

TOWARDS MEASURING INTER-ORGANIZATIONAL TRUST - A REVIEW AND ANALYSIS OF THE EMPIRICAL RESEARCH IN 1990-2003

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ABSTRACT

In this meta-empirical study, empirical research on inter-organizational trust is reviewed. Research on inter-organizational relationships since early 1990's has consistently argued that mutual trust is an essential factor of relationship quality and performance. The purpose of this study is to evaluate the advancements and drawbacks of current empirical research in measuring inter-organizational trust. In this paper the theoretical approach, conceptualization, operationalization, and measurement issues in empirical studies on inter-organizational trust from 1990 to 2003 are analyzed. Although trust has emerged as an important theme in inter-organizational relationships, there are still major conceptual and methodological challenges in studying this complex concept. The results show major inconsistency in conceptualization, operationalization, and measurement in existing studies. Paper concludes with suggestions for further empirical research on inter-organizational trust.

1 INTRODUCTION

In the knowledge-based competition a firm's ability to establish inter-organizational relationships such as alliances and partnerships has become a critical source of competitiveness, and a dynamic capability (Eisenhardt and Martin 2000; Teece et al., 1997). In inter-organizational relationships there are some critical success factors identified by many researchers. Among one of the most common success factor, and possibly also one of the most critical is trust (Blomqvist 2002; Ford et al. 1998; Parkhe 1998; Sako 1998; Raimondo 2000). Trust is believed to be critical as it is seen to increase predictability (Sako 1994), adaptability (Lorenz 1988) and strategic flexibility (Young-

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Ybarra and Wiersema 1998). Trust enables more open communication, information sharing and conflict management (Blomqvist 2002; Creed and Miles 1996). In general trust is seen to reduce transaction costs such as governance costs (management costs), costs for internalization (acquisitions) (Bidault and Jarillo 1997, see also Williamson 1993) and social complexity (Arrow 1974; Luhman 1979). Trust opens also chances for informal network collaboration (Bidault and Jarillo 1997), and collaborative innovation (Miles et al. 2000). It has been proposed that a certain amount of trust is needed as a threshold condition for inter-organizational cooperation to evolve (Blomqvist 2002; Dibben 2000). It is also acknowledged that trust may be a critical factor in enhancing business performance, and a source for sustainable competitive advantage (e.g. Barney and Hansen 1994; Blomqvist and Seppänen 2003).

Our analysis reveals that despite of the increased interest among academics the theory on trust is still in a developing state. The researchers disagree on the nature and definitions of this complex concept (see e.g. Blomqvist 1997; Hosmer 1995; Rousseau et al. 1998; Castaldo 2003). Studies conducted by so far approach trust quite differently, due to the researchers' different theoretical backgrounds (Blomqvist 1997), and the chosen empirical context (Hosmer 1995, Rousseau et al. 1998). Despite of this increased interest and the acknowledged role of trust to a company's competitiveness, there has not yet been theoretically and empirically coherent attempts to measure trust in inter-organizational context. Thus, "*trust remains an under-theorized, under-researched, and, therefore, poorly understood phenomenon*" (Child 2001, 274). Valid and reliable measurement methods would however facilitate the development of knowledge (Churchill 1979), generalization and diffusion of produced knowledge (Raimondo 2000), and more rigorous theory testing (Currall and Inkpen 2002) as the development and falsifiability of theories is dependent on hypothesis testing - and hypothesis testing is dependent on solid measurement of constructs (Bacharach 1989).

In order to evaluate how trust has been empirically studied in inter-organizational research we examined studies that were published in scientific journals between years 1990-2003. The article-search was performed from international journal databases (Abi/inform, ScienceDirect, EbscoHost, and Emerald), and 107 articles were found. Since the present analysis concentrates solely on inter-organizational trust, studies related to trust inside an organization and to trust between an organization and consumers were outlined. However, our analyses revealed that some of the reviewed studies although claiming to study inter-organizational trust, studied and measured trust at

interpersonal level. We also chose to focus on “real” situations of inter-organizational trust. Therefore, artificial laboratory experiments, role-plays, and studies among students were excluded. Furthermore, we decided to study only private (business) organizations, and therefore studies among governmental institutions were outlined. After these restrictions, 15 empirical studies on inter-organizational trust were left for deeper analysis. Research context, level of analysis, informants, theoretical approaches and conceptualizations, operationalizations, and measurement issues are reviewed here.

2 A REVIEW OF APPROACHES AND METHODOLOGIES ON MEASURING INTER-ORGANIZATIONAL TRUST

In this sub-chapter the selected 15 articles are shortly introduced. They were published between 1990-2003. The study by Ganesan (1994, in *Journal of Marketing*) examines the key roles of trust and dependence in determining the long-term orientation of both buyers and their vendors. In their article in *Journal of International Business Studies*, Aulakh, Kotabe, and Sahay (1996) stress the importance of bilateral relational norms and informal monitoring mechanisms in building interorganizational trust and improving market performance of international partnerships. Chow and Holden’s 1997 article in *Journal of Managerial Issues* brought up the essentiality of both trust in the salesperson and trust in the company in forming and maintaining strategic alliances especially when the partner is a supplier. Doney and Cannon (1997, in *Journal of Marketing*) wanted to pay attention to the fact that trust of the supplier firm and trust of the salesperson (operating indirectly through supplier firm trust) influence a buyer’s anticipated future interaction with the supplier, yet neither trust of the selling firm nor its salesperson influence the current supplier selection decision. Nooteboom, Berger, and Noorderhaven (1997) assessed in their article in *Academy of Management Journal* the effects of trust-related variables and governance to the perceived risk by agents of firms in alliances, and found them to have significant effects. Smith and Barclay (1997, in *Journal of Marketing*) studied the effects of trust on the effectiveness of selling partner relationships. The results indicate that the dimensions of trustworthiness had both direct and indirect effects on satisfaction, whereas trusting behaviors were found to have a greater effect on perceived task performance than on mutual satisfaction. In their study of the automotive industry in *Journal of Economic Behavior & Organization*, Sako and Helper (1998) noticed that firstly; the way trust is conceptualized by suppliers is more complex in Japan than in the US; secondly, the level of trust is higher in Japan than in the US; and thirdly, the factors facilitating trust and those attenuating

