Capturing The Concept Of Trust Right In Supply Chain Partner's Relationship - A Conceptual Framework

Mohd Laeequddin ¹, B. S. Sahay ², Vinita Sahay ³

¹ Express Flexi Pack, United Arab Emirates; ² Management Development Institute, India; ³ Institute of Management Technology, India

ABSTRACT

While there is unanimity in the large part of the supply chain management literature that, trust is an essential element for successful supply chain partner's relationship, there is not a universal all encompassing definition or concept of trust. Therefore this paper has attempted to capture the concept of trust right in supply chain partner's relationship through an integrated conceptual frame work from trust and risk perspectives to facilitate the supply chain members to understand the concept of trust and to address the issue of how to build trust.

Keywords: Supply chain partners, Perspectives of trust, Perspectives of risk, Concept of trust.

1. Introduction

Trust is often referred as an essential element for successful supply chain partner's relationship (Sahay, 2003; Svensson, 2004; Varma et al., 2006). Spekman and Davis (2004) argued that building partnership trust is at the heart of managing risk and a prerequisite (Kasperson et al., 2003) in supply chain. Trust influences knowledge creation through the opportunity, motivation, and capability of the knowledge combination in organizations and other entities such as informal network structure, shared norms & values, and risk interact with trust to affect the knowledge creation (Park, 2006). Thus, researchers and practitioners are turning their attention to the concept of trust as a mechanism enabling managers to achieve organizational openness and ultimately, competitiveness while reducing social uncertainty and

vulnerability (Mollering, 2004). Sinha et al., (2004) mentioned lack of trust is one of the major factors that contribute to supply chain risks. Johnston et al., (2004) found that high-trust levels were associated with increases in cooperative behavior among logistics outsourcing partners, which in turn led to higher partnership performance levels. With the emergence of RFID based u-commerce, the issue of consumer trust actually has gained additional importance because consumers are usually more concerned about the trust issue whenever new technologies are introduced in commerce (Lee, 2007). With new technologies and the ubiquity of their reach we should recognize the softer underlying issues, for example emotions, trust, reciprocity and awareness (Jones, and Ranchhod, 2007).

Despite the availability of vast literature on trust, there is no clear understanding of concept of trust referring to supply chain partner's relationship, as Holliday (2003) mentioned, there is no construct of trust with a clear definition, or even one complex definition. According to a number of guest editorial review articles of special issues of management journals (e.g. Harrison, 2003; Mollering, 2004; Arnott, 2007) there is a need for studies on conceptual issues and importance of empirical testing of multi constellations of trust with respect to vulnerability and risk, nature and extent of uncertainty and urge to build an integrated view of trust.

To address the above issue this paper has developed an integrated conceptual model to under stand trust at first place to build trust. Though the model represents the trust building process at dyadic level the concept can be simply extended to any number of levels and perspectives. The next section provides an understanding of trust as described by various authors in literature, the section next to that discusses various perspectives of trust and risk. Further section provides a structured concept of trust in supply chain partner's relationship. Further section discusses the issues of trust building process and risk engagements. Section further to that provides managerial implications. Finally paper concludes suggesting directions for future research on trust building process.

2. Literature Review

In the process of conceptualizing trust, researchers have identified a number of antecedents of trust - including personal characteristics (Rotter, 1967), situational factors (Scott, 1980; Kee and Knox, 1970), institutional arrangements (Sitkin and Roth, 1993) and Sheppard and Tuckinsky (1996) suggest that trust can be of three types-deterrence-based, knowledge-based, and identification-based. Ring (1996) proposes that trust is of two types, one being fragile and the other resilient. Whereas fragile trust is more calculative, resilient trust is based on a perception of goodwill. McAllister (1995) emphasized the point that trust is either cognition-based or affect-based. Cognition is calculative and affect is about emotions and goodwill. Wicks et al, (1999) identified three levels of trust; high trust, moderate trust and low trust to reach an optimal level of trust. Barney and Hansen (1994) suggest that inter firm trust comes in weak form, semi-strong form, and strong form, depending upon the degree of vulnerability in the relationship. Tyler and Kramer (1996) mentioned trust embraces construct of ethics, morals, emotions, values and natural attitudes and combines a variety of fields, including philosophy, psychology, sociology, political science,

economics, computer science, and organizational behavior. Corazzini (1977) described trust for an individual as a multi-dimensional psychological construct composed of elements such as expectancy, reliance upon others, faith, surrender of control, consistency, mutuality and utility for risk. Each of these dimensions describes the way trust works as a personal cognitive response with regard to an object that can exist anywhere in future human reality (Medlin 2002). Bachmann (2001) argues that inter-organizational trust is especially dependent on and mediated by the institutional framework in which the relationship is embedded. Holliday (2003) mentioned trust as a theme, not a construct with a clear definition, or even one complex definition. According to Ammeter et al, (2004) trust is a complicated and multifaceted concept. Mayer et al., (1995) described trust as willingness to take risk. Considering trust as risk coping mechanism and willingness to take risk, several authors have also paid attention on the sources of uncertainty and the relative connected risk, inside a supply chain (e.g, Koh and Saad, 2004) to mitigate risk and maintain relationship.

