Impact Assessment of Inter-Organizational Trust on Virtual Organizations Performance in Nigerian Service Firms

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Abstract
This investigation examines inter-organizational trust on virtual organizations performance of selected Nigerian service firms. Inter-organizational trust is the extent to which members of a firm hold a collective trust orientation towards another organization. Virtual organization is a functionally culturally diverse firm that is connected by electronic forms of communication and/or use of ICT for collaborations. In inter-organizational relationships, the most common success factor, and possibly the most critical one is trust. Trust is widely acknowledged as being important for the efficient operation of inter-organizational business activities, the formation of trust remains challenging, the experience with trust despite increased interest and the acknowledged role of trust to a company’s competitiveness is that there has not yet been theoretically and empirically coherent attempts to measure trust in inter-organizational contexts to the best of my knowledge. The apparent, lack of inter-organizational trust and reliability in virtual organizations as a result of perceived risks from privacy concerns and vulnerability to fraud may impede organizations’ performance. In carrying out this investigation, three research objectives and three research questions were formulated alongside with three research hypotheses. Relevant data were reviewed, this provide an understanding of previous work in an area of investigation thereby providing basis for the researchable problem at stake. The chief instrument for data collection was questionnaire, which was designed for low, middle and top level management staff. The data was analyzed using a chi-square statistical technique. The result of the study showed that inter-organizational trust impact significantly and positively on virtual organizations commitment and performance and firm benefitted more from inter-organizational trust when the degree of interdependence between two organizations was higher. When we examine inter-organizational trust in virtual organizations from the perspective of network organizations, then we certainly conclude that inter-organizational trust in virtual organizations is a new type of network. Finally, it was recommended that, the formation of organizational process should be based on trust and not on the basis of power which will result in increased commitment, job-satisfaction, performance and growth of employees and the organizations in general.

Key words: Trust; Virtual; Inter-organizational trust; Virtual organizations and performance

INTRODUCTION
It has become increasingly clear that inter-organizational trust is an important factor affecting the actions and performance of organizations engaged in dyadic and network relationships such as strategic alliances. Issues associated with organizational trust have generated a great deal of broad scholarly interest in the field, as evidenced by the dozens of articles and special issues of the leading journals that have been devoted to the theme of trust. Yet, although there exists a significant amount of literature on trust in an organizational context as well as research in related area such as alliances, social networks, and interpersonal trust-scholarly work specifically dealing with inter-organizational trust is a more limited area of research. A commonly used definition of inter-
organizational trust is the extent to which members of one organization hold a collective trust orientation toward another organization (Zaheer, McEvily, & Perrone 1998). Relatedly, Currall and Inkpen (2002) draw attention to the socially constructed shared history within an organization toward another organization that constitutes a collective orientation. In this vein, it is important to avoid anthropomorphizing the organization by treating inter-organizational trust as equivalent to an individual trusting another individual.

The fact that trust is such a broad concept, complicated by its various connotations in common usage, results in researchers parsing trust into a variety of finer-grained dimensions, teasing out various aspects of trust. These dimensions often frame very different descriptive views of trust; for instance, inter-organizational trust can be seen as goodwill-based (Saparito, Chen, & Sapienza 2004) or competence-based (Lui & Ngo, 2004). Because trust has developed into a multidimensional construct, researchers both conceive of and measure trust in various ways. A major, economics-derived stream on trust views it as a dispositional characteristic of the trustor (Gambetta, 1988, p. 19).

On the other hand, virtual organization exists in cyberspace. It is a new organization form that facilitates technological demands. The virtual organization is information-intensive and centres round the knowledge of workers linked by technology across space and time. While a clear historical perspective remains forthcoming Kasper-Fuehrer and Ashkanasy (2004) opine that, there is general consensus that the virtual organization is not a hierarchical structure but rather a type of network organization. As such, it facilitates open access to and exchange of information throughout the network and across organization boundaries. The collapse of space and time in virtual organizations highlights the need for a management approach that enable flexibility, coordinated communication and adaptability to address emerging issues regarding a dispersed workforce. Therefore, virtual operations require organizing efforts that move beyond efficiency and control to those that emphasize the ability to identify or create opportunities, and gather the needed players to harness these opportunities.

Definitions of the virtual organization are ambivalent and lack clarity due to conflicting characterizations in the literature (Shekhar, 2006; Warner & Witzel, 2004). A primary problem in the literature is that virtual organizations are approached as technology-enabled extensions of traditional, structurally bounded organizations. Conceptualization is based on the understanding of the term virtual, or degree of virtuality, where definitions imply that the virtual organization is merely a binary concept which is either virtual or not. This is evident in Bosch-Sijtsema (2002) who cites numerous historical perspectives ranging from descriptions of the virtual organization as a team within a single organization, to a web company where different organization partners combine resources and work through information technology. Divergent result from research focused on different units of analysis when studying virtuality, such as the individual unit, the group unit and the organizational unit (Shekhar, 2006, p. 478). However, accurate conceptualization relies on this distinction because the degree of virtuality differs for each organization type that displays different characteristics. This implies that the organization processes of each need to be managed differently.

However, concepts and definitions related to the VE/VO paradigm are still evolving, and the terminology is not yet fixed. There is still not even a common definition for the VE/VO that is agreed by the community of researchers in this area. Nevertheless, many real examples of VE/VO are already available and functional in different regions of the world, which indicates the importance of this area and the need for stabilizing the terminology and definition for this paradigm, as well as research in developing a model of their life cycle, behavior, and evolution.

It is against this background that the researcher seeks to examine impact of Inter-organizational Trust on Virtual Organizations Commitment in Nigerian Service Firms with particular reference to selected Nigerian service firms (a study of selected service organizations’ in the federal capital territory Abuja), with the objective of recommending ways by which the present practices can be improved.

Objectives of the Study

The broad aim of this research is to study inter-organizational trust and it effect on virtual organizations performance of selected Nigerian service organizations, using selected service organizations in federal capital territory Abuja for the study.

