

Sample of Rewrite

Strategic Orientation towards Information Sharing in Supply Chain Management

Abstract

Information ~~sharing~~ ~~sharing used to be~~ ~~is~~ traditionally treated as a practice for streamlining inter-organizational processes in company with the development of inter-organizational systems (IOS). However, in the mindset of Chief Executive Officers (CEOs), information sharing is often deemed as an effective supply chain strategy for the reduction of uncertainty.

This study ~~looks into~~ ~~investigates~~ a causal model of the information sharing of supply chain members by content and process aspects of strategy. The impact ~~made from of~~ trust and commitment on information sharing mechanisms is then examined. Empirical testing was performed on ~~The~~ data gathered from 122 senior managers participating in ~~s~~Supply ~~c~~Chain ~~m~~Management (SCM) activities ~~were empirically tested~~. The results ~~show~~ ~~indicate~~ that trust has a significant~~ly~~ impact on the quality of information sharing in an e-business supply ~~chain~~. The member's long-term commitment ~~also affects~~ ~~makes a substantial contribution to~~ the dedicated partner of ~~supply chain management~~SCM. Moreover, the dedicated partner will effectively reduce the supply chain uncertainty, ~~thereby raising the quality of information and, ultimately, operational efficiency between supply chain partners. and high quality information improves significantly the operation efficiency between supply chain enterprises.~~

Comment [MH1]: CHECK: Should this be plural i.e. "chains"?

Keywords: Information Sharing, Coordination, Trust, Commitment, Supply Chain Performance

1. Introduction

~~A key question for supply chain researchers and practitioners is whether sharing company information to members will reduce the uncertainty in supply chain, especially in e-business environments.~~ An emerging issue for supply chain researchers is whether the sharing of company information with members can reduce the uncertainties in the supply chain, and in particular, for e-businesses.

Comment [O2]: CHECK: Please clarify which members. Do you mean members of the supply chain or supply chain partners?

Despite numerous studies that examine the impact of information sharing ~~to~~ on reducing the uncertainty, ~~there is still an omission about the strategy aspect of information sharing~~ remains a lack of research about strategic information sharing. We propose trust and commitment as missing links of the real impact of information sharing to reduce the uncertainty in supply chain. This research proposes that trust and commitment are two missing factors for measuring the real impact of information sharing on reducing uncertainty in the supply chain.

Comment [O3]: CHECK: Do you mean in general or specific to supply chains. Please clarify.

~~Although the World Wide Web led organizations to transform their interactions more effectively, lower cost, and more seamlessly, privacy issue has also been addressed.~~ Use of the WWW has allowed organizations to improve their business processes, increase the efficiency of transactions, lower costs and seamlessly collaborate across the supply chain. However, privacy issues must also be addressed.

Comment [O4]: CHECK: I am not sure what you point is about privacy issues. Please check this sentence.

~~Over the past 20 years, the practices in the supply chain management have been on the logistics integration and cost reduction in order to provide cheaper, faster, and better products and services to customers. Gattorna (1998) described this evolution in the last 20 years. In the 70s, the supply chain management focused on the integration of storage and distribution as well as the reduction of inventory within an enterprise. The focus then shifted to the re-engineering of the supply chain cost structure in the 80s. Since the 90s, the supply chain management started to emphasize on the improvement of customer services, the enhancement of product development responsiveness, and the integration between different supply chain organizational systems with the same goals.~~ Over the past two decades or so, SCM has focused on logistics integration and cost reduction with the aim of providing cheaper, faster and

higher quality products and services to customers. Gattorna (1998) described, at the time, the supply chain evolution: In the 70s, the SCM focused on the integration of storage and distribution as well as the reduction of inventory within an enterprise. The focus then shifted to the re-engineering of the supply chain cost structure in the 80s. Since the 90s, the SCM ~~started to~~ has concentrated ~~emphasize on the improvement of~~ improving customer services, ~~the enhancement of~~ enhancing product development responsiveness, and ~~the integrating the goals~~ integration between of **different** supply chain organizational systems ~~with the same goals~~.

