

INVESTIGATING THE RELATIONAL FACTORS FOR INTER-FIRM INFORMATION EXCHANGE BASED ON COMMITMENT-TRUST THEORY: A CONCEPTUAL FRAMEWORK

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Abstract

This paper seeks to analyze the concept of inter-firm information exchange in the context of inter-firm relationship and discuss further on the relational factors based on trust and commitment. The paper is a synthesis of the literature on inter-firm information exchange and the approach is a discussion on the issue and relational factors. There are four major findings that are found in this study. First, the understanding on the concept of information exchange between firms. Second, the influence of relational factors on trust and relationship commitment by examining the relationship between constructs. Third, the simultaneous mediating role played by relationship commitment and trust towards inter-firm information exchange warrants for more exploration. Finally, the impact of the determinant factors (shared value, communication, non-opportunistic behavior) in developing trust and relationship commitment for the research consequences (inter-firm information exchange). However, to validate the model, the hypotheses development and quantitative survey is required.

Keywords: *Information Exchange, Trust, Relationship Commitment*

2016 GBSE Journal

Introduction

Today, the new information economy era (Chen & Reich, 2007) Information is becoming a significant important strategic weapon for firm to gain competitive advantage (Bhatt & Grover, 2005; Mussa, Dominic, Downe, Loke, & Thamaraiselvan, 2013; Porter & Millar, 1985; Vives, 1990). Information is referred as endowed data with relevance and purpose (Drucker, 1998) and being considered as value for business. So, generating value from

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information is an increasingly important part of modern business firm (Kauffman, Li, & van Heck, 2010) and one of the strategy to generate the information is through inter-firm relationship (Clemons & Hitt, 2004; Kauffman et al., 2010; Kauffman & Mohtadi, 2004, 2009).

Nowadays, one of the most significant changes in the business world is that a firm cannot exist alone and no longer compete as autonomous entities but rather as inter-firm business relationship (Darmasetiawan, Idrus, Troena, & Salim, 2013; Peng, 2011). Most of the Inter-firm relationship is referred as the partnership between firms with other parties for certain purposes. It is including alliances, buyer-supplier relationship, joint venture, cooperation and firm-rival alliances (Pearlson & Saunders, 2009). Firm is seeking to improve their competitive position by cooperating with other companies is the latest trend in business world (Thimm & Rasmussen, 2010, 2012). In general cooperation refers as few people or communities or business units or inter-firm working together to achieve certain goal. Cooperation as in Transaction Cost Theory involves at least three transactional exchanges such as expertise and practice exchange, facilities exchange and information accessibility. For information accessibility, it involves reciprocity and communication. Reciprocity and communication refers to information exchange between firms (McKeen & Smith, 2009, 2012).

Information exchange is referred as the extent of bidirectional transactional of information to and from the partners (Peng, 2011) based on it types. Information exchange will make information much more accessible (Fink, 2007) and also can speed up the decision making and providing transparency and capabilities of information (Reeves, Malone, & O Driscoll, 2008). Effective inter-firm relationship based on shared information is essential for successful inter-firm relationship management (Kwon & Suh, 2004). So, cooperation requires exchanging information (Pearlson & Saunders, 2009; Uzzi, 1997). It is stated that only information exchange is a periodically activity undertaken under cooperation (Liljegren, 2013) and this activity is very common in the strategic cooperation (Kwon & Suh, 2004) and link to competitive advantage (Porter & Millar, 1985). ((Daley, 2009) claimed that despite the acclaimed benefit that derived from inter-firm information exchange, in reality firms that are actively involving in this activity are small. Furthermore, in practice firms are still reluctant to participate in a regular information exchange (Madlberger, 2008). Now the debate is not about whether information should be exchange or not but more on how to exchange the right and accurate information (Peng, 2011). So, the central issue toward inter-firm information exchange is pointing to mechanism to make it happen. This paper is an attempt to provide a conceptual understanding of inter-firm information exchange through the proposed theoretical framework and the contributing factors. Based on previous research on the topic of information exchange and relational mechanism, a framework for studying inter-firm information exchange which is based on two theoretical perspectives is proposed; Commitment-trust Theory (CTT) and information exchange model. In addition, the determinants construct namely shared value; communication and non-opportunistic behavior are explored to determine the possibility in contributing to inter-firm information exchange. Based on the proposed theoretical framework, several propositions are proposed.

