

SUPPLY CHAIN MANAGEMENT: MORE THAN A NEW NAME FOR MANAGEMENT OF RELATIONSHIPS

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Management of multiple relationships across the supply chain is, increasingly, being referred to as supply chain management. In the UK construction industry, supply chain management has replaced partnering as a latest buzz word. The concept has been raised to deal with the arms length adversarial relationships ingrained in the construction industry with a belief that working in collaborative environment would increase industry productivity and profitability. Partnering/partnerships and relational contracting are the means to achieve these aims. The paper argues that replacing these approaches, to obtain collaborative environment among trading partners, with the terminology of supply chain management is not an appropriate strategy as supply chain management differs from the management of relationships, currently practiced in the industry, in two distinct ways. Firstly it considers management of relationship as one of its components that is required as a medium to drive supply chain management and secondly it does not focus only on the immediate trading partners but takes into account all trading members comprising a supply chain from one end of it to the other. The concept of the supply chain management has already been overloaded with a profusion of confusing terminologies for over a decade. It is important to prevent it from getting into further confusions that may hinder the establishment of its problem domain and recognition as one of the management paradigms.

Keywords: collaborative relationships, partnering, relationship management, supply chain management.

INTRODUCTION

The term 'Supply Chain Management' conjures up different meanings to different people. It is the most debated concept of today in almost all the industries (manufacturing, construction, aerospace, agriculture, meat, service etc). As such supply chain management is a most widely used and abused term in the literature these days (Tan, 2001). Variations in the definition of supply chain management can be attributed to its multidisciplinary origin and the sense of holism that it is expected to possess and deliver (Croom *et al.*, 2000). In other words, it is precisely the broad perspective and coverage of supply chain management that makes the concept so difficult to study and visualize it (Ellram, 1991). This fact has long hindered its establishment as a well formed discipline that has a certain problem domain to address.

The concept of 'supply chain' is well established in the literature and is generally referred to as a global network used to deliver products and services from raw materials to end customers through an engineered flow of information, physical

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distribution, and cash (Walker and Alber, 1999). The first supply chain model was provided by Forrester in 1961. Supply chain management started to make its presence in mid 80's after Houlihan (1984) introduced supply chain management theory in the field of logistics (Lamming, 1996). For over a decade and half, with in the supply chain management literature, there is a confusing profusion of overlapping terminologies and meanings (New, 1997; Saunders, 1995). For this reason one can find many labels referring to supply chain and to practice supply chain management. Integrated purchasing strategy, supplier integration, supply base management, buyer-supplier partnership, supplier alliances, supply chain synchronisation, network supply chain, value added chain, logistic integration, lean chain approach, supply network, value stream, etc. (Dyer *et al.*, 1998; Burt, 1984; New and Ramsay, 1995; Lee and Billington, 1992; Nassimbeni, 1998; Tan *et al.*, 1998; Ellinger, 2000; Nishiguchi, 1994; Lamming, 1993). While each term addresses elements of a phenomenon, typically focussing on immediate suppliers of an organization, supply chain management is the most widely used (but abused) term to describe this philosophy (Tan, 2001).

Good relationships and partnerships have been considered important in the business world for a long time (Hallen *et al.*, 1991; Arndt, 1983). Such relationships are necessary for industry profitability (Shaw and Gibbs, 1995). Management of relationships has become an important management tool, therefore. In supply chain management good relations between the trading partners are critically important to its smooth and effective working. For this reason relationship management in the context of supply chain management becomes an extremely important component of it. Recently, Lambert and Cooper (2000) have indicated that the management of multiple relationships across the supply chain is, increasingly, being referred to as supply chain management. In the UK construction industry, especially, supply chain management has replaced partnering as the latest buzz word (Pearson, 1999). It is, therefore, the intention of this paper to make it clear that relationship management is an important part of supply chain management not supply chain management in itself and what might be the structure of relationship management in the context of supply chain management. The paper also intends to address the concerns of those who feel confused about whether or not supply chain management is a new contracting process and a recent addition in the list of partnerships, partnering, joint ventures, strategic alliances etc.