opportunism differ in the US and Japan. Zaheer, McEvily, and Perrone (1998, in *Organization Science*) assessed interpersonal and interorganizational trust as distinct constructs, and ended up in to a conclusion that they play different roles in exchange performance. The results of their study supported somewhat the hypotheses linking trust to the performance of an organization. Plank, Reid, and Pullins (1999, in *The Journal of Personal Selling & Sales Management*) studied how to develop a multidimensional measure of trust especially for sales context, and received support for their division of trust in this context into salesperson trust, product trust, and company trust. Young-Ybarra and Wiersema (1999, in *Organization Science*) analyzed flexibility in strategic alliances, utilizing a model drawn from transaction cost economics and social exchange theory. They found out that economic constraints, quality of communication, and the existence of shared values were positively related to trust, and dependence was negatively related to trust. Dyer and Chu (2000) stress in their study published in *Journal of International Business Studies*, that supplier trust is highly correlated with stable and consistent buyer processes and routines, representing commitment toward long-term interactions. They also found out that the absolute level of supplier trust differed by country, with Japanese supplier-buyer relations characterized by relatively high levels of trust when compared to Korean and US counterparts. They explained this difference to be due to the differences in institutional environment. Gassenheimer and Manolis (2001, in *Journal of Managerial Issues*) explored the roles of both salesperson trust and organizational trust in regulating dependence. The results of their study indicate that trust in a salesperson helps to explain the degree to which dependence has a positive or negative effect on the future, while organizational trust, in contrast, has no such mediating influence, i.e., organizational trust does not appear to be related to issues of dependence. In Möllering's (2002, in *Cambridge Journal of Economics*) study, the transaction-cost argument about trust being a parameter reducing hierarchy was dismissed. He stresses, instead, that the triadic forces argument - price, authority, trust - received stronger support. Norman (2002, in *The Journal of High Technology Management Research*) studied factors related to protection of knowledge in strategic alliances. The results indicate that higher trust in a partner tends to reduce knowledge protection. Coote, Forrest, and Tam (2003, in *Industrial Marketing Management*) received support in their study to the arguments that commitment is related to trust, indicating that there are systematic differences in the effects of the antecedents on commitment and trust.

Contexts of the studies and relationship types

Analyses revealed that the reviewed studies vary from each other on their contextual backgrounds, and relationship types (Table 1). Studies differ also in their contextual focus based on cultural and industry differences - although the majority of studies are conducted in the United States, and across knowledge intensive industries. Inter-organizational trust was studied in vertical and horizontal business relationships, e.g. in buyer-seller relationships and partnerships and alliances.

Table 1. Country and industry contexts, relationship type

Author	Country	Industry	Relationship type
Ganesan (1994)	US.	Retail (regional department store chains).	Retail buyer and vendor – relationship.
Aulakh et al. (1996)	US firms having relationships with firms from Asia, Europe, and Central/South America.	Not mentioned (target firms were chosen from Fortune 500 US Industrial firms).	Inter-organizational relationships.
Chow and Holden (1997)	Massachusetts, US.	Electronic circuit board industry.	Buyer-seller relationships.
Doney and Cannon (1997)	US (Firms are members of National Association of Purchasing Managers - NAPM).	Industrial manufacturing (classification codes 33-37).	Buyer-seller relationships.
Nooteboom et al. (1997)	Netherlands.	Electrical/electronic components (i.e., microelectronics assembly industry).	Manufacturer-supplier relationships.
Smith and Barclay (1997)	Canada.	Computer industry.	Selling partnerships.
Sako and Helper (1998)	US and Japan.	Automotive industry in US and Japan.	Supplier-manufacturer relationships.
Zaheer et al. (1998)	US (Firms which are members of NAPM).	Electrical equipment manufacturers and their component suppliers.	Supplier-manufacturer relationships.
Plank et al. (1999)	US and Puerto Rico (Firms which are members of NAPM).	Not mentioned.	B-to-B sales-relationships.
Young-Ybarra and Wiersema (1999)	At least one of the partners was US-based (the region of another partner not mentioned in the study).	The area of information technology.	Strategic alliances.
Dyer and Chu (2000)	USA, Japan, and Korea.	Automaker industry in US, Korea, and Japan.	Supplier-automaker relationships.
Gassenheimer and Manolis (2001)	the Southeast and West Coast in US. (Firms which are members of NAPM).	“...represent a variety of industries (products ranged from industrial raw materials...to more durable goods utilized to support operations)”.	Buyer-seller -relationships.
Möllering (2002)	UK.	UK printing industry.	Buyer-seller -relationships.
Norman (2002)	US (firms identified from Wards Business Directory of US Private and Public Companies).	US telecommunications, microelectronics, and computer firms.	Strategic alliances.
Coote, Forrest, and Tam (2003)	Chinese firms.	Not mentioned.	Industrial marketing relationships.

Cultural and national impact in evaluating the concept of trust: The majority of studies are conducted at national level in U.S. (e.g. Chow and Holden 1997; Ganesan 1994; Zaheer et al. 1998)

although inter-organizational trust is also studied in the Netherlands (Nooteboom et al. 1997), Canada (Smith and Barclay 1997), China (Coote et al. 2003), and United Kingdom (Möllering 2002). However, studies having more international research focus exist, as for example Aulakh et al. (1996) included in their research firms from Asia, Europe and Central and South America. Sako and Helper's (1998) and Dyer and Chu's (2000) studies were the only ones where also the cultural effect on trust was studied. Sako and Helper (1998) compared the concept of trust across Japanese and U.S. firms. They found out that for the Japanese suppliers the conceptualization of trust is more complex than for the US citizens. Also the overall level of trust was higher in Japan. In similar vein the factors facilitating trust were different. Dyer and Chu (2000) studied supplier-automaker relationships in US, Japan, and Korea, and found some differences in the level of trust in Japan, and in Korea, and US giving empirical support to the notion of Sako and Helper⁴. As these four authors have verified that there are cultural differences in trust, we call for more papers on cultural issues in inter-organizational trust research. Results from these cross-cultural trust studies could give valuable insights for practitioners in the field, as cultural differences between the parties increase the challenges in inter-organizational relationships (Arinõ et al. 1997).

Industry Impact: Trust was studied and measured in circuit board industry, industrial manufacturing, microelectronics assembly industry, computer industry, automotive industry, electrical industry, information technology, printing industry, and telecommunications. In some studies, the field of industry was not specified exactly, instead, the objects of the study are mentioned to come from "several fields of industries", or from "industrial marketing relationships". Majority of the research contexts seem to be technology-intensive industries. Technology and risks are often related; therefore trust is logically a critical concept for technology-intensive industries. Thus, most articles studied technology-intensive industries, there was no articles e.g. on service industry. In today's global and networked economy also 'more traditional' industries are dependent on partnerships and foreign cooperation. Thus, empirical studies should also have a closer look at these industries. Because of the differences in business and industry cultures more cross-industry comparisons are proposed.

Relationship type: In the context the review is performed, the main focus on the articles is on business-to-business marketing, sales management, and channel management. Inter-organizational

⁴ However, Dyer and Chu argued that "the key role of the institutional environment may be one of influencing the

trust was studied in vertical relationships in e.g. buyer-seller (6), supplier-manufacturer (4), and industrial marketing relationships (1). Also horizontal relationships, e.g. strategic alliances and partnerships (3) were studied. The study by Aulakh et al (1996) did not specify the type of the inter-organizational relationships.

Theoretical approaches, conceptualization, dimensions of trust and operationalization

In this subchapter the theoretical approach, conceptualization, dimensions of trust and operationalization are analyzed. The information from the reviewed 15 articles is summarized in table 2.