Comment [SBH5]: These were separate organizations that strove for the same goals by different means? Or only some of them shared the same goals because these organizations differed from each other in other ways?

~~Nowadays, industrial enterprises are facing a much faster changing pace in business environment than it happened before. Their competitions have centered on the contest of supply chains. Only those with higher operational efficiency and better interaction mechanisms will have a brighter future. With this regard, the coordination across the members within the supply chain is needed. Supply chain coordination is a complex activity across organizational borders (Gulati, R et al, 2000). For different partners to coordinate various activities of each in a supply chain, supplier partners must share information with each other (Lee and Billigton, 1993). Therefore, when discussing inter-organizational coordination activities, information sharing becomes a necessary strategy for an enterprise to reduce its uncertainty and increase its flexibility so as to gain competitiveness. However, with the widespread use of internet technologies, industrial enterprises are facing an unprecedented pace of change in the business environment. Competitiveness requires a focus on the supply chain; those enterprises with better operational efficiency and sleeker collaborative processes prevail in the long term. Therefore, members across the entire supply chain are compelled to collaborate. However, supply chain coordination is a complex activity across organizational borders (Gulati, R et al, 2000). For different partners to coordinate various activities of each in a supply chain, supplier partners must share information with each other (Lee and Billigton, 1993). Therefore, sharing information is a necessary for~~ Strategizing inter-organizational activities in order on this basis is likely to produce tangible outcomes, extending to a reduction of ~~to reduce~~ uncertainty, an increase in flexibility and net gains in overall competitiveness.

~~The subjects on supply chain integration and researches on partnerships among supply chain members have been confirmed in many aspects. As the results indicated by these studies, information sharing plays a very crucial role in any supply chain and it is a goal and a key success factor of supply chain integration (Bailey & Pearson, 1983; Ives et al, 1983; Doll & Torkzadeh, 1988; Ferine, 1994; Singh, 1996). Researches also mention that for different partners to develop willingness to cooperate with each other, information and achievement sharing will be of the utmost importance (Parr & Curran, 2000; Grassian, 2000; Uwec, 2000). Just as Mintzberg (1999) mentioned when exploring the essence of strategies, "Strategies involves issues of process and content." When trying to understand inter organizational coordination in a supply chain, one should grasp the principle of that strategic essence. Different inter-organizational coordination activities may have different processes involved, and the depth and breadth of information sharing varies accordingly.~~

The subjects of supply chain integration and research on partnerships among supply chain members have been confirmed in many regards. As the results of these studies indicate, information sharing plays a crucial role in any supply chain and it is a goal and a key success factor of supply chain integration (Bailey & Pearson, 1983; Ives et al, 1983; Doll & Torkzadeh, 1988; Ferine, 1994; Singh, 1996). Research also points out that for supply chain partners to develop a willingness to cooperate, information and achievement sharing is of the utmost importance (Parr & Curran, 2000; Grassian, 2000; Uwec, 2000). According to Mintzberg (1999), "Strategies involves issues of process and content." When attempting to understand the inter-organizational coordination involved in a supply chain, this principle of strategy must be embraced as inter-organizational activities each have different processes which determine the depth and breadth of the information to be shared.

Comment [O6]: CHECK: What is achievement sharing? Perhaps explain this term if it is important for readers to know.

~~According to the experiences in the past, the capabilities for organizations to share information in supply chains were limited for two causes. In the past, the capacity of organizations to share information across the supply chain has been limited for two reasons.~~

~~The first cause is the insufficiency of the information technology of those days, which rendered the communication within the supply chain and the linkage of knowledge incomplete.~~ The first reason is the lack of information technology with which to

communicate; many organization processes were developed prior to the advent of the internet.

Comment [O7]: IDEA: There isn't much explanation of this first reason, but there is a detailed explanation of the second reason.