The rest of the paper is organized as follows. Next, Section 2 will review the literature on information exchange, trust and relationship commitment. Then, Section 3 presents the conceptual model and propositions. Conclusions are presented in Section 4.

Literature Review

Information Exchange

Based on Harnesk (2006) there are three aspects of information exchange being study. Firstly social information exchange which focus on interaction and process of exchange. Secondly, transaction information exchange based on relational mechanism. Lastly, information exchange mediation by technology. Much of the previous literature exploring the value of information exchange in a supply chain (Baihaqi & Sohal, 2012; Lee, Kim, Hong, & Lee, 2010; Moberg, Cutler, Gross, & Speh, 2002; Ramayah & Omar, 2010; Wu, Weng, & Huang, 2012; Zailani, Premkumar, & Fernando, 2008). Among scholars, Moberg et.al (2002) is the most referred literature regarding to information exchange. Moberg et.al (2002); Zailani et.al (2008) using Supply Chain Management Theory (SCM) to examine the relationship of antecedent factors to information exchange meanwhile, Baihaqi and Sohal (2012); Ramayah and Omar (2010) were more interested to measure information exchange relationship to performance.

There are several terms used instead of information exchange in the literature. This term is usually used interchangeably in most journal articles. Among them Inter-firm information exchange as in (Ramayah & Omar, 2010; Moberg et.al, 2002; Peng, 2011; Lee et.al, 2010), Inter-firm information sharing in (Li, 2002; Omar, Ramayah, Lo, Sang, & Siron, 2010; Yang & Maxwell, 2011; Zailani et al., 2008) and inter-firm information integration (Wei, Wong, & Lai, 2012). Basically these terms refer to the same and the benefits are almost same. The benefit and problem of information sharing has drowned considerable attention in various business fields such as in operation management, finance, economics, R & D, and production (Clemons & Hitt, 2004). Peng (2011) discussed the benefits from firm-supplier information exchange in his book. Among them benefit for better services, support for procurement, Improve in chain level performance, reductions in inventory and costs, Low demand uncertainty, Agility and flexibility, and most important together with improved stability and performance.

Information exchange has been viewed from different perspectives including technological, organizational, sociological and politic context (Yang & Pardo, 2011). However base on Yang and Maxwell (2011) inter-firm information exchange can be viewed from three perspectives; technological, policy and organizational. For our research, an organizational perspective is chosen when it involves relational mechanism. Under organizational perspective there are several types of information involve such as operational information, strategic information, managerial and order (Tai & Ho, 2010). However based on Zailani et.al (2008) there are three classes of information; strategic, control and operational. In this research the focus is on two types of information; strategic and operational.

Ramayah and Omar (2010) suggested that partners should effectively exchange strategic information for greater performance. However Baihaqi and Sohal (2012) found a contradicting result when information sharing is not directly related to organizational performance. The manufacturing firms recognized the importance of information sharing, quality and IT tool usage (Omar et.al, 2010). The result provides insight into the type of information shared, the aspects of information quality emphasized and IT tool utilization (Omar et.al, 2010). Zailani et.al (2008); Moberg et.al (2002) indicated that independent variables; information quality, commitment (IT and SCM), size, trust are significantly related to information exchange. It shows that trust and commitment are important elements in developing information exchange.