Table 2. Theoretical approaches, conceptualizations, dimensions, and operationalization of trust

Author	Theoretical approach	Conceptualization	Dimensions	Operationalization
Ganesan (1994)	Marketing channels research, Social exchange theory, Inter-organizational exchange behavior	<i>“Trust is the willingness to rely on an exchange partner to whom one has confidence”.</i>	Credibility and benevolence	Vendor's credibility was measured with seven, and benevolence with five items. Retailer's credibility was measured with four, and benevolence with three items. Other factors were tested in a sum of 24 items.
Aulakh et al. (1996)	Social exchange theory and Economic approach	<i>“Degree of confidence the individual partners have on the reliability and integrity of each other”.</i>	Confidence, reliability and integrity	Four items for measuring continuity expectations, 3 for flexibility, 2 for information exchange, 4 for output control, 4 for process control, 3 for social control, and 3 items for trust. All items were measured with a scale of 1-5 (strongly disagree-strongly agree).
Chow and Holden (1997)	Psychology, Marketing channels literature	<i>“The level of expectation or degree of certainty in the reliability and truth/honesty of a person or thing”.</i>	Reliability Truth/honesty	Three items measuring salesperson trust. For example: "Anyone who trusts him/her is asking for trouble." And three items measuring trust in company. For example: "This company is basically honest" A five-point Likert scale was used in evaluation.
Doney and Cannon (1997)	Social psychology and Marketing	<i>“Perceived credibility and benevolence of a target of trust”.</i>	Credibility and benevolence	Trust of supplier firm was measured with eight items, and trust of salesperson was measured with seven items. Antecedents of trust were tested with a total of 41 items.
Nooteboom et al. (1997)	Transaction cost approach, Marketing channels, Resource dependence and Relational contract theory	<i>“Trust as a significant source of cooperation, along with coercion and self-interest”. (intentional trust only)</i>	Institutionalization and habituation	Institutionalization was measured with two, and habituation with three items. One item was used to capture a combined view of both dimensions.
Smith and Barclay (1997)	Organizational theories and Social exchange theory	<i>“Trust as the critical factor differentiating effective from ineffective selling partner relationships”.</i>	Honesty/integrity Reliability/dependability Responsibility	23 items were used to measure trustworthiness, and 27 items were used to measure trusting behaviors. Each factor of organizational differences was measured, and a total of 15 items were used.

development of firm-level practices which influence trust”.

			Likeability Judgment	
Sako and Helper (1998)	Economic, sociological and psychological theories	<i>"An expectation held by an agent that its trading partner will behave in a mutually acceptable manner"</i> .	Goodwill trust Contract trust Competence trust	One item measured contractual trust, one measured competence-, and two items measured goodwill trust. A five-point Likert scale was used. Conceptualized conditions were tested with a total of 11 items, and three calculated items. Also several dummy variables were used added to evaluation.
Zaheer et al. (1998)	Relational exchange theory Transaction cost theory Theories of inter-firm exchange	<i>"Expectation that an actor can be relied on to fulfill obligations, will behave in a predictable manner, and will act fairly when the possibility for opportunism is present"</i> .	Reliability Predictability Fairness	Three measures for trust were used: 1) "The focal carrier and our agency have a high level of mutual trust" 2) "The focal carrier is well known for fair dealing", and 3) "The focal carrier stands by its word". A seven-point Likert scale was used in evaluation.
Plank et al. (1999)	Psychology, Sales literature	<i>"Trust is a global belief on the part of the buyer that the salesperson, product, and company will fulfill their obligations as understood by the buyer"</i> .	Not defined	Each dimension of trust was measured with five items, and evaluation was made by using a five-point Likert scale. Getting information was measured with four items, and giving information with one item.
Young-Ybarra and Wiersema (1999)	Transaction cost economics and Social exchange theory	<i>"Trust is based on three components: dependability (expectation that the partner will act in the alliance's best interests), predictability (consistency of actions), and faith (partner will not act opportunistically)"</i> .	Dependability Predictability Faith	Trust was measured with four items, using seven-point scale. Sources of trust were measured with a total of 16 items. E.g. "We have found that our partner company is unusually dependable."
Dyer and Chu (2000)	Theories of inter-organizational cooperation, Social interactions perspective, process-based perspective, economic perspective.	<i>"...trust as one party's confidence that the other party in the exchange relationship will not exploit its vulnerabilities"</i>	Reliability Fairness Goodwill	Five hypotheses, examining the determinants of trust (i.e., which factors influence supplier trust across all countries, and which are country-specific). The model consisted of measures of "Length of the relationship", "face-to-face communication", "continuity of the relationship", automaker assistance to the supplier", and "stock ownership".
Gassenheimer and Manolis (2001)	Resource dependency theory, "Inter-organizational research"	<i>"...governance mechanism for assessing dependence and as mediator of the effects that dependence has on anticipated future purchases."</i>	Calculative trust (The authors name the salesperson trust and organizational trust to be the two dimensions of trust)	Salesperson-trust was measured on 7 items, organizational trust on 4 items (e.g. "I trust this supplier to do things my firm is not equipped to do"). Measures were adapted from "previous inter-organizational research".
Möllering (2002)	Transaction cost approach, the ambivalent hierarchy argument, the precondition argument, the triadic forces argument, the systems separation argument, the	<i>Not defined</i>	Types of trust(worthiness): Cognition-based, Affect-based	Six items for the cognitive side of trustworthiness, and five items for the affective side of trustworthiness, and a control item ("we trust this supplier").

	rationality skepticism argument.			
Norman (2002)	Resource-based view, “relational aspects of alliances”	“ <i>Willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control the other party</i> ” Inter-organizational trust; CEOs and presidents as key informants.	Types of trust: competence-based trust and goodwill-trust	Items for trust: 1. “We can rely on our partner to abide by the alliance agreement”, 2. There is a high level of trust in the working relationship with our partner, 3. We trust that our partner’s decisions will be beneficial to the alliance, 4. We trust that our partner’s decision will be beneficial to our firm”.
Coote, Forrest, and Tam (2003)	Relationship-and industrial marketing theories.	“ <i>...trust exists when one party has confidence in the honesty, reliability, and integrity of their partner</i> ”.	Trust consists of honesty, integrity and reliability.	Trust was one of 5 measured dimensions. Four trust-items: “My supplier is honest and truthful”; “Promises made by my supplier are reliable”; “My supplier is open in dealing with me”; “I have great confidence in my supplier”; and “My supplier has a high degree of integrity”.

Theoretical approach: Theoretical bases are sometimes mentioned rather vaguely such as “inter-organizational research” or “theories of inter-organizational cooperation”, “economic approach” or “sales literature”. Most common theoretical approaches behind the 15 empirical studies are sociological or psychological theories, e.g. social exchange theory used in four studies. Literature from marketing channels is used in three studies. Transaction cost economics is used three times (Nooteboom et al. 1997; Young-Ybarra and Wiersema 1999; and Möllering 2002). Möllering (2002, 157) concludes that although his study integrates the concept of trust into the theory of economic organization at the most general level, “*...the straightforward annexation of trust by transaction cost theory...is rejected...*” This is understandable as trust has not traditionally been a focal concept in economic theories like transaction cost economics (Williamson 1975), even if its impact is later proposed as potentially lowering transaction costs (Williamson 1993), and increasing transaction benefits (Blomqvist et al. 2002). Despite of the common critics toward transaction cost economics, its vocabulary such as opportunism, uncertainty, bounded rationality and asymmetric information are useful conceptual tools to analyze trust in inter-organizational relationships. Coote, Forrest, and Tam’s (2003) definition: “*...trust exists when one party has confidence in the honesty, reliability, and integrity of their partner*” reflects the basic notions in psychology by assessing the partner’s qualities and personal attributes such as honesty, reliability and integrity. Ganesan (1994, 2) approaches trust from marketing channels research, social exchange theory and inter-organizational exchange behavior and defines trust as “*the willingness to rely on an exchange*”

partner to whom one has confidence". This definition reflects the fundamental idea of *marketing as exchange* (Bagozzi 1977), and fits well with social exchange theory.