Specifically, the research seeks to:

- Determine the extent to which inter-organizational trust influences virtual organizations’ commitment in Nigerian service organizations.
- Find out whether Inter-organizational trust creation, growth and commitment are gradual and sequential.
- Determine the extent to which development of inter-organizational trust enhances integration in virtual organizations.

Research Questions

Research question is one of the first methodological steps the investigator has to take when undertaking research. Choosing a research question is the central element of both quantitative and qualitative research and in some cases it may precede construction of the conceptual framework of the study.

Therefore, the following research questions are presented for the study.

- To what extent does inter-organizational trust influence virtual Organizations’ commitment in service organizations?
• Does Inter-organizational trust creation, growth and commitment gradual and sequential?
• To what extent does development of inter-organizational trust enhances integration in virtual organizations?

Research Hypotheses

A hypothesis is a tentative statement about the relationship between two or more variables. Hypothesis is a proposition made as a basis for reasoning without any assumption of its truth. Therefore, the following hypotheses are presented for the study.

• Inter-organizational trust impacts significantly and positively on virtual Organizations’ commitment in Nigerian service organizations.
• Inter-organizational trust creation, growth and commitment are gradual and sequential.
• Development of inter-organizational trust enhances integration in virtual organizations.

1. CONCEPTUAL FRAMEWORK OF INTER-ORGANIZATIONAL TRUST

In a competitive knowledge-based environment, a firm’s ability to establish inter-generational relationships in terms of strategic alliances and performance inside and outside a firm has become a critical fount of competitiveness. In inter-organizational relationships, the most common success factor, and possibly the most critical one is trust. Scholars from strategic management and organization theory to economics and marketing have conceptually and empirically addressed the role that inter-organizational trust, as well as trust in general, plays in social relationship. While McGregor defines trust as the way of getting to know the people for a new born human being is to decide if they are reliable or not. Blas (1964, p. 34) posits trust as a necessary element for durable social relationship. While McGregor defines trust as the most sensitive product of human affairs, Weber states that exchange of goods is only possible within the relationships based on inter-personal trust. Baier (1986) defines trust accepting the existence of others without expecting any evil act (Yilmaz, 2004, p. 5); while Carnevale and Wechsler (1992, p. 473) define it as a set of beliefs that the acts of an individual or a group are well-intentioned, fair and constructive, based on ethical norms. Mayer, Davis, and Schoorman (1995) explain this concept as willingness to act sensitively depending on the expectation that the other party’s acts can have important results. One of the original, forward-looking frameworks commonly employed in thinking about trust was the game-theoretic view on the evolution of cooperation proposed by Axelrod (1984), who shows that expectations of continued interaction change the behavior of relationship partners. Organizational scholars have built upon this game-theoretic framework (Doz, 1996; Parkhe, 1993), finding that organizational perceptions of the inter firm relationship continuing into the future encourage cooperation between the organization involved (Heide & Miner, 1992).

Changes in working conditions, differences that are getting more and more apparent, globalization, increasing importance of justice in workplace, international relations, complicated partnerships, information technologies, replacement of traditional partnerships by hierarchic organizations, replacement of control mechanisms based on authority by self-management and control and also spread of decisions making to all levels in organizations result in a dramatically increase in the importance of the concept of trust in organizational life (Shockley-Zalabak, Ellis, & Winograd, 2000). This in turn necessitate establishment of organizational processes not on the basis of power but on the basis of trust. Trust enables clear and effective exchange of information in organizations, decreases process costs concerning the work, and thus causes efficiency to increase (Varol & Tarcan, 2001, p. 99).

The virtual organization is often described as one that is replete with external ties (Coyle & Schnarr, 1995, p. 29), managed via teams that are assembled and disassemble according to need (Grenier & Metes, 1995; Lipnack & Stamps, 1997), and consisting of employees who are physically dispersed from one another (Clancy, 1994; Barner, 1996). The result is a “company without walls” (Galbraith, 1995, p. 36) that acts as a “collaborative network of people” working together, regardless of location or who “owns” them (Bleeke, 1994, p. 11; Grenier & Metes, 1995; Hedberg, Bahlgren, Hansson & Olve, 1997).

Locket and Holland (1996, pp. 46-49) describe Barclays as virtual global bank. This entity is a new global network created by linking together extant networks of smaller, regional banks. Customers of the regional banks now have the feeling of being a part of a large global bank because electronic media bring them the worldwide services of Barclay, though they remain members of the smaller, regional banking entity. In this way, tensions between global and local are reconciled, and smaller groups or firms can exist within larger entities and realize their advantages (Monge & Fulk, 1999, p. 91).
Virtual organization requires a different way of perceiving the world by those who wish to participate in it. There are four key characteristics of virtual organization as process. First, virtual organization entails the development of relationships with a broad range of potential partners, each having a particular competency that complements the others. Secondly, virtual organization capitalizes on the mobility and responsiveness of telecommunications to overcome problems of distance. Thirdly, timing is a key aspect of relationships, with actors using responsiveness and availability to decide between alternatives. Lastly, there must be trust between actors separated in space for virtual organization to be effective.

Davidow and Malone (1992, pp.7-8) describe the distinguishing characteristics of a virtual corporation as a focus on change, being customer driven and managed, and the presence of highly skilled workers working in a collaborative climate. Virtual corporations succeed when they develop relationship with their clients that last three to four product generations and include a broad variety of services related to a product. (Goldman, Nagel & Preiss 1995, p. 87) agree with these characteristics and build on them, proposing a structure defined by the alliance of distinct core competencies distributed among discrete entities. To be successful, argues Goldman et al. (1995) each firm must focus on achieving world-class excellence in one area, its core competency.