Trust and Commitment

Trust can be simplified by dividing into factors, determinants and attributes (Cheikhrouhou, Pouly, & G. Madinabeitia, 2013). Previous research has showed that inter-firm relationship can be categorized by the type of trust. Nicolaou, Ibrahim and van Heck (2013) tried to understand the influence of information quality in the specific type of trust (competence and goodwill). Cheikhrouhou et.al (2013) identified trust categories and their relationship with information exchange. From five identified types of trust only competence, relational and contractual trust have a significant impact in strengthening the relationship between firm through information exchange. Relational trust is includes human aspect of the economic relation that could allow developing or improving relation. Communication, shared valued and opportunistic behaviour are attributes that influence relational trust. It also emphasized on commitment in the relationship. Meanwhile Nicolaou et.al (2013) focuses on competence and goodwill trust.

Morgan and Hunt (1994) theorized that trust and commitment is key important construct for successful relationship marketing. Basically there are several types of commitment proposed by researchers such as relationship commitment (Ganesan, 1994; Moorman, Zaltman, & Deshpande, 1992; Morgan & Hunt, 1994), calculative commitment (Gounaris, 2005; Meyer & Allen, 1991; Ruyter, Moorman, & Lemmink, 2001), affective commitment (Gounaris, 2005; Meyer & Allen, 1991; Ruyter et al., 2001), continuance (Meyer and Allen, 1991), and normative commitment (Meyer & Allen, 1991; Müller, 2008). However original relationship commitment has been chosen for this research.

The Conceptual Model

Figure 1 depicts the proposed theoretical framework to examine inter-firm information exchange and the antecedents based on relational governance perspective. The framework is adapted from original CTT by Morgan and Hunt (1994) and the extension of the theory by Mukerjee and Nath (2007); Kassim and Abdulla (2007) for constructs selection. Then for Inter-firm exchange, this research uses TCT as the underpinning theory. The resultant of the framework is compromised nine constructs clustered into three antecedents constructs namely shared value, communication and non-opportunistic behavior. Inter-firm information exchange (consequences) will have four second order constructs namely horizontal operational information exchange, vertical operational information exchange, horizontal

strategic information exchange, and vertical strategic information exchange. Relational trust will act as independent variables and relationship commitment as mediating variables. There are potential antecedent factors that could be included in the framework, but the focus is on three factors that have been chosen due to its suitability, applicability and strong support from literature.