Trust as a Multi-dimensional Construct: Authors typically combine different theoretical approaches (most often transaction cost economics and socio-psychology) to capture the multi-dimensional and complex nature of trust (on analysis of the applicability of different theories see Blomqvist 2002). Economic approach to trust is often calculative, emphasizing the risk decreasing nature of trust, and enhancing the prediction or expectations of the other actor's future behavior. Sako and Helper (1998, 388) have combined economic, sociological and psychological theories, and their definition on trust as "*an expectation held by an agent that its trading partner will behave in a mutually acceptable manner, and will act fairly when the possibility for opportunism is present*" reflects the socio-psychological expectation on reciprocity, and the economic approach on trust as prediction, as well as economic concepts (opportunism). In similar vein Young-Ybarra and Wiersema (1999, 443) combine transaction cost economics and social exchange theory in their theoretical framework, which can be seen in their definition, "*trust is based on three components: dependability (expectation that the partner will act in the alliance's best interests), predictability (consistency of actions), and faith (partner will not act opportunistically)*", which uses both the transaction cost economics vocabulary (opportunism), and the expectation of reciprocity from social exchange theory. It is proposed that a combination of social and economic approaches (Sako and Helper 1995; Young-Ybarra and Wiersema, 1999) may yield most comprehensive view of the complex phenomena of trust in inter-organizational relationships.

We also propose that along the development of the new theories explaining the competitiveness of the firm in dynamic environments (e.g. dynamic capability view of the firm, Teece et al. 1997), knowledge-based view of the firm (Nonaka and Takeuchi 1995) and theory on social capital (e.g. Nahapiet and Ghoshal 1998), there will be room for a research tradition combining at present distinct theoretical approaches. Also Blomqvist (2002), Möllering (2002), and Castaldo (2003) stress the need to take into account cognitive, affect-based and behavioral dimensions of trust to capture the complex and multi-dimensional concept.

Another issue is that the measurable dimensions of trust cannot most often be seen clearly in the definition. E.g. Ganesan (1994) names credibility and benevolence as dimensions of trust. However,

these are not visible in his definition (see Table 2). Doney and Cannon (1997, 36) use the same dimensions of trust (i.e. credibility and benevolence), which is coherent to their definition of trust as “*perceived credibility and benevolence of a target of trust*”. Also Young-Yabarra and Wiersema’s definition (1999, see above) and dimensions of trust are coherent. It is proposed that a more coherent linkage between the theoretical approach, conceptualization and dimensions of trust could make the research on inter-organizational trust more solid.

Even if similar theoretical approaches are used, trust is not necessarily defined similarly. In most studies, trust is conceptualized to be a multidimensional construct, yet the content, role and number of the dimensions is not universally agreed. The role and number of the dimensions varied across analyzed studies. Number of dimensions varied across analyzed studies from none to five. Dimensions used in reviewed empirical researches on inter-organizational trust are credibility, benevolence, confidence, reliability, integrity, honesty, institutionalization, habitualization, ability, dependability, responsibility, likeability, judgment, goodwill trust, contract trust, competence trust, fairness, reciprocity, togetherness, predictability, openness, and frankness. The most common dimensions seem to be reliability and credibility/competence yet there seems to be no consensus on the semantic meaning of words. Some authors use e.g. the terms capability, or ability, instead of competence or credibility (on semantics related to trust, see Blomqvist 1997; and Castaldo 2003). Dependability has been used in similar vein as *goodwill* or *benevolence* and *predictability* and *integrity* have been used intertwined in the reviewed articles. Using dimensions in a blurry, overlapping, or even controversial way makes the assessment of trust measurement efforts difficult.

As noted, the number and content of trust dimensions still remains to be agreed on. Most of the studies, however, see trust as a multi-dimensional construct; based on the argument that only one dimension does not cover properly the whole phenomenon. Semantic ambiguity in conceptualization may be due to different national or industry-specific cultural approach to trust. Furthermore, it is even argued by some authors that due to the difficulties in operationalization and measurement of inter-organizational trust and its suggested dimensions, it could - and should - be treated as one-dimensional, global measure⁵ (Medlin and Quester 2002).

⁵ Medlin and Quester (2002) argue that due to a) the intertwining of honesty and benevolence dimensions, b) the inter-level generalization problem, c) the ambiguity of benevolence problem, and d) the argument that trust is an orientation to the future, inter-organizational trust may have to be measured with one - global - measure.

Trust as a reciprocative concept: Trust seems to have some specific properties that make studying of it harder. E.g. the inter-relationships between trust and cooperation, trust and communication, as well as trust and performance have all been suggested to be reciprocal. Causality can be seen as one of the major reasons for the ambiguity and confusion in defining the antecedents, dimensions, and consequences of the trust construct. This tells, at least partly, about trust as a reciprocative concept, being potentially both a cause and partly an effect. As Laurent (2000, 178) has well pointed out authors in marketing “almost always manage to propose models with “simple” causality”, i.e. with no circular or reciprocal causation. Forrester (1961) has argued forcefully in favor of the feedback loops as the basic constituents of economic and social systems. Feedback loops may also exist in trust research (see e.g. Blomqvist 2002), and if this is the case, “simple” causal models are logically wrong, and the empirical estimation by any statistical software is not going to confirm them.

Operationalization and level of measurement: It seems, that all the empirical papers share more or less the same problem: the theory is based on the organizational level trust, while the attempts of measuring trust have taken place on the individual level. Currall and Inkpen (2000, 481) refer to this by noting that “*misspecification of the firm as the level of theory and the person as the level of measurement is common in alliance research*”. As pointed out, this “inter-level generalization problem” (Medlin and Quester 2002) seems to be somewhat the problem in almost all studies on inter-organizational trust.

It has been suggested that inter-organizational and inter-personal trust may not be possible to study with similar measures (Zaheer et al. 1998). Ganesan (1994), and Smith and Barclay (1999) used individual boundary spanners (a representative/buyer) as key informants. Nooteboom et al. (1997) acknowledge the individual’s key role and view his/her propensity to trust to be impacted by the organizational culture. Subsequently, they treat trust as an individual’s perception with respect to partner organization and their variables treat trust as perception of mutual relationship. Doney and Cannon (1997) and Zaheer et al. (1998) have developed separate measures for interpersonal and inter-organizational trust. The study by Zaheer et al. (1998) indicates that interpersonal and inter-organizational trust are distinct but related constructs playing different roles in inter-organizational cooperation. Also Doney and Cannon (1997) note that processes by which trust develops, appear to differ depending on whether the target is an organization or an individual. Chow and Holden (1997) and Plank et al. (1999) believed that trust should be measured on three separate but interrelated

levels: salesperson, company and product/service level. In some of the reviewed studies, though, trust is defined either with little, or no distinction at all between individual, organizational, or inter-organizational trust.

