCE

Dependence is defined as the firm's replaceability in terms of market relevance (Corsten and Felde, 2005). The perception of dependence is an important dimension of buyer-supplier relationships (Caniels and Gelderman, 2007, Carr et al., 2008, Geyskens et al., 1996) perhaps more than the actual level of dependence itself. Handfield and Bechtel (2002) stated that dependence exists when one party does not entirely control all of the conditions to reach a goal or achievement, this party has to be supported by the other party. The existence of dependence between the buyer and supplier leads tofundamental interactive vulnerability in supply chain buyer-supplier relationships (Svensson, 2004). These vulnerabilities cause various supply chain risks (Svensson, 2002). In addition, dependence asymmetry may mitigate the degree of trust between buyers and suppliers (Handfield and Bechtel, 2002). More recent studies have incorporated dependence from the perspective of the buyers and suppliers (Caniels and Gelderman, 2007, Svensson, 2004, Vijayasarathy, 2010, Wathne and Heide, 2004). Dependence in supply chain research, incorporating both facets of dependence can help explain its dichotomous influences on integration. While organizations that are mutually inter-dependent are more likely to embrace tighter integration, organizations that are relatively more dependent on their partners would be less likely to worsen supply chain vulnerability (Vijayasarathy, 2010).

INTERNAL ENVIRONMENT –SOCIAL BONDS

The firm needs to take account the social environment within the firm's operation, as different firm's attitude to relationships may be different (Ozer, 2005)**.**Crotts and Turner (1999) defined social bonding as the degree of mutual personal friendships and liking shared by buyer and seller. Social bonds are an important factor explaining small supplier's

commitment to wholesale buyers (Crotts et al., 1998). In long term buyer supplier interactions, transaction specific investments are gradually embedded in social bonds (Liu et al., 2009). Social bonds link and hold a buyer and seller closely together (Han, 1991). The social bonds can lead to group norms that increase the commitment of the parties to maintain a cooperative relationship (Seabright et al., 1992), and also serve as a relational norm that govern the successful buyer-supplier relationships (Powers and Reagan, 2007). Relationship norms and trust govern the buyer-supplier relationships by establishing a congenial, socially constructed environment that in turn promotes and nourishes economic exchange (Liu et al., 2009). The social behaviours build relationship strength (Burt, 2006). In a successful relationship, social distance is minimised and a "close relationship" ensues (Håkansson, 1982).

INTERNAL ENVIRONMENT –SIZE OF SUPPLIER BASE

Firm's own characteristics have been studied in managing business relationships (Ford, 2003). Thesize of the supply base was found to be negatively related to environmental collaboration in the supply chain (Vachon and Klassen, 2006). The size of the supply base and the concentration of the suppliers are also important variables in the context of supply chain management (Cousins, 1999). Firm size had a significant and positive impact on a buyer's tendency to switch. Firm size may also be a proxy for buyer power (Wathne and Heide, 2004). In the market governance model, the transition to the market system has inevitably created predominantly a buyer's market. It gives the buyers greater power to dissolve a relationship and defect to another supplier.

INTERNAL ENVIRONMENT –BUYER'S EXPERIENCE

The organisation's experience as feature of an enterprise has been studied in managing business relationships (Ford, 2003). The term "organizational memory" refers to the stored information generated from an organization's history that may affect its future decisions (Walsh and Ungson, 1991). Parties prefer dealing with the partners who they know and feel can interpret each other's move, as they feel comfortable with the relationships that have been established. The firm's historic factors influence inter-organisational dependence (Cousins, 2002). From a buying perspective, the experience learned in a collaborative relationship may change a buyer's expectations with others supplier relationships, as well as change the way a buyer works with the supplier base (Whipple et al., 2010).

EXTERNAL ENVIRONMENT –POLITICAL ENVIRONMENT

Cousins (2002) indicated a firm exists in both the internal and the external environment. The external environment is composed of government imposed legislation amongst other issues.A better understanding of the political environment in which a firm operates can improve a manager's ability to assess opportunities and threats. It can further help shape the current and future operating environment (Keim and Hillman, 2008).

Extensive studies have been conducted on the extent to which existing policies have a significant influence on business relationships (Keim and Hillman, 2008). The political environment in one country might differ from another (Ling and Lim, 2007), and even in the same country, the firm needs a clear understanding of the rules in the development of a global strategy (Clarke et al., 2000). In this regard, regulations may push the firms into building and improving business relationships in either a loosely or a highly regulated business environment. However, according to previous studies, the development of global supply chain management can be restricted by regulations e.g. unbalanced trade deficit concerning export and import (Ling and Lim, 2007), and restriction on repatriation of funds (Chua et al., 2003). This enforcement of regulation may not be predictable (Xenidis and Angelides, 2005) particularly in developing countries.

EXTERNAL ENVIRONMENT –CULTURAL DISTANCE

Cultural difference is related to the way companies behave in a supply chain. It leads to difficulties in managing the supply chain in global business context (Locke, 1996). Hofstede (1991) drew cultural differences around the following five dimensions: Power distance; Individualism; Masculinity;Uncertainty avoidance; and long-term or short-term orientation. Cultural distance has attracted a lot of attention in supply chain relationship studies (Christopher and Peck, 2004, Cousins et al., 2004, Murphy and Dalenberg, 1989, Quer et al., 2007, Vaaland et al., 2004, Zolin et al., 2004). Previous research has found that in societies with high power distance people will be less innovative and therefore less likely to consider and discuss the introduction of new products and technologies (Gong et al., 2007). Greater cultural distance reduces the possibilities of using higher commitment entry strategies (Quer et al., 2007).

Cultural distance is a significant factor in inter-organizational relationships and influences the manner of communication, coordination and trust development (Gong et al., 2007, Vaaland et al., 2004, Zolin et al., 2004). It can also cause errors in communication between the various

parties in a supply chain (Murphy and Dalenberg, 1989). Building business relationships with global partners has both opportunities and risks. The characteristic behind these opportunities and risks can be assessed from both internal and external dimensions. Cultural distance is a part of the firm's surrounding environment that is beyond the immediate control of the firm (Jin and Hong, 2007).

EXTERNAL ENVIRONMENT –SUPPLY CHAIN RISK

Gaudenzi and Borghesi (2006) summarised supply chain risk as identification and management of risk for the supply chain through a co-ordinated approach amongst members to help the supply chain achieve its objectives.Understanding the risks in a supply chain helps to make better decisions and decreases the risks of both an individual organisation and a whole supply chain organisation (Hallikas et al., 2004). The significance of supply chain risk and exploitation has been stressed in the literature (Manuj and Mentzer, 2008a, Manuj and Mentzer, 2008b, Christopher, 2002). Initially, transactions cost theory (Williamson, 1975, Williamson, 1979) described and identified governance structures by reference to transaction costs between buyer/supplier. These transaction costs are affected by specific risk, but Khan and Burnes (2007) argued that transaction cost theory does not seek to explore risk theory to explain the governance structure. The IMP approach has dealt with risk. The work of the group has shown that a key component of managing the supply chain is the strategies chosen to reduce the risk posed by the inappropriate behaviour or performance of particular network members (Ford, 1980, Gadde and Hakansson, 2001, Khan and Burnes, 2007). The previous literature suggests studying supply chain risk from both an internal and an external perspective (Mason-Jones and Towill, 1998), and to focus on the level of the supply chain risk (Peck, 2005).

