# INTERFIRM COOPERATION AND INFORMATION SHARING THROUGH INTERLOCKING DIRECTORATES

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*Abstract :*
*When firms engage in cooperative efforts, interfirm relations get particular interest to be studied. A direct interlock occurs when an executive or director of one firm sits on the board of another firm, and an indirect interlock occurs when two firms have directors or executives who sit on the board of a third firm. The three commonly used theoretical models such as social network theory, learning theory, and theory of strategic choice are more relevant for the formation and management of interlocking directorates. Uncertainty, resource scarcity, mutual trust, dependency, etc. influence the formation of interlocking directorates. Consequently, interlocking directorates allow sharing of information and overall cooperation between partners through learning, collaboration, networking, and effective relationship, etc. Proper management of interlocking directorates requires communication and collaboration among partners that enhance exchange of knowledge and cooperation.*

*Keywords: interlocking directorate, cooperation, collaboration, information sharing.*

## Introduction

When firms engage in cooperative efforts, interfirm relations get particular interest to be studied. Firms cooperate when they need to, when they are able to, and perhaps when it is popular. Firms in vulnerable strategic position or strong social position are more likely to cooperate with other firms through strategic relationships (Eisenhardt and Schoonhoven, 1996). Interlocking directorate is a loosely coupled interorganizational relationship. A direct interlock occurs when an executive or director of one firm sits on the board of another firm, and an indirect interlock occurs when two firms have directors or executives who sit on the board of a third firm (Barringer and Harrison, 2000). The basic premise behind the formation of interlocking directorates is resource needs such as, capital, innovation, human resources overall dissemination of information. Contemporary research on interlocking directorates provides an area of research in which it seems reasonable to apply the bipartite model, (according to Koskinen and Edling, (2012) “the study of bipartite networks is central to social science. Furthermore, the dynamics of these processes suggests that bipartite networks should not be considered static structures, but rather be studied over time.”) that addresses the question of how tie formation, i.e. director recruitment, contributes to the structural properties of the interlocking directorate network (Koskinen and Edling, 2012).

Interlocking directorates are supported by social exchange views and learning and sharing of knowledge and information. Social exchange as well as networks can have a significant positive or negative impact on performance, depending on how they are employed. Silva et al. (2006) found

in their study that the interlocking of directors (26 percent) has less influence on performance improvement than family ties (76 percent). The advantage of participating in an interlocking is the potential to engage in co-optation (Barringer and Harrison, 2000). An executive of one firm that sits on the board of another firm may collect a number of new ideas as a result of the interlocking directorship. The avenue for knowledge transfer (O'Hagan and Green, 2004), resource sharing and opportunity of learning (Barringer and Harrison, 2000) to gain valuable insights into underlying business processes as well as the established reputations of firms with which they share board members (Everard and Henry, 2002) have focused the formation of interlocking directorates.

The literature on interfirm relationships is vast, but very few focused on the formation, governance, and outcomes of interlocking directorates. The purposes of this paper are, firstly, to review the existing literature as well as theories relating to interfirm relationship especially in interlocking directorates. Secondly, identify the factors that affect to join in interlocking directorates. This paper, in the next section, discusses the effects of joining in an interlocking directorate. The paper ends with concluding remarks that firms involve in an interfirm relationship such as interlocking directorate must be weighted and managed the relational advantages and disadvantages.

## Theoretical foundations

Interlocking directorates are loosely coupled specialized strategic alliance encompassing many different arrangements. Interlocking directorates are often grouping of firms oriented towards cooperation and sharing and exchange of technical skills and technological capabilities. Several disciplines are contributing to the field of formation of interfirm partnership as well as the formation of interlocking directorates. The three commonly used theoretical models included in this discussion are social network theory, learning theory, and theory of strategic choice.