Rousseau et al. (1998) suggests that trust may be a meso-level concept integrating micro-level psychological processes, group dynamics and macro-level institutional arrangements. Weiss (1993) notes that studies of inter-organizational negotiations require multiple level of analysis, as in complex social phenomena actors exist on more than one level (simultaneously), act differently as units and influence each other across levels (see also Tyler 2001).

Methodologies and measurement validation

In this sub-chapter we review the methodologies (i.e. sampling, data collection and measurement issues) of the selected fifteen empirical papers.

Sample, data collection and measurement validation: Majority of the reviewed studies collected data via mail surveys. However, in some studies field interviews were also applied (e.g. Auklah et al. 1996; Ganesan 1994). When new measures are created, it is highly recommended to apply rigorous pre-testing (Bolton 1993; Reynolds and Diamantopoulos 1996). Pre-testing was used in six of the reviewed 15 empirical papers. In quantitative studies on inter-organizational trust the final sample sizes varied from 10 to 675 firms and from 97 relationships to 132 alliances (241 firms). The response rates varied from 14 to 68 percent. Researchers have applied mainly multi-item scales for measuring trust, as it is suggested in the literature (see e.g. Morgan and Hunt 1994). For measurement development and validation researchers applied either exploratory factor analysis or confirmatory factor analysis or even both, like Ganesan (1994) and Plank et al. (1999). Methodology, used data, measurement source, and validity are illustrated in the table 3.

Table 3. Used methodologies, analysis methods, and measurement sources.

Author(s)	Methodology/data	Analysis method	Measurement Source & Validity	Object of Trust & Key informants
Ganesan (1994)	Study of 124 US retail buyers and 52 vendors. Pretests (interviews). Two separate mail-surveys.	Exploratory + Confirmatory factor analysis (CFA)	Measures adapted from Moorman et al. (1993) 1. Credibility ($\alpha = .90$ for vendor, $\alpha = .80$ for retailer) 2. Benevolence ($\alpha = .88$ for vendor, $\alpha = .76$ for retailer)	Inter-organizational trust Sales representatives and managers as key-informants.

Aulakh et al. (1996)	Preliminary field interviews with 20 manufacturer firm managers. Mail survey. Sample size 1952. Response rate 70% (1365 persons). Final sample of 249 distributor-, and 213 manufacturer firms.	Exploratory factor analysis	Measures adapted from Moorman et al. (1993) Trust: 3-item scale ($\alpha = .77$)	Inter-organizational trust Presidents/CEOs as key informants.
Chow and Holden (1997)	Mail survey. Sample size 297. Response rate of 52% (155 respondents).	Confirmatory factor analysis	Items adapted from the past studies (cf. Hockreich and Rotter, 1970) Trust in Salesperson: 3 item scale ($\alpha = .87$) Trust in Company: 3 item scale ($\alpha = .81$)	Salesperson trust and company trust Purchasers as key informants.
Doney and Cannon (1997)	Mail survey. Sample size 678 Response rate 31% (i.e. 210 respondents). Reminder used.	Confirmatory factor analysis	Measures developed for the study. 1. Supplier firm trust: 8-item scale ($\alpha = .94$) 2. Salesperson trust: 7-item scale ($\alpha = .90$)	Trust of industrial buyers to a supplier firm and its salesperson, i.e., inter-personal and inter-organizational trust. Purchasing managers as key informants.
Nooteboom et al. (1997)	Questionnaire filled by 10 suppliers. (data of 97 relationships)	Confirmatory factor analysis	Measures developed for the study. Institutionalization ($\alpha = .87$) Habitualization ($\alpha = .75$) Habitualization and institutionalization ($\alpha = .77$)	Inter-organizational trust General-, or sale manager as key informants.
Smith and Barclay (1997)	First, a mail survey was sent to 338 randomly selected sales representatives involved in partnership. Then survey was mailed to detected partner of relationship. Final sample size was 103 matched pairs of responses.	Partial Least Squares	Mutual perceived trustworthiness was adapted from Swan et al. (1988) and Gabarro (1978) : 1. Character 2. Role competence 3. Judgement 4. Motives and intentions Mutual Trusting Behaviors: 1. Relationship investment 2. Influence acceptance 3. Communications openness 4. Control reduction 5. Forbearance opportunism	Inter-organizational trust Sales representatives as key informants.
Sako and Helper (1998)	Mail survey. Sample size: more than 3000. Response rates: in US (675 responses, rate 55%) and in Japan (472 responses, rate 30%).	N.A.	Measures developed for the study. Single item measures. Three types of trust: 1. Contractual trust 2. Competence trust 3. Goodwill trust	The trust of supplier firm to customer firm, i.e., inter-organizational trust The key informant not specified.
Zaheer et al. (1998)	Sample size 1050. Response rate 15%. Questionnaires (306 persons) + telephone survey (100 persons)	Exploratory factor analysis	Interpersonal trust ($\alpha = .88$) Inter-organizational trust ($\alpha = .77$) Measures adapted from Remper and Holmes (1986). Fairness was new measure.	Trust in individual, and organizational level Purchasing managers as key informants.
Plank et al. (1999)	Mail survey. Sample size 2324. Response rate 24,5% (568 responses)	Exploratory factor analysis + CFA	Three facets of trust: company trust, product trust, salesperson trust. Measures adapted from Rotter 1967, Swan et al. 1988,	Salesperson trust, product trust and company trust

			Lagace 1991. 15-item scale	Buyers as key informants evaluating salespersons.
Young-Ybarra and Wiersema (1999)	Sample 132 alliances, involving 241 firms. 91 questionnaires received. Response rate 38%.	Exploratory factor analysis	Trust: 4-item scale ($\alpha = .86$): 1. Interpersonal trust (adapted from Johnson-George & Swap 1982; Larzelere & Houston 1980, McAllister 1995) 2. Interorganizational trust (adapted from Anderson & Narus 1990; Morgan&Hunt 1994)	Inter-organizational trust Key informant not defined.
Dyer and Chu (2000)	Survey of automotive industry. Questionnaires received: 135 (U.S.), 101 (Japan), and 217 (Korea). Response rates 66% (US), 68% (Japan), 55% (Korea).	Summated scale of three items	Trust: 3-item scale ($\alpha = .84$)	Inter-organizational trust Purchasing manager as key informants.
Gassenheimer and Manolis (2001)	138 usable questionnaires received. Response rate 14 %.	CFA + Cronbach's alpha coefficients	Salesperson trust ($\alpha = .84$) 7-item scale adapted from Ganesan's (1994) scale. Organizational trust ($\alpha = .64$) 4-item scale adapted from Moorman et al. (1992)	Inter-organizational and organizational trust Purchasers as key informants.
Möllering (2002)	A survey among 184 buyer-supplier relationships in the UK printing industry.	Cronbach alpha coefficients	Trustworthiness: 1. Cognitive trustworthiness ($\alpha = .78$) 2. Affective trustworthiness ($\alpha = .84$)	Inter-organizational trust Buyers as key informants.
Norman (2002)	Survey. 61 alliances in the study.	Factor analysis	Trust (modified from Inkpen 1992; Mohr & Spekman 1994) ($\alpha = .89$)	Inter-organizational trust Owner/CEO as a key informant.
Coote, Forrest, and Tam (2003)	Mail survey (sample size approximately 1000) 152 returned questionnaires	Confirmatory factor analysis	Trust: 5-point Likert scale. Items based on Morgan and Hunt (1994) ($\alpha = .88$)	Type of trust not defined Owners/CEOs as key informants.