Furthermore, to assess supply chain risk exposure, a firm not only identifies direct risks, but also analyses the potential sources of risk at every link along the supply chain (Christopher, 2002). The companies have to participate in risk taking behaviour for this vulnerability to exist (Mayer et al., 1995, Morgan and Hunt, 1994). Risk taking behaviour can be handled by the use of formal structures such as contracts (Canning and Lioyd, 2007).

If a buyer chooses to develop and invest in a long term relationship with a supplier, it can bring significant benefits (Burnes and Doyle, 1994, Burnes and New, 1996, Womack et al., 1990). However, if either partner defaults or attempts to take advantage of the other, the risk can be significant (Cousins et al., 2004). Thus, risk can lead to possible loss and gain in buyer/ supplier relationships. For managing the risk it must be understood "collectively" and "simultaneously" and implemented in an integrative and coherent way to guide practice

(Chua et al., 2003, Christopher and Peck, 2004, Cousins et al., 2004). Moreover, Chopra and Sodhi (2004)formulated a supply chain risk interaction diagram to mitigate supply chain risk and improve the resilience of supply chains. However, there is still only limited research on measuring supply chain risk and examining the effect of supply chain risk on supply chain performance.

EXTERNAL ENVIRONMENT –COMPETITIVE INTENSITY

Badri et al. (2000) demonstrated that the external business environment in which a firm competes changes continually. A critical issue therefore is continual environmental scanning is to stay ahead of competition. Competition among suppliers has increased as globalization and buyers' requirements have evolved. Competition between suppliers is fierce, particularly in view of the changing business environment (Baraldi, et al., 2007).The environment has pushed organizations to compete not solely on their own capabilities but with their entire supply chain (Hult et al., 2007).The firm may gain in a competitive business environment by broadening product lines, improving quality, or lowering cost (Badri et al., 2000b). However, it is very difficult for a company to achieve success without the help of its partners in a competitive environment(Ozer, 2005).Many authors have suggested that competitive advantage and reducing costs may be gained through developing close supply relationships (Lamming et al., 2005).However previous literature has not yet developed a model of how relationships in competitively-intense environments affect supply chain risk and performance.

RELATIONSHIP – TRUST

Since the 1990s, trust has received a lot of attention from various disciplines: in economics (Sako, 1992), in marketing (Morgan and Hunt, 1994) and in social exchange (Zaheer et al., 1998). Trust is a complex concept with a range of definitions. Sako (1992) developed the idea of trust and categorises trust in three ways: contractual, competence and goodwill. Contractual trust is based on the belief that the other party will fulfil its promises and act as agreed. Competence trust is based on the belief that the other party will be capable of doing what it has promised. Goodwill trust is such that there are no explicit promises which are expected to be fulfilled. It promotes a good development of relationships. Both parties in relationships are willing to do more that could be expected according to the contractual terms without expecting anything in exchange.Ring and Van de Ven (1994) considered that trust can be conceptualised based on the premises of fair dealing and the confidence of risk in the predictability of one's expectations.

The relevance of trust as an influential variable in supply chain relationships has been recognised broadly in supply chain management literature (Zaheer et al., 1998, Bretherton and Chaston, 2005, Chen and Paulraj, 2004, Halldorsson et al., 2007, Svensson, 2001, Håkansson and Snehota, 1995). Trust is not only an important precondition in supply chain management but also is the core prerequisite of supply chain integration (Halldorsson et al., 2007). Calculative trusts that can have a significant impact on buyer-supplier relationships, and have a significant influence on supply chain performance (Chen and Paulraj, 2004). A high level of inter-organizational trust is found to be related to enhanced supplier performance, lowered costs of negotiation and reduced conflict (Zaheer et al., 1998). The existence of trust in collaborative relationships is essential to reducing control risk,its flexibility provides the supply chain with a strong ability to deal with the supply chain's complexity (Svensson, 2004). However, Cox (1999) argued that trust cannot be enforced, it is not volunteered, and the only reason of fostering collaboration is either through unbalanced power-relationships or by providing incentive to suppliers. Several authors have acknowledged studies involving trust in supply chain (Cambra-Fierro and Polo-Redondo, 2008, Chen and Paulraj, 2004, Cheng et al., 2008, Ireland and Webb, 2007).

RELATIONSHIP – COMMITMENT

In buyer–supplier contexts, commitment is defined as a desire to maintain a relationship and make efforts to ensure its continuance (Morgan and Hunt, 1994).It is also defined as an implicit or explicit pledge of relational continuity between exchange partners (Morgan and Hunt, 1994, Dwyer et al., 1987). Supply chain management can not integrate firms without the highest level of managerial commitment(Magnan and Cooper, 2006) and is a prerequisite for exceptional value in the chain.

In addition, the cross–functional and inter-organisational nature of supply chain management makes broad–based commitment a prerequisite (Kuglin, 1998).For long term relationships, commitment produces outcomes that promote efficiency, productivity, and effectiveness. In the short term, commitment leads directly to cooperative behaviours. Commitment and trust both are "key" to market motivation (Morgan and Hunt, 1994).This can be explained by transactions cost theory in that, committed parties are willing to invest in translation-specific assets, demonstrating that the buyer/supplier can be relied upon perform essential functions in the future (Anderson and Weitz, 1992). It reduces the chances that a company may have other partners, or decreases the cost for redirecting (Williamson, 1983).

Commitment as the keystone of business relationship creates confidence in exchange effectiveness that comes from trust (Dwyer et al., 1987).Commitment is a factor that

isassumed to influence the development of trust between firms (Crotts and Turner, 1999). It represents true loyalty to the supplier-partners, and is connected to a long-term orientation and close relationships (Nielson and Arizona, 1998).

RELATIONSHIP – POWER

Power is ability to lead a change in others' behaviour (Gaski, 1984) and is an element of control in the supply chain. A control process includes the use of arange of bureaucratic, cultural, and informal mechanisms of power and authority(Geringer and Hebert, 1989). Power is a potential influence and exists even when not observable (Emerson, 1962). In addition, power in the supply chain can be explainedas mediating the initiatives of the supply chain to the end consumer (Dapiran and Hogarth-Scott, 2003).It is a significant factor that leverages buyer-supplier relationships (Cox, 2004b, Harland, 1996).