### *Social network theory*

A network is a set of relationships. More formally, a network contains a set of objects (in mathematical terms, nodes) and a mapping or description of relations between the objects or nodes. Social network theory is a broader aspect theory under social science that is not reductionist. Small groups to entire global systems are included under the analysis of this theory. Networks are more than bilateral alliances; they represent the configuration of alliances, but also both close and "arm's-length" relationships in which the organization is involved. A network involves high trust intensity, and so the negotiation of roles, risks and profit sharing will be more complex (Tomkins, 2001). Kraatz (1998) argued that strong networks might be particularly valuable in promoting adaptation because they create high capacity information link between organizations and engender a motivation for information sharing.

Social network theory has confirmed the importance of interpersonal networks for individuals' career success. Tsai and Ghoshal (1998) provided clear performance implications for the role of interfirm networks by showing how social capital contributed to product innovations at the business unit level and organizational advantage can be achieved through resource sharing among different organizational units. Baum et al. (2000) and Powel et al. (1996) studied biotechnology networks. They provided that while startups are frequently characterized by a lack of resources and exchange relationships with other actors in their environment, they can potentially overcome many of the

hazards through judicious establishment of interfirm alliances. These alliances may be particularly effective for enhancing innovation.

The structure of an industry network plays an important rile both in firm performance and in industry evolution. Since relationships provide access to key resources, the structure of relationship networks describes the asymmetric external access that rivals have to raw materials, information, technology markets, or other crucial performance requirements. Madhavan et al. (1998) found that central and dominant firms continue to be central in the network of interfirm relationships before and after a structure reinforcing event. Following a structure loosening event, central and dominant firms are likely to be less central in the network of interfirm relationships. The network of prior alliances can be powerful enabling conditions that enhance the likelihood that a firm will engage in additional alliances in the future. Another outcome for firms resulting from their membership in alliance networks is that they can develop managerial capabilities associated with forming new alliances (Gulati, 1999).

***Learning theory***

Another ground for participation in interlocking directorates for taking the advantages of organizational learning. Firms try to enhance their competitive position through superior knowledge (Simonin, 1997). Expertise knowledge and technical skills get more concentration in learning based interfirm relationship. Sharing and exchange of technical skills and technological know-how across firms can be possible through interorganizational relationship (Barringer and Harrison, 2000). Technical skills and knowledge is often tacit and not purchasable in the market. A firm with lacking of such knowledge is in some trouble position if it is not involved in an interfirm relationship where it can get this sharing of knowledge.

The literature on interfirm networks and biotechnology support the formation of interfirm relationship learning purposes. According to Powell et al. (1996) “Knowledge creation occurs in the context of a community, one that is fluid and evolving rather than rightly bound or static. The canonical formal organization with its bureaucratic rigidities is a poor vehicle for learning. Sources of innovation do not reside exclusively inside firms; instead they are commonly found in the interstices between firms, universities, research laboratories, suppliers and customers.” Formation of trade association is also supported by learning theory. The studies of Child and Faulkner (1998), Deeds and Hill (1996), and Powell et al. (1996) have been examined to explore the concept of learning through interfirm relationships. Collectively, these studies show that in the competitive environment firms are engaging new relationship to access resources and sharing knowledge. Firms are expanding and becoming more complex, so expertise knowledge is out of control of a single firm. New product development and innovation are the result of formation of alliances rather than a single firm’s endeavor. Degree of learning depends on the degree of connectivity and degree of centrality in the network relationships. Because of uncertainty and resource scarcity firms try to explore new opportunity of value creation and involve in exploitation to improve existing capability for costs reduction.

A firm’s absorption capacity is also crucial in learning theory context. Absorption capacity includes the recognition of new values, external knowledge then incorporation and implementation of those in exiting business process (Barringer and Harrison, 2000). Prior preparation, employees’ knowledge, quality of management information systems, organizational culture, and learning incentives affect the absorptive capacity

of a firm (Kumar and Nti, 1998). Learning based alliance has the risk of losing proprietary information and costs of learning alliance should be taken under consideration along with skills development and exchange of knowledge.