Due to the limited space, we review here only few selected topics related to the measurement issues. First we review measurement of trust in salesperson and trust in company. This discussion is followed by the review of the role and measurement of trustworthiness, followed by assessment of measurement validity (c.f. Blomqvist et al. 2002) for the review of antecedents and consequences of trust).

Key informant and single respondent bias: Trust is a 'soft' concept also what comes to the measurement. In order to assess trust, one must rely on personal judgements gained from interviews and/or questionnaires. Therefore, one should not overlook the importance of obtaining reliable information from carefully selected respondents. However, as Ernst and Teichert (1998, 722) point out "interviewing a single respondent per company impedes the assessment of validity". Multitrait-

multimethod approaches could be used to overcome the problem of possible informant biases (Cambell and Fiske 1959). In all of the reviewed studies, there was a single key informant used. Persons chosen for key informants were owners, CEOs, and presidents of the company; sales managers, purchasing managers, and general managers; or purchasers and sales representatives. In some studies, the key informant was not named.

Measurement items: A major question is how trust was measured. Studies that measured trust in salesperson and in company are reviewed first. Chow and Holden (1997) measured trust in salesperson with three items that focused on the risk of trusting, opportunistic behavior, and being careful. Doney and Cannon (1997) used 7-item measure for salesperson trust. Their items emphasized for example trustworthiness, openness, and the risk of opportunistic behavior. Plank et al.'s (1999) study on the other hand measured salesperson trust with 5-item scale. Their scale covered topics like expertise, friendship and willingness to serve the company, whereas Gassenheimer and Manolis (2001) utilized 7-item scale of trust in their study. Their scale added one more dimension, i.e. reliability. Although credibility and benevolence are seen as conceptually distinct, in business relationships they may be so intertwined that in practice they are operationally inseparable. Therefore, Doney and Cannon (1997) treated trust of the salesperson and trust of the selling firm as unidimensional constructs. The items used to measure seem to reflect the three basic dimensions: reliability, predictability, fairness.

As shown in Appendix A, *trustworthiness* is often included in studies that studied perceived trust in salespeople and company or supplier. Mutual perceived trustworthiness is the extent to which partners jointly expect fiduciary responsibility in the performance of their individual roles and believe that each will act in the best interest of the partnership (e.g. Anderson and Narus 1990). Smith and Barclay (1997) conceptualized mutual perceived trustworthiness as having four dimensions: character, role competence, judgment, and motives or intentions. This was consistent with Mayer et al.'s (1995) study, with the exception that Smith and Barclay (1997) added judgment as a fourth dimension. Trustworthiness is also included in Zaheer et al.'s (1998) study as supplier's trustworthiness is included both in the scale of inter-organizational and inter-personal trust. Dyer and Chu (2000) operationalized trust using multiple scales items designed to measure the extent to which the supplier trusted the automaker not to behave opportunistically. Trust was operationalized as the sum of the three sub measures: (a) the extent to which the supplier trusts the manufacturer to

treat the supplier fairly, (b) the extent to which the automaker has a reputation for trustworthiness in the general supplier community, and (c) if given a change, the extent to which the supplier perceives that the automaker will take unfair advantage of the supplier. Later Möllering (2002) has proposed a separate multi-item scale for trustworthiness. Given the subjective nature of trustworthiness, Möllering (2002) measured the buyer's level of agreement or disagreement with a range of statements about a supplier, using five point likert scales. Six statements were targeted at the cognitive side of trustworthiness and five items at the affective side.

Evaluation of measurement validity: Most of the studies have adopted multi-item scales. However differences arise on the extent of measurement validation and construct reliability assessments. Most studies have used either exploratory factor analysis or confirmatory factor analysis (e.g. Nootboom et al. 1997) in measurement development and validation. However, also studies applying both exist (e.g. Ganesan 1994; Plank et al. 1999). In Ganesan's (1994) study the items that loaded greater than .40 level (see e.g. Hair et al. 1998) on two factors were analyzed further through a confirmatory factor analysis. Only Möllering (2002) has included a control item ("We trust this supplier") to ensure the content validity of the scale. Use of control items is recommendable when measuring complex issues like trust due to the jeopardy of social desirability bias (Blois 1999).

It has been proposed that trust is context based (Mayer et al. 1995; Rousseau et al. 1998). Thus, researchers have developed new measures of trust to better illustrate the specific research context. For example, Doney and Cannon (1997) accommodated measures to the industrial buyer-supplier context. Items were generated on the basis of interviews with marketing and purchasing personnel. On the other hand, Nootboom et al. (1997) proposed that opportunism and trust are to some extent idiosyncratic: they vary between people and organizations even if other conditions are identical. "It is useful to distinguish between behavioral trust *"the willingness to increase one's vulnerability to another whose behavior is not under one's control"* (Zand 1973, 230), from intentional trust, or the subjective probability that one assigns to benevolent action by another agent of group of agents. If trust is identified with a subjective probability that a partner will not abuse one's dependence, without further qualification, then anything that contributes to such subjective probability would belong to trust – anything that restrains the partner from opportunistic conduct.

Measurement of trust varies a lot across the reviewed studies. An interesting notion is that replication of studies is not commonly used. In the trust research there seems to be a tendency that each author develops his/her own measures. The items - even when based on literature review or earlier research - are modified by authors and adapted to the specific field in question. This may be a result due to very different conceptualization of trust across studies. It can be seen that only shared values and communication are common concepts in these studies. In ambiguous, complex and soft concepts like trust, a multi-item measure could yield better results. E.g. Sako and Helper (1998) have used a composite measure in which the measures for trust have been adapted from economics and psychology to reduce measurement error. Thus, in similar vein than in Möllering (2002), their composite measure both cognitive and affect-based factors are included.

Object of trust and key informants: Not all authors define the object of trust. Those who do, usually see the object of trust in a passive voice: exchange partner, partner, party, actor, person or thing, or target. Thus, the definitions allow person, product/service or organization to be trusted.

Viewing trust between organizations is obviously challenging, yet reliance on key informants can turn out to be problematic from the point of view of validity. When an individual is asked to give information about organization-level issues, s/he may respond to the topic in hand based on personal perceptions, opinions, and feelings, which may be subjectively considered as commonly shared views - i.e., the informant makes a subjective generalization. At least the process of selecting the informants has to be done most carefully - i.e., their competency, experience, etc. has to be assessed thoroughly. (Currall and Inkpen 2002; Medlin and Quester 2002). The single informant bias is a severe obstacle for the validity of studies and for the goal of making empirical or theoretical generalizations.