NATURE OF RELATIONSHIPS IN THE CONSTRUCTION INDUSTRY

In the construction industry, transactional exchange is a dominant form of business (Dubois and Gadde, 2000; Thompson *et al.*, 1998; Gann, 1996). Firms traditionally place very little attention to the relational elements of business transactions (Thompson *et al.*, 1998). The underlying reason is the heavy reliance on tendering procedures. Suppliers competition in each transaction is assumed to be the most appropriate means of securing efficiency in operations. Due to this reason, actor constellations change all the time, making it difficult to utilize the experience gained in previous projects (Dubois and Gadde, 2000). Cox and Thompson (1997) add that this creates inefficiencies for the client as the supplier climbs a new learning curve each time. The prevailing tendering procedure represents considerable sunk costs owing to the huge number of hours spent on design, planning and calculations that are never used (Dubois and Gadde, 2000). Ofroi (2000) further adds that the traditional

approach to business has several discernible elements: win-lose arrangements; a focus on negative issues; uncertainty; a minimal exchange of information, the buying of supplies of each item from many companies to maintain price competition, and an atmosphere of fear, dishonesty and frustration.

Bontekoe (1989 cited in Kornelius and Wamelink, 1998) consider bilateral contraction as the most important cause of all these types of problems. Bilateral contracting and subcontracting lead to complex network of relationships, of which no one has an integrated overview (Voordijk, 1994 cited in Kornelius and Wamelink, 1998). The parties are selected independent of each other and do not have knowledge of agreements made with others. Actors can only be held responsible for their specific contribution (Kornelius and Wamelink, 1998).

Thompson *et al.* (1998) mention that most standard forms of contracts actively encourage non-collaborative behaviour. The contract is used as a wedge to drive distances between them instead of bringing them together. Standard forms of contracts are nothing more than instruments used by the parties to seek strict liability and attach blame to events as they occur (Cox and Thompson, 1997).

Search for Collaborative Relationships in Construction Industry: Relationship Management

Dale *et al.* (1994) indicated that to deal with the above mentioned problems, the construction company must make the strategic decision of considering its suppliers and subcontractors as its long term partners with which it is working towards a common aim and aspirations, in replacement of traditional win-lose relationship of business partners with different objectives. Partnering has been suggested as one of the means to achieve collaborative relationships. Carlisle and Parker (1989) emphasise the advantages of partnering with suppliers in the construction industry. Reaping partnering benefits requires a shift in atmosphere and behaviour from traditional arm's length relationships by replacing short-term focus on efficiency in the individual transaction with longer-term-oriented relational exchanges based on close buyer-seller relationships (Dubois and Gadde, 2000).

A lot of efforts are going on for the search of other collaborative relationships and this search has become a contemporary theme in the construction industry (Cox and Thompson, 1997). So far, there is a clear lack of understanding regarding their application as the most appropriate contracting method. Under certain conditions they may be appropriate but certainly not under all conditions. Most of these emerging concepts fail to determine how collaboration can be achieved or maintained. It is to be recognized that there is no single optimum buyer-supplier relationship. Long-term collaborative arrangements that are always emphasized, where buyer and supplier are working towards common goals and mutual benefits, are just one type of relationship within a broad spectrum.

Types of Relationships

There is a continuum of buyer-supplier contractual relations between the poles of arms length contractual relations (ACR) and obligational contractual relations (OCR) (Sako, 1992). ACR is characterized by specific discrete transactions where there is no commitment between parties, absence of good-will trust and are often short term. Such bilateral contracting practices exist in the construction industry today. OCR is characterised by high degrees of interdependence, good will trust and reciprocity, as the relations develop over the long term a high degree of collaboration is induced to

the point where no contract is necessary. Okun has (1981) termed such relations as 'invisible handshake'. In the event of default parties are quick to make amends and avoid dispute and a spirit of trust prevails.

Cox and Thompson (1997) argue that Sako's ACR-OCR framework describes two extremes between which she recognizes there is a continuum of contractual relations. However, she fails to describe interim relations or how one might interpolate between the two extremes. A broad spectrum of relationships is important because customers can make use of different skills and capabilities of their suppliers (Dubois and Gadde, 2000). All suppliers should not be treated equally. Suppliers should be segmented and 'one size fits all' strategy for procurement should be avoided (Spekman *et al.*, 1999; Dyer *et al.*, 1998).