***Theory of strategic choice***

Firms cooperate not only to increase competitiveness or market power, but also for other strategic reasons. The theory of strategic choice focuses on the strategic position of firms and strategic partnering. Short-term efficiency or resource-based rationales or any number of other factors are examples of strategic reasons for which firms may involve in interorganizational relationship (Kogut, 1988). Powell (1990) captured the breadth of the various rationales for alliance formation by stating that "firms pursue cooperative agreement in order to gain fast access to new technologies or new markets, to benefit from economies of scale in joint research and/or production, to tap into sources of the know-how located outside the boundaries of the firm, and to share the risks of activities that are beyond the scope of the capabilities of a single organization".

The perspective of strategic choice is very broad. Any type of interorganizational relationship and long-term profit maximization can be justified as a business strategy. Strategic choice includes all of other motivating factors that are suited for other perspective as well. According to Barringer and Harrison (2000) a useful starting point may be to divide strategic reasons into four groups such as (1) relationships that increase market power through the erection of entry barriers or the creation of monopoly-type influence, (2) relationships that increase political power, or the ability to influence governing bodies domestically or internationally, (3) relationships that increase efficiency in research, production, marketing, or other functions, and (4) relationships that provide the product or service differentiation.

## Antecedents of interlocking directorates

Interfirm cooperation is becoming a valuable research agenda in the business field. Cooperation and transfer of tacit knowledge is common in interfirm relationships to achieve competitive advantages (Mentzer et al., 2000). A growing literature deals with interorganizational cooperation and antecedents of interorganizational relationships under the purview of interorganizational analysis (Hawkins et al., 2008; Kim et al., 2010; Mentzer et al., 2000; Mentzer et al., 2001; Oliver, 1990; Schermerhorn, Jr. 1975; Zaheer and Venkatraman, 1995). This section focuses on pertinent literature regarding factors influencing the formation of cooperative relationship as well as interlocking directorates.

***Uncertainty***

According to transaction cost economics (TCE) theory, bounded rationality renders uncertainty a permanent fixture in interfirm relations. Behavioral uncertainty arises from the difficulty in predicting the actions of the counterpart in the interorganizational relationships because of opportunistic behavior and bounded rationality precludes the writing of complete contingent contract (Zaheer and Venkatraman, 1995). When contractors cannot match with conditions or in the situation of losing money or schedule, they use flawed design or differing site condition as an opportunity to manage their profit position (Hawkins et al., 2008). With a high-level of risk, i.e. high uncertainty, if either party is dependent very much to its contempt opportunistic behavior will be followed, or either traditional relationship will exist depending on the dependency condition of the whole environment. Since individual firms cannot control the issue of uncertainty and technological changes (Mentzer et al., 2000), by

encouraging collective strategies to reinforce collaborative coordination and recognizing resources dependency firms engage in interfirm relationship to reduce technological changes and uncertainty (Kim et al., 2010). When firms face technological uncertainty, they may choose to either strengthen or weaken the interorganizational collaboration depending on several factors, such as availability of new partners, existing investment in interfirm relationship, benefits from tight coupling, and firm-specific situations.

***Interdependence***

Interdependence encompasses each partner's dependence, the magnitude of the firms' total interdependence, and the degree of interdependence asymmetry between the firms (Mentzer et al., 2000). Uncertainty and interorganizational collaboration have a positive relationship because of recognition on resource dependence (Kim et al., 2010). Dependence is created by two factors: the importance or criticality of the resources provided by the source firm, the number of alternate sources available to the target firm for the need resources (Andaleeb, 1995). A key factor that contributes to dependence is transaction specific assets (TSA), a non-transferable investment whose utility is unique to a specific relationship (Hawkins et al., 2008). In a long-term orientation, while interorganizational relationships create dependence, level of trust and relational norms transform dependence to interdependence and foster interfirm relationships (Andaleeb, 1995; Hawkins et al., 2008).