Some of the sources of risk, studied are; price fluctuations, available capacity, manufacturing yield, supplier quality, internal organization, competitor's action, and information delay, political environment, customs regulations. Cousin et al., (2004) suggest that there are two main types of supply chain risk to which partners can be exposed, technological risk and over-reliance on single partner. Bernstein (1996) maintains that risk is about choice; the action we dare to take. According to the Transitional Cost Economics (TCE) theory of Williamson (1979) a part of the business cost is associated with managing the buyer and supplier relationship. For example, some of the costs of a relationship to a supplier could be the investment in machinery or technology in order to supply the buyer. These costs could be very high and could expose the supplier to considerable risk should the customer choose to go elsewhere. From the customer's point of view, this type of situation might make it difficult to find and costly to switch to another supplier. In the former situation, the transaction costs for the customer might be lower whilst in the latter they might be higher. Here, the partners are exposed to economic risk. With increasing size of the partner's organizations the other partner need to build their dynamic capabilities to respond to the partner's requirement or risk the relationship. Similarly, a long term trust worthy relationship between partners may turn risky under high uncertainty or risk conditions, firms may need to either develop some additional assurances from various risk perspectives or use formal governance mechanisms such as contracts or legal agreements to reduce the risk.

Various perspectives of trust and risk provided in the literature can broadly be grouped in to the following three streams:

- Characteristics based trust / characteristics based risk which deals with trust or risk characteristics such as reliability, credibility, commitment, benevolence, goodwill, affect, emotions etc.(e.g Mayer et al., 1995; Cumming and Bromiley,1996; Corazzini, 1977; Morgan and Hunt, 1994; Geyskens et al., 1998; Rousseau et al., 1998), Puto et al., (1985) and Mitchell (1995)
- 2. Rational Trust / rational risk which deals with the rational choice of trust or risk such as economics, dynamic capabilities and technology adoption (e.g.,

Williamson, 1993; Zaheer and Venkatraman, 1995; Lippert and Swiercz, 2005), Heide and Weiss (1995)

3. Institutional Trust / institutional risk protection, which induces trust between partners by reducing the risk level through legal frame works, commercial law, control system, agreements and contracts etc. (e.g. Kramer, 1999; Das T.K, 2001; Child and Mollering, 2003), Newman et al., (1993) and Sherman (1992)

2.1. Characteristics Based Trust

A great deal of research (e.g. Corazzini, 1977; Mayer et al., 1995; Geyskens et al., 1998; Rousseau et al., 1998; Morgan and Hunt, 1994) has documented the importance of trust in maintaining satisfactory relationships. The focal issue of this research has been the effect of individual characteristics on the establishment of trust. Characteristics that have received significant attention in the literature include:

- ➢ Competence,
- > Dependability
- Commitment
- Reliability
- > Belief
- ➢ Fairness
- ➢ Benevolence
- ➢ Honesty
- Credibility and
- Willingness to take risk

The characteristic based factors are dependent on the mutual perceptions, positive or negative past experiences. For example, competence is defined as the degree to which customers perceive that the supplier has required skills and knowledge to supply the product. Reliability and promptness refer to the delivery of the product or service in a dependable and timely manner (Parasuraman et al., 1985). According to the definition of trust given by Doney and Cannon (1997) trust requires an assessment of the other party's credibility and promises. According to So and Schill (2002), trust is developed through consistent and predictable act of partner over an extended period such a partner is likely to be considered reliable by the other party. However, reliability is also often based on the integrity or honesty of the partners and stable business environment. According to Svensson (2002), a partner's predictable action, complemented by an occasional willingness to help the other party in a bind, will most

often lead to a deeper sense of trust by the other party and greater commitment. The words promptness, honesty, benevolence, fairness are often used as a synonym. These characteristics can only describe the antecedents of trust and drive the partner's propensity to trust or willingness to take risk but they do not mean act of trust.

In the dynamic business environment how much risk a supply chain partners can take with the other partner is dependent on the partner's characteristic. Level of partner's willingness to take risk is based on clear objectives of partnership that include, calculations of cost and benefit, capabilities, technological compatibility of the partners and a legal framework to protect the external risks and opportunistic behavior of partners to fit into either, efficient, responsive, lean, agile or integrated supply chains. As mentioned by Williamson, (1993), individuals make trust choices based on rationally derived costs and benefits.

The second stream of research has focused on the rational trust which is based on the economics, dynamic capabilities and technology fit between partners (e.g. Williamson, 1993; Teece 1998; Lippert and Swiercz, 2005).

2.2. Rational Trust

McAllister's (1995) research confirms that since trust comes into play in conditions of ignorance of some aspect of the negotiation or interaction there must be a rational reason to trust. Coleman (1990) argues that, social actors calculate the gains which might result from their decision to trust another social actor before they actually make their decision. Williamson, (1993) has articulated a few situational antecedents for calculative trust. The affected parties: (1) are aware of the range of possible outcomes and their associated probabilities; (2) take cost-effective actions to mitigate hazards and enhance benefits; (3) proceed with the transaction only if expected net gains can be projected; and, (4) if X can compete the transaction with any of several Ys, the transaction is assigned to that Y for which the largest net gain can be projected. An empirical study by Grant (2005) in the Scottish food processing industry suggests that important customer service variables tend to be transactional in nature. Customers do not appear willing to embrace relationships as readily as their suppliers do, and revert to historical behaviors related to transactional concerns of availability, delivery time and price. The objective of the lean supply chain is to develop a value stream to eliminate all waste, including time, and to enable a level schedule. Therefore, even if the supply chain partners are having a propensity to trust or willingness to take risk, based on the partner's characteristics, essentially trust involves a calculative process as and when an organization or an individual calculates the costs and / or the benefits of staying in the relationship (Williamson, 1993; Dasgupta, 1988; Lindskold, 1978). Act of trust is dependent on the acceptable levels of economics, dynamic capabilities, and technology and institutions risks involved.