Hunt and Nevin (1974) developed a modified model of power that divided power into coercive and non-coercive types. Non-coercive power sources are reward; reference; expert; legal legitimate; and information, while the source of coercive power is punishment. The model of power in a buyer–supplier relationship essentially involves a channelof distribution within a unilateral dependency relationship. Coercive power onlyreflects a short-term perspective and most suppliers will only cooperate defensively, thus this approach misses out in establishing long-term trading partner relationships and economic benefits (Hart and Saunders, 1997).Hunt and Nevin (1974) claimed non-coercive sources of power provide better alternatives for enhancing the satisfaction of less powerful trading partners. Cox (1999) argued there is no one single approach to supply chain management that is appropriate in all circumstance. Certain approaches will be conducive to particular supply and value chain power structures. Power and trust between partners in a relationship co-evolve over time, in which the presence of trust may negate the need for using power in certain activities (Inkpen and Currall, 2004). The successful business relationships lay in the presence of relationships, commitment and trust, not power and ability to condition others (Morgan and Hunt, 1994). Meanwhile, power has been found to have a significant positive effect on both supply chain performance and supplier satisfaction (Benton and Maloni, 2005).

RELATIONSHIP – MITIGATING RISK

Supply chain risk is a significant factor in the business environment. Mitigating risk has been examined by many authors (Jüttner et al., 2003, Manuj and Mentzer, 2008a, Manuj and Mentzer, 2000b). Four methods have been identified to reduce risk in terms of Avoiding, Co-operation, Transferring/ sharing risk, and Flexibility (Manuj and Mentzer, 2000b).

Avoidancestrategies can be used when the risks associated with operating in a given product or geographical market, working with business partners, is considered unacceptable (Miller, 1992). Co-operationis a strategy that mitigates supply chain risk(Jüttner et al., 2003).

Collaborative supply chain partners support the development of flexibility, responsiveness and low cost manufacturing skills therefore reducing risk (Hoyt and Huq, 2000). It can lead to a competitive advantage over other supply chains (Faisal et al., 2006, Mentzer, 2000, Poon and Swatman, 1998). This collaborative relationship leads to a high degree of interdependence among business partners. It requires trust and commitment and a willingness to share risks (Sahay and Maini, 2002). Risk sharing varies according to the type of collaboration (Harland et al., 2003). As regards collaboration in the initial level of supply chain framework, there may not be such clarity in terms of risk sharing, but in the highly integrated level of the network it is important to form an agreement to ensure long term commitment to allow sharing of sensitive information, knowledge and competences (Harland et al., 2003).

Moreover, flexibility is a critical way to mitigate risk in global supply chain. It plays a facilitating role in the coordination process and provides the capability to help firms cope with the high levels of environmental and operating uncertainty in global cooperation (Manuj and Mentzer, 2000b). In addition, flexibility helps firms smoothly change when circumstances change (Manuj and Mentzer, 2008b). Jüttner et al (2003) proposed three strategies to keep the supply chain stability and mitigate risk. Firstly, postponement: This reduces firm’s dependence on forecasts and reduces demand risk. Secondly, multiple sourcing, through which firms can manage risk through spreading risk is potentially useful. Finally, localising sourcing with its short lead times and potential for quick response can be used to stabilise supply chains.

SC PERFORMANCE – SATISFACTION

Satisfaction has been defined as an overall positive measure or evaluation of the aspects of a firm's working relationship with another firm (Dwyer et al., 1987, Gaski and Nevin, 1985). Satisfaction with a relationship may be defined in both economic and non-economic terms (Geyskens et al., 1999). As such, firms can work toward improving both financial and psychological benefits derived from buyer–seller relationships (Leonidou et al., 2008, Flynn et al., 2010a, Soni and Kodali, 2010, Thakkar et al., 2009). Economic satisfaction relates to a relationship partner's positive affective response to economic rewards arising from the relationship, such as increased sales volume and profits (Geyskens et al., 1999). Non-economic satisfaction relates to a partner's positive affective response to psychosocial aspects,

such as nature of interaction, respect, and willingness to exchange ideas (Geyskens et al., 1999). Benton and Maloni (2005, p2) defined supplier satisfaction as "the feeling of equity with the relationships no matter what power imbalance exists" and call it"the overriding factor" in affecting the future of a supply chain partnership. Supply chain satisfaction is driven by trust and commitment (Benton and Maloni, 2005). Nyaga (2010) demonstrated that one way to improve performance and buyer's satisfaction was for suppliers to focus on demonstrating trust and commitment.

SC PERFORMANCE – PERFORMANCE

The supply chain encompasses all activities associated with the flow of goods and information from internal suppliers through to the end consumer (Christopher, 2002, Handfield and Bechtel, 2002, Christopher, 1992). The goal of manufacturers is critical in determining the supply chain objective to improve supply chain performance. Studies of supply chain performance have engaged a variety of perspectives such as supply chain performance definitions (Beamon and Chen, 1999, Gunasekaran et al., 2001, Gunasekaran et al., 2004), performance measures (Benito, 2007, Benton and Maloni, 2005, Kroes and Ghosh, 2010, Ghosh and Fedorowicz, 2008) and methodologies (Flynn et al., 2010, Soni and Kodali, 2010, Thakkar et al., 2009). For instance, Berry et al., (1999) found that the implementation of business technology system certainly improve supply chain performance. Panayides and Lun (2009) found trust has an impact on supply chain performance. A high level of inter-organizational trust is found to be related to enhanced supplier performance, lowered costs of negotiation and reduced conflict (Zaheer et al., 1998). As performance improves, satisfaction with the relationship is likely to increase (Whipple et al., 2010).

The recurring theme in all of these studies is the aim of improving supply chain performance. However, the underlying dimensions of business environment have received limited treatment in these studies. Furthermore, dimensions of supply chain relationships such as trust and commitment have been only broadly tested in the marketing literature in term of their impact on marketing performance (Morgan and Hunt, 1994). Likewise, satisfaction has been tested in the business environment literature only in terms of its impact on financial performance (Ward and Lewandowska, 2008). However, its effect on supply chain performance has received less attention in the literature.

RESEARCH APPROACH

This paper reports on stage one of a larger project. The research is set out in two phases: a preliminary qualitative phase followed by a large scale survey aiming to measure the

constructs and test the relationships in Figure 1. The qualitative research component has two main objectives. The first is to elicit manager opinions on the model presented in Figure 1 in order to test it empirically in the quantitative stage. The second objective is to ascertain if there are elements that need to be included in the model that are not currently there.