***Trust***

Trust involves a belief or a manner, it happens step-by-step in the dealings of both parties. The basic ground behind the success of long-term relationships is considered the establishment of trust (Su et al., 2008). A relationship will not develop without the growth of trust (Tomkins, 2001), and without trust, the relationship may still continue with uncertainty (Andaleeb, 1995). In a hierarchy and network relationship like interlocking directorate, considerable amount of interfirm trust is required. Consequently, tacit knowledge and technological capability can be shared.

***Resource scarcity***

Organizations will seek out or be receptive to interfirm relation when they face with situations of scarcity of resources or performance distress (Schermerhorn, Jr., 1975). To obtain the accessibility of important resources firms associate with other firms and to enhance their power comparative to other organizations (Barringer and Harrison, 2000). Economies of scope, operational synergies, and development of new resources and subsequent skill can be made by complementary resources; they may be different, but ensure new competitive advantages (Ireland et al., 2002). This resource dependence perspective suggests the bilateral relationships emerge as individual organization attempt to secure necessary resources (Kim, et al., 2010).

***Top management vision***

Determining an organization's values, views, and orientation top management vision acts a significant role. A new sort of leadership from top management is required to allow a new model of interfirm relationship (Mentzer et al., 2000). The members of top management perform a significant role on organizational performance (Mentzer et al., 2001). Not only formation of a relation, but also successful implementation of a new relationship depend on top management vision as well as require top management support (Schermerhorn, Jr., 1975). The formation of interfirm relationships for purposes of enhancing legitimacy can be initiated from an organization's intentions to express or develop its reputation, image, prestige, or correspondence with existing norms in its institutional environment (Oliver,

1990). Therefore, the significance of operational and market impacts of partnership must be understood and embraced by top management to realize a strategic partnership orientation (Mentzer, et al., 2000).

## Outcomes of interlocking directorates

The motive behind the formation of interorganizational relationships is to increase relational competitive advantages. The majority of the studies focused on the effect of interfirm relationships as aggregate performance measures or outcomes. Competitive advantage from strategic partnering cannot be sustained automatically, but must be valuable to customers, hard for the competition to find out and durable and not vulnerable. Mutual trust based interlocking directorates result that trust to partner's goodwill and competence, decrease of transaction cost and increase relational effectiveness (Laaksonen et al., 2008).

### *Learning*

Interlocking directorates allow partner firm to access of resources and tacit knowledge. According to Barringer and Harrison (2000), "An executive of one firm that sits on the board of another firm may pick up a number of new ideas as a result of the directorship." This learning of new ideas or knowledge depends upon the absorptive capacity of firms. Prior preparation, employees' knowledge, quality of management information systems, organizational culture, and learning incentives affect the absorptive capacity of a firm (Kumar and Nti, 1998). Properly connected and communicated interlocking directorate opens the avenue of skills development and exchange of knowledge. Learning requires communication and an open communication has been consistently cited as important for sharing information and enhancing learning, which are required for firms to adopt innovative business practices (Tu et al., 2006).

### *Information sharing*

Learning through information sharing is vital for the partners in interfirm relationships that facilitate to gain a new skill and identify new opportunities (Coad and Cullen, 2006). Cooper and Slagmulder (2004) in their case study based on interfirm cost management practice in Japanese firms stated that information sharing enable firms to get collaborative benefits. They argued that in the joint product development process the role of guest engineers' are very crucial , and they facilitate in information sharing that is an example of interfirm relationship management practice. Information becomes knowledge when it includes some ideas, values, and know-how for improvement of an existing position. Firms exchange knowledge in a relational context through information sharing system. Information includes facts, axiomatic propositions, and symbols (Dyer and Singh, 1998). To achieve competitive advantages over the rivals, firms are more couscous in operations management and technology up gradation and innovation. To doing these managerial and operations activities internal environment is crucial that incorporate knowledge and create learning capacity (Tu et al., 2006).

