http://ansinet.com/itj



ISSN 1812-5638

# INFORMATION TECHNOLOGY JOURNAL



Asian Network for Scientific Information 308 Lasani Town, Sargodha Road, Faisalabad - Pakistan

Information Technology Journal 12 (17): 4106-4113, 2013 ISSN 1812-5638 / DOI: 10.3923/itj.2013.4106.4113 © 2013 Asian Network for Scientific Information

### Research on the Influencing Mechanism of Manufacturer-supplier Information Sharing on Manufacturer Innovation Performance-mediated by Trust and Relationship Commitment

Jiang Xiaorong, Xue Xiaoxue and Li Suicheng School of Economics and Management, Xi'an University of Technology, Xi'an, Shaanxi, 710054, China

Abstract: With the economic globalization and informatization, the development of technology changes rapidly and the market competition is becoming increasingly fierce, only share information with suppliers and make full use of information resources can Chinese manufacturing enterprises reduce costs, meet customer demand for diversification and individuation and improve innovation performance steadily. Based on a survey of Chinese manufacturing enterprises and the existing research results, this study proposed conceptual model, carried out an empirical study. Results show that, first, the three dimensions of information sharing between manufacturers and suppliers can have positive impact on innovation performance directly, it can also have a positive effect on manufacturer innovation performance indirectly through relationship commitment, second, the mediating effect of trust on the three dimensions of information sharing and innovation performance is not significant, information quality and information technology can have a positive effect on trust, the effect information content on trust is not significant, the direct impact of trust on manufacturers innovation performance was not significant but trust has an indirect positive effect on innovation performance through relationship commitment. The results provide methods and enlightenment for manufacturers to improve enterprise innovation performance.

**Keywords:** Information sharing, trust, relationship commitment, innovation performance

#### INTRODUCTION

With the development of economic globalization and informatization, the uncertainty of business environment that Chinese manufacturing enterprises faced is increasing gradually, the market demand is also increasingly more and more diversification and individuation. According to the theory of resource-based view, manufacturing enterprises' sustainable competitive advantage depends on their control of valuable, rare, heterogeneous and unique resources and capabilities (Corsten et al., 2011). Resource can be assets, process, technology, knowledge and information. However, if manufacturers only depend on their own internal information resource, they can't meet the needs of information for rapid development, therefore, only share information and establish good relationships with suppliers and use relevant information resources reasonably, can manufacturers implement innovation in order to improve the competitive advantage of manufacturers.

Although some domestic and foreign researches have been studied the influence of information sharing on innovation performance. Manufacturing enterprises in customer-customer market as research object and information sharing as intermediary variable, Yao and Wang (2011) studied how antecedent variables of innovation performance to affect it. Li (2012) studied the form of industry-university cooperation, information sharing had direct effect on innovation performance, many scholars have studied research about direct effect of information sharing among manufacturing enterprises on innovation performance (Yan and Pei, 2011) and some scholars studied the direct impact of information sharing on innovation performance based on the equilibrium process of double RandD model coexistence. But based on Chinese manufacturing enterprises as the research object, trust and relationship commitment as mediator, influencing mechanism of manufacturer-supplier information sharing on manufacturer innovation performance is very few (Hong et al., 2008). Therefore, to explore influencing mechanism of manufacturer-supplier

information sharing on manufacturers innovation performance, so as to provide reasonable suggestions for Chinese manufacturing enterprise to improve innovation performance, has a positive significance in two aspects of theory and practice.

## THEORETICAL BACKGROUND AND RESEARCH HYPOTHESIS

**Information sharing:** At present, different scholars have expounded their views from different aspects but the difference is not obvious, generally think that information sharing refers to information exchange and transfer among different manufacturers in the particular trade or the process of cooperation.

As for the content of information sharing, some scholars thought there were inventory levels, sales data, time forecast, order information and production or delivery information these five kinds of information be shared in the supply chain (Lee and Whang, 2000); also some scholars proposed information that be shared can be trading information, operation information and strategy information etc. (Li et al., 2006). The above scholars studied from the content level of information sharing and also some scholars measured information sharing from information sharing support technology, information content and information quality these three dimensions (Zhou and Benton Jr., 2007). Ye et al. (2012) divided information sharing into two dimensions of information sharing content and information sharing quality.

Based on the above research foundation as well as the research object, this study measured information sharing from information quality, information content and information technology three aspects.