Given the lack of empirical research on the business environment influence on supply chain buyer-supplier relationships, and the need to explore environmental factors influencing supply chain buyers and suppliers within particular business environments, the use of in-depth semi-structured interviews is deemed appropriate. The interviewer can further explore and build upon the existing knowledge based on semi-structured interviews, and this method has been used by previous research (Churchill, 1979, Gerbing and Anderson, 1988, Wathne and Heide, 2004). There are several advantages of using semi-structured interviews. Firstly, in-depth semi-structured interviewscan be used to examine the dynamics present in real life and discover insights of the firms into the research topic at hand (Flynn et al., 2010, Fynes et al., 2004). Secondly, the flexible format of semi-structured encourages extensive answers that reveal insights into the topic being examined (Wathne and Heide, 2004). This method was conducted to find out business environmental factors that influence supply chain buyer-supplier relationships.

Several gaps were found after the literature review had been carried out. A semi-structured interview has the potential to help in justifying the research gap and reconceptualising the model. A theme sheet wasdeveloped based on the literature review, and used as a guide to investigate key business environmental elements that are influencing supply chain buyer supplier relationships, also it helps inform the questionnaire, and to identify measures for quantitative investigation in the next step. Senior managers/owners of the firms in different sectors in Ireland and China were interviewed based on the theme.

Purposive sampling using maximum variation as a sampling strategy will be used. This strategy helps researchers select cases that are likely to be able to provide researchers with compelling information regarding the key research objectives that have been proved by previous studies (Fynes et al., 2005, Fynes et al., 2004). In this study, the applicable operational criteria for case selection are firms that have purchasing relationships with overseas suppliers in China. Eight companies were interviewed for the purposes of this stage. Seven of the companies have significant purchasing relationships with Chinese companies across different industries. The final interview was with a Chinese supplier who supplies to the Irish market in order to validate much of the information from the perspective of the Chinese supplier. This was felt to be an important step given the dyadic nature of the research in supply chains, and the possibility of having a myopic view of the situation if only

Irish firms were interviewed. Interviewees held various positions as per Table 1.Interviews were in English or Chinese depending on the interviewee's preference and were transcribed into English for the purposes of analysis.

Table 1: Interviewees

Industry Sector	**Respondents**
Heating	Director
Building Materials	Country Director - China
Heating	Director of Operations
Retail Organization	International Marketing Manager
Retail Clothing Organization	Director of Asian Marketing
Dairy Business	Group Purchasing Director
Electrical Components (China)	OperationsManager
Beverages	Head of Supply Chain

RESEARCH ANALYSIS

In the broad discussion of the external environment with the participants, three key aspects emerged: institutional environment, cultural issues and competitive intensity. The change in the Chinese economy and its relative insulation from the financial crisis led to the validation of the importance of the institutional environment for both Irish and Chinese firms (Yaibuathet et al., 2008). Cultural distance is a significant factor in supply chain relationships and influences the manner of communication, coordination and trust development (Gong et al., 2007, Vaaland et al., 2004, Zolin et al., 2004). The participants felt that cultural issues played a large part in the relationships and discussed mechanisms to reduce the distance and to align themselves with their partner's cultural mindset. The issue of competitive intensity, perhaps not surprisingly given the current economic environment, also came to the fore.

Five internal environmental issues came to the fore in the interviews. These were technology development, dependence, social bonds, supplier size and experience. Supply chains are becoming more dependent on technology and it plays vital role in supply chain management (Schoenthaler, 2003). The interviewees discussed the importance of matching technology requirements early in the relationship in order to make the most from the relationship.They also conceded that this was a learning opportunity for both sides. The level of dependence on the supplier or indeed the buyer was a recurrent theme in the interviews. The issue of back-up plans in case of failure was mentioned to mitigate risk. The perception of dependence was discussed rather than the actual level itself as an important dimension of buyer-supplier relationships (Caniels and Gelderman, 2007, Carr et al., 2008). The level of importance placed on social bonds was quite high. May organisations have invested in transaction specific investments that are gradually embedded in social bonds (Liu et al., 2009). It is

known that firm size may be a proxy for buyer power (Wathne and Heide, 2004) and this research validated this finding. Historic factors continue to affect relationships between buyers and suppliers (Cousins, 2002).

The model was partially validated by the interviewees. While they all considered the aspects in Figure 1 to be important, they stressed the importance of cultural distance, political environment and trust as having a significant influence on the supply chain buyer-supplier relationships and supply chain performance. Interestingly the internal environment aspects were given less credence by the respondents even though they did acknowledge their importance. One of the objectives of this stage was to see if there were any issues that were missing from the model.

Quality and social responsibility were mentioned by respondents in terms of key factors that affect buyer supplier relationships. Quality of product, and indeed communications, were mentioned by respondents as key to doing business in China. This was also echoed by the Chinese respondent. The issue of social responsibility was raised primarily by the retail clothing organization as this industry has come under pressure from their customers in relation to such issues as ethical sourcing and child labour allegations. This matter was not brought up by the other interviewees. Quality therefore remains as a key issue to be addressed before finalizing the quantitative instrument.

Finally, it was encouraging to note that both internal and external factors were found to be important for the level of trust and commitment exhibited in the relationship and also seen to be crucial for the continued success of the supply chain relationship.

CONCLUSIONS AND RECOMMENDATIONS

This research is answering a need for a theoretical framework specific to business environment elements and supply chain relationships, and their outcomes in terms of supply chain performance. This study aims to meet the need and develops a conceptual model which posits relationships between business environment factors, aspects of supply chain buyer-supplier relationships, supply chain satisfaction and their ultimate effect on supply chain performance.

By focusing on the business environment factors, this researchresponds to a call from Fynes et al. (2004) who indicated the need for more work on themediating variables in the relationship quality-performance linkage in supply chains. Thewide-ranging set of such variables here includes firm’s internal technology which is noted byFynes et al. (2004). This

research will contribute in determining the extent to which buyer-supplierrelationships mediate the impact of business environment factors on supply chainperformance. It will help to further develop the way of managing the business environmentfactors and supply chain buyer-supplier relationships that create supply chain performance.

Satisfaction has been tested in business environment management in term of impacton financial performance (Ward, 2008). It also has been investigated in buyer-supplierrelationships in term of the impact on outsourcing relationship performance (De Vita et al.,2010). However, satisfaction impacts on supply chain performance has been given lessattention. This research will further support this issue highlighted in previous studies such asunderstanding the satisfaction as being critical because there is a ‘‘void’’ in supply chainsatisfaction research (Benton and Maloni, 2005) and the consequent inadequate attention torelationships quality impact on supply chain performance (Fynes et al., 2005). The benefit ofthis research will not only be to help understand the impact of satisfaction on supply chainperformance but to contribute to relationship quality issue such as trust and commitmenteffect on supply chain performance.