Though the supply chain members develop characteristic based trust and rational trust with members related to economics, dynamic capabilities and technologies, there is always an element of risk present in the partner's relationship from the changing political, institutional and business environment that needs an involvement of legal frame works, commercial law, insurance and trade organizations etc. A risk coping mechanism (institutional trust) becomes imperative beyond the characteristic based trust and rational trust to control the risk and to induce the trust between supply chain members.

The third stream of research has focused on the risk control and institutional trust (e.g. Kramer, 1999; Das, T.K. 2001; Child and Mollering, 2003) which states, trust is based on the legal frameworks, notably contract and property laws, as well as the socio-cultural backgrounds.

2.3. Institutional Trust

Trust between supply chain members can be maintained if the risk levels remain constant within the member's risk bearing capacities. However, in a dynamic business environment that is not possible. To cope with unknown risks, supply chain members draw formal agreements and contracts through a legal framework or an external institutional system such as bank guarantees, insurance, trade organizations etc. According to Nooteboom (1996), control comes into play only when adequate trust is not present. Here adequacy refers to insufficient propensity to trust (willingness to take risk) or low level of risk bearing capacity for a partner to become vulnerable to other member's actions. Luhmann (1979) suggests, the existence of legal norms is one of the most effective remedies to confine the risk of trust and thus provide those good reasons, which a potential trustor needs to decide to invest in a relationship. Bachmann, (2001) recognized that inter-organizational trust is especially dependent on and mediated by the institutional framework in which the relationship is embedded. Shapiro et al., (1992) has proposed the notion of deterrence-based trust. This perspective suggests that a supply chain member act in a trustworthy manner because of the fear of the consequences of trust violation. Thus, higher the penalty, the theory suggests, the greater the probability that a member will be trustworthy. In other words the penalties act as additional risk that a member cannot bear and induce the trust to act in a trustworthy manner. However if the member has no willingness to take risk or rationale to become vulnerable due to the unpredictable and un assessable risks the institutions have no role to play. Therefore, institutional systems are referred as risk coping mechanisms that ensure trustworthy characteristics and limits rational risks of partners by inducing a third party trust.

2.4. Characteristics Risk

Partner's characteristics such as loyalty, credibility, reliability, dependability etc. are analyzed to reduce the uncertainties and risk in the partnership. According to Puto et al., (1985) the necessary conditions for the adoption of effective risk-reducing strategies include loyalty to existing suppliers, the characteristics of the buying situation and the buyer's perception of the procurement problem of reliability and dependability. Williamson (1979) argued that the risk of transaction costs between a customer and a supplier increasing was dependent on the level of uncertainty in the relationship. Mitchell (1995) suggests that other risk-reducers include: choosing a leading company (credibility) in the field, using an approved list of suppliers (familiarity), multiple sourcing, visiting supplier operations (perceptions) and establishing good communications (honesty) with suppliers.

2.5. Rational Risk

Risk in relationship is analyzed rationally, the contents include, economics, dynamic capabilities and technology (e.g. Williamson, 1993). Referring to the dynamic capabilities, supply chain partners should select the dynamically capable partners to respond to change because; fluctuations in demand may tax a supplier beyond its abilities through insufficient utilization of equipments and employees (Lee et al., 1997). Other capacity risks include volume / product mix requirement fluctuations that result from the increased customer's sophistication and the unpredictability of demand and process technological changes. For example, in the apparel, packaged food and consumer goods industry, volatility plays a more important role in determining the required flexibility (Ponce and Prida, 2004). In terms of Williamson's (1979) Transactional Cost Economics (TCE), the less regulated the relationship is, the greater the probability of opportunistic behavior. An important source of uncertainty stems from partner's lack of experience with product technology. In markets where technology changes at a rapid pace there are, usually, multiple discrepant product standards (Heide and Weiss, 1995) and risks caused by the rapid pace of technology changes.

2.6. Institutional Control System (Risk Protection)

The institutional control systems such as commercial laws, local legislation, trade organizations and partner's agreements, contracts, legal frame works are analyzed based on the strength of the institutional systems. Newman et al., (1993) argue that an effective long-term strategy for dealing with supply risk requires consistent monitoring and auditing of a supplier's processes to check that they confirm to the required standards. Luhmann (1979) suggests the existence of legal norms is one of the most effective remedies to confine the risk. Giddens (1984) argues that since social actors themselves are assumed to produce and to reproduce the institutional order in which they live they are in principle also free to change its structures. Also according to Giddens, they cannot avoid permanently orienting their behavior towards existing institutional arrangements unless they accept that their actions are arbitrary and meaningless to others.

Apparently, the foregoing examination of the literature shows that the supply chain partner's relationship trust and risk are interdependent. Sherman (1992) stresses trust production is related to various types of dependence relationships and risks. In particular research on relationship building has tended to focus mostly on perspectives of trust ignoring the risk perspective of trust and trust building process of supply chain partnership.