Information quality: Information quality reflects manufacturers' information sharing potential (Subramaniam and Youndt, 2005). Manufacturers accept and share new information for future use only if the information is deemed to be valuable. Information with high quality can compensate the asymmetry of information and to increase the trust between the two parties (Rajesh and Margaret, 2012). At the same time, delivery of high quality information make both sides of enterprises to get help, reach psychological and economic benefits, contribute to the formation of inter firm relationship commitment. Especially when it comes to innovation implementation, the quality of shared information is more important than simply the quantity of information.

Information accuracy influences the quality of manufacturer to make relevant decision. Information must have its value to the receiver to facilitate managers in making effective decision making (Raghunathan, 1999; Rabren, 2010). Access to the right information would enable manufacturers to reduce uncertainty and improve planning which in turn improves their profitability. Manufacturers that have the access to the right information would be more proactive in responding to changes in market conditions thereby becoming more focused in meeting customer needs (Daugherty *et al.*, 1995).

To sum up, this study proposed following hypothesis:

**H1a:** Manufacturer-supplier information quality has a positive effect on trust

**H1b:** Manufacturer-supplier information quality has a positive effect on relationship commitment

**H1c:** Manufacturer-supplier information quality has a positive effect on manufacturers innovation performance

Information content: There are six categories of production information that may be shared between manufacturers and suppliers (Huang et al., 2003). The information is identified as product information, process information, inventory information, resource information, order information and planning information. Sharing demand information between manufacturers can be enable manufacturers to reduce variability of orders and inventory level (Daugherty et al., 1995; Lee, 2000). Other studies have shown that predictive information exchange between manufacturers and suppliers can improve the trust between the two parties and have a positive impact on manufacturer innovation performance (Forslund and Jonsson, 2007). Lee et al. (2011) contend that both strategic and operational information should be shared between manufacturers and their suppliers. Strategic information exchange encompasses long term issues related to firm business strategies such as marketing and logistics strategies. It can also include joint planning and goal setting between manufacturers and its strategic suppliers to enable the companies to coordinate activities in supply chain (Moberg et al., 2002). Strategic information represents changes that not only affect the manufacturers but also the strategies of their suppliers, once the manufacturers provide honest, detailed and necessary information content to suppliers, not only the express the psychological desire of the manufacturers to

maintain long-term and stable relationship with suppliers, suppliers also see the sincerity of the manufacturer and want to share their own information about knowledge and specialized skills, to strengthen relationship between the two sides further which have positive effect on trust and relationship commitment.

To sum up, this study proposed following hypothesis:

**H2a:** Manufacturer-supplier information content has a effect influence on trust

**H2b:** Manufacturer-supplier information content has a positive effect on relationship commitment

**H2c:** Manufacturer-supplier information content has a positive effect on manufacturer innovation performance

**Information technology (IT):** Information technology (IT) could improve information quality which leads to improvement in decision quality and performance (Raghunathan, 1999). At present, in the manufacturer and supplier research field, research tools of information technology are the following several kinds. Zhang and Yuan (2012) think that Internet, Intranet and Extranet and EDI connected to the whole supply chain, Li and Tang (2010) suggested that EDI and Internet allows manufacturers and their suppliers partners to share information such as the demand and inventory, Internet is the basic technology of future supply chain to coordinate the operation of supply chain. Cheng et al. (2010b) suggested that the application of task SRM can have a positive impact on cost reduction. Molina-Morales et al. (2011) studied that Internet technology, e-mail and cellular phones would allow easy access and communication of required information across the supply chain. The use of these information technology tools speed up communication, trust and cooperation between manufacturers and suppliers and reduce the risk of demand uncertainty, in order to develop new products that are suitable for the market and customers with lower cost and fast speed and reduce the risk of new product development.

The appropriate information technology between manufacturers and suppliers improve the quality of information sharing, communicate the information content accurately timely, manufacturers not only can obtain psychological benefit from the relationship, such as learning skills, grow together, share more resources but also can obtain the economic benefits from the relationship, such as saving money, obtaining additional special products, benefits from seizing the market time, so can reduce the uncertainty and anxiety in the process of transactions with suppliers, strengthen trust and promote

the formation of relationship commitment which can be conducive to maintain long-term and stable good relationships between manufacturers and suppliers. There is compelling evidence that IT has a positive effect on innovation through the regulation of existing relationship (Chae *et al.*, 2005). In fact, the process of long-term relationship oriented cooperation strategy, network management, information technology can promote communication between manufacturers and suppliers (Paulraj *et al.*, 2008); communication will help improve innovation performance further (Hadaya and Cassivi, 2007; Paulraj *et al.*, 2008; Zelbst *et al.*, 2009).