Cox (2004) believed the most appropriate way of managing a relationship depends onthe prevailing balance of power between the buyer and supplier. Power is a critical role insupply chain relationships, it has been found to have a significant positive effect on bothsupply chain performance and supplier satisfaction (Benton and Maloni, 2005). This studyextends the concept of power to examine how power mediates the impact of businessenvironment factors on supply chain performance.

On the practical implications, it must be noted that supply chain buyer-supplier relationshipshave become increasingly important. They can bring superior value to an organisation byapplying an appropriate relationship strategy (Cousins, 2002, Trent, 2005, Benton andMaloni, 2005, Ford, 1980). This study offers potential benefit of improving firm performancethrough enhancing appropriate relationships between buyers and suppliers in particularenvironmental contexts.

Finally, the research offers a comprehensive study on business environment factors thatinfluence supply chain buyer and supplier relationships. This would suggest that there are considerableopportunities for organisations operating in such business environment to enhance theirsupply chain performance through a particular focus on the attitude and behaviour of supplychain managers. The relationships identified by the research can form the basis for aprescriptive tool to help managers make decisions about the effect of environmental factorson supply chain performance.

The next stages of this work are to complete more interviews focussing on the quality aspect brought up by the respondents, and to engage with more Chinese suppliers to ensure that both sides of the relationship are well represented in the model to be tested empirically.

REFERENCES

ANDERSON, E. & WEITZ, B. (1992) The use of pledges to build and sustain commitment in distribution channels *Journal of Marketing Research* 29**,** 18-34.

BADRI, M. A., DAVIS, D. & DAVIS, D. (2000) Operation strategy, environmental uncertainty and performance: a path analytic model of industries in developing countries *The International Journal of Management Science,* 28**,** 155-173.

BARALDI, E., BRENNAN, R., HARRISON, D., TUNISINI, A. & ZOLKIEWSKI, J. (2007) Strategic thinking and the IMP approach: A comparative analysis *Industrial Marketing Management,* 36**,** 879-894.

BEAMON, B. M. & CHEN, V. C. P. (1999) Measuring supply chain performance *International Journal of Operations & Production Management,* 19**,** 275-292.

BENITO, J. G. (2007) A theory of purchasing's contribution to business performance *Journal of Operations Management,* 25**,** 901-917.

BENSAOU (1999) Portfolios of Buyer-supplier Relationships. *Sloan management review,* 40**,** 35-44.

BENTON, W. C. & MALONI, M. (2005)The influence of power driven buyer/seller relationships on supply chain satisfaction *Journal of Operations Management* 23**,** 1-22.

BERRY, D., EVANS, G. N., JONES, R. M. & TOWILL, D. R. (1999) The BPR SCOPE concept in leveraging improved supply chain performance *Business Process Management Journal* 5**,** 254-275.

BERRY, L. L. (1995) Relationship marketing of services-growing interest, emerging perspective *Journal of Academy of Marketing Science* 23**,** 236-245.

BLANKLEY, A. (2008) A Conceptual model for evaluating the financial impact of supply chain management technology investments. *The International Journal of Logistics Management* 19**,** 155-182.

BRETHERTON, P. & CHASTON, I. (2005) Resource dependency and SME strategy: an empirical study. *Journal of Small Business and Enterprise Development 12***,** 274-289.

BURNES, B. & DOYLE, M. (1994)*The American Keiretsu: A Strategic Weapon for Global Competitiveness,* Illinois Business One Irwin

BURNES, B. & NEW, S. (1996) New perspectives on supply chain improvement: purchasing power supplier competence *European Journal of Purchasing & Supply Management* 2**,** 21-30.

BURT, D. & DOYLE, M. (1994)*The American Keiretsu: A Strategic Weapon for Global Competitiveness,* Illinois, Business One Irwin.

BURT, G. (2006) Pre-determined elements in the business environment: Reflecting on the legacy of Pierre Wack *Futures,* 38**,** 830-840.

CAI, S. & YANG, Z. (2008) Development of cooperative norms in the buyer-supplier relationship: The Chinese Experience *Journal of Supply Chain Management* 44**,** 55-70.

CANIELS, M. C. J. & GELDERMAN, C. J. (2007) Power and interdependence in buyer supplier relationships: A purchasing portfolio approach *Industrial Marketing Management,* 36**,** 219-229.

CANNING, L. & LIOYD, S. H. (2007) Trust in buyer-seller relationships: the challenge of environmental adaptation *European Journal of Marketing,* 41**,** 1073-1095.

CARR, A. S., KAYNAK, H., HARTLEY, J. L. & ROSS, A. (2008) Supplier dependence: impact on supplier's participation and performance. *International Journal of Operations & Production Management,* 28**,** 899-916.

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

CHEN, L. & MOHAMED, S. (2008) Impact of the internal business environment on knowledge management within construction organisations *Construction Innovation* 8**,** 61-81.

CHENG, F. H., YEH, C. H. & TU, C. W. (2008) Trust and knowledge sharing in green supply chain *Supply chain Management: An international Journal* 13**,** 289-295.

CHOPRA, S. & SODHI, M. S. (2004) Managing risk to avoid supply chain breakdown *Sloan management review,* Fall 53-61.

CHRISTOPHER, M. (1992) *Logistics and Supply Chain Management,* London Pitman Publishing

CHRISTOPHER, M. & PECK, H. (2004) Building the resilient supply chain *International Journal of Logistics Management* 15**,** 1-13.

CHRISTOPHER, M. E. A. (2002) Supply Chain Vulnerability. *final report on behalf of DTLR, DTI and Home Office* Cranfield University.

CHUA, D. K. H., WANG, Y. & TAN, W. T. (2003) Impacts of obstacles in east Asian cross border construction. *Journal of Construction Engineering and Management* 129**,** 131-141.

CHURCHILL, G. A. (1979) A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research* 16**,** 64-73.

CLARKE, I., OWENS, M. & FORD, J. B. (2000) Integrating country of origin into global marketing strategy: a review of US marking statutes *International Marketing Review,* 17**,** 114-126.

CLEMONS, E. K. & ROW, M. C. (1992) Information technology and industrial cooperation: the changing economics of coordination and ownership. *Journal of Management information systems,* 9**,** 9-28.

COOPER, M. C. & ELLRAM, L. M. (1993) Characteristics of supply chain management and the implications for purchasing and logistics strategy *International Journal of Logistics Management,* 4**,** 13-24.

CORSTEN, D. & FELDE, J. (2005) Exploring the performance effects of key-supplier collaboration: An empirical investigation into Swiss buyer-supplier relationships. *International Journal of Physical Distribution & Logistics Management* 35**,** 445-461.

COUSINS, P. (2002) A conceptual model for managing long-term inter-organisational relationship. *European Journal of Purchasing & Supply Management,* 8 71-82.