Trust and commitment are central to all such collaborative relationships. Different relationships may demand different level of trust and commitment. The opposite of trust is considered as 'opportunism'. Ellram (1991) identifies 'opportunism' as another biggest potential downfall of the outsourcing approach. Cox and Thompson (1997) recognize that while developing contractual relations between two extreme ends as suggested by Sako (1992), it is necessary to determine to what extent collaboration and/or trust can be established and opportunism be curbed. It is evident that in arms length leveraged contractual relationships there is little or no trust leaving the parties vulnerable to the risk of opportunisms.

Supply Chain Management as a Management Discipline

In the last decade, organizations have recognized that by working in collaborative atmosphere with other trading partners might generate competitive advantage and better potential for pay offs. As a result, they started to carry out some proportions of either purchasing or logistics tasks in association with their 'immediate' trading partners and referred to these efforts as practicing 'supply chain management' and while practicing so, they were able to have growth in their revenues (Quinn, 1999; Nolan 1999). They did not develop any particular framework and the practice was different from company to company. This aspect grasped the attention of the researchers and they strived to give these efforts a standard shape. As these researchers had multidisciplinary origins, they defined supply chain management with different perspectives. In the literature, two major perspectives can be found. One perspective refers to supply chain management as an evolutionary form of purchasing and procurement function and advocates strong links with the suppliers for purchasing/procurement activities, other considers supply chain management as an evolutionary form of logistics/physical distribution and hence advocates strong links with the trading partners for logistics related activities.

Croom *et al.*, (2000) and Tan (2001) have carried out an extensive literature review of supply chain related terminologies and have suggested that supply chain management is an evolved form of both purchasing and logistics related activities. The notion of holism that is grounded in the philosophy of supply chain management is not achievable unless both evolved forms of purchasing/procurement and logistics/transportation are combined together (Maqsood *et al.*, 2002). This explanation has recently contributed towards the recognition of supply chain management as a 'management discipline' that has a certain problem domain. It has also addressed a concern of New (1997) who noticed, earlier, a problem with the definitions of supply chain management domain that some definitions were too strict

and closed the productive avenues of development and some were too loose to allow the label to collapse into an amorphous study of everything.

Structure of Supply Chain Management

Maqsood *et al.* (2002) conceptualise the framework to develop supply chain management model by identifying the following five components:

- Outsourcing: Identification of supply chains or network structure (trading partners selection) and recognition of key or all trading partners.
- Supply Management: Identification of key or all business processes (both purchasing and logistics related) that are to be integrated with trading partners' business processes.
- Chain Management: Identifying a mechanism to transfer the effect of supply management activities, taking place between any two immediate trading partners, up stream or downstream and seamlessly integrate all the trading partners to achieve synchronization.
- Relationship Management: Identification of nature of relationships among trading partners for driving supply chain management.
- Power Management: Identification of trading partner holding a vantage point.