As the perspectives of trust and risk are the same, we developed our conceptual model linking the relationship between them. The next section presents, the structure of trust in supply chain partner's relationship based on the three key perspectives of relationship trust & risk that can capture the concept of trust right.

3.Structure Of Trust In Supply Chain Partners Relationship - A Conceptual Framework

In supply chain partner's relationship, when partners lack mutual information and they are in the state of total ignorance of future outcome of the relationship, risk is 100% and there can be no reason for one member to trust the other and trust can be zero. On the other hand, when the supply chain members have access to complete mutual information about characteristics, calculations, consequences, and they are certain that there is no uncertainty or risk involved in the relationship, risk is zero, then trust has of no relevance even it is said to be 100%. In supply chain partner's relationship both the situations are not practical at least for two reasons. First, there cannot be total ignorance between the members because without perceiving the yield of relationship benefits members does not engage in the relationship. This means that the members are already having certain level of mutual understanding and they are aware of the each other's characteristics such as dependability, reliability, commitment, benevolence etc, there is no total ignorance. Secondly there cannot be total transparency between the members due to the market dynamics and differences in lean, agile and technology adoption levels of the partners. Therefore, in supply chain partner's relationship trust is an inherent phenomenon and as mentioned by Sahay (2003) supply chain partnerships are dynamic realities, whose very development lies on the strength of the amount of trust that both the parties have for each other. To identify this strength it requires an assessment of other party's credibility and benevolence, one party must have information about the other party's past behavior and promises as mentioned by Doney and Cannon (1997) and trust cannot exist in an environment of certainty as mentioned by Bhattacharya et al. (1998). The strength of trust can be referred as partner's strength of willingness to take risk (Mayer et al 1995) and the level of one party becoming vulnerable to other party's actions (Blois 1999).

As referred in the literature, trust in supply chain partner's relationship is based on the perspectives of partner's characteristics, partnership rationale and institutional system of partner's business environment along with it's complementary dimensions of risk (as shown in Fig.1). The partner's willingness to place himself at risk signals the partnering firm that the other partner is willing to cooperate (Lindskold, 1978; Strub and Priest, 1976). Such behavior could invoke the process of intentionality-in which the idiosyncratic investments provide evidence that the supplier's motives are trustworthy. Therefore, supply chain member's willingness to take risk with other member's characteristics results in propensity to trust. A member may have a very high level of willingness to take risk or propensity to trust but how much risk he can take or how much he can trust; depends on his risk bearing capacity. However, with increasing propensity to trust, partners engage in act of trust at some point, i.e. one partner becomes vulnerable to other partner's action to meet the rationale of the relationship.

As mentioned by Williamson (1993) and Dasgupta (1988) essentially trust involves a calculative process as and when an individual calculates the costs and / or rewards of another party staying in the relationship. It stands to reason that one party would be considered trusting if it believes that the risk of not staying in relationship is bigger than staying in the relationship. Increasing length of relationship and familiarity will reduce the uncertainty and risk leading to increase in threshold level of partner's risk bearing capacity. Empirically, Anderson and Weitz (1989) found, that a channel member's trust in a manufacturer increases with age of relationship, but beyond the bearable limits of vulnerability or calculated risk levels, the members opt for risk

control through the institutional systems. Institutional systems create a deterrence to act in a trustworthy manner, hence to hold on to act of trust. As mentioned by Bachmann (2001) inter-organizational trust is especially dependent on and mediated by the institutional framework in which the relationship is embedded. According to Ouchi (1979), control is most appropriate in high trust situations. High trust situation could be referred as trust beyond their risk bearing capacity and the risk needs to be controlled. The risk control mechanism brings down the risk level that extends the trust level. According to McKean (1975), trust should not necessarily mean putting the interest of the other party ahead of yours. That would be altruism, not trust. In supply chain partners relationship no partner would be willing take risk or become vulnerable to other partner beyond his risk bearing capacity. Trust has a limit where the risk level becomes unbearable. Therefore, we define trust, as 'Trust is a supply chain partner's threshold level of risk bearing capacity' (to be more specific, risk related to economics, dynamic capabilities, technology and security). Characteristics and institutions drive the propensity to trust but do not engage a partner to act of trust. In business relationship act of trust is directly related to rationale of relationship.

While trust is a threshold level of partner's risk bearing capacity, partner's willingness to take risk precedes trust and risk control succeeds trust resulting in a curvilinear nature of relationship between trust and risk as shown in Fig.1. Adobar (2006) has proved a curvilinear relationship between uncertainty and trust through an empirical study, such that there is some optimal levels beyond which higher uncertainty lead to lower level of trust. The results show that, trust begins to rise as uncertainty rises but beyond a certain threshold level, trust begins to fall as uncertainty continues to increase. We argue that, at this point trust does not fall but supply chain partner's threshold level of risk bearing capacity and willingness to take risk limits, the trust remains at the same level. Partners may have high level of trust with long standing relationships but when the risk levels grow higher than their risk bearing capacities partners limit their trust at a level where the risk is bearable. Some live examples could be the recent trend of trust between supply chain partners from Iran and the rest of the world or between supply chain partners of African countries and rest of the world. The findings of Bhattacharya et al (1998) and Adobar (2006) proved that low uncertainty would give rise to low level of trust. Our model questions this finding, in fact lower uncertainty or low risk within the threshold level of a partner's risk bearing capacities give rise to trust. Trust would increase with reducing risk or uncertainty.