Market success follows from opportunistic alliances with other firms to design, manufacture and market a product in a given niche. By building a virtual web (Goldman et al., 1995, p. 221) of relationships with other corporations, including competitors, suppliers, and clients, a corporation enables itself to efficiently and effectively pull together the resources needed to develop and deliver profitable solutions to client problems. By holding a collective trust orientation, integrating their complementary core competencies, virtual corporations can reap the benefits of inter-dependence-reduced overhead, increased profits, greater commitment from members and customers, and increased array of opportunities for future collaborations (Goldman et al., 1995; Davidow & Malone, 1992).

There is abundant justification for regarding management in Nigerian service organizations as the most crucial activity of man because one who manages a concern is saddled with the responsibility of not only establishing but also nourishing and maintaining a type of internal environment in which people can work together in cooperation efficiently in order that they may achieve some set corporate objectives. It makes no difference whether or not these people are of the same sex, nationality, religious creed, linguistic group, educational background or political affiliation, etc. To be able to do this, the manager will need to study, understand and respond to the various elements affecting his operational environment including trust. Such elements must also include economic, social ethical, moral, political and technological ones (Umoh, 1996).

Development of inter-organizational trust is one of the objectives of virtual organizations and for any project to succeed, people always work together co-operatively. Examples can be seen in government, military operations and philanthropic organizations. It is usually the ability of those in management capabilities that determine the effectiveness of working co-operatively towards a set goal. If the management level or quality in virtual organizations does not facilitate trust or permit effective coordination of the scarce human resources then there would be no need for technical skills, engineering capabilities, material resources or scientific knowledge (Umoh, 1996, p. 4).

It is believed that a long human interaction has existed between the management and its members that are geographically dispersed and their relationship has contributed to the failure or success of organizational objectives. This is based on the understanding that goals and objectives of virtual organizations could be achieved or not achieved through human elements.

1.1 Theoretical Framework

The literature of management is bundled of new forms of organizations theories. Queerly, these new forms stem from business practices which are dated since the beginning of humanity. Recently the intensive use of information technology (IT) brings too many challenges and changes within/through organizations, that scholars write a great deal of papers on new forms of organization generated by IT. These days, the real debate relating to new forms of business is summed up to virtual organization. In this section within the framework of theoretical basis of organizational trust the concept of organizational trust will be discussed and related works in local and foreign literature will be mentioned.

1.2 The Concept of Organizational Trust

The concept of trust based on open and safe behavior of individual against each other is examined from different aspects. These are basically interpersonal trust, the trust between two individuals, two individuals’ trust in each other, inter-organizational trust, political trust, social trust, trust between juniors and superiors and organizational trust. (Joseph & Winston, 2005, p. 7). In this sub-heading among these aspects, organizational trust is discussed.

Organizational trust is described as good will-based or competence based and employees’ feeling of safety and support and it has been regarded as a relevant factor in improvement of organizational performance and realization of individual and organizational objectives. Existence of a climate of trust in an organization keeps the individuals together and enables them to trust each other and act openly. The institution of trust atmosphere needs a long time yet it takes just a second to destroy it (Gilberth & Tang, 1998, p. 322; Mayer, Davis, & Schoormans, 1995, p. 710). Organizational trust has four important impacts.
on the relationship between the employees and the organization. These are:

1. Trust facilitates management;
2. Trust facilitates changing high risks, iii. Trust facilitates effective use of resources and iv. Trust affects all activities of the organization (Conn, 2004, pp. 43-44).

Axelrod (2004, p. 21) defines organizational trust as reliability among the employees in terms of each one’s discourses, acts and decisions. Gilbert and Tang, (1998, p. 328) describe it as the belief that everybody would act in line with the objectives of the organization and they would be honest. According to Mayer, Davis and Schoorman (1995, p. 715) organizational trust is belief of the employee that the other employee would act to satisfy his expectations without any controlling effect and in line with this belief his willingness to act openly towards the other employee without any need for self-defense. As this definition clearly reveals, for institution of organizational trust, it is necessary for the employee to believe that the other party is willing to act in a way that would not cause any trouble or create any risks for him (Kamer, 2001, p. 34; Wekselberg, 1996, p. 333). Organizational trust is positive expectations of an employee about the applications and policies of the organization even in risky situations and his support for the organization.

The common points among the definitions of organizational trust are: belief in management, assurance about the thoughts of the colleagues, honesty and positive expectations. Whitener et al. (1998), suggest a model concerning the relationship between the manager and the employees which lists some basic behavior of the managers necessary for institution of organizational trust. These are listed as: Consistency in acts, Honesty in acts, Sharing and distributing the control, Correct and explanatory communication, showing interest and concern.

Smith (2005), on the other hand, has determined the basic behaviors of the employees for institution of organizational trust. Some of them are always telling the truth, always having positive thoughts about the colleagues, acting respectfully, communicating effectively, informing about one’s acts beforehand, supporting the other employees’ success and sharing the success of the organization. Wekselberg (1996) analyzes organizational trust in terms of social climate within business dimensions of organizational trust under calculated trust, trust of adequacy, trust of commitment, and trust based on relationship.

In view of dimensions of emotional trust, trust based on friendship is considered as a slowly forming type of trust where partners expect mutual openness and honesty; trust based on personality is defined as the tendency of trust stemming from the past environmental support to the individual while extended trust is defined as a type of trust shared by all the members of a group where the general level of faith is so strong to remove any doubts (Kamer, 2001, pp. 38-39).

In view of cognitive trust dimensions, calculated trust is considered to stem from the holder’s feeling of trust and based on the assumption that the other person would act in his favor and in accordance with rational choices; trust based on proficiency is the case where the individual has the feelings of respect and trust to another person due to his knowledge and ability in doing a particular thing; trust of commitment is accounted for as the belief that both parties will struggle to fulfill their duties towards each other due to a business agreement and trust based on relationship is defined as the trust based on the information and impressions gained by the individuals about each other throughout their relationship (Long, 2002, p. 6; Saparito, 2001, p. 15; Ari, 2003, p. 17; Kamer, 2001, p. 40).