Empirical generalization has an important role in scientific research⁶ (Bass 1993). However, today's research in inter-organizational trust is largely based on simple common generalizations and beliefs but not on empirical generalizations. Our review revealed that there were hardly any evidence of attempts to establish any empirical generalizations. According to Barwise (1995) good empirical generalizations have five characteristics: scope (i.e. a good empirical generalization is known to

⁶ "Empirical generalizations is a pattern or regularity that repeats over different circumstances and that can be described simply by mathematical, graphic, or symbolic measures. A pattern that repeats but need not be universal over all circumstances" (Bass 1995)

hold under a wide range of different conditions), precision (an empirical generalization is a description of a phenomenon that has been observed several times), parsimony (in scientific description, other things being equal “less is more”), usefulness (both for academicians and practitioners), and a link with theory. The link with the theory means that the theory accounts for the empirical generalization and preferably also accounts for its scope. As hardly any replications studies exist, we cannot conclude the scope of empirical generalizations in inter-organizational trust research. And as empirical studies of inter-organizational trust are relatively new also precision of empirical generalizations in this area is vague. We can also question the usefulness of prior research for practitioners as operationalization, measurement, and analyses do now allow us to compare objectively and precisely these studies. Thus, it is utmost important to conduct more empirical studies on inter-organizational trust, in order to derive both empirical and theoretical generalizations on this emerging topic.

3 CONCLUSIONS AND DIRECTIONS FOR FURTHER RESEARCH ON MEASURING INTER-ORGANIZATIONAL TRUST

The analysis of these empirical papers revealed a lot of differences both in conceptualization and operationalization of trust. Also measurement and methodology used to study the concept of trust in inter-organizational relationships varied. Does this mean that trust is so context specific that its conceptualization and operationalization in general level is impossible? Or are there deficiencies in recent studies on inter-organization trust? In the reviewed studies, the contexts - although it varied in some extent - were not so different that using essentially different approach to trust would seem justified. It can reasonably be proposed also that studies applying the same theoretical approach should share at least the common concepts of trust, although the measurement may differ across studies based on the contexts the study is conducted in (i.e. industry, vertical or horizontal relationships). It is also suggested that in order to grasp the phenomenon of trust in the inter-organizational context, the authors should be very clear of the level of analysis. This seems not to be clear in all reviewed studies. It can well be argued that separate measures should be developed for inter-personal and inter-organizational trust. It is proposed that using more than one - preferably multiple - key informant is preferable. The congruence between the level of theory and measurement should be kept in mind, and strictly assessed. Possibilities for using also other sources of information to incorporate also behavioral trust are also recommended - such are e.g. archival

data sources (for more of this topic, see Currall and Inkpen 2002). In order to enhance comparability between studies and to avoid confusion, also semantic issues should be paid more attention to. In addition the confusion in differentiating between antecedents, components, and consequences of trust is certainly one of the major challenges in trust studies (see Rousseau et al. 1998). Future research on inter-organizational trust should also consider testing the reciprocal loops of trust and communication, as well as trust and commitment.

There seems to be also discrepancy on what actually is studied. In some studies, it is clearly trustworthiness of the other party that is measured; yet in others, it is mutual trust. It is proposed, that authors should be very clear on the roles of the trustor and trustee, and whether they study trustworthiness or mutual trust existing in the relationship. This is because trust and trustworthiness are seen to be clearly distinct concepts (see e.g. Nooteboom 2002).

As noted in previous chapter, cultural matters are seen - at least in some extent - to impact to perceived trust. Trust is always perceived by the individual respondent, and based on his/her values. There is already some evidence that national culture impacts the role and nature of trust (see e.g. Dyer and Shu 2000; Sako 1994), possibly also on how trust is perceived. Based on very early findings of Bidault and de la Torr  (forthcoming), religion is the most prominent factor explaining the respondent's approach to trust. It is proposed, that also the individual's experience, analytical skills and judgement may impact perceived trust (Blomqvist 2002). Could this indicate that people who are aware and conscious of trust are able to discern more delicate dimensions in trust? Also the impact of the industry culture, organizational culture and professional subculture (e.g. entrepreneurial, legalistic, buyers) may impact on the respondent's view and awareness on trust. These are important areas for further research. This obviously raises a question, whether empirical studies and measures of inter-organizational trust can be applied and generalized across cultures and religions. Also this calls for replication of conducted studies in other contexts (see e.g. Churchill 1979).

A more coherent linkage between the theoretical approach, conceptualization and dimensions of trust could make the research on inter-organizational trust more solid. At present it seems that empirical studies do not leverage fully the earlier research on trust, e.g. on conceptualizations and the measurement instruments. It is also proposed that a combination of different theoretical

approach may yield most comprehensive view of trust. Cognitive, affective and even behavioral dimensions of trust should be included.

The review indicates that trust is seen to be relevant and essential phenomenon across industries. However, the nature of trust, and its' antecedents and consequences may vary due to the industry in question, and thus cross-industry comparison could give interesting insights of the concept of trust. The impact of the context may also be related to the level of analysis and the roles of inter-organizational and inter-personal trust. Majority of the research contexts was technology-intensive industries. However there was no articles e.g. on service industry, which is becoming increasingly important, and risk is also a critical issues there. Some more research on trust in inter-organizational relationships in the service industries is called for. Therefore, both replication of conducted studies in other contexts, and more studies of the possible context specificity is strongly urged. An important and widely supported notion also in other trust studies is that the conceptualization of trust differs across cultures. Nature and role of trust in inter-cultural context is certainly an emerging and important research topic for further research.

Managerial implications: Based on our clinical work and research projects with firms, it is proposed that measuring trust in inter-organizational relationships is also a critical managerial issue. Firms increasingly understand the critical role of trust in e.g. partnerships, and are looking for suitable metrics. It is proposed that if a coherent and simple method for measuring inter-organizational trust could be developed, it could function as a pre-sensor management tool. The decreased level of trust would indicate forthcoming and more concrete problems in the relationship. For managerial purpose the developed metrics should be however very simple and easy to use.

Theoretical Implications: Taken together, this review did reveal a great variety in conceptualization and operationalization in the attempts to measure inter-organizational trust. Yet, any clear major reason to the lack of all encompassing and widely agreed method cannot be found from these studies. If studies based on the same theories apply different conceptualizations for trust, then the theoretical examination of the concept itself might be inadequate, and thus it needs more research, first theoretical and only then empirical. Because of the suggested high context-specificity, and due to the fact that the concept of trust seems not to be easily quantifiable, it seems obvious that also qualitative empirical studies and piloting are called before quantitative surveys. Furthermore,

studies on trust need essentially to be replicated, and extended to different types of contexts - i.e., different types of cultures, fields of industries, and relationships - in order to improve their validity and approve generalizability. Also longitudinal studies are welcome in order to improve measurement, conceptualization, and operationalization of studies of inter-organizational trust. A more clear articulation of the theoretical base could increase the accumulation of knowledge, researchers' references to earlier studies, and an overall fruitful academic dialogue.

Trust is one of the key concepts in the knowledge-based competition in the network era. There seems to be plenty of room for researchers interested in this challenging concept, and its measurement in inter-organizational relationships. Drawn from the earlier studies and reviewed articles, it can be pointed out that measuring trust at inter-organizational level is not very well developed and can be rather challenging. However, the topic is clearly critical for inter-organizational relationships in the knowledge-based network economy, and offers potential both for theoretical and managerial contribution. Development of clear measurement procedures and methods at individual, group, and organization levels would help in a more rigorous theory testing, and in management and development of organizations. Solid research work based on earlier knowledge, careful conceptualization, operationalization and measurement of trust could build up a body of coherent work on trust in inter-organizational relationships. In time a theory on trust could emerge.