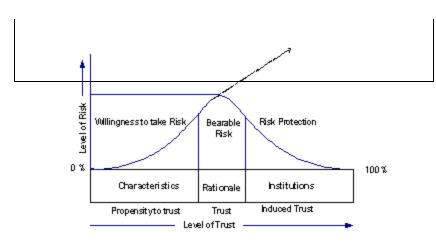


Fig 1. Structure of trust in supply chain partners relationship

4. Discussions

Reference to the structure of trust in supply chain partner's relationship as shown in fig.1, if trust is considered as a one dimensional phenomenon, it has no reference point. A partner can have any level of propensity to trust, or institutional control to induce trust and the supply chain partners may be lost to understand how much trust each partners is having for the other and how much more is required to build. Therefore trust building process is seen as a complex process. As Dasgupta (1998) mentioned, some level of uncertainty is required for trust to emerge, if trust is viewed along with its complementary dimension of risk, supply chain members can easily understand that the level of trust is dependent on the level of risk and each partner would limit his risk depending his risk bearing capacity and there ends the level of trust. As Yates and Stone (1992) suggested, every conception of risk implies that there must be uncertainty about the prospective outcomes, and that if the probability of those outcomes are known, the level of risk can be estimated. From these estimates, a supply chain member's level of willingness to take risk can be equated to level of propensity to trust and a partner's threshold level of risk bearing capacity can be equated to level of trust and the risk levels which are unbearable can be controlled by institutional systems as risk coping mechanisms to induce the trust. As mentioned by Nooteboom (1996), control comes into play only when adequate trust is not present. Adequacy of trust we consider as adequate risk bearing capacity. The risk protection mechanisms such as contracts, agreements, and legislation practices induce trust. Trust building is also described as a long time process, for example, Gulati (1995) mentioned, trust can be established over time through previous alliances. So and Schill, (2002) argued trust is developed through consistent and predictable act of partner over an extended period such a partner is likely to be considered reliable by the other party. We argue that; trust building process can be instant if the partners can define their limits of willingness to take risk, threshold level of risk bearing capacity, and the required risk protection systems from various perspectives of characteristics, rationale and institutional system of relationship. Lorenz (1988) research has shown that it may take six months to one year for trust to develop in an alliance relationship. We consider this time period may

be required for members to evaluate each other from various risk perspectives in relationship to establish the risk limits and to make their decision to trust.

Christopher and Lee. (2004) suggest evaluating the potential causes or sources of the risks at every significant link along the supply chain to develop appropriate risk coping mechanisms. Having defined trust as 'supply chain partner's threshold level of risk bearing capacity', when supply chain partners trust each other without actually evaluating their level of willingness and the level of rational risk with reference to their risk bearing capacity, trusting becomes a risky engagement and one of the partners may feel betrayed at some point when they learn what level of risk they have been taking. If the risk levels are lower than a partner's risk bearing capacity and the partner continues to have the same level of trust, there is no risk in trusting a partner with a higher level of trust with low risk levels. Only when the level of trust is higher than the level of risk bearing capacity trust becomes a risky engagement and the subject becomes the risk management.

5. Managerial Implications

Trust building process requires reference points from various perspectives of partnership risk. Trust building process is based on the risk perspectives of partner's characteristics, rationale of relationship and the institutional systems. The partner's characteristics drive the propensity to trust (willingness to take risk), the bearable rational risk levels engages partners in relationship under trust (vulnerability to other partners actions) and the risk levels beyond the partner's threshold level of bearable risk can be controlled by institutional system (contracts / agreements) that ensures that the risk in relationship will not exceed the estimated levels if does so will be compensated. Supply chain partners trying to induce the trust through institutional system (risk protection) while, the partners are willing to take risk and ready for vulnerability, increases the risk levels as the institutional systems brings additional risks and hence reduce the trust. Similarly trust cannot be built when the partners are not willing to take risk with partner's characteristics and rationale the introduction of institutional systems increase the risk levels by reducing the trust.

The supply chain management practitioners should approach trust building process through risk evaluation to identify the threshold level of self and partner's risk bearing capacities and introduction of risk protection mechanisms. Trust in supply chain management plays a role till the risks is within manageable limits, beyond that it becomes risk management. The supply chain partner's decision to build trust or manage risk depends on their respective rational risk bearing capacities.

6. Conclusions And Direction For Future Research

This paper has made the understanding of the concept of trust simpler for supply chain partner's relationship by integrating various perspectives of trust and risk and by defining trust as, 'Trust is a supply chain partner's threshold level of risk bearing capacity' (to be specific, risk related to economics, dynamic capabilities, technology and security). From the conceptual framework it is apparent that the supply chain partner's trust has a limit, which is same as the partner's risk bearing capacity. The partner who has a higher risk bearing capacity considers the other partner as trust worthy and if all the risks related to characteristics, rational and institutional protection systems are within the bearable limits he engages in the act of trust.

This papers has emphasized the idea that, trust cannot be built as one dimensional phenomenon, trust building process has it's reference points anchored in risk perspectives. Trust building process should be approached through risk evaluation process. Supply chain partner's efforts in the trust building direction independent of the risk evaluation in the relationship, does not lead the partners anywhere in creating a sustainable trust. Since risk reduction builds trust, we recommend that the future research on trust building in supply chain partner's relationship should be approached from identification of various perspectives of partnership risk.