COUSINS, P., LAMMING, R. C. & BOWEN, F. (2004) The role of risk in environment related initiatives *International Journal of Operations & Production Management* 24**,** 554-565.

COUSINS, P. D. (1999) Supply base relationalisation: myth or reality? *European Journal of Purchasing & Supply Management,* 5**,** 143-155.

COX, A. (1999) Power, value and supply chain management *Supply chain Management: An international Journal,* 4**,** 167-175.

COX, A. (2004a) The art of the possible: relationship management in power regimes and supply chains *Supply chain Management: An international Journal,* 9**,** 346-356.

COX, A. (2004b) Business relationship alignment: on the commensurability of value capture and mutuality in buyer and supplier exchange *Supply chain Management: An international Journal,* 9**,** 410-420

COX, A. & THOMPSON, I. (1997) "Fit for purpose" contractual relations: Determining a theoretical framework for construction projects. *European Journal of Purchasing & Supply Management,* 3**,** 127-135.

CROTTS, J. & TURNER, G. (1999) Determinants of intra-firm trust in buyer-seller relationships in the international travel trade *International Journal of Contemporary Hospitality* 11**,** 116-123.

CROTTS, J. C., AZIZ, A. & RASCHID, A. (1998) Antecedents of supplier's commitment to wholesale buyers in the international travel trade. *Tourism Management* 19**,** 127-134.

DAPIRAN, G. P. & HOGARTH-SCOTT, S. (2003) Are co-operation and trust being confused with power? An analysis in Australia and the UK

DAWSON, A. (2002) supply chain technology *work study* 51**,** 191-196.

DE VITA, G., TEKAYA, A. & WANG, C. (2010) Asset specificity's impact on outsourcing relationship performance: A disaggregated analysis by buyer-supplier asset specificity dimensions. *Journal of Business Research,* 63**,** 657-666.

DWYER, F. R., SCHURZ, P. H. & OH, S. (1987) Developing Buyer Seller Relationships *Journal of Marketing* 51**,** 11-27.

EMERSON, R. M. (1962) *"Power-dependence relations" in Oslen, M.E. (Ed), Power in Societies* New York, Macmillan Publishing

FAISAL, M. N., BANWET, D. K. & SHANKAR, R. (2006) Supply chain risk mitigation: modelling the enables *Business process Management Journal* 12**,** 535-552.

FLYNN, B. B., HUO, B. & ZHAO, X. (2010) The impact of supply chain integration on performance: A contingency and configuration approach *Journal of Operational Management,* 28**,** 58-71.

FORD, D. (1980) The development of buyer-seller relationships in industrial markets *European Journal of Marketing,* 14**,** 339-353.

FORREST, J. E. & MARTIN, M. J. (1990) Strategic alliances: lessons from the new biotechnology industry. *Engineering Management Journal* 2**,** 13-20.

FROLICH, M. & WESTBROOK, R. (2001) Arcs of integration: an international study of supply chain strategies. *Journal of Operations Management* 19**,** 185-200.

FYNES, B., BURCA, S. D. & VOSS, C. (2005) Supply chain relationship quality, the competitive environment and performance *International Journal of Production Research* 43**,** 3303-3320.

FYNES, B., SEAN, D. B. & MARSHALL, D. (2004) Environmental uncertainty, supply chain relationship quality and performance *Journal of Purchasing and Supply management,* 10**,** 179-190.

GADDE, L. E. & HAKANSSON, H. (2001) *Supply network strategies: purchasing in the new economy* Chichester Wiley

GASKI, J. F. (1984) The theory of power and conflict in channels of distribution. *Journal of Marketing* 48**,** 1-19.

GASKI, J. F. & NEVIN, J. R. (1985) The differential effects of exercised and unexercised power sources in a marketing channel. *Journal of Marketing Research* 22**,** 130-142.

GAUDENZI, B. & BORGHESI, A. (2006) Managing risks in the supply chain using the AHP method. *The International Journal of Logistics Management,* 17**,** 114-136.

GERBING, D. & ANDERSON, J. C. (1988) Updated Paradigm for Scale Development Incorporating Unidimensionality and Its Assessment *Journal of Marketing Research* xxv**,** 186-192.

GERINGER, J. M. & HEBERT, L. (1989) Control and performance of international joint ventures. *Journal of International Business Studies* 20**,** 235-254.

GEYSKENS, I., STEENKAMP, J. B. & KUMAR, N. (1999) Ameta-analysis of satisfaction in marketing channel relationships. *Journal of Marketing Research,* 36**,** 223-238.

GEYSKENS, I., STEENKAMP, J. E. M., SCHEER, L. K. & KUMAR, N. (1996) The effects of trust and interdependence on relationship commitment: A trans-Atlantic study. *International Journal of Research in Marketing* 13**,** 303-317.

GHOSH, A. & FEDOROWICZ, J. (2008) The role of trust in supply chain governance *Business Process Management Research,* 55**,** 133-139

GONG, W., LI, Z. G. & STUMP, R. L. (2007) Global internet use and access: culture considerations. *Asia Pacific Journal of Marketing and Logistics,* 19**,** 57-74.

GOULDSON, A. (2008) Understanding business decision making on the environment *Energy Policy* 36**,** 4618-4620.

GRONHAUG (1973) some factors influencing the size of the buyer's evoked set. *European Journal of Marketing,* 7 232-241

GUNASEKARAN, A., PATEL, C. & MCGAUGHEY, R. E. (2004) A Framework for supply chain performance measurement *Int. J, Production Economics,* 87**,** 333-347.

GUNASEKARAN, A., PATEL, C. & TIRTIROGLU, E. (2001) Performance measures and metrics in a supply chain environment *International Journal of Operations & Production Management,* 21**,** 71-87.

HÅKANSSON, H. (1982) *International marketing and purchasing of industrial goods: An interaction approach IMP,* Chichester Wiley.

HÅKANSSON, H. & SNEHOTA, I. (1995) *Developing Relationships in Business Networks* London Routledge

HALL, E. T. & HALL, M. R. (1990) *Understanding Culture Differences,* MA Intercultural Press Inc

HALLDORSSON, A., KOTZAB, H., MIKKOLA, J. H. & SKJOTTLARSEN, T. (2007) Complementary theories to supply chain management *Supply chain management* 12**,** 284-296.

HALLIKAS, J., KARVONEN, I., PULKKINEN, U., VIROLAINEN, V. M. & TUOMINEN, M. (2004) Risk management process in supplier networks. *International Journal of Production Economics,* 90**,** 47-58.

HANDFIELD, R. B. & BECHTEL, C. (2002) The role of trust and relationship structure in improving supply chain responsiveness *Industrial Marketing Management,* 31**,** 367-382.

HARLAND, C. (1996) Supply chain management: relationships, chains and networks. *British Journal of Management* 7**,** 63-80.