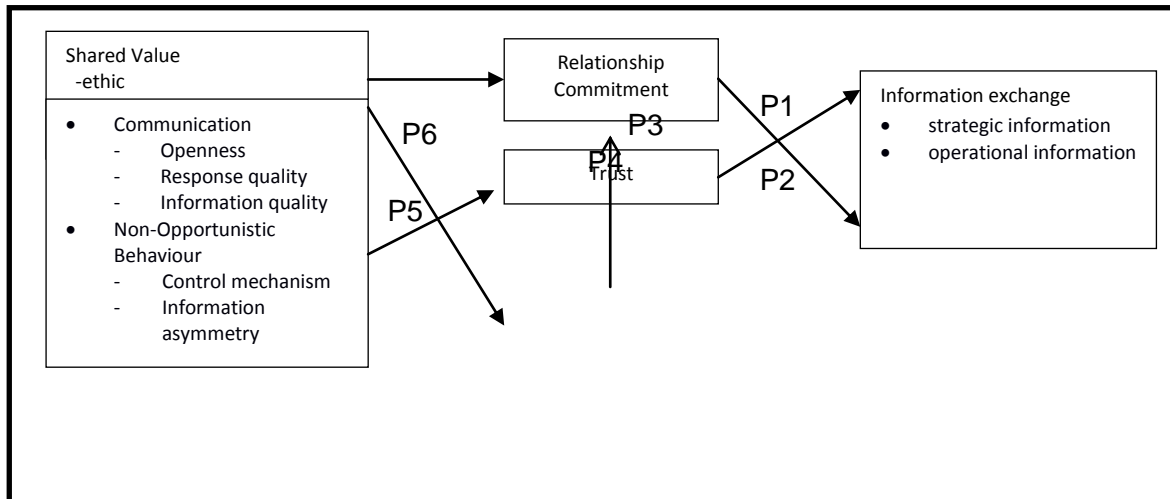


Figure 1: Conceptual Model

Inter-firm Information Exchange

Inter-firm information exchange is the consequences of both relational trust and relationship commitment. Based on Morgan and Hunt (1994) inter-firm information exchange is conceptualized as a form of cooperation as suggested by Lee et al. (2010); Tomlinson (2010); Tomlinson and Fai (2012); Liljegren (2013). Meanwhile Nguyen (2011a); Nguyen (2011b) considered information exchange as characteristic of cooperation. TCT acts as the most influence theory regarding to inter-organization relationship and inter-firm information exchange. The inter-firm information exchange is divided into its types or organization decision level.

Operational information exchange refers to short term information (daily and weekly). The activities for operational information exchange such as shipment notice, and order status (Ramayah & Omar, 2010). Operational information is information related to operational business activities including short-term order, delivery, incentive and production (Lee et al., 2010). Meanwhile strategic information exchange refers to information which is strategic in nature that way has a long term effect on business (Ramayah & Omar, 2010). Strategic information is information related to strategic business activities including long-term pricing strategy, demand forecast, new product development, technology development, and marketing strategy (Lee et al., 2010). Operational is related to efficiency (Lee et al., 2010). Both operational and strategic are found to be necessary in many cooperation performances (Ramayah & Omar, 2010).

Trust and Relationship Commitment

Derived from CTT trust is viewed as the willingness of a party to rely on the behaviour of others, especially when the behaviours have outcomes implications for the party bestowing trust (Hall, Skipper, Hazen, & Hanna, 2012; Morgan & Hunt, 1994). Trust in general lead to better work relationship, improve decision making, enhanced the organizational effectiveness, reduce transaction cost, greater information sharing and improve team effectiveness (Jeffries & Becker, 2008). Once trust is established, firm learn that coordinated joint efforts will lead to outcomes that exceed what firm would achieve (Morgan and Hunt, 1994). Trust is more appropriately considered as a mechanism to control the action of the collective organization (Goo & Huang, 2008). Various researchers have suggested that trust will positively influence the information exchange between firm as in (Cheikhrouhou et al., 2013; Goo & Huang, 2008; Moberg et al., 2002). Based on Cheikhrouhou et.al (2013) relational trust is chosen due to its appropriation to influence information exchange. Based on the argument, it is proposed that trust have an effect on strategic and operational inter-firm information exchange.

Proposition 1: Trust will affect both strategic and operational inter-firm information exchange in the context of inter-firm relationship.

Relationship commitment is defined as an enduring desire to maintain the valued relationship with expectation of continuity an intention to strengthen the relationship (Hall et al., 2012). As aforementioned, relationship commitment is chosen because of it suitability and based on behavioural in time and influence of long-term loyalty. Relationships commitment emphasize on the desire to maintain a valued relationship if the existence of the relationship is considered important (Ganesan, 1994; Moorman et al., 1992; Morgan & Hunt, 1994). As information exchange is considered important in the existence of the relationship, thus it is proposed that relationship commitments have positive affect on strategic and operational inter-firm information exchange.

Proposition 2: Relationship commitments will affect both strategic and operational inter-firm information exchange in the context of inter-firm relationship.

From literature analysis regarding to Commitment-trust theory, most of the research are link trust and commitment in their model (e.g. Wu et al., 2012; Mukherjee & Nath, 2007). It show that trust also work as factor on relationship commitment and also mediator. Based on the argument, we proposed that trust has an impact on relationship commitment regarding to inter-firm information exchange.

Proposition 3: Trust will influence relationship commitment when a firm exchanges strategic and operational information in the context of inter-firm relationship.