A more organizationally oriented view is that trust is reciprocal or relational in nature (Hardin, 1991; Zaheer & Venkatraman, 1995). The term relational as it applies to trust has at least two implications: relational as social, and relational as dyadic. First, relations-as-social trust, in contrast to “calculative” trust or trust as quasirational choice, implies the inclusion of relational elements or possessing a social orientation. Macneil (1980) draws attention to relational contracting as a contrast to more explicit classical and neoclassical contracting. Relational contracting includes social elements such as norms and expectations as well as encompassing long-term horizons. Relations-as-dyadic trust suggests trust relative to an identified other and favors a dynamic and reciprocal-rather than dispositional-view of trust. In this way, a relational view of inter-organizational trust implies that a specific organization is the object of trust (Zaheer et al., 1998). Yet this does not preclude organizations from possessing or acquiring reputations for being trustworthy; to that extent, inter-organizational trust is not exclusively dyadic or relational but can be network-based as well. Reputations may be more easily spread when the firm is embedded in a dense network of ties.

The relational issue in trust naturally raises the question of time horizons, as it implies that one is prepared to defer reciprocation in some way. The reciprocal relationship between trust and trust worthiness also brings up the issue of possible asymmetries in trust between parties.

Larson’s (1992) inductive study indicates inter-organizational trust generally has positive effects on the successful governance of firm networks. Gulati (1995, p. 80) suggests that repeat alliance partners are more likely to trust; and Lui and Ngo (2004, p. 478) suggest that competence-based trust can arise from reputation effects-results with important ramification for network governance. McEvily and Zaheer (2004, p. 201) explore the central role an institutional “network facilitator” plays in creating trust in geographical industrial networks. Overall, the nature of inter-organizational trust presents a number of open questions for future research.
1.3 Factors Affecting Trust Worthiness Assessment During Alliance Formation

Daellenback and Davenport (2004) investigated factors which influence the formation of organizational alliances based primarily on technology transfer and sharing of proprietary knowledge. They argue that self-interest can often influence these alliances negatively and developing relationships that improve knowledge-sharing, inter-organizational alliances and joint ventures. They argue further that one of the ways to overcome potential problems within this area is to help potential alliance partners to be more aware of issues of trust and trustworthiness. To do this, they used a case study approach to understand the formation of a technology-based alliance within the robotics industry. This case study involved an initiative called “the shiny robot venture” an alliance formed among a set of diverse organizations, and interviews were conducted with 4 members of the initiative and a total of 15 individual members.

Daellenback and Davenport (2004) note that, except in cases where organizations had previous alliances with one another, trust is initially undeveloped at the start of alliances. In these cases, an initial assessment of trustworthiness of the prospective organization is used. There are several factors which might influence this trustworthiness assessment during alliance negotiations, but the boundary spanners who interact personally with members of the other organization(s) play a very important role in this process. Daellenback and Davenport argue that most trustworthiness assessments are based on the perceptions of these individuals. Information about trustworthiness is gathered during the search for organizations with which to partner, the assessment of whether the partnership should be pursued, and negotiations to create the partnership.

Two stages of alliance formation are identified as being particularly relevant, including searching for a partner and conducting negotiations. At the stage of searching for an alliance partner, three factors are posited to contribute to this partner’s perceived trustworthiness, as shown in the top half of Figure 1.

### Figure 1
Model of Trustworthiness Assessments During Alliance Formation


These include prior experience with the partner and the partner’s reputation within known networks of trusted others. With prior experience (presumably only successful experience), they argue that procedural norms would have been created, and that knowledge-based trust would have developed. Reputation is also an influence on early perceptions of trustworthiness. They argue that “a firm’s reputation for trustworthiness acts as a proxy for
shared collaborative history” (Daellenbach & Davenport, 2004, p. 192).

Conditional trust is also posited as an influence on perceived trustworthiness, and is particularly important when other information is not influenced on perceived trustworthiness, and is particularly important when other information is not available. This trust is described as a presumptive form of trust for “a completely unknown but capable potential partner, that is, a favorable enough assessment for negotiation of the potential alliance to take place” (Daellenbach & Davenport, 2004, p. 193). This stage of trust, they argue, is based primary on perceptions of the partner’s ability, or the skill set or competencies that the partner has in a particular area.

The negotiation stage is also relevant to the development of perceptions of trustworthiness in one’s alliance partner. A part of the impact of reputation relates to perceptions of distributive and procedural justice in the prospective alliance’s system. Procedural justice has to do with assessing whether a process was fair; distributive justice has to do with assessing whether an outcome was fair. Factors impacting at the negotiation stage are shown in the bottom half of Figure 1. They argued that procedural justice is another important part of the determination of the trustworthiness of a potential alliance partner. In fact they proposed that procedural justice will have a major impact on initial assessments of trustworthiness and therefore on the creation of new alliances. Considerations about procedural justice shift the focus from competencies and skills to integrity, benevolence and affect. Procedural justice has a strong influence on commitment, trust, and social harmony, and has been found to be during the creation of new organizations. Distributive justice was also posited to play a role, but a less critical one, and they argue that distributive justice is primarily influenced by perceptions of competence of the alliance partners.

The model also argues that the use of power during alliances can play a key role in shaping perceptions of justice. By definition, they argue that power is a non-cooperative activity. When working to define the terms of the alliance, it is clear that each member of the alliance must push to ensure that their own interest are likely to be met (i.e., that they ultimately have a sense of distributive justice). Using power in this context, then, is not posited to adversely affect distributive justice. On the other hand, using power when working to determine control procedures could damage the perceived legitimacy of the relationship and lower levels of perceived procedural justice.