7. References

Adobar, H. (2006), "Optima trust? Uncertainty as a determinant and limit to trust in inter-firm alliances" *Leadership & Organization Development Journal*, Vol. 27 No 7, pp 537-553

Ammeter, A.P, Douglas, C. Ferris, G.R and Goka, H.(2004), "A social relationship conceptualization of trust and accountability in organizations, *Human Resource Management Review* Vol.14, pp. 47-65

Anderson, E. and Weitz, B.(1989), "Determinants of continuity in conventional channel dyads" *Marketing Science*, Vol. 8, No 4, PP 310-23

Arnott, D.C.(2007), "Trust-current thinking and future research", *European Journal of Marketing*, Vol. 41 No. 9/10, pp. 981-987.

Bachmann, R. (2001), "Trust, power and control in trans-organizational relations", *Organization Studies*, Vol. 22 No. 2, pp. 337-65.

Barney, J. and Hansen, M. (1994), "Trustworthiness as a source of competitive advantage", *Strategic Management Journal*, Vol. 15, pp 175-190

Bernstein, P.(1996), "Against the Gods: The Remarkable Story of Risk", Wiley, Chichester.

Bhattacharya, R. Devinney, T.M. and Pillutla, M.M. (1998), "A formal model of trust based on outcomes", *Academy of Management Review*, Vol. 23, pp. 459-72.

Blois, C. K.(1999), "Trust in business to business relationships: an evaluation of its status", *Journal of Management Studies*, Vol. 36 No. 2, pp. 197-215.

Child, J. and Mo"llering, G. (2003), "Contextual confidence and active trust development in the Chinese business environment", *Organization Science*, Vol. 14 No. 1, pp. 69-80.

Christopher, M. and Lee, H. (2004), "Mitigating supply chain risk through improved confidence", *International Journal of Physical Distribution & Logistics Management*, Vol. 34 No. 5, pp. 388-96

Coleman, J. (1990), *Foundations of Social Theory*, Cambridge, Mass; Harvard University Press.

Corazzini, J.G.(1977), "Trust as a complex multi-dimensional construct", *Psychological Reports*, 31, Vol. 40, pp. 75-80.

Cousins, P, Lamming, R.C. and Bowen, F.(2004), "The role of risk in environmentrelated initiatives", *International Journal of Operations & Production Management*, Vol. 24 No. 6, pp. 554-65

Cumming, L.L. and Bromiley, P.(1996), "*The organizational trust inventory (OTI): development and validation*", in Kramer, R.M. and Tyler, T.R. (Eds), Trust in Organizations: Frontiers of Theory and Research, Sage, Thousand Oaks, CA, pp. 302-30.

Dasgupta, P.(1988), "*Trust as a commodity*", in Gambetta, D.G. (Ed.), Trust, Basil Blackwell, New York, NY, pp. 49-72.

Das, T. K., and Teng, B.S.(2001), "A risk perception model of alliance structuring", *Journal of International Management, Vol.* 71, pp 1-29

Doney, P.M. and Cannon, J.P. (1997), "An examination of the nature of trust in buyer-seller relationships", *Journal of Marketing*, Vol. 61, April, pp. 35–51.

Doney, P. M., Cannon, J.P. and Muller, M.R. (1998) Understanding the influence of national culture on the development oftrust *Academy of Management Review* Vol. 23 pp 601 – 620

Geyskens, I., Steenkamp, J. and Kumar, N. (1998), "The effects of trust and interdependence on relationship commitment: a trans-Atlantic study", *International Journal of Research in Marketing*, Vol. 13, pp. 303-17.

Giddens, A. (1984), "The constitution of society". Cambridge: Polity.

Grant, D.B. (2005), "The transaction relationship Dichotomy in Logistics and supply Chain Management" *Supply Chain Forum An International Journal*, Vol. 6. No.2 PP 38-48

Gulati, R. (1995), "Does familiarity breed trust? The implications of repeated ties for contractual choice in alliance" *Academy of Management Journal*. Vol.36, No.1, PP 85-112.

Harrison, T. (2003), "Why trust is important in customer relationships and how to achieve it", *Journal of Financial Services Marketing*, Vol. 7 No. 3, pp. 206-9.

Heide, J.B. and Weiss, A.M. (1995), "Vendor consideration and switching behavior for buyers in high-technology markets", *Journal of Marketing*, Vol. 59, July, pp. 30-41.

Halliday, S.V. (2003), "Which trust and when? Conceptualizing trust in business relationships and based on context and contingency" *The International review of Retail, Distribution and Consumer Research*, Vol.13, No.4, pp. 405-241.

Johnston, D.A. McCutcheon, D.M., Stuart, F.I. and Kenwood, H. (2004), "Effects of supplier trust on performance of cooperative supplier relationships", *Journal of Operations Management*, Vol. 22 No. 1, pp. 23-38.

Jones, S. and Ranchhod, A.(2007), "Marketing strategies through customer attention: beyond technology-enabled Customer Relationship Management" *Int. Journal of Electronic Customer Relationship Management*, Vol. 1, No. 3, pp 279-286

Kasperson, R. E. Kasperson, J. X., Pidgeon, N. F.and Slovic, P. (2003), "*The social amplification of risk: Assessing fifteen years research and theor*", PP 13-46, Cambridge University Press.