To sum up, this study proposed following hypothesis:

**H3a:** Manufacturer-supplier information technology has a positive effect on trust

**H3b:** Manufacturer-supplier information technology has a positive effect on relationship commitment

**H3c:** Manufacturer-supplier information technology has a positive effect on manufacturer innovation performance

Trust: Trust refers to the decision to rely on a partner with the expectation that the partner will act according to common agreements. Trust can engender cooperation between manufacturers and suppliers and avoid conflict, then contribute to the long-term stable relationship (Morgan and Hunt, 1994). Empirically, researchers have found that trust amongst organizations can create cooperative environment, through cooperation, manufacturers and suppliers can focus more their attention on new product or process innovation. Wang et al. (2011) argued that maintain a high level of trust between manufacturers and suppliers, information can flow more smoothly so as to help manufacturers improve innovation performance.

However, Molina-Morales *et al.* (2011) studied that from a strategic point of view, for trust, overinvest in trust-trust too much or invest in trusting relationships that have little value for the firm-may be misallocating precious resources and/or taking unnecessary risks that could have substantial negative effects on their innovation performance. For example, Cheng *et al.* (2010a) divided organization trust into cognition and emotion two different mechanism to study, the result showed that the relationship between cognitive trust and organizational innovation performance reflected the inverted "U" type. This also showed that when the organizational trust improved to a certain extent, increasing trust degree may bring negative effect to the organization, such as a rider, monitoring level decreased etc.

Trust allows trading partners to go beyond short-term inequality or risk, focusing on long-term profit or benefits (Bianchi and Saleh, 2011). Once trust formed, partnership will have a strong desire to promise each other more time, resources and energy to develop a continuous working relationship (Morgan Hunt, 1994). Trust influence commitment and then influence the long-term relationship and cooperation in order to finish enterprise mission effectively and reach organizational performance (Ganesan et al., 2009). Trust can promote commitment in order to maintain relationship with the other party and also increase cooperation. Using the path model, Ramaseshan et al. (2006) found in the field of supply chain management, trust leads to relationship commitment.

To sum up, this study proposed following hypothesis:

**H4a:** Manufacturer-supplier trust has a positive effect on manufacturer innovation performance

**H4b:** Manufacturer-supplier trust has a positive effect on manufacturer-supplier relationship commitment

Relationship commitment: In this study, relationship commitment was considered as a kind of attitude, adopted the definition of Anderson and Weitz (1992), that is manufacturers are eager to build a stable relationship with suppliers and willing to make short-term sacrifices in order to maintain this relationship and they are very confident in the stability of this relationship.

Morgan and Hunt (1994) thought that relationship commitment was the core and foundation of the relationship between manufacturers and suppliers in their study. Due to the operation and management of relationship commitment manufacturer for supplier, its advantage lies in: first, for manufacturers, to maintain long-term and stable trade relationship with suppliers not only can reduce transaction costs and increase profit (Krause *et al.*, 2007) but also can reduce the risks caused by uncertainty, raise barriers to entry, prevent competitors entering the target market (Meehan and Wright, 2011). Second, manufacturers can focus on their core competencies and strategically influence other activities through the full use of suppliers' investment, innovation and expertise which is one of the determinants of innovation (Autry and Golicic, 2010).

To sum up, this study proposed following hypothesis:

**H5:** Manufacturer-supplier relationship commitment has a positive effect on manufacturers innovation performance

Innovation performance: This study believed that innovation performance refers to the extent of enterprise bring invention such as new products and new process into the market. This study used indicators such as the number of new products every year, the number of new products every year accounted for the total number of enterprise products, the total number of proportion patents for products every year, new product development cycle shortened and new product manufacturing cost and development cost decreased and so on to measure innovation performance.

According to the above assumptions, the theoretical model of this study is shown in Fig. 1.