~~The second cause is the "attitude" of supply chain partners, namely, the lack of willingness of different vendors in a supply chain to share information with each other.~~

The second reason can be attributed to the attitude of supply chain partners, namely, a reluctance of vendors across a supply chain to share information with one another.

Comment [O8]: CHECK: Do you distinguish between a supply chain partner and a supply chain member? Or, are these interchangeable terms? From my perspective, a 'partner' suggests there is more collaboration.

~~The willingness of a supply chain member to share its information will first affect its actual information sharing scenario, and then affect the results of its information sharing implementation, such as the quality and quantity of the information acquired, and so on.~~

The willingness of a supply chain member to share its information with other members will at first affect its information sharing scenario and consequently affect the successes from implementing an information sharing strategy, such as the quality and quantity of the information acquired. Such kind of hesitation resulted from

Comment [O9]: CHECK: I am not sure of the meaning of this term. What is an information sharing scenario?

~~many factors, such as the fear that their competitive edges might be revealed to other vendors, the threat of their sensitive information (e.g. inventory levels or manufacturing schedules) being shared among other channel members, and the potential risk of losing their customers (Lancioni, Smith & Oliva , 2000).~~ Supply chain members are often reluctant to share information across the supply chain for many different reasons: their competitive edge might be sacrificed, sensitive information such as inventory levels and manufacturing schedules might leak to other channel members and the risk of losing their customers (Lancioni, Smith & Oliva , 2000).

~~These two causes show that there are still hesitations and worries which hinder a supply chain member from sharing its information. Can Information Sharing be considered as a strategy in dealing with uncertainty? Is there a formal method for representing information sharing strategy? However, is the implementation of information sharing as successful as it is expected? In addition, are any other factors that may affect the actual scenario and result of information sharing? These are the issues that should be further examined. For these two reasons, there are still hesitations and concerns that may hinder a member of a supply chain from sharing its information. The following questions are posed: Can information sharing be considered as a strategy for dealing with uncertainty? Does there currently exist a formal method for representing an information sharing strategy? Do information~~

sharing strategies meet expectations? Furthermore, what other factors might affect the information sharing scenario and its results? These issues should be examined.

Concluding the above discussion, ~~the three objectives of this research are listed as follows:~~

Comment [O10]: CHECK: I guess that these objectives are specific to the supply chain.

1. To incorporate the characteristics of inter-organizational coordination processes in the supply chain and the resulting information sharing content into ~~the an~~ information sharing strategy.

Comment [O11]: CHECK: What is 'information sharing content'? Do you mean the actual information that is shared? This is called 'shared content' or 'shared information'.

2. To develop precedent variables which might influence the process and content of information sharing across the supply chain.

3. To ~~suggest-propose~~ a strategic model, based on the constructs developed ~~in from~~ 1 and 2, ~~to-that~~ may serve as a ~~reference~~-model ~~for-by~~ which firms ~~to-could~~ manage uncertainty and improve performance in the supply chain.

This paper proceeds as follows: Section 2 reviews the role of trust and commitment ~~which are as the~~ antecedents of information sharing ~~in the supply chain~~ and the impact ~~that the process of information sharing to-can have on uncertainty.uncertainty that the process of information sharing could made.~~ Section 3 introduces and develops the research model and hypotheses to explain how trust and commitment indirectly influences the level of uncertainty in the supply chain through the process of information sharing. Section 4 describes the research methodology and the questionnaire used to test the proposed hypotheses. Section 5 presents the data analysis and results. Finally, Section 6 discusses ~~thise~~ study's contributions and implications for both theory and practice.

6. Conclusion

This research project explored the role of trust and commitment in sharing information in supply chain, ~~and examined using as its departure point~~ our first research question: "how do trust and commitment influence the supply chain uncertainty and performance through sharing information between chain members?" ~~To-do-so initiate proceedings,~~ we conducted a survey, ~~and will attempt to map in high relief and discuss~~ our findings ~~and present the contributions of our research in~~ throughout the course of this section.