However, this work echoes the importance of the interpersonal aspects of inter-organizational trust. They argue that using skilled negotiators who are sensitive to the factors in the model would be critical. Interestingly, they also emphasize the “dispositional qualities of the potential partners” (Daellenbach & Davenport, 2004, p. 198) as an important influence. However, they also note the difficulty of attempting to transpose this construct to the organizational context. Although this model was not tested, they argued that their unique contribution was the identification of the two stages during which inter-organizational trust is developing and evolving. At the search stage, initial assessments of the partner must occur. At the second stages, the negotiation experience will drive how the relationship develops. Use of power and perceptions of justice will influence perceptions of trustworthiness.

1.4 The Factors that Facilitate Organizational Trust

The factors that facilitate organizational trust can be divided into two groups as organizational factors and individual factors.

Organizational Factors

Some of the factors in institution of organizational trust are human resources, management practices, organizational culture and structure of the organization. The factor of human resources determines the effectiveness of rewarding and evaluation of performance; the factors of management practices and structure of the organization determine the way to follow to reach organizational effectiveness, realization of organizational commitment, increasing performance, success of communication and including the employees in the decision making process; the factor of organizational culture determines the structure of the relationships among the employees and their managers and thus facilitates Institution of organizational trust (Musacco, 2000, pp. 50-55). For instance, in evaluation of success using the modern approaches that include informing the employees, instead of a traditional one; having fair systems of rewarding; supplying the employees with feedback regularly and on time increases the interaction between the employees and the managers and results in trust of the employees in the organization (Ari, 2003, pp. 66-67).

Individual Factors

In institution of organizational trust some individual factors such as the tendency for reliance, state of mind and feelings, values and manners have impacts. The tendency for reliance explains how people are ready to rely on others since their birth; state of mind and feelings explain how a person considers his feelings about someone and evaluates his experience of reliance so far including his ideas about the other person’s credibility before deciding to trust them or not; the values explain formation of inclinations that cause trust and creation of reciprocally shared values; and the manners explain credibility of the individuals (Kamer, 2001, pp. 45-48).

1.5 Outcome of Inter-organizational Trust

A great deal of research interest exists regarding whether inter-organizational trust leads to desirable business outcomes, although in some instances evidence of a relationship between inter-organizational trust and
performance has proven inconclusive (e.g., Aulakh et al., 1996), a variety of studies focus on this connection with interesting results. Although some research emphasizes direct outcomes, other work examines more complex, indirect effects. Most of the research, however, focuses on only the positive outcomes of inter-organizational trust which include:

**Direct Economic Outcomes:** Inter-organizational trust has been shown to positively influence a number of recognizable economic outcomes, such as lowered transaction costs (Dyer & Chu, 2003). Increased sales (Mohr & Spekman, 1994), and increased return on investment (Luo, 2002). In addition, inter firm trust has a positive effect on project management measures, such as task performance (Carson et al., 2003, p. 42), and operational measures, such as continuous improvement and just-in-time delivery (Sako, 1998). In general, this evidence indicates that inter-organizational trust can help achieve advantageous economic performance outcomes.

**Intermediate Relational Outcomes:** Research on inter-organizational trust suggests that it also leads to a variety of outcomes that are less directly economic but are nevertheless desirable outcomes for the relationship. At one extreme, a loss of trust can lead to the dissolution of the relationship entirely (Seabright, Levittal & Fichman, 1992, p. 130); in fact, it appears that undesirable performance outcomes and loss of trust can escalate into a self-reinforcing downward spiral (Zaheer et al., 2002). On the other hand, increasing inter firm trust can lead to increased strategic flexibility (Young-Ybarra & Wiersema, 1999, p. 450), greater information-sharing (Dyer & Chu, 2003, p. 161), lowered perceptions of relational risk (Nooteboom & Berger, 1997, p. 310) heightened contingency adaptability (Luo, 2002, p. 911), and improved knowledge transfer (Szulanski et al., 2004, p. 605). Several studies also indicate that trust strongly increases satisfaction with various aspects of the inter firm relationship, including joint goal fulfillment (Hagen & Simons, 2003; Zaheer et al., 1998), expectation of relationship continuation (Jap & Anderson, 2003), and positive perceptions of exchange success (Mohr & Spekman, 1994; Poppo & Zenger, 2002).

Several studies focus on the performance outcomes that are of particular importance to buyer-supplier relationships, suggesting both that trust plays a key role in determining the long-term orientation of both organizations (Ganesan, 1994, p. 15) and also that trust in a supplier greatly impacts the actual product utilization of the buyer (Moorman et al., 1992, p. 320). In addition, Wathne and Heide (2004, pp. 75-76) find that inter firm flexibility-a relational norm often associated with trust-has the potential to affect relational norms beyond the dyad in other parts of the supply chain.

**Indirect effects:** In addition to these direct effects, scholars are starting to investigate more complex relationships between inter-organizational trust and performance, including interaction effects and mediation models. Fryxell, Dooley, and Vryza (2002, pp. 871-872), discover that the presence of inter firm trust affects the influence of social-control mechanisms on performance; in the presence of trust, social controls positively influence performance, but without trust, social controls have the opposite effect. High inter-organizational trust tends to mitigate the detrimental effect of historical social contact on exchange performance (Poppo & Zenger, 2003), and different types of trust moderate the relationship between contractual safeguards and performance in different ways (Lui & Ngo, 2004, p. 481). Whereas Jap and Anderson (2003, p. 1680) find that rising ex post opportunism decreases the positive effects of inter-organizational trust on performance. Saparito et al. (2004, p. 425) discover that inter firm trust can help minimize the negative effects of opportunism.

Overall, research on inter-organizational trust has revealed a wide range of positive outcomes for inter firm relationships such as alliances and buyer-supplier relationships. These include a variety of direct effects on performance, such as lowered transaction costs and increased ROI, but also a large set of indirect benefits through the mediating or moderating roles of inter-organizational trust.