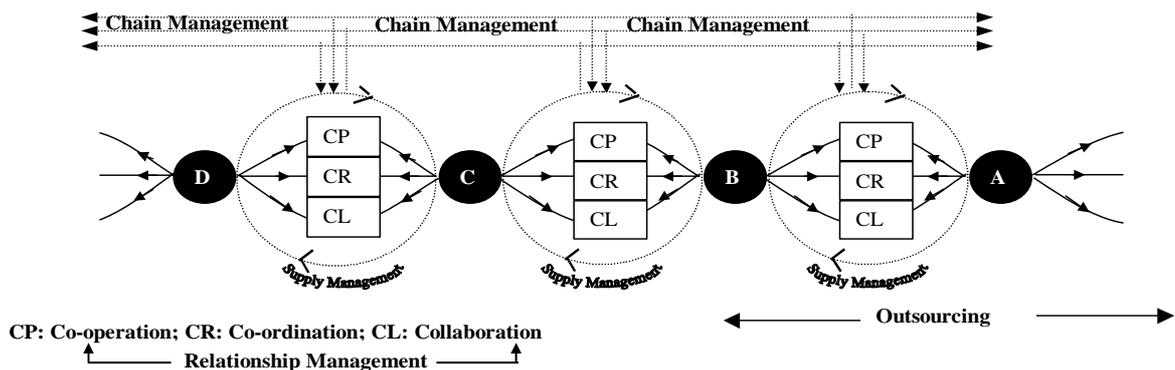


Figure 1: Conceptualization of Generic Integrated Supply Chain Management Model

Supply management and chain management form the basis for supply chain management and may be termed as 'essential components'. Outsourcing, relationship management and power management are needed to facilitate implementation of supply chain management and may be termed as 'driving components'. Figure 1 graphically illustrates the components of supply chain management. The outsourcing process is responsible for the formation of supply chains. In a supply chain, immediate trading partners (buyer-supplier) may select one of three interaction levels (CP: Co-operation, CR: Co-ordination and CL: Collaboration) to work together in harmonious atmosphere to execute the supply management activities (comprising of purchasing and logistics related activities). The effect of supply management activities between any two immediate trading partners is transferred upstream and downstream by chain management aspect of supply chain management to achieve synchronization. (For example any delay in a certain purchasing activity between 'B and C' should immediately be reflected into supply management activities between 'B and A' and 'C and D'). The party holding a vantage point in the supply chain should execute the chain management aspect of the supply chain management so that positive integration of business processes in a supply chain may take place and objectives of waste elimination, improved productivity and end user satisfaction are met.

RELATIONSHIP MANAGEMENT IN THE CONTEXT OF SUPPLY CHAIN MANAGEMENT

Outsourcing decisions and strategies by an organization result in the formation of networks termed as 'supply chains'. Each link in the chain referred to as 'trading partner' may have its own vision, objectives and profit generating tactics which may be in mismatch with the objectives of other trading partners. These contradictions produce too much friction and cause the waste of valuable resources (Lambert and Cooper, 2000). Integrating trading partners together, help streamlining the objectives of all trading partners to achieve the common goal of improving productivity and waste minimization. Supply chain management refers to this sort of integration.

More clearly, this type of integrations may be referred to as 'inter organization cross functional integration'. To achieve such integration, the business processes of various trading partners need to be integrated which is not possible in a traditional set up where arms length adversarial relationships exist between trading partners. The interaction occurs through spot rate basis and the trading partners are decided by the lowest price criteria. In such a set up, an organization is never sure about their trading partners as they change constantly over time. Integrating the business processes requires efforts and resource both in terms of cost and time from both organizations to set up a system to work together. There would be no advantage if such a set up does not work for a long time. For this reason, long term commitment between trading partners is emphasised to reap the benefits of successful integration. Therefore traditional arm length bilateral short term contracting is not an option at all, if employing supply chain management is an objective. This makes the relational exchange or contracting a key to drive supply chain management successfully. It is for this reason that supply chain management is said to have built on the foundation of trust and commitment (Lee and Billington, 1992).

Our purpose here is to define the relationships that are suitable for driving supply chain management across the supply chain. We believe that collaborative relationships have the ability to overcome the prevailing problems in the construction industry and in addition they provide a medium to employ supply chain management successfully as Cooper and Ellram (1993) noted that applicability of SCM lies somewhere between fully integrated firms and independent companies operating in the chain. In Figure 2, a conceptual framework for developing partnership model for driving supply chain management is proposed. This approach is based on the work of Spekman *et al.*, (1998) who has suggested four types of interactions between trading partners; Open market negotiation, Co-operation, Coordination and Collaboration. We consider that for facilitating supply chain management, Co-operation (CP), Coordination (CR) and Collaboration (CL) are important interactions that encompass different levels of trust and commitment and involve different roles and responsibilities an organization has to carry out.