Our second research question ~~addresses~~ addressed information sharing strategy ~~based on~~ as it pertains to the process and content aspects. Results indicated that information sharing includes the process aspect of inter-organizational coordination and the content aspect of information sharing. In terms of the process, it is clear that a ~~supply-chain~~ supply chain partner must rely on Dedicated Partner and formalized trading and payment processes to cope with demands from its ~~supply-chain~~ supply chain partners. ~~In terms of~~ As for the content dimension, a ~~supply-chain~~ supply chain partner must share high-quality information to assist its ~~supply-chain~~ supply chain partners' decision-making~~s~~ when conducting the information sharing.

Our research ~~resulted in~~ yielded three specific findings. First, we ~~found~~ discovered that trust affects information sharing on two processes variables, while commitment only affects on Dedicated Partner process of information sharing. Second, we found no evidence to support that the formalization ~~process of information sharing has a negative effect on the supply chain uncertainty,~~ but Dedicated Partner process had. This result ~~indicated~~ leads us to conclude that ~~the~~ formalization is insufficient to reduce ~~all the factors which cause supply chain uncertainty in a~~ supply chain architecture. We would reference in particular the demand, provision, and manufacture dimensions as not readily amenable to modification by formalization. Formalization instead plays a more modest role in forming preliminary transaction relationships between supply chain partners. ~~with respect to demand, provision, and manufacture dimensions, and can only contribute to the formation of preliminary transaction relationships between~~ supply chain partners. When it comes then to understanding reductions in supply chain uncertainty, attention is better directed to ~~Finally, our finding found the~~ Inter-organization Coordination, because it is here that one can observe how the quality of information directly affects the performance of the supply chain. ~~can reduce the supply chain uncertainty and then improve the performance of supply chain.~~ The quality of information directly affects ~~the performance of supply chain.~~

The results of this research showed that two antecedents – Trust and Commitment – ~~have strong impact on~~ play a determining role in the sharing of information ~~sharing of~~ between supply chain members. From a broad perspective, trust and commitment can encourage two ~~supply-chain~~ supply chain partners to ~~share information, and hence also encourage them to~~ invest their time, energy and ~~resource~~ into ~~build up and~~

Comment [MH12]: CHECK: As I recall, formalization had no discernible effect on supply chain uncertainty. Might it be better to just say that, otherwise it may be confusing for the reader to sort out whether having “no effect” is the same thing as a “negative” effect or a “positive” effect?

Comment [MH13]: CHECK: Should this be plural i.e. “resources”. Is there a need to specify the kinds of resource(s) referenced here, are they, for instance, the “raw material” mentioned earlier in this paper?

~~reinforce—consolidating~~ inter-organizational information sharing processes, ~~in~~ particularly; when resources from both parties are limited. From a ~~more~~ specific perspective, the two antecedents impact both the process and content aspects of information sharing.

~~In the aspect of the process,~~ Trust falls under the umbrella of the process aspect of information sharing, given that it promotes both formalization and dedicated partner-based process, while commitment can only stimulate Dedicated Partner. Although both trust and commitment have ~~significant impact on~~ important ramifications for the Dedicated Partner, the latter shows a greater coefficient, typifying that commitment ~~has a greater impact—contributes~~ more than trust ~~on the—in~~ establishing ~~establishment of~~ a Dedicated Partner. The Dedicated Partner between ~~supply chains~~ supply chain organizations requires enterprises to make practical and highly specialized investments in equipment and personnel training, ~~including highly specialized tools and equipments, as well as personnel training.~~ Therefore In other words, for ~~supply-chains~~ supply chain organizations to establish a dedicated cooperative relationship, they have to invest in long-term commitments. Only through long-term cooperation, ~~supply chain~~ supply chain partners ~~can~~ understand each other's needs, resolve disagreements in their communication, and thereby ~~seek to~~ improve their information sharing processes.