### *Collaboration*

As regards the external environment, intense competition causing a pressure to continuously reduce costs and gain competitive advantages is common characteristics of industries in which collaborative approaches could be observed (Kajuter and Kulmala, 2005). Scarcity of resources as well as inadequacy of technical skills and mutual trust fosters collaboration among the partners in an interlocking directorate. Collaboration allows firms to reduce costs, improve quality and build better relationships with trading partners or it might be as a result of being forced into an electronic

based relationship (collaboration) (Holland, 1995). Electronic collaboration consists of product development and distribution activities in line such as, collaborative product design, forecasting and production planning, and logistic planning (Rosenzweig, 2009). Local financial constraints can rigorously force operational and financial performance of the entire interfirm relationship that is shown by using dynamic simulation model with different execution sequences of e-collaboration tools along with different financial situations (Marquez et al., 2004).

***Networking***

The complexity of technological development, and market access and search for opportunity motivate the formation of interlocking directorates that resulting networking (Alvarez et al., 2009). The classical coordination forms of hierarchy and market are closely related concepts. New forms of coordination including alliance and networking have opened up new challenges to the realm of interorganizational relationships (Hakansson and Lind, 2004). Networks are more than bilateral alliances; they represent the configuration of alliances, but also both close and arm's-length relationships in which the organization is involved (Tomkins, 2001). The establishment of networks has been an emerging issue for understanding the improvement in competitiveness of firms, generating increased interests in scholar and practitioners. In an interlocking directorate through networking, firms are said to get access to resource in a flexible way and typically by interacting with other firms non-hierarchically, directly and based on trust (Mouritsen and Thrane, 2006).

***Effective Relationship***

When there is more cooperation in an interorganizational relationship, there is more relational effectiveness and interlocking directorate is a field of cooperation and collaboration. Relationship effectiveness is the extent to which both firms are committed to the relationship and find it productive and worthwhile (Mentzer et al., 2000). Effective relationship depends upon persistence, frequency, and diversity of relationship (Su et al., 2008). Long-term orientation is the main feature of relationship persistence (Su et al., 2008). Long-term orientation is the willingness of one party to make short-term sacrifices to realize long-term benefits from the relationship with other partners (Ryu et al., 2007). An interfirm relationship adjusts over time. As the closer relationships and transaction period between partners increases, firms must adapt to one another, which increase the chances of future transactions (Kim et al., 2010). Relationship frequency describes the times the cooperation or transactions recur in a fixed period of time. Continuity and long-term orientation positively influence the frequency of relationship (Kim et al., 2010; Su et al., 2008). On the other hand, high relationship quality will promote diversity (Su et al., 2008).

***Loss of proprietary information***

Organizational knowledge is vital to competitive success because firms that know more about their customers, competitors, suppliers and themselves often develop more sustainable competitive advantages. Competitive advantage can be lost when firms share their tacit knowledge with their competitors (Barringer and Harrison, 2000). Technical know-how and technological expertise are considered resources under the domain of resource-based view. So, sharing of knowledge and allow to access into resources hamper firm's privacy and makes other firms more dependent to the focal firm.

## Conclusions

Interlocking directorate is a loosely coupled interfirm relationship. A direct interlock occurs when an executive or

director of one firm sits on the board of another firm, and an indirect interlock occurs when two firms have directors or executives who sit on the board of a third firm. Sharing innovation new idea, new approach, tacit knowledge, and overall cooperation are the motives behind joining in an interlocking directorate. Manufacturing firms and service providing firms (financial institutions) may form interlocking directorates to easy access of capital. On the other hand, peer level organizations may join in interlocking directorates for access to a new approach and the idea that can be implemented in their own business process. Because of uncertainty and scarcity of resources firms engage in a collaborative relationship that is characterized by cooperation and sharing of resources.

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This paper is not out of limitations, and the main limitation of this paper is that it did not collect any data or information from practical world. Future research may address the empirical study on interlocking directorates. Loss of proprietary information is not only one limitation, but the problem of collusion, anticompetitive behavior, and over dependency may be raised. Since many companies are involved in an interlocking directorate, the governance structure or management issues may suffer from proper approaching. These issues could be addressed in the study.