Kee, H.W. and Knox, R.E. (1970), "Conceptual and methodological considerations in the study of trust and suspicion", *Journal of Conflict Resolution*, Vol. 14 No. 3, pp. 357-66.

Koh, S.C.L. and Saad, S.M. (2004), "Modelling uncertainty under a multi-echelon ERP-controlled manufacturing system", *International Journal of Integrated Manufacturing Systems*, Vol. 15 No. 3, pp. 239-53.

Kramer R.M. (1999), "Trust and Distrust in Organization: Emerging Perspectives, enduring Questions", *Annual Review of Psychology*, Vol. 50, pp 569-598

Lee, C.W. (2007), "The success of biotech new ventures when combined with strategic alliance", *International Journal of Management & Enterprise Development*, Vol. 4 No. 3, pp. 293-315.

Lee, H.L., Padmanabhan, V. and Whang, S. (1997), "The bullwhip effect in supply chain", *Sloan Management Review*, Vol. 38 No. 3, pp. 93-102.

Lindskold, S. (1978), "Trust development, the GRIT proposal and effect of conciliatory acts on conflict and cooperation" *Psychological Bulletin*, Vol. 85, No 4, pp.772–93

Lippert, S.K and Swiercz, P.M. (2005), "Human resource information systems (HRIS) and technology trust" *Journal of Information Science*, Vol. 31 No. 5, PP 340-53.

Lorenz, Edward H. (1988), "*Neither friends nor strangers*: Informal networks of subcontracting in French industry' in Trust: Making and breaking of cooperative relations. Diego Gambetta (ed.), 194–210. Oxford: Blackwell.

Luhmann, N. (1979), "Trust and Power", John Wiley & Sons,

Mayer, R.C, Davis, J.H and Schoorman, F.D (1995), "An integrative model of organizational trust" *Academy of Management Review*, Vol. 20, No.3, PP 709-34.

McAllister, D.J. (1995) 'Affect and Cognition based trust as foundations for interpersonal cooperation in organizations' *Academy of Management Review*, Vol. 23 pp 473-489

McKean, R.N. (1975), "*Economics of trust altruism, and corporate responsibility*", in Phelps, E.S. (Ed.), Altruism, Morality and Economic Theory, Sage, New York, NY, pp. 29-43.

Medlin, C.J. and Quester, P.G. (2002). "Inter-firm trust: Two theoretical dimensions versus a global measure", IMP Asia: Culture and Collaboration in distribution networks, Perth, Australia.

Mitchell, V.W. (1995), Organizational risk perception and reduction: a literature review205, *British Journal of Management*, Vol. 6, pp. 115-33.

Mollering, G. (2004), "Understanding Organizational Trust-foundations, constellations, and issues of operationalization" *Journal of Managerial Psychology*, Vol 19, No.6, pp 556-570

Morgan, R.M. and Hunt, S.D. (1994), "The commitment-trust theory of relationship marketing", *Journal of Marketing*, Vol. 58, pp. 20-38.

Moshabbaki, A. and Jahanyan, S. (2009), "A Trust-Based Model for Knowledge Sharing In ERP Adopting Organizations" *Journal of Knowledge Management Practice*, Vol. 10, No. 1, pp

Newman, W.R., Hanna, M. and Maffei, M. J. (1993), "Dealing with the uncertainties of manufacturing: flexibilities, buffers and integration", *International Journal of Operations & Production Management*, Vol. 13 No. 1, pp. 19-34.

Noteboom, B. (1996), "Trust, opportunism & governance: a process and control model", Organization Studies, Vol. 17 No. 6, pp. 985-1010.

Ouchi, W.G. (1979), "A conceptual framework for the design of organizational control mechanisms", *Management Science*, Vol. 25, pp 833-848

Park, J.H. (2006), "The role of trust on knowledge creation in a virtual organization: a social capital perspective" *Journal of Knowledge Management Practice*, Vol. 7, No. 4

Parasuraman, A., Zeithmal, V. and Berry, L.L. (1985), "A Conceptual Model of Service Quality and Its Implications for Future Research", *Journal of Marketing*, Vol. 49, pp. 41-50.

Ponce, E. and Prida, B. (2004), "*La logi stica de aprovisionamientos para la integracio n de la cadena de suministros*", Pearson Educacio n, Madrid.

Puto, C.P., Patton, W.E. and King, R.H. (1985), "Risk handling strategies in industrial vendor selection decisions", *Journal of Marketing*, Vol. 49, pp. 89-98.

Ring. P.S. (1996), "Fragile and resilient trust and their roles in economic exchange" *Business and society*, Vol. 35, No.2, pp 148-175

Rousseau, D.M, Sitkin, S.B, Burt, R.S and Cameerer, C. (1998), "Not so different after all: a cross-discipline view of trust" *Academy of Management Review*, Vol. 23, No.3, PP 393-404.

Rotter, J.B. (1967), "A new scale for the measurement of interpersonal trust". *Journal of Personality*, Vol. 35, pp 651-655

Sahay, B.S.(2003), "Understanding trust in supply chain relationship" *Industrial Management and data system*, Vol.103 No.8, PP 553-563

Scott, C.L III. (1980), "Interpersonal trust: A comparison of attitudinal and situational factors", *Human Relations*, Vol. 33, pp 805-812

Shapiro, D.Sheppard, B.H, and Cheraskin, L.(1992), "Business on a handshake" *Negotiation Journal*, Vol.8 No. 4, pp 365-377

Sheppard, B.H and Tuchinsky, M. (1996), "*Micro-OB and the network organization*" in Tyler, T.R and Tyler. R.T. & Kramer R.M.(1996), Trust in Organizations, Thousand Oaks, Sage Publications.