According to Spekman *et al.*, (1998) 'cooperation' is the threshold level of interaction where firms exchanges bits of essential information and engage some suppliers/customers in longer-term contracts. The next level of intensity is 'coordination' where by both specified work flow and information are exchanged in a manner that permits JIT systems, EDI, and other mechanisms that attempt to make seamless many of the traditional linkages between and among trading parties. The next stage is 'collaboration' where by partners engage in joint planning and processes beyond levels that reaches in less intense trading relationships. Collaboration requires

high levels of trust and commitment, and information sharing among supply chain partners and partners share common vision of the future. An organization may decide to work at any of these three levels of trust and commitment with other trading partner to facilitate the supply chain management and may modify its selection after monitoring the interaction for a certain time pertaining to the change in affecting factors.

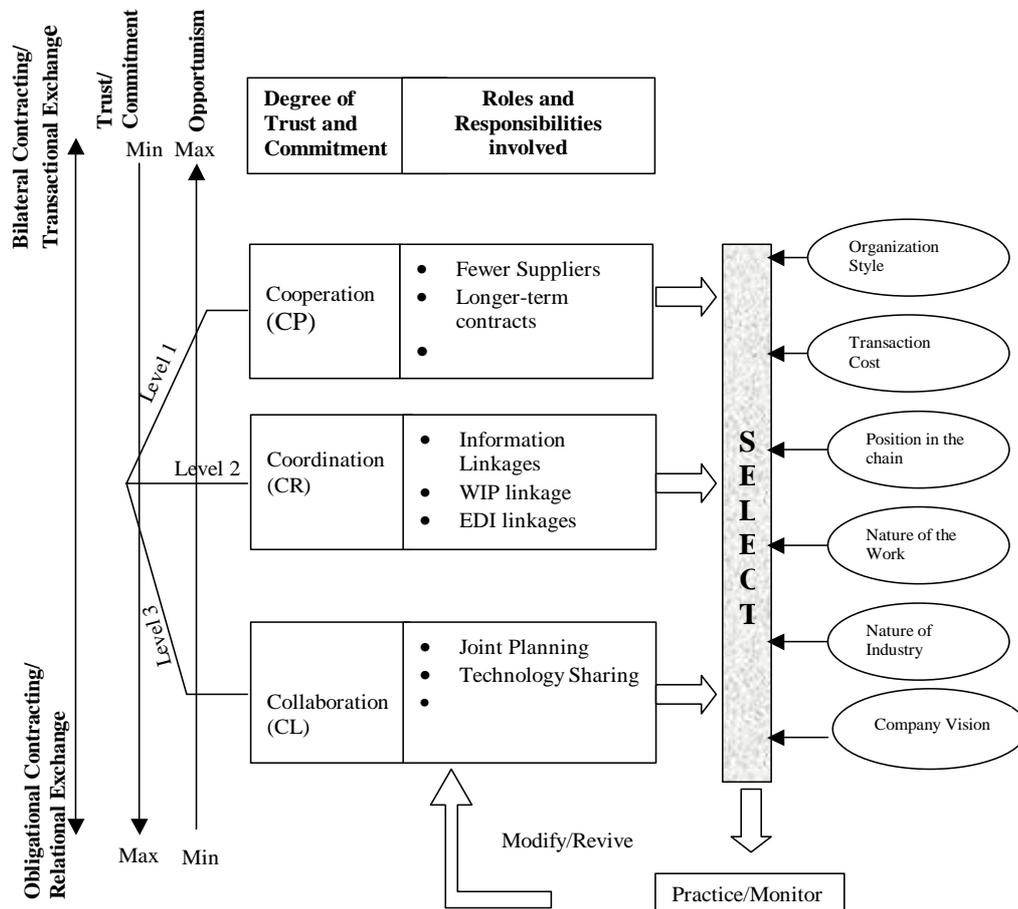


Figure 2: Conceiving relationship management for driving supply chain management

Spekman *et al.* (1998) has proposed a 2x2 matrix approach to select the interaction level depending on the intensity (high and low) of the two variables complexity (financial or commercial) and strategic importance. We feel that the selection of the level of interaction depends upon on further other factors as shown in Figure 2 (Organization style, transaction cost, position in the chain, nature of the work, nature of the industry, company vision, etc.). These factors are not exhaustive and research is being carried out to determine other influencing factors and testing them empirically. Also, in a certain level of interaction a trading partner needs to agree to carry out certain roles and responsibilities. The efforts are being put together to develop extensive interaction activities among trading partners and group them under cooperation, coordination and collaboration.