~~In the aspect of the content~~ Be this as it may, both trust and commitment are germane to the content aspect, on account of their influence on ~~have significant impact on—the~~ quality of information sharing ~~quality~~. While ~~both of them—each~~ contribute to high-quality information, trust has greater overall impact. ~~As shown by the results of this research, the strengthening of trust between supply chains~~ supply chain organizations can help to improve the quality of information content shared among them. To prosper in the ~~cope with competitions~~ competitive in the industrial environment, ~~replete with its~~ varying consumer demands and preferences, ~~as well as~~ not to mention other issues ~~like such as~~ the dramatic shortening of product life cycles, ~~supply chains~~ supply chain organizations ~~have need~~ to acquire from each other more accurate, ~~more—integral and timelier information—from each other~~. But just as importantly, there are inter-organizational “boundary issues” that must be attended to with the upmost vigilance. Organizations must establish risk management strategies

as they have a vested interest in minimizing occurrences of ~~Meanwhile, to avoid issues like~~ information leakage ~~and~~ ~~management vulnerabilities.~~ ~~Nothing less than~~ the establishment of a complete, comprehensive integration of information systems ~~has to be supported by strong~~ ~~inoculated by~~ inter-organizational trust will suffice ~~between organizations.~~ ~~Therefore, to assist in the integration of information aspects between organizations,~~ It should be noted, however, that this could only come about if a foundation of strong trust ~~must be~~ is established ~~between these organizations before the~~ prior to integration ~~task begins.~~ Although high-quality information is not easy to acquire during the supply chain cooperation, ~~the~~ ~~maintaining~~ maintenance of strong trust and commitment between ~~supply chain~~ supply chain partners ~~for sharing information~~ can make them more willing to exchange high-quality information with each other.

Comment [MH14]: CHECK: Are these managerial vulnerabilities a consequence of information leakage? Perhaps it may be helpful to clarify which factors cause management vulnerability.

This research also finds that the more willingly organizations are to establish strong trust and commitment between them; the more helpful it will be to develop deeper levels of Dedicated Partner. ~~Therefore, supply chain~~ It would be sensible for supply chain organizations ~~should to~~ pay more attention to maintaining or strengthening ~~of~~ their mutual trust and commitment, ~~so as to~~ encourage the inter-investments of resources ~~between them.~~

~~Besides~~ ~~Aside from~~ the findings relating to the two antecedents, trust and commitment ~~the two antecedents,~~ the research findings ~~results of this research also indicate~~ affirm that information sharing can reduce uncertainty and enhance the performances of a supply chain. ~~Supply chain~~ Supply chain partners can reduce the information asymmetry between manufacturers and channel members through the integration of Dedicated Partner and information sharing, ~~and~~ thereby bringing benefits to all supply chain participants. As far as the performances of the overall supply chain network are concerned, effective integration of information flows through information sharing can strengthen the responsiveness toward rapidly changing consumer demands.

Differential impacts on uncertainty and performance can be identified with respect to information sharing. ~~The impacts made to uncertainty and to performance from information sharing are discussed separately here in order to avoid confusion. In regard to reducing uncertainty, this research finds~~ Our findings support the conclusion

that only the process aspect of information sharing ~~has strong impact significantly reduces~~ ~~on reducing~~ the uncertainty of a supply chain. We also note that ~~Furthermore,~~ Formalization and Dedicated Partner ~~seem to be~~ ~~are~~ two factors ~~included~~ in the process aspect ~~that have a strong impact on oftentimes~~ associated with supply chain uncertainty ~~as discussed previously~~. However, the results show that only close ties to the Dedicated Partner can reduce supply chain uncertainty. ~~To reduce the uncertainty of a supply chain, supply chain~~ ~~supply chain partners have to engage in tighter interactions in order to establish a Dedicated Partner.~~ Investments in specific assets help ~~supply chain~~ ~~supply chain~~ partners understand each other's needs as well as share information with each other, so that they can effectively handle their product markets and demand forecasts.

Comment [MH15]: CHECK: Is this statement also intended as a grand summation of the paper's argument, of the achievements of the original research? If so, it is not clear to me. Might it be a good idea then to perhaps offer a more expansive overview of why these points are significant in the context of the project as a whole?