## REFERENCES

Alvarez, I., Marin, R., Fonfria, A. (2009), "The role of networking in the competitiveness of firms", *Technological Forecasting & Social Change*, 76, 410-421.

Andaleeb, S.S. (1995), "Dependence relations and the moderating role of trust: implications for behavioral intensions in marketing channels", *International Journal of Research in Marketing*, 12, 157-172.

Barringer, B.R., Harrison, J.S. (2000), "Walking a Tightrope: Creating Value Through Interorganizational Relationships", *Journal of Management*, 26(3), 367-403.

Baum, J.A.C., Calabrese T., and Silverman, B.S. (2000), "Don't Go It Alone: Alliance Network Composition and Startups' Performance in Canadian Biotechnology", *Strategic Management Journal*, 21(3), 267-294.

Child, J., Faulkner, D. (1998), "Strategies of cooperation: Managing alliances, networks and joint ventures", Oxford, England: Oxford University Press.

Coad, A.F., Cullen, J. (2006), "Inter-organizational cost management: Towards an evolutionary perspective", *Management Accounting Research*, 17, 342-369.

Cooper, R., Slagmulder, R. (2004), "Interorganizational cost management and relational context. Accounting", *Organizations and Society*, 29, 1-26.

Deeds, D. L., Hill, C. W. L. (1996), "Strategic alliances and the rate of new product development: An empirical study of entrepreneurial biotechnology firms", *Journal of Business Venturing*, 11, 41–55.

Dyer, J.H., Singh H. (1998), "The Relational View: Cooperative and Sources of Interorganizational Competitive Advantage", *The Academy of Management Review*, 23(4), 660-679.

Eisenhardt, K. M., Schoonhoven, C.B. (1996), "Resource-Based view of strategic Alliance Formation: Strategic and social effects in Entrepreneurial Firms", *Organization Science*, 7(2), 136-150.

Everard, A., Henry, R. (2002), "A social network analysis of interlocked directorates in electronic commerce firms", *Electronic Commerce Research and Applications*, 1, 225-234.

Gulati, R. (1999), "Network Location and Learning: The Influence of Network Resources and Firm Capabilities on Alliance Formation", *Strategic Management Journal*, 20(5), 397-420.

Hakansson, H., Lind, J. (2004), "Accounting and network coordination", *Accounting, Organizations and Society*, 29, 51-72.

Hawkins, T.G., Wittmann, C.M., and Beyerlein, M.M. (2008), "Antecedents and consequences of opportunism in buyer-supplier relations: Research synthesis and new frontiers", Industrial Marketing Management, 37, 895-909.

Holland, C.P. (1995), "Cooperative supply chain management: the impact of interorganizational information systems", *Journal of Strategic Information Systems*, 4(2), 117-133.

Ireland, R.D., Hitt, M.A., and Vaidyanath, D. (2002), "Alliance Management as a Source of Competitive Advantage", *Journal of Management*, 28(3), 413-446.

Kajuter, P., Kulmala, H.I. (2005), "Open-book accounting in networks Potential achievements and reasons for failures", *Management Accounting Research*, 16, 179-204.

Kim, K.K., Park, S.H., Ryoo, S.U., and Park, S.K. (2010), "Inter-organizational cooperation in buyer-supplier relationships: Both Perspective", *Journal of Business Research*, 63(8), 863-869.

Kogut, B. (1989), "The stability of joint ventures: Reciprocity and competitive rivalry", *Journal of Industrial Economics*, 38: 183–198.

Koskinen, J., Edling, C. (2012), "Modelling the evolution of a bipartite network-Peer referral in interlocking directorate", *Social Networks*, 34(3), 309-322.

Kraatz, M.S. (1998), "Learning by Associations? Interorganizational Networks and Adaptation to Environmental Change", *The Academy of Management Journal*, 41(6), 621-643.