HARLAND, C., BRENCHLEY, R. & WALKER, H. (2003) Risk in supply networks. *Journal of Purchasing and Supply management* 9**,** 51-62.

HARLAND, C., LAMMING, R. C. & COUSINE, P. D. (1999) Developing the concept of supply strategy *International Journal of Operations & Production Management,* 19**,** 650-673.

HART, P. & SAUNDERS, C. (1997) Power and Trust: Critical factors in the adoption and use of electronic data interchange *Organisation Science,* 8**,** 23-42.

HEIZER, J. & RENDER, B. (1993) *Production and operations management: Strategies and tactics* NJ Prentice Hall

HOBBS, J. & YOUNG, L. (2000) Closer coordination in agrifood supply chains: a conceptual framework and some preliminary evidence *Supply chain Management* 5**,** 131-142.

HOFSTEDE, G. (1984) Culture dimensions in management and planning *Asia Pacific Journal of Management* 1**,** 88-99.

HOFSTEDE, G. (1991) *Culture's and Organisations* London Mc Graw-Hill

HOYT, J. & HUQ, F. (2000) From arms-length to collaborative relationships in the supply chain *International Journal of physical Distribution & Logistics Management* 30**,** 75-64.

HULT, G. T. M., HKETCHEN, D. J. & ARRFELT, M. (2007) Strategic supply chain management: improving performance through a culture of competitiveness and knowledge development *Strategic Management Journal* 28 1035-1052.

INKPEN, A. C. & CURRALL, S. C. (2004) The coevolution of trust, control, and learning in joint ventures *Organisation Science,* 15**,** 586-599

IRELAND, R. D. & WEBB, J. W. (2007) A Multi-theoretic perspective on trust and power in strategic supply chains. *Journal of Operational Management,* 25**,** 482-497.

JAP, S. D. (1999) Pie-Expansion Efforts: Collaboration Presses in Buy-Supplier Relationships *Journal of Marketing Research* 36**,** 461-475.

JIN, Y. & HONG, P. (2007) Coordinating global inter-firm product development *Journal of Enterprise Information Management* 20**,** 544-561.

JÜTTNER, U., PECK, H. & CHRISTOPHER, M. (2003) Supply chain risk management: outlining and agenda for future research *International Journal of Logistics: Research and Applications,* 6**,** 197-210

KEIM, G. & HILLMAN, A. (2008) Political environments and business strategy: implication for managers *Business Horizons,* 51**,** 47-53

KHAN, O. & BURNES, B. (2007) Risk and supply chain management: creating a research agenda. *The International Journal of Logistics Management,* 18**,** 197-216.

KIM, D., CAVUSGIL, S. T. & CALANTONE, R. (2005) The role of information technology in supply-chain relationships: does partner criticality matter? *Journal of Business & Industrial Marketing* 20**,** 169-178

KINRA, A. & KOTZAB, H. (2008) A macro-institutional perspective on supply chain environment complexity. *International Journal of Production Economics* 115**,** 283-295.

KROES, J. & GHOSH, S. (2010) Outsourcing congruence with competitive priorities: Impact on supply chain and firm performance *Journal of Operations Management,* 28**,** 124-143.

KUGLIN, F. A. (1998) *Customer-Centered Supply Chain Management* New York AMACOM

KUMAR, N., SCHEER, L. K. & STEENKAMP, J. B. E. M. (1995) The effects of perceived interdependence on dealer attitudes *Journal of Marketing Research,* 32**,** 348-356.

LAMBERT, D. M. & COOPER, M. C. (2000) Issue in Supply Chain Management *Industrial Marketing Management* 29**,** 65-83.

LAMMING, R. C. (1993) *Beyond Partnership: Strategies for Innovation and Learn Supply,* London Prentice-Hall

LAMMING, R. C. (1996) Squaring lean supply with supply chain management: lean production and work organization *International Journal of Operations & Production Management,* 16**,** 183-197.

LAMMING, R. C., CALDWELL, N. D., PHILIPS, W. E. & HARRISON, D. A. (2005) Sharing sensitive information in supply relationships: The flaw in one-way open-book negotiation and the need for transparency. *European Management Journal* 23**,** 554-563

LANDEROS, R. & MONCZKA, R. M. (1989) Cooperative buyer/seller relationships and a firm's competitive posture *Journal of Purchasing and Materials* fall

LEONIDOU, L. C., TALIAS, M. A. & LEONIDOU, C. N. (2008) Exercised power as a driver of trust and commitment in cross-border industrial buyer-seller relationships. *Industrial Marketing Management,* 41**,** 18-29.

LINDGREEN, A. & HINGLEY, M. (2003) The impact of food safely and animal welfare policies on supply chain management: the case of Tesco meat supply chain *British Food Journal* 105**,** 328-349.

LING, F. & LIM, H. L. (2007) "Foreign firms" financial and economic risk in China *Engineering , Construction and Architectural Management* 14**,** 346-362.

LIU, Y., LUO, Y. & LIU, T. (2009) Governing buyer-supplier relationships through transactional and relational mechanisms: Evidence from China. *Journal of Operational Management* 27**,** 294-309.

LOCKE, D. (1996) *Global supply management* America McGraw-Hill.

MACBETH, D. K., FERGUSON, N. & NEIL, G. (1992) Developing customer supplier relationships *First PSERG Conference* Glasgow

MAGNAN, G. M. & COOPER, M. B. (2006) Organisational commitment and governance for supply chain success *:International Journal of Physical Distribution & Logistics Management,* 36**,** 22-35.

MANUJ, H. & MENTZER, J. (2008a) Global supply chain risk management *Journal of Business Logistics* 29**,** 133-155.

MANUJ, H. & MENTZER, J. (2008b) Global supply chain risk management strategies *International Journal of physical Distribution & Logistics Management,* 38**,** 192-223.

MASON-JONES, R. & TOWILL, D. R. (1998) Shrinking the supply chain uncertainty Circle. *Institute of Operations Management Control Journal* 24**,** 17-23.

MCLVOR, R. (2009) How the transaction cost and resource-based theories of the firm inform outsourcing evaluation *Journal of Operations Management,* 27.

MENTZER, J. T. E. A. (2000) *Supply Chain Management.* Oaks Sage Publications.

MILLER, K. D. (1992) A Framework for Integrated Risk Management in International Business *Journal of International Business Studies,* 23**,** 311-331.

MORGAN, R. M. & HUNT, S. D. (1994)The commitment-trust theory of relationship marketing *Journal of Marketing* 58**,** 20-38

MURPHY, P. R. & DALENBERG, D. R. (1989) Assessing international port operations *International Journal of physical Distribution & Materials Management,* 19**,** 3-10

NEEDLE, D. (1994) *Business in Context* London Chapman & Hall

NIELSON, C. C. & ARIZONA, G. (1998) An empirical examination of the role of closeness in industrial buyer-seller relationships *European Journal of Marketing* 32**,** 441-463.