CONCLUSION

The construction industry has long suffered, in terms of productivity loss, from traditional arms length adversarial relationships among the trading partners that emerge because of heavy reliance on traditional tendering procedures. Collaborative relationships and relational exchanges are necessary to improve the industry productivity by curbing the existing negative attitude and replacing win loss attitudes with win-win attitudes. Search for such relationships is one of the agendas of construction research today. Also, supply chain management which, in nutshell, demands inter organization cross-functional integration cannot be effectively implemented unless trading members keep a collaborative atmosphere and cordial relations among themselves. This makes relational exchange or contracting as a key to drive supply chain management successfully. Because of the utmost importance that supply chain management places on collaborative relationships, it is being mistakenly referred to as 'management of relationships' and as a new form of relational contracting similar to partnering. It has been illustrated clearly in this paper that 'management of relationships or relationship management' is one of the important components of supply chain management not supply chain management in itself. Relationship management in the context of supply chain management may suggest three levels of relational interaction involving different states of trust and commitment in the form of cooperation, coordination and collaboration among trading partners and in each level certain organization agrees to carry out different roles and responsibilities.

This paper is a step towards keeping the concept of supply chain management intact and saving it from getting into further confusion at this critical time when it is about to mature into an established discipline after more than a decade of controversy.

REFERENCES

- Arndt, J. (1983) The political economy paradigm: foundation for theory building in marketing, *Journal of Marketing*, 47, 44-54.
- Bontekoe, I. (1989) Logisitiek in de bouw, Stichting Bouwresearch Rotterdam, (Dutch Text)
- Burt, D., (1984) *Proactive Procurement*, Prentice-Hall, Englewood Clifs.
- Carlisle, J., and Parker, R., (1989) *Beyond negotiation: Redeeming customer supplier relationship*, Wiley, Chichester, UK.
- Cooper, M.C., and Ellram, L.M., (1993) Characteristics of supply chain management and the implications for purchasing and logistics strategy, *International Journal of Logistics Management*, 4 (2), 13-24.
- Cox, A., and Thompson, I., (1997) Fit for purpose' contractual relations: determining a theoretical framework for construction projects, *European Journal of Purchasing and Supply Management*, 3(3), 127-135.
- Croom, S., Romana, P., and Giannakis, M., (2000) Supply Chain Management: an analytical framework for critical literature review, *European Journal of Purchasing and Supply Management*, 6, 67-83.
- Dale, B.G., Lascelles, D.M., and Lloyd, A. (1994) Supply chain management and development, In Dale, B.G. (Ed.), *Managing Quality*, Prentice-Hall, New York, 292-315.