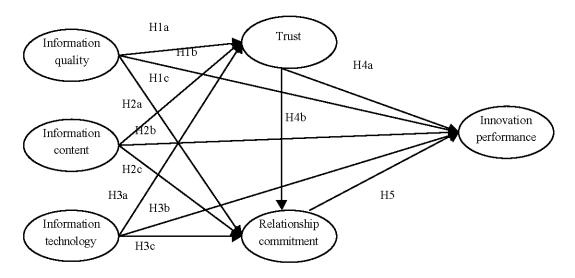


Fig. 1: Conceptual model

#### RESEARCH DESIGN

Research sample: In this study, according to the need of research, had the investigation in the manufacturing industry (including electric machinery manufacturing, electronics and communications equipment manufacturing, automobile manufacturing, heavy automobile manufacturing, heavy machinery manufacturing etc.). Therefore, investigations were carried out in provinces and cities such as Shaanxi, Ningxia, Gansu, Sichuan, Shanxi, Henan, Jiangsu, Guangdong, Zhejiang, Hubei, Shanghai, Liaoning, Beijing, the scope of the investigation covers some representative city in the western, central and eastern of China, also including all kinds of ownership enterprises such as state-owned, private and joint ventures, investigation object and questionnaire including enterprise procurement personnel, project managers, senior managers, most of them are economists, senior economists, engineers, senior engineers, etc.. The investigation release questionnaires and withdraw 288, there are 266 valid questionnaires, of which effective questionnaire response rate is 66.5%.

Variable measurement: For the measurement of independent variable information sharing, integrated the items of Miller (2005) to compile the information quality scale with 6 items, namely iq1-iq6; integrated the items of Chengalur-Smith et al. (2012) and Fang et al. (2011) to compile information content scale with 7 items, namely icl-ic7; integrated items of Omar et al. (2010) to compile information technology scale with 5 items, namely it1 -it5. For the measurement of dependent variables, integrated

items of Jiang and Li (2009) and with 5 items, namely pdip1-pdip5. For the measurement of intermediate variables, adopted Doney and Cannon (1997) scale with 5 items to compile trust scale, namely tru1-tru5 and adopted Svensson et al. (2010) scale to compile relationship commitment scale with items, namely com1-com3.

#### RESULTS OF EMPIRICAL ANALYSIS

Reliability and validity analysis: This study used SPSS19.0 for reliability analysis and the Cronbach? value to test the reliability of scale, the reliability value of every variable is shown in Table 1.

We can see from Table 1, for each dimension of every variable, Cronbach? is above 0.6 and the overall Cronbach? of the scale of information sharing, trust, relationship commitment and innovation performance are about 0.8, that indicated variables or factors have good reliability.

For validity analysis, used AMOS17.0 to have confirmatory factor analysis of samples, the results of every fit index analysis is shown in Table 2.

We can see from Table 2, information sharing, trust, relationship commitment and innovation performance has good fitting degree and good validity.

Correlation analysis: This study used SPSS19.0 to have correlation analysis of variables, as shown in Table 3.

We can see from Table 3, there are significant correlations between information quality, information content, information technology and trust and relationship commitment and innovation performance.

Variables	Factors
Information sharing	Information quality
	Information content

Variables	Factors	No. of items	Alpha	Cronbach
Information sharing	Information quality	6	0.799	0.938
	Information content	7	0.891	
	Information technology	5	0.813	
Trust		5	0.827	
Relationship Commitment		3	0.806	
Innovation Performance		5	0.881	

Table 2: Results of confirmatory factor analysis

Table 1: Cronbach? of variables or factors

Table 2. Results of confirmatory factor analysis							
Fit Index	$\chi^2/d\mathbf{f}$	RMSEA	GFI	AGFI	NFI	TLI	CFI
Information sharing	2.888	0.084	0.898	0.856	0.918	0.932	0.944
Trust	2.981	0.086	0.943	0.902	0.958	0.961	0.971
Relationship commitment	2.764	0.082	0.933	0.889	0.936	0.942	0.955
Innovation performance	2.468	0.074	0.941	0.904	0.943	0.954	0.965

Table 3: Correlation analysis (N = 266)

Tueste D. Contendaron andry Siz (1. 20.	٠,					
Variable	1	2	3	4	5	
Information quality	1.000					
Information content	0.823 **	1.000				
Information technology	0.811 **	0.829**	1.000			
Trust	0.847**	0.830**	0.847**	1.000		
Relationship commitment	0.802**	0.837**	0.861**	0.862**	1.000	
Innovation performance	0.833 **	0.856**	0.859**	0.877**	0.868**	1