Sherman, S. (1992), "Are strategic alliance working?" Fortune, September PP 77-78

Sinha, P.R., Whitman, L.E. and Malzahn, D. (2004), "Methodology to mitigate supplier risk in an aerospace supply chain", *Supply Chain Management: An International Journal*, Vol. 9 No. 2,

Sitkin, S.B. and Roth, N.L. (1993), "Explaining the limited effectiveness of legalistic 'remedies' for trust / distrust", *Organization Science*, Vol. 4 No. 3, pp. 367-92.

Spekman R.E and Davis E.W. (2004), "Risky business: expanding the discussions on risk and the extended enterprise" *International Journal of Physical Distribution and Logistics Management*, Vol 34, No 5, PP. 414-433

So, M.W.C. and Schill, D. (2002), "The role of trust, quality, value and risk in conducting e-business" *Industrial Management & Data Systems*, Vol. 102 No. 9, PP 503-12

Strub,P.J. and Priest,T.B. (1976), "Two patterns of establishing trust; The marijuana user" *Sociological Focus*, Vol. 9 No 4, pp 399-411

Svensson G. (2002) "Perceived trust towards suppliers and customers in supply chains of the Swedish automotive industry" *International Journal of Physical Distribution and & Logistics Management:* Vol. 31, No. 9, pp 647-62

Svensson. G. (2004), "Vulnerability in business relationships: the gap between dependence and trust" *Journal of Business & Industrial Marketing*, Volume 19, No. 7, PP 469 –483.

Tyler TR, Kramer R.M. (1996), *Whither trust?* See Kramer & Tyler 1996, pp. 1.15 Tyler TR, Lind EA. 1992. *A relational model*

Teece, D.J. (1998). "Capturing Value from Knowledge Assets: The New Economy, Markets for Know-how, and Intangible Assets", *California Management Review*, Vol. 40, No.3, PP 55-79.

Varma.S, Wadhwa.S, Deshmukh.S.G. (2006), "Implementing supply chain management in a firm: issues and remedies" Asia Pacific Journal of Marketing and Logistics, Vol.18, No. 3, pp 223-243

Wicks, A.C, Berman, S.L and Johnes, T.M.(1999), "The structure of optimal trust: moral and strategic implications", *Academy of Management Review*, Vol.24, pp 99-116

Williamson, O.E. (1979), "Transaction Cost Economics: The Governance of Contractual Relations", The Free Press, New York, NY.

Williamson, O.E. (1993), "Calculativeness, trust, and economic organization" *The Journal of Law & Economics*, Vol.36 No 1, part 2, PP 453-86.

Yates, J.F. and Stone, E. (1992), "*The risk construct*", in Yates, J.F. (Ed.), Risk-taking Behaviour, Wiley, Chichester.

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

About the Authors:

Mohd Laeequddin is a general manager at Express Flexi Pack, Dubai, United Arab Emirates. He holds mechanical Engineering degree from Regional Engineering Collage, (now NIT) Warangal and M.Tech in Industrial Engineering and Management from Jawaharlal Nehru Technological University, Hyderabad, India. He is having over 20 years experience in printing and packaging industry in the areas of operations management and sales. He has worked over 10 years in the Middle - East countries and currently doing his research in 'Trust in Supply Chain Management' as a part-time research scholar at Institute of Management Technology Ghaziabad, India.

Mohd. Laeequddin, General Manager, Express Flexi Pack, Jebel Ali Free Zone,Plot No. EWTA – 92, P.Box. 16797, Dubai, United Arab Emirates; Tel: 00971 503595700; Fax: 009714 8873990; Email: e-mail: laeeq@mail.com *Dr. B.S. Sahay* is Director of Management Development Institute, India. He did his M.Tech. and Ph.D. from Indian Institute of Technology (IIT) Delhi, India. He is the Editor of International Journal of Value Chain Management and Guest Editor of *International Journal of Physical Distribution and Logistics Management*, *International Journal of Technology Management, and International Journal of Integrated Supply Management*. He is on the Editorial Board of five international journals and many national journals. He has published/ presented over 130 papers in international/national journals and conferences. He has published seven books and his book on *Productivity Management* was given the Escorts Book Award and ISTD National Book Award.

Dr. B.S.Sahay, Director, Management Development Institute, Mehrauli Road, Sukhrali, Gurgaon, India; Tel: 0091 124 4560002; Email: bssahay@mdi.ac.in

Dr. Vinita Sahay is a PhD in the area of Customer Value and an MBA in Marketing. She secured first class first with Gold Medal in M.A. in Economics. She has about 16 years of experience in teaching and training with organizations like ICFAI Business School Gurgaon, Amity Business School. She was founder Editor of Synergy: Journal of IT and Management. Prof. Sahay has published and presented many research papers in International and National journals and conferences.

Dr. Vinita Sahay, Professor of Marketing Management, Institute of Management Technology, Ghaziabad,India; Tel: 009101203002200; Fax::0091 0120 3002300; Email: e-mail:vsahay@imt.edu