### 2. RESEARCH METHODOLOGY

A methodology is usually a guideline for solving a problem, with specific components such as methods, techniques, research design and tools. Franklin (2012) describes it as a highly intellectual human activity used in the investigation of nature and matter and deals specifically with the manner in which data is collected, analyzed and interpreted. The research design adopted in this study was a survey because it is a very valuable tool for assessing opinions and trends; it can be very accurate and it allows you to be selective about whom you ask questions and you can explain anything that they do not understand. The main instrument for data collection was the questionnaire and interview guide. One type of questionnaire was designed for all the staff at the various levels of management. This was done to crosscheck the views of the respondents. The questionnaire was based on a modified 5-point Likert Scale with the options, strongly agree, agreed, strongly disagreed, disagreed, No ideas, while interview was designed for key top management staff.

The data through which responses were given in the questionnaire was analyzed and interpreted with the use chi-square ($\chi^2$) statistical techniques. The use of percentages enabled the researcher to assign any given percentage weighted to each alternative in order to make good comparative analysis and to choose the alternative with the highest percentage. The test of hypotheses was carried out, using the chi-square ($\chi^2$) statistical method in testing a particular hypothesis one on one. This is
to convey information at a glance to make for easy understanding and draw conclusion based on the result of the analysis.

3. DATA PRESENTATION

The best of experiments and logical arguments still need to rely upon effective presentation of data, usually in the form of figures or tables. It is putting across collected information in a clear and concise manner. Presentation of data requires excellent arrangement of data and good communication skills and understanding of the target audience.

Therefore, data collected for the purpose of answering research questions and testing of hypotheses pose in the study are presented and analyzed, using frequency distribution (fixed percentage) as the main element of data analysis.

Data is presented in tabular form and briefly discussed accordingly. A well-structured questionnaire was designed and distributed to the sampled staff of the selected service organizations in FCT-Abuja.

For the purpose of testing the hypotheses, the chi-square statistical technique is employed. One thousand one hundred and sixty five (1165) were prepared and distributed but only one thousand one hundred and thirty nine (1139) were correctly filled and returned. Therefore, the researcher based his analysis on the number that was correctly filled. Table 1 shows the questionnaire distribution and collection schedule.

Table 1
Questionnaire Distribution and Collection Schedule

<table>
<thead>
<tr>
<th>No distributed</th>
<th>No returned</th>
<th>No rejected</th>
<th>No accepted</th>
<th>No not return</th>
</tr>
</thead>
<tbody>
<tr>
<td>1165</td>
<td>1139</td>
<td>0</td>
<td>1139</td>
<td>26</td>
</tr>
<tr>
<td>100</td>
<td>97.8%</td>
<td>0%</td>
<td>97.8%</td>
<td>2.2%</td>
</tr>
</tbody>
</table>

Note. Adapted from Researcher Field Survey, 2016.

Table 2
Inter-organizational Trust Influences on Virtual Organizations’ Commitment in Nigerian Service Firms.

<table>
<thead>
<tr>
<th>Option</th>
<th>Responses</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agreed</td>
<td>797</td>
<td>69.9</td>
</tr>
<tr>
<td>Agreed</td>
<td>309</td>
<td>27.1</td>
</tr>
<tr>
<td>Strongly Disagreed</td>
<td>13</td>
<td>1.1</td>
</tr>
<tr>
<td>Disagreed</td>
<td>11</td>
<td>0.9</td>
</tr>
<tr>
<td>No idea</td>
<td>9</td>
<td>0.8</td>
</tr>
<tr>
<td>Total</td>
<td>1139</td>
<td>99.8</td>
</tr>
</tbody>
</table>

Note. Adapted from Researcher Field Survey, 2016.

Table 3
Inter-organizational Trust Creation, Growth and Commitment are Gradual and Sequential

<table>
<thead>
<tr>
<th>Option</th>
<th>Responses</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agreed</td>
<td>642</td>
<td>56.4</td>
</tr>
<tr>
<td>Agreed</td>
<td>329</td>
<td>28.9</td>
</tr>
<tr>
<td>Strongly Disagreed</td>
<td>128</td>
<td>11.2</td>
</tr>
<tr>
<td>Disagreed</td>
<td>33</td>
<td>2.8</td>
</tr>
<tr>
<td>No idea</td>
<td>7</td>
<td>0.6</td>
</tr>
<tr>
<td>Total</td>
<td>1139</td>
<td>100</td>
</tr>
</tbody>
</table>

Note. Adapted from Researcher Field Survey, 2016.

Table 4
Development of Inter-organizational Trust Enhances Integration in Virtual Organizations

<table>
<thead>
<tr>
<th>Option</th>
<th>Responses</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agreed</td>
<td>341</td>
<td>29.9</td>
</tr>
<tr>
<td>Agreed</td>
<td>511</td>
<td>44.9</td>
</tr>
<tr>
<td>Strongly Disagreed</td>
<td>103</td>
<td>9.0</td>
</tr>
<tr>
<td>Disagreed</td>
<td>184</td>
<td>16.1</td>
</tr>
<tr>
<td>No idea</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>1139</td>
<td>100</td>
</tr>
</tbody>
</table>

Note. Adapted from Researcher Field Survey, 2016.

Table 1 indicates that 1165 questionnaire representing 100% were prepared and distributed, 1139 (Representing 97.8%) out of 1165 were correctly filled and returned while 26 questionnaire representing 2.2% were not returned at all. The researcher based his analysis on the number that was correctly filled and returned which is 1139.

3.1 Analysis of Data or Responses Rate

Table 2 depicts that, 797 respondents representing 69.9% strongly agreed with the fact that inter-organizational trust influences virtual organizations’ commitment, 309 respondents representing 27.1% agreed with the statement, 13 respondents representing 1.1% strongly disagreed and 0.9% that is, 11 respondents disagreed while 9 respondents representing 0.8% provided no answer. This means that inter-organizational trust influenced virtual organizations’ commitment in service firms.
Table 4 indicates that 341 respondents representing 29.9% are of the strong opinion that development of inter-organizational trust enhances integration in virtual organizations, 511 respondents representing 44.9% agreed entirely while 103 respondents with 9.0% and 184 respondents representing 16.1% strongly disagreed and disagreed respectively. The analysis from the table then shows that development of inter-organizational trust enhances integration in virtual organizations.