<sup>\*\*</sup>Significantly related in the level of 0.01

Table 4: Fit index of hypothesis path model and modified path model

	$\chi^2$ / df	RMSEA	GFI	AGFI	NFI	TLI	CFI
Hypothesis model	2.731	0.081	0.840	0.80	0.858	0.891	0.904
Modified model	2.537	0.076	0.855	0.811	0.874	0.903	0.919

Table 5: Path coefficient

Path	Path coefficient	t	P	Hypothesis	Outcome
Information quality ¡úTrust	0.492	2.334	***	H1a	Supported
Information quality úRelationship commitment	0.256	4.393	***	H1b	Supported
Information quality úInnovation performance	0.450	2.615	***	H1c	Supported
Information content;úTrust	0.539	1.683	0.222	H2a	Rejected
Information content¡úRelationship commitment	0.945	2.958	0.004	H2b	Supported
Information content¡úInnovation performance	0.501	3.290	0.003	H2c	Supported
Information technology júTrust	0.714	5.078	ope ope ope	H3a	Supported
Information technology; úRelationship commitment	0.540	4.257	oje oje oje	H3b	Supported
Information technology;úInnovation performance	0.657	2.729	ope ope ope	H3c	Supported
Trust¡úInnovation performance	0.138	1.191	0.121	H4a	Rejected
Trust¡úRelationship commitment	0.675	3.445	oje oje oje	H4b	Supported
Relationship commitment;úInnovation performance	0.360	4.105	oje oje oje	H5	Supported

<sup>\*\*\*</sup>Mean be significant at 0.001

Table 6: Hypothesis test results

Hypothesis	Hypothesis content	Outcome
H1 a	Mannfacturer-supplier information quality has a positive effect on trust	Supported
H1b	Mannfacturer-supplier information quality has a positive effect on relationship commitment	Supported
H1c	Mannfacturer-supplier information content has a positive effect on mannfacturer innovation performance	Supported
H2a	Mannfacturer-supplier information content has a positive effect on trust	Rejected
H2b	Mannfacturer-supplier information content has a positive effect on relationship commitment	Supported
H2c	Mannfacturer-supplier information content has a positive effect on mannfacturer innovation performance	Supported
Н3а	Mannfacturer-supplier information technology has a positive effect on trust	Supported
H3b	Mannfacturer-supplier information technology has a positive effect on relationship commitment	Supported
Н3с	Mannfacturer-supplier information technology has a positive effect on manufacturer innovation performance	Supported
H4a	Mannfacturer-supplier trust has a positive effect on mannfacturer innovation performance	Rejected
H4b	Mannfacturer-supplier trust has a positive effect on manufacturer-supplier relationship commitment	Supported
H5	Mannfacturer-supplier relationship commitment has a positive effect on mannfacturers innovation performance	Supported

**Structural equation model analysis:** Using AMOS17.0 to analyze overall fit goodness of the model and get the fit indices of the model is shown in Table 4.

We can see from Table 4,  $\chi^2/df = 2.731 < 3$ , RMSEA = 0.081<0.1, GFI = 0.840<0.85, AGFI = 0.80 = 0.80, NFI = 0.858>0.80, TLI = 0.891<0.90, CFI = 0.904>0.80 in the hypothesis model, thus it can be seen, fit index GFI and TLI of the model did not reach the acceptable range. After revising and adjusting of the model, got fit index of modified model for  $\chi^2/df = 2.537 < 3$ , RMSEA = 0.076<0.1, GFI = 0.855>0.85, AGFI = 0.811>0.80, NFI = 0.874>0.80, TLI = 0.903>0.90, CFI = 0.919>0.80, showed that the index of the model reached the acceptable range, the model had a good fitting.

**Hypothesis testing:** After modifying model, get the path parameter estimation is shown in Table 5.

We can see from Table 5 that H1a, H1b, H1c, H2b, H2c, H3a, H3b, H3c, H4b and H5 have been verified while H1c, H2a and H4a was not validated.

So that, the hypothesis test results is shown in Table 6.

#### DISCUSSION

Through empirical research, the result of this study showed that the three dimensions of information sharing between manufacturers and suppliers can have positive impact on innovation performance directly, it can also have a positive effect on manufacturer innovation performance indirectly through relationship commitment. The mediating effect of trust on the three dimensions of information sharing and innovation performance is not significant, information quality and information technology can have a positive effect on trust, the effect information content on trust is not significant, the direct impact of trust on manufacturers innovation performance was not significant but trust has an indirect positive effect on innovation performance through relationship commitment.