Kumar, R., Nti, K. O. (1998), "Differential learning and interaction in alliance dynamics: A process and outcome discrepancy model", *Organization Science*, 9: 356–367.

Laaksonen, T., Pajunen, K., and Kulmala, H.I. (2008), "Co-evolution of trust and dependence in customer-supplier relationships", *Industrial Marketing Management*, 37, 910-920.

Madhavan, R., Koka, B.R., and Prescott, J.E. (1998), "Networks in Transition: How Industry Events (Re) Shape Interfirm Relationships", *Strategic Management Journal*, 19(5), 439-459.

Marquez, A.C., Bianchi, C., and Gupta, J.N.D. (2004), "Operational and financial effectiveness of e-collaborations tools in supply chain integration", *European Journal of Operational Research*, 159, 348-363.

Mentzer, J.T., Min, S., and Zacharia, Z.G. (2000), "The Nature of Interfirm Partnering in Supply Chain Management", *Journal of Retailing*, 76(4), 549-568.

Mentzer, J.T., DeWhitt, Keebler, J.S., Min, S., Nix, N.W., Smith, C.D., and Zacharia, Z.G. (2001), "Defining supply chain management", *Journal of Business Logistics*, 22(2), 1-25.

Mouritsen, J., Thrane, S. (2006), "Accounting, network complementaries and the development of inter-organizational relations", *Accounting, Organizations and Society*, 31, 241-275.

O'Hagan, S.B., Green, M.B. (2004), "Corporate knowledge transfer via interlocking directorates: a network analysis approach", *Geoforum*, 35, 127-139.

Oliver, C. (1990), "Determinants of Interorganizational Relationships: Integration and Future Directions", *The Academy of Management Review*, 15(2), 241-265.

Powell, W. W. (1990), "Neither market nor hierarchy: Network forms of organization", *Research in Organizational Behavior*, 12, 295–336.

Powell, W.W., Koput, K.W., and Smith-Doerr, L. (1996), "Interorganizational Collaboration and the Locus of Innovation: Networks of Learning in Biotechnology", *Administrative Science Quarterly*, 41(1), 116-145.

Rosenzweig, E.D. (2009), "A contingent view of e-collaboration and performance in Manufacturing", *Journal of Operations Management*, 27, 462-478.

Ryu, S., Park, J.E., and Min, S. (2007), "Factors of determining long-term orientation in interfirm Relationships", *Journal of Business Research*, 60, 1125-1233.

Schermerhorn, Jr. J.R. (1975), "Determinants of Interorganizational Cooperation", *The Academy of Management Journal*, 18(4), 846-856.

Silva, F. Majluf, N., and Paredes, R.D.( 2006), "Family ties, interlocking directors and performance of business groups in emerging countries: The case of Chile", *Journal of Business Research*, 59, 315-321.

Simonin, B. L. (1997), "The importance of collaborative know-how: An empirical test of the learning Organization", *Academy of Management Journal*, 40, 1150–1174.

Su, Q., Song, Y., Li, Z., and Dang, J. (2008), "The impact of supply chain relationship quality on cooperative strategy", *Journal of Purchasing & Supply Management*, 14, 263-272.

Tomkins, C. (2001), "Interdependencies, trust and information in relationships, alliances and Networks", *Accounting, Organizations and Society*, 26, 161-191.

Tsai, W., Ghoshal, S. (1998), "Social Capital and Value Creation: The Role of Intrafirm Networks", *The Academy of Management Journal,* 41(4), 464-476.

Tu, Q., Vonderembse, M.A., Ragu-Nathan, T.S., and Sharkey, T.W. (2006), "Absorptive capacity: Enhancing the assimilation of time-based manufacturing practices", *Journal of Operations Management*, 24, 692-710.

Zaheer, A., Venkatraman, N. (1995), "Relational Governance as an Interorganizational Strategy: An Empirical Test of the Role of Trust in Economic Exchange", *Strategic Management Journal*, 16(5), 373-392.