NYAGA, G. N., WHIPPLE, J. M. & LYNCH, D. F. (2010) Examining supply chain relationships: Do buyer and supplier perspectives on collaborative relationships differ? *Journal of Operational Management,* 28**,** 101-114.

OZER, M. (2005) Online business tailoring your business environment in order to compete. *International Journal of Information Management* 25**,** 137-149.

PECK, H. (2005) Drivers of supply chain vulnerability: an integrated framework 4**,** 210-232.

POON, S. & SWATMAN, P. M. C. (1998) A Combined method study of small business internet commerce. *International Journal of Electronic Commerce,* 2**,** 31-46.

POWERS, T. & REAGAN, W. R. (2007) Factors influencing successful buyer seller relationships *Journal of Business Research* 60**,** 1234-1242.

PRASAD, S. & SOUNDERPANDIAN (2003) Factors influencing global supply chain efficiency: implications for information systems. *Supply Chain Management: An International Journal,* 8**,** 241-250. .

RINDFLEISH, A. & HEIDE, J. (1997) Transaction cost analysis: past, present, and feature Application *Journal of Marketing* 6.

RING, P. S. & VAN, A. H. (1994) Developing processes of cooperative inter-organisational relations. *Academy of Management Review,* 19**,** 90-118.

ROBSON, I. & RAWNSLEY, V. (2001) Cooperation or coercion? Supplier networks and relationships in the UK food industry *Supply chain Management,* 6**,** 39-47.

RUDBERG, M. & OLHAGER, J. (2003) Manufacturing networks and supply chains: an operations strategy perspective *Omega,* 31**,** 29-39

SAHAY, B. S. (2003) understanding trust in supply chain relationships *Industry Management & Data systems* 103**,** 578-587

SAHAY, B. S. & MAINI, A. (2002) Supply chain: a shift from transactional to collaborative partners *Decision* 29**,** 67-88.

SAKO (1992) *Price, quality and trust: inter-firm relations in Britain and Japan* Cambridge. Cambridge University Press.

SCHMIDT, G., E., W. & WILHELM (2000) Strategic, Tactical and Operational Decisions in Multi-National Logistics Networks: A review and Discussion of Modelling Issues. *International Journal of Production Research,,* 38**,** 1501-1523.

SCHOENTHALER, R. (2003) Creating real-time supply chain visibility *Electronic Business* 29**,** 12-13

SEABRIGHT ET AL. (1992) Role of individual attachments in the dissolution of interorganisational relationship *Academy of Management Journal* 35**,** 122-150

SHAYAN, M. K. & GHOTB, F. (2000) The importance of information technology in port terminal operations *International Journal of physical Distribution & Logistics Management,* 30**,** 331-344.

SONI, G. & KODALI, R. (2010) Internal benchmarking for assessment of supply chain performance *Benchmarking: An International Journal* 17**,** 44-76.

STUART, F. I. (1993) Supplier partnerships: influencing factors and strategic benefits *International Journal of Purchasing and Materials Management* Fall**,** 22-28

SVENSSON (2001) Extending trust and mutual trust in business relationships towards a synchronised trust chain in marketing channels *Management Decision* 39**,** 431-440.

SVENSSON, G. (2002) A conceptual framework of vulnerability in firms inbound and outbound logistics flows *Journal of Physical Distribution & Logistics Management* 34**,** 662-682.

SVENSSON, G. (2004) Interactive vulnerability in buyer-seller relationships: a dyadic approach. *International Journal of physical Distribution & Logistics Management,* 34**,** 662-682.

TAN, K. (2001) A framework of supply chain management literature. *European Journal of Purchasing and supply Management* 7**,** 39-48.

THAKKAR, J., KANDA, A. & DESHMUKH, S. G. (2009) Supply chain performance measurement framework for small and medium scale enterprises. *Benchmarking: An International Journal* 16**,** 702-723.

THEING, PURCHASE, S. & PHUNGPHOL, Y. (2008) Social capital in Southeast Asian business relationships *Industrial Marketing Management* 37**,** 523-530.

VACHON, S. & KLASSEN, R. D. (2006) Extending green practices across the supply chain: the impact of upstream and downstream integration *International Journal of Operations & Production Management,* 26**,** 795-815.

VIJAYASARATHY, L. R. (2010) Supply integration: An investigation of its multi-dimensionality and relational antecedents. *International Journal of Production Economics* 124**,** 489-505.

WALSH, J. P. & UNGSON, G. R. (1991) Organizational memory *Academy of Management Journal,* 16**,** 57-91.

WARD, S. & LEWANDOWSKA, A. (2008) Is the marketing concept always necessary? The effectiveness of customer, competitor and societal strategies in business environment types *European Journal of Marketing,* 42**,** 222-237.

WASTI, S. N., KOZAN, M. K. & KUMAN, A. (2006) Buyer-supplier relationships in the Turkish automotive industry *International Journal of Operations & Production Management* 26**,** 947-970.

WATHNE, K. & HEIDE, J. (2004) Relationship Governance in Supply Chain Network *Journal of Marketing* 68**,** 73-89.

WHIPPLE, J. M., LYNCH, D. F. & NYAGA, G. N. (2010) A buyer's perspective on collaborative versus transactional relationships *Industrial Marketing Management,* 39**,** 507-518.

WILLIAMSON, O. E. (1975) *Markets and Hierarchies: Analysis and Anti-trust Implications,* New York The Free Press

WILLIAMSON, O. E. (1979) *Transaction Cost Economics: The Governance of Contractual Relations* New York, The Free Press

WILLIAMSON, O. E. (1983) Credible commitments: using hostages to support exchange *American Economic Review* 73**,** 519-540.

WILLIAMSON, O. E. (2008) OUTSOURCING: TRANSACTION COST ECONOMICS AND SUPPLY CHAIN MANAGEMENT *Journal of Supply Chain Management,* 44**,** 5-16.

WOMACK, J. P., JONES, D. T. & ROOS, D. (1990) *The Machine That Changed the World,* New York Rawson Associates

WU, W. Y., CHIAG, C. Y. & TU, H. F. (2004) The influencing factors of commitment and business integration on supply chain management *Industrial Management & Data System,* 104**,** 322-333.

XENIDIS, Y. & ANGELIDES, D. (2005) The financial risks in build-operate-transfer project. *Construction Management and Economics* 23**,** 431-441.

ZOLIN, R., HINDS, P. J., FRUCHTER, R. & LEVITT, R. E. (2004) Interpersonal trust in cross-functional, geographically distributed work: a longitudinal study, information and organisation *Information and Organisation* 14**,** 1-26.