From the previous study, trust and commitment also play mediating role between relational factors and cooperation in Morgan and Hunt (1994); Wu, Weng and Huang (2012); Goo and Huang (2008), and behavioural intention in Mukerjee and Nath (2007). So, it is expected that, the influence of the relational factors on operational and strategic information exchange is mediated by trust and relationship commitment.

Proposition 4: The influence of the relational factors on both strategic and operational inter-firm information exchange will be mediated by trust and relationship commitment.

Relational Factors on Trust

Communication. From the viewpoint of not-for-profit sector regarding to relationship marketing, there is a positive influence of communication on trust (MacMillan, Money, Money, & Downing, 2005). Anderson and Narus (1990) also found the same positive association between these two constructs. According to Mukerjee and Nath (2007), Kassim and Abdulla (2007); Fock and Soh (2006), informational factors related to communication are openness, response quality and information quality. Base on that the informational factor of communication is referred as open interaction, speed of response and quality of information may foster the relational trust in relationship. Based on these grounds, the positive relationship between communication based on information quality, response quality and openness of interaction with relational trust is proposed.

Non-opportunistic behavior. Non-opportunistic behavior was proposed by Macmillan et.al (2005) as opposed to Morgan and Hunt's (1994) opportunistic behavior. Macmillan et.al (2005) attempted to simplify the model by changing the label of opportunistic behavior to non-opportunistic behavior. According to Macmillan et.al (2005) non-opportunistic behavior associated positively to trust. Based on Kassim and Abdulla (2007); Mukerjee and Nath (2007), information assymetry and control machanism are the factors under oportunistic behavior that have impact on trust. Information assymetry in non-opportunistic behavior is referred as undistortion of information meanwhile control machanisme referred as non-violation of rule. According to Zineldin and Jonsson (2000), non-opportunistic behavior is one of the important factor that support trust. Therefore, the following propostion is derived that non-opportunistic behavior have an impact on relational trust based on appropriate control machanism and undistortion information assymetry.

Proposition 5: Relational factors of communication and non-opportunistic behavior will affect trust when a firm exchange strategic and operational information in the context of inter-firm business relationship.

Relational Factors on Relationship Commitment

Shared Valued. According to Morgan and Hunt (1994), exchange partners with shared value are more committed to their relationship meanwhile Zineldin and Jonsson (2000) stressed on important of shared value to the relationship commitment. Shared value based on the original version by Morgan and Hunt (1994) is the extent to which partners have belief about behaviors, policies and goals are important or unimportant, appropriate or inappropriate and right and wrong. Further Mukerjee and Nath (2007) and Kassim and Abdulla (2007) look at privacy, security and ethics. Security and privacy refers to the protection of information from intrusion. Fear on the lack of security and privacy on information could reduce trust and commitment. Ethic is a key aspect of shared value (Mukerjee and Nath, 2007). Based on the above discussion, the shared value of information based on security, privacy and ethic have a positive impact on relational trust and relationship commitment are investigated.

Proposition 6: Relational factors of shared value based on security, privacy and ethic will influence trust and relationship commitment when a firm exchange strategic and operational information in the context of inter-firm relationship.

Conclusion

In this study, propositions are offered an opportunity for further investigation on the fields of inter-firm relationship by focusing inter-firm information exchange as research domain. The proposed model should attract interests from the practitioners and academicians. For the practitioner, the framework will enhance their understanding on the factors that contribute to the needs in inter-firm information exchange. For academicians, the framework can enhance knowledge in the supporting theories and can also contribute to the development of inter-firm cooperation business model.

In conclusion, this paper proposes the relationship between relational factors; communication, non-opportunistic behaviour and shared value to the trust and commitment can enhance understanding on the concept of relational mechanism based on trust and commitment for the purpose of inter-firm information exchange. Secondly, this paper highlights the role of trust and commitment in fostering inter-firm information exchange. Lastly, this paper suggests that the existence of inter-firm exchange could be in the strategic and operational position would promote clear understanding for the success inter-firm relationship.

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