3.2 Testing of Hypothesis

Data already analyzed in Tables 2, 3 and 4 respectively were used to achieve this test; the chi-square ($X^2$) test was employed.

Testing of Hypotheses

In testing the hypotheses, it is important to find out whether the differences in opinion are significant enough to draw conclusion. To determine the degree of freedom, the researcher uses the formula: $(R-1) (C-1) = (5-1) (3-1) = (4x2) = 8$. Giving 0.05 as the significant level and the degree of freedom = 8.

Hypothesis one

Ho: Inter-organizational trust does not impact significantly and positively on virtual organizations’ commitment in Nigerian service organizations.

Hi: Inter-organizational trust impacts significantly and positively on virtual organizations’ commitment in Nigerian service organizations.

Hypothesis Two

Ho: Inter-organizational trust creation, growth and commitment are gradual and sequential.

Hi: Inter-organizational trust creation, growth and commitment are not gradual and sequential.

Hypothesis Three

Ho: Development of inter-organizational trust enhances integration in virtual organizations.

Hi: Development of inter-organizational trust does not enhance integration in virtual organizations.

Table 5

<table>
<thead>
<tr>
<th>Variable</th>
<th>Table 2</th>
<th>Table 3</th>
<th>Table 4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agreed</td>
<td>797</td>
<td>642</td>
<td>341</td>
<td>780</td>
</tr>
<tr>
<td>Agreed</td>
<td>309</td>
<td>329</td>
<td>511</td>
<td>1149</td>
</tr>
<tr>
<td>Strongly Disagreed</td>
<td>13</td>
<td>128</td>
<td>103</td>
<td>244</td>
</tr>
<tr>
<td>Disagreed</td>
<td>11</td>
<td>33</td>
<td>184</td>
<td>228</td>
</tr>
<tr>
<td>No idea</td>
<td>9</td>
<td>7</td>
<td>-</td>
<td>16</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1139</strong></td>
<td><strong>1139</strong></td>
<td><strong>1139</strong></td>
<td><strong>3417</strong></td>
</tr>
</tbody>
</table>

Using the following formula

$$X^2 = \sum \frac{(OF - EF)^2}{EF}$$

Where $OF = $ Observed frequency

$$EF = $ Expected frequency

$$DF = $ Degree of frequency

$$X^0 = $ Calculated chi-square value

$$X^2 = $ Chi-square calculated from chi-square Distribution table

Level of significance = 0.99

$$X^2 = 22.0$$

Computation for the Expected

$$\frac{\text{Row Total} \times \text{Column Total}}{\text{Grand Total}}$$

= \frac{1139 \times 1780}{3417} \approx 593

= \frac{1139 \times 1149}{3417} \approx 383

= \frac{1139 \times 244}{3417} \approx 81

= \frac{1139 \times 228}{3417} \approx 260

= \frac{1139 \times 16}{3417} \approx 5

Table 6

<table>
<thead>
<tr>
<th>O</th>
<th>E</th>
<th>O-e</th>
<th>$(O-e)^2$</th>
<th>$(O-e)^2/e$</th>
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</thead>
<tbody>
<tr>
<td>797</td>
<td>593</td>
<td>204</td>
<td>41616</td>
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<td>309</td>
<td>383</td>
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<td>5476</td>
<td>14.3</td>
</tr>
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<td>13</td>
<td>81</td>
<td>-68</td>
<td>4624</td>
<td>57.1</td>
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<tr>
<td>11</td>
<td>260</td>
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<td>9</td>
<td>5</td>
<td>4</td>
<td>16</td>
<td>3.2</td>
</tr>
<tr>
<td>642</td>
<td>593</td>
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<td>2401</td>
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<td>2</td>
<td>4</td>
<td>0.8</td>
</tr>
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<td>341</td>
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<td>-252</td>
<td>63504</td>
<td>107.1</td>
</tr>
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<td>511</td>
<td>383</td>
<td>128</td>
<td>16384</td>
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<td>22</td>
<td>484</td>
<td>6.0</td>
</tr>
<tr>
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<td>260</td>
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</tr>
<tr>
<td>0</td>
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<td>-5</td>
<td>25</td>
<td>5</td>
</tr>
</tbody>
</table>

$\sum = 804.3$

Note. Level of significance = 0.99, $X^2 = 22.0, X^20 = 804.3, X^20 = (804.3) > X^2 (22.0)$

Conclusion

Since $X^0 > X^2$ that is, the chi-square calculated is greater than chi-square of the critical value, the researcher therefore accept Hi and reject Ho. This
indicates that, inter-organizational trust influences virtual organizations’ commitment in service organizations'. Secondly, Inter-organizational trust creation, growth and commitment are gradual and sequential in service organizations and that inter-organizational trust facilitates integration in virtual organizations and boosts the effect of strategic importance on contact complexity.

4. DISCUSSION OF RESULTS

The discussions revolved around the objectives of the study; analysis and testing of hypotheses. The findings made in this work were compared with findings made in other related studies and efforts were made to reconcile them where necessary. For ease of reference, the relevant objectives are presented each, before the discussion.

Research Objective One

To determine the extent to which inter-organizational trust influences virtual organizations’ commitment in Nigerian service firms.

From the analysis of data collected from the selected service organizations in the federal capital territory Abuja, it was observed, as indicated in Table 2 that the respondent’s opinion clearly depicted that they were of the view that organizational commitment to a large extents depends on inter-organizational trust.