#### ACKNOWLEDGMENTS

This study is supported by National Natural Science Fund (70672090, 71372172), Shaanxi Provincial Project of

Social and Sciences Association (2013Z034), Ministry of Education Program of Humanities and Social Science Research (10YJA630085), Shaanxi Provincial Soft Science Research Project (2010KRW70).

#### REFERENCES

- Anderson, E. and B. Weitz, 1992. The use of pledges to build and sustain commitment in distribution channels. J. Market. Res., 29: 18-34.
- Autry, C.W. and S.L. Golicic, 2010. Evaluating buyer-supplier relationship-performance spirals: A longitudinal study. J. Oper. Manage., 28: 87-100.
- Bianchi, C.C. and M.A. Saleh, 2011. Antecedents of importer relationship performance in Latin America. J. Bus. Res., 64: 258-265.
- Chae, B., H.J.R. Yen and C. Sheu, 2005. Information technology and supply chain collaboration: Moderating effects of existing relationships between partners. Eng. Manage. IEEE Trans., 52: 440-448.
- Cheng, D.J., Z. Song and B.B. Wang, 2010a. Cognitive trust or emotional trust: The influence of high involvement in work system on organizational innovation performance. Econ. Manage.,
- Cheng, H.C., M.C. Chen and C.K. Mao, 2010b. The evolutionary process and collaboration in supply chains. Ind. Manage. Data Syst., 110: 453-474.
- Chengalur-Smith, I., P. Duchessi and J.R. Gil-Garcia, 2012. Information sharing and business systems leveraging in supply chains: An empirical investigation of one web-based application. Inform. Manage., 49: 58-67.
- Corsten, D., T. Gruen and M. Peyinghaus, 2011. The effects of supplier-to-buyer identification on operational performance: An empirical investigation of inter-organizational identification in automotive relationships. J. Operat. Manage., 29: 549-560.
- Daugherty, P.J., A.E. Elinger and D.S. Rogers, 1995. Information accessibility: Customer responsiveness and enhanced performance. Int. J. Phys. Distrib. Logist., 25: 4-17.
- Doney, P.M. and J.P. Cannon, 1997. An examination of the nature of trust in buyer-seller relationships. J. Market., 61: 35-51.
- Fang, S.R., S.C. Fang, C.H. Chou, S.M. Yang and F.S. Tsai, 2011. Relationship learning and innovation: The role of relationship-specific memory. Ind. Market. Manage., 40: 743-753.
- Forslund, H. and P. Jonsson, 2007. The impact of forecast information quality on supply chain performance. Int. J. Oper. Prod. Manage., 27: 90-107.

- Ganesan, S., M. George, S. Jap, R.W. Palmatier and B. Weitz, 2009. Supply chain management and retailer performance: Emerging trends, issues and implications for research and practice. J. Retailing, 85: 84-94.
- Hadaya, P. and L. Cassivi, 2007. The role of joint collaboration planning actions in a demand-driven supply chain. Ind. Manage. Data Syst., 107: 954-978.
- Hong, P., S.H. Youn and A. Nahm, 2008. Supply chain partnerships and supply chain integration: The mediating role of information quality and sharing. Int. J Logistics Syst. Manage., 4: 437-456.
- Huang, G.Q., J.S.K. Lau and K.L. Mak, 2003. The impacts of sharing production information on supply chain dynamics: A review of the literature. Int. J. Prod. Res., 41: 1483-1517.
- Jiang, X. and Y. Li, 2009. An empirical investigation of knowledge management and innovative performance: The case of alliances. Res. Policy, 38: 358-368.
- Krause, D.R. and R.B. Handfield and B.B. Tyler, 2007. The relationships between supplier development, commitment, social capital accumulation and performance improvement. J. Oper. Manage., 25: 528-545.
- Lee, H.L. and S. Whang, 2000. Information sharing in a supply chain. Int. J. Manuf. Technol. Manage., 1: 79-93.
- Lee, H.L., 2000. Creating value through supply chain integration. Supply Chain Manage. Rev., 4: 30-36.
- Lee, J.Y., M. Swink and T. Pandejpong, 2011. The roles of worker expertise, information sharing quality and psychological safety in manufacturing process innovation: An intellectual capital perspective. Prod. Operat. Manage., 20: 556-570.
- Li, H.L. and M.J. Tang, 2010. Vertical integration and innovative performance: The effects of external knowledge sourcing modes. Technovation, 30: 401-410.
- Li, J.Q., R. Sikora, M.J. Shaw and G.W. Tan, 2006. A strategic analysis of inter organizational information sharing. Decis. Support Syst., 42: 251-266.
- Li, S.C., 2012. The research of influence of industry collaboration relationship on enterprise innovation performance-based on the conceptual model and explanatory of case studies. Prog. Sci. Technol., Vol. 29.
- Meehan, J. and G.H. Wright, 2011. Power priorities: A buyer-seller comparison of areas of influence. J. Purchasing Supply Manage., 17: 32-41.
- Miller, H., 2005. Information quality and market share in electronic commerce. J. Serv. Market., 19: 93-102.