- Dubois, A., and Gadde, L-E., (2000) Supply Strategy and net work effects-purchasing behaviour in the construction industry, *European Journal of Purchasing and Supply Management*, 6 , 207-215.
- Dyer, J., Cho, D., Chu, W., (1998) Strategic supplier segmentation: the next 'best practice' in supply chain management, *California Management Review*, 40(2), 57-76.
- Ellinger, A. E, (2000) Improving marketing/logistics cross functional collaboration in the Supply Chain, *Industrial Marketing Management*, 29, 85-96.
- Ellram, L.M. (1991) Supply chain management: the industrial organisation perspective, *International Journal of Physical Distribution and Logistics Management*, 21(1), 13-22.
- Forrester, J.W. (1961) *Industrial Dynamics*, MIT Press, Cambridge, MA.
- Gann, D., (1996) Construction as a manufacturing process? Similarities and differences between industrialized housing and car production in Japan, *Construction Management and Economics*, 14, 437-450.
- Hallen, L., Johanson, J., and Sayed-Mohamed, (1991) Inter-firm adaptation in business relationships, *Journal of Marketing*, 55, 29-37.
- Houlihan, J., (1984) Supply chain management, *Proceedings of the 19th International technical Conference of the British Production and Inventory Control Society*, 1984, 101-110.
- Kornelius, L., and Wamelink, J.W.F., (1998) The virtual corporation: learning from construction, *Supply Chain Management*, 3 (4), 193-202.
- Lambert D. M. and Cooper, M. C., (2000) Issues in Supply Chain Management, *Industrial Marketing Management*, 29, 65-83.
- Lamming, R.C., (1993) *Beyond Partnership: strategies for innovation and lean supply*, Prentice-Hall, Hemel Hempstead.
- Lamming, R. (1996) Squaring lean supply with supply chain management, *International Journal of Operations and Production Management*, 16 (2), 183-196.
- Lee, H. L., Billington, C. (1992) Managing Supply Chain Inventory: Pitfalls and Opportunities, *Sloan Management Review*, 33(3), 65-73.
- Maqsood, T., Akintoye A., and Azhar, S. (2002) Conceptual Framework For Developing Generic Integrated Supply Chain Management Model For Construction Industry *First International Conference on Construction in the 21st Century "Challenges and Opportunities in Management and Technology"* 25-26 April, 2002, Miami, Florida, USA, 229-236.
- Nassimbeni, G., (1998) Network structures and co-ordination mechanisms: a taxonomy, *International Journal of Operations and Production Management*, 18(6), 538-554.
- New, S.J. and Ramsay, J., (1995) Supply chains- corporate path to economic disaster? *Fourth International IPSERA Conference*, Birmingham.
- New, S.J., (1997) The scope of supply chain management research. *Supply Chain Management*, 2(1), 15-22.
- Nishiguchi, T., (1994) *Strategic Industrial Sourcing: The Japanese Advantage*. Oxford University Press, Oxford.
- Nolan, R. (1999) How to get the most from your SCM system, *Bobbin; Columbia*, August 1999, 40 (12), 74-76
- Ofroi G. (2000) Greening the construction supply chain in Singapore, *European Journal of Purchasing and Supply Management*, 6 , 195-206.

- Okun, A. M., (1981) *Prices and Quantities: A Macroeconomics Analysis*: Blackwell, Oxford.
- Pearson (1999) Chain Reaction, *Building*, 12 March, 54-55.
- Quinn, F. J., (1999) The Pay off Potential in Supply Chain Management, *ASCET*, 1, Montgomery Research Inc.
- Sako, M., (1992). *Prices, Quality and Trust: Interfirm Relations in Britain and Japan*. Cambridge University Press, Cambridge.
- Saunders, M.J., (1995) Chains, pipelines, networks and value stream: the role, nature and value of such metaphors in forming perceptions of the task of purchasing and supply management, *First Worldwide Research Symposium on Purchasing and Supply Chain Management*, Tempe, Arizona, 476-485.
- Shaw, S. A., and Gibbs, J., (1995) Retailer-Supplier relationships and the evolution of the marketing: two foods industry case studies, *International Journal of Retail and Distribution Management*, 23(7), 7-16.
- Spekman, R. E., Kamauff Jr., J. W. and Myhr, N., (1998) An empirical investigation into supply chain management: A perspective on partnerships, *International Journal of Physical Distribution and Logistics Management*, 28 (8), 630-650.
- Spekman, R., Kamauf, J., and Spear, J., (1999) Towards sourcing and supplier management. *European Journal of Purchasing and Supply Management*, 5(2), 103-116.
- Tan, K. C. (2001) A framework of supply chain management literature, *European Journal of Purchasing and Supply Management*, 7, 39-48.
- Tan, K.C., Kannan, V.R., and Handfield, R.B., (1998) Supply chain management: supplier performance and firm performance, *International Journal of Purchasing and Material Management*, 34 (3), 2-9.
- Thompson, I., Cox, A., and Anderson, L., (1998) Contracting strategies for the project environment, *European Journal of Purchasing and Supply Management*, 4, 31-41.
- Voordijk, J., (1994) Naar integrale logistiek in bedrijfsketens: ontwikkelingen in de bouw (Toward Integrated logistics in supply chains: developments in construction), University Press Masstricht (In Dutch)
- Walker, T. W. and Alber, K. L., (1999) Understanding Supply Chain Management, APICS online Edition, 99 (1).<http://www.apics.org>