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APPENDIX A: Measurement Items

Study	Items
Ganesan (1994)	<p>Credibility</p> <ul style="list-style-type: none"> - This resource's representative has been frank in dealing with us. - Promises made by this resource's representative are reliable - This resource's representative in knowledge able regarding his/her products - This resource's representative is not open id dealing with us - If problems such as shipment delays arise, the resource's representative is honest about the problems - This resource's representative has problems answering our questions. <p>Benevolence</p> <ul style="list-style-type: none"> - This resource's representative has made sacrifices for us in the past - This resource's representative cares for us - In times of shortages, this resource's representative has gone out on a limb for us - This resource's representative is like a friend - We feel the resource's representative has been on our side.
Auklah et al. (1996)	<p>Trust</p> <ul style="list-style-type: none"> - Our business relationship with this foreign partner is characterized by high levels of trust - Our firm and the partner firm generally trust that each will stay within the terms of the contract - We and our partner firm are generally skeptical of the information provided to each other
Chow and Holden (1997)	<p>Salesperson trust</p> <ul style="list-style-type: none"> - Generally speaking you can't be too careful in dealing with him/her - Anyone who completely trusts him/her is asking for trouble - Despite what she/he says, she/he will try to take advantage of me <p>Company trust</p> <ul style="list-style-type: none"> - This company can't be trusted, it's just too busy looking our for itself - I have found that I can rely on this company to keep the promises that it makes - This company is basically honest.
Doney and Cannon (1997)	<p>Supplier firm trust:</p> <ul style="list-style-type: none"> - This supplier keeps promises it makes to our firm - This supplier is not always honest with us - We believe the information that this vendor provided us. - This supplier is genuinely concerned that our business succeeds. - When making important decisions, this supplier considers our welfare as well as its own. - We trust this vendor keeps our best interests in mind. - This supplier is trustworthy. - We find it necessary to be cautious with this supplier. <p>Trust of the salesperson:</p> <ul style="list-style-type: none"> - This salesperson has been frank in dealing with us. - This salesperson does not make false claims. - We do not think this salesperson is completely open in dealing with us. - This salesperson in only concerned about himself/herself - This salesperson does not seem to be concerned with our needs - This people at my firm do not trust this salesperson - This salesperson is not trustworthy.
Nooteboom et al. (1997)	<p>Institutionalization</p> <ul style="list-style-type: none"> - In this relation, both sides are expected not to make demands that can seriously damage the interests of the other - In this relation the strongest side is expected not to pursue its interest at all costs <p>Habitualization</p> <ul style="list-style-type: none"> - Because we have been doing business so long with this customer, all kinds of procedures have become self-evident - Because we have been doing business for so long with this customer, we can understand each other well and quickly - In our contacts with this customer we have never had the feeling of being misled
Sako and Helper (1998)	<p>Contractual trust</p> <ul style="list-style-type: none"> - We prefer to have everything spelt out in detail in our contract <p>Competence trust:</p> <ul style="list-style-type: none"> - The advice our customer gives us is not always helpful <p>Goodwill trust:</p> <ul style="list-style-type: none"> - We can rely on our customer to help us in ways not required by our agreement with them. - We can depend on our customer always to treat us fairly
Zaheer et al. (1998)	<p>Inter-organizational trust:</p> <ul style="list-style-type: none"> - Supplier X has always been evenhanded in its negotiations with us - Supplier X may use opportunities that arise to profit at our expense - Based on past experience, we cannot with complete confidence rely on Supplier X to keep promises made to us. - We are hesitant to transact with Supplier X when the specifications are vague - Supplier X is trustworthy <p>Interpersonal trust:</p> <ul style="list-style-type: none"> - My contact person has always been evenhanded in negotiations with me - I know how my contact person is going to act. He can always be counted on to act as I expect - My contact person is trustworthy

	<ul style="list-style-type: none"> - I have faith in my contact person to look out for my interests even when it is costly to do so - I would feel a sense of betrayal if my contact person's performance was below my expectations
Plank et al. (1999)	<p>Company trust:</p> <ul style="list-style-type: none"> - The company this salesperson works for will stand behind us - The company can be counted upon to do right with us - This salesperson's company has quality people working for them - The salesperson's company has a poor reputation - The company will do what it takes to make us happy <p>Product trust:</p> <ul style="list-style-type: none"> - The product/service will not meet our needs without question - This product/service has the technical attributes necessary to do the job - The product/service will give us little trouble in use - The product/service will please all those in our company who use it or are responsible for it - This product/service will do everything we want it to do <p>Salesperson trust:</p> <ul style="list-style-type: none"> - This salesperson did everything possible for our company - This salesperson will always use good judgment - The salesperson is not a real expert - The salesperson is like a good friend - When the salesperson tells me something it must be false
Young-Ybarra and Wiersema (1999)	<ul style="list-style-type: none"> - When we encounter difficult and new circumstances, my company does not feel worried or threatened by letting our partner company do what it wants. - My company is familiar with the patterns of behavior our partner company has established, and we can rely on them to behave in certain ways - We have found that our partner company is unusually dependable - Our partner company cannot be trusted at times
Dyer and Chu (2000)	<ul style="list-style-type: none"> - The extent to which the supplier trusts the manufacturer to treat the supplier fairly - The extent to which the automaker has a reputation for trustworthiness in the general supplier community - If given a change, the extent to which the supplier perceives that the automaker will take unfair advantage of the supplier
Gassenheimer and Manolis (2001)	<p>Salesperson trust:</p> <ul style="list-style-type: none"> - I generally trust the supplier's sales representative - This supplier's sales representative has been frank in dealing with us - Promises made by this supplier's sales representative are reliable - This supplier's sales representative is knowledgeable regarding his products - This supplier's sales representative is not open in dealing with us - If problems arise the supplier's sales representative is honest about the problem - This supplier's sales representative has problems answering our questions <p>Organizational trust:</p> <ul style="list-style-type: none"> - If I or someone else from my firm could not be reached by this supplier, I would be willing to let this supplier make important supply decisions without my involvement - If I or someone else from my firm was unable to monitor this supplier's activities, I would be willing to trust this supplier to get the job done right - I trust this supplier to do things my firm is not equipped to do - I generally do not trust this supplier
Möllering (2002)	<p>Cognitive trustworthiness</p> <ul style="list-style-type: none"> - Supplier charges fair prices - Relatively few problems with quality of materials - Relatively few problems with reliability of delivery - Supplier has a good reputation - Supplier operates reliable quality controls - Legal disputes with supplier are unlikely <p>Affective trustworthiness</p> <ul style="list-style-type: none"> - Supplier understands our needs and culture - Supplier treats us well as a customer - Supplier's staff known personally and professionally (later omitted from scale) - Good working relationship with supplier's staff - Supplier makes constant efforts to maintain good relationship
Norman (2002)	<ul style="list-style-type: none"> - We can rely on our partner to abide by the alliance agreement - There is a high level of trust in the working relationship with our partner - We trust that our partner's decision will be beneficial to the alliance - We trust that our partner's decision will be beneficial to our firm