- Moberg, C.R., B.D. Cutler, A. Gross and T.W. Speh, 2002. Identifying antecedents of information exchange within supply chains. Int. J. Phys. Distrib. Logist. Manage., 32: 755-770.
- Molina-Morales, F.X., M.T. Martinez-Fernandez and V.J. Torlo, 2011. The dark side of trust: The benefits, costs and optimal levels of trust for innovation performance. Long Range Plann., 44: 118-133.
- Morgan, R.M. and S.D. Hunt, 1994. The commitment-trust theory of relationship marketing. J. Market., 58: 20-38.
- Omar, R., T. Ramayah, M.C. Lo, T.Y. Sang and R. Siron, 2010. Information sharing, information quality and usage of Information Technology (IT) tools in Malaysian organizations. Afr. J. Bus. Manage., 4: 2486-2499.
- Paulraj, A., A.A. Lado and I.J. Chen, 2008. Inter-organizational communication as a relational competency: Antecedents and performance outcomes in collaborative buyer-supplier relationships. J. Operat. Manage., 26: 45-64.
- Rabren, J., 2010. Technology, integration and data drive supply chain visibility. Mater. Handling Manage., 65: 42-43.
- Raghunathan, S., 1999. Impact of information quality and decision-maker quality on decision quality: A theoretical model and simulation analysis. Decis. Support Syst., 26: 275-286.
- Rajesh, R. and J.M. Margaret, 2012. Effects of inter-organizational compatibility on supply chain capabilities: Exploring the mediating role of Inter-Organizational Information Systems (IOIS) integration. Ind. Market. Manage.,
- Ramaseshan, B., L.S.C. Yip and J.H. Pae, 2006. Power, satisfaction and relationship commitment in Chinese store-tenant relationship and their impact on performance. J. Retailing, 82: 63-70.

- Subramaniam, M. and M.A. Youndt, 2005. The influence of intellectual capital on the types of innovative capabilities. Acad. Manage. J., 48: 450-463.
- Svensson, G., T. Mysen and J. Payan, 2010. Balancing the sequential logic of quality constructs in manufacturing-supplier relationships: Causes and outcomes. J. Bus. Res., 63: 1209-1214.
- Wang, L., J.H.Y. Yeung and M. Zhang, 2011. The impact of trust and contract on innovation performance: The moderating role of environmental uncertainty. Int. J. Prod. Econ., 134: 114-122.
- Yan, R.L. and Z. Pei, 2011. Information asymmetry, pricing strategy and firm's performance in the retailer-multi-channel manufacturer supply chain. J. Bus. Res., 64: 377-384.
- Yao, S.J. and Y.G. Wang, 2011. The influence mechanism of customer participation in new product development on technological innovation performance-Based on an empirical study of B-B context. Manage. Sci. Stud. Sci. Technol., Vol. 32.
- Ye, F., J. Zhang and H. Lv, 2012. The influence of supplier opportunism behavior on information sharing and operational performance. Manage. Sci., Vol. 25.
- Zelbst, P.J., K.W. Green Jr., V.E. Sower and P. Reyes, 2009. Impact of supply chain linkages on supply chain performance. Ind. Manage. Data Syst., 109: 665-682.
- Zhang, J. and Y.P. Yuan, 2012. Research review on information sharing of supply chain management. Manage. China Secur. Futures,
- Zhou, H. and W.C. Benton Jr., 2007. Supply chain practice and information sharing. J. Operat. Manage., 25: 1348-1365.