The respondents’ view confirmed that inter-organizational trust impacts significantly and positively on virtual organizations commitment in service organizations’. Furthermore, the respondent’s opinions revealed that inter-organizational trust depend on the levels of fairness, reliability, and goodwill in the relationship. The above result is further supported by the participant’s oral interview with some key informants who are believed to be a representative sample (not in the statistical sense) of the service organizations. Most of the informants believed that inter-organizational trust facilitates commitment, as this process makes possible a higher level of confidence between partners and lower cost and time spending for control. Mrs. Adeniyi said and I quote, “commitment to the inter-organizational relationship increased when partners had a higher measure of relationship benefits or a higher degree of trust”.

To confirm the findings above, Chi-square ($X^2$) was used to test the hypothesis at 5% level of significance. The calculated chi-square value was 804.3 and this value was greater than the critical chi-square value that was given as 22.0 Therefore, the null hypothesis was rejected and the alternative hypothesis was accepted. The conclusion was that inter-organizational trust influences virtual organizations commitment and performance in service organizations.

The finding is in line with the finding of Krishnan et al. (2006) that inter-organizational trust was positively related to alliance performance, and that alliance performance benefitted more from inter-organizational trust when the degree of interdependence between two organizations was higher. The result therefore agrees with Jap and Anderson (2003), who suggest that, there are performance implications for the relationship between interpersonal and inter-organizational trust. Jab and Anderson find that interpersonal trust between boundary spanners has a positive effect on organizational performance measures, but this effect diminishes as ex post opportunism rises. Nevertheless, interpersonal trust appears to be important in the development of inter-organizational trust and its relative effect on performance.

Research Objective Two

Find out whether Inter-organizational trust creation, growth and commitment are gradual and sequential.

The responses to question in Table 3 were analyzed to achieve this objective. The cumulative percentage of strongly agree and agreed of 77.5 indicated that Inter-organizational trust creation, growth and commitment are gradual and sequential in service organizations.

Chi-square test value at 5% level of significance using the mean value in Table 3 was conducted to confirm these. The calculated chi-square value was 804.3, which was greater than the critical chi-square value of 22.0, leading to the rejection of null hypothesis. The conclusion therefore was that Inter-organizational trust creation, growth and commitment are gradual and sequential in service organizations.

The oral interview with key top management team also revealed that Inter-organizational trust creation, growth and commitment enhance effectiveness in service organizations. The informants point out that, growth and commitment and specifically trust creation often influence these alliances positively, and they hope to contribute to equipping management with the information necessary for forming alliances and developing relationships that improve knowledge sharing, inter-organizational alliances and joint ventures.

Research Objective Three

Determine the extent to which development of inter-organizational trust enhances integration in virtual organizations.

The responses to question in Table 4 clearly indicate that inter-organizational trust impacts positively on the integration of virtual organizations with the highest percentage of 74.8 strongly agreed and agreed respectively supporting the statement. The respondent’s views confirm that, inter-organizational trust has positive contribution to institution of commitment and organizational integration as well as improvement of social relationships. This was supported by oral interview with the key informant in the selected service organizations who believed that organizational trust boosts the job satisfaction and performance of employees. When the factors of motivation for the employees are considered the most
important one seems to be creating an atmosphere that would encourage inter-organizational integration and improved productivity. One of the interviewees Mr. Bassy Okon believed that, inter-organizational trust appears as a powerful mechanism for integration in inter-organizational relationships even when it does not derive from calculative motivations, as trust explains a variety of inter-organizational actions much more plausible than calculative self-interest.

To confirm the findings above, chi square Test was employed at 5% level of significance. The cumulative computed chi square value was 804.3 and this value was greater than the critical value of 22.0. Thus falling into the rejection region. The researcher therefore accepts Hi and rejects Ho.

The conclusion was that inter-organizational trust facilitates integration in virtual organizations and boosts the effect of strategic importance on contact complexity.

These findings synchronized with the study of Chenhall and Smith (2003) who suggest that the relationships based on trust in organizations facilitate reaching the goals either individual or organizational, developing innovative strategies and sharing values, enhance integration and causes effective communication and participation in problems solving.

5. SUMMARY OF MAJOR FINDINGS

The following findings were arrived at after taking into consideration the analysis of data and test of hypotheses in line with the objectives of the study.

Findings show that inter-organizational trust impacts significantly and positively on virtual organizations commitment and performance in service firms and that alliance performance benefitted more from inter-organization trust when the degree of interdependence between two organizations was higher.

Secondly, finding reveals that, Inter-organizational trust creation, growth and commitment are gradual and sequential in service organizations. Growth, commitment and specifically trust creation often influence these alliances positively, as management are equipped with information necessary for forming alliances and developing relationships that improve knowledge sharing, inter-organizational alliances and joint ventures.

More so, findings reveal that inter-organizational trust enhances integration in virtual organizations. It has positive contribution to institution of commitment and organizational integration as well as improvement of social relationships.

Finally, finding indicate that inter-organizational trust influences virtual organizations’ profitability in service organizations as virtual organizations cannot perform favorably without improved resources or profitability as finance is seen as the major pillar of modern organizations.

CONCLUSION

The consequence of discussion in the thesis is that psychological and sociological changes, cultural differences, economic, and changing environmental conditions result in different points of view about the concept of trust among individuals. However, for the realization of some vital elements demanded for the success of the organizations such as team work, job satisfaction, organizational commitment, motivation, employee empowerment, information sharing, and organizational justice, one of the most critical factors is trust among the employees and towards their managers and the organization itself. The concept of inter-organizational trust which covers the feeling of assurance in the employees about the discourses, acts and decisions of each other and the belief that they would act for the good of the organizations has become an important instrument of success in organizations since the discovery of the benefit of human factor with the organization.

However, the literature scanning has proven that there are a large number of studies analyzing inter-organizational trust and related concepts while there are inadequate number of studies to direct human resources management, which bears the most important role in institution of organizational trust.

On the other hand, virtual organizations is a complex phenomenon that cannot be reduced to singular dimensions that are often used in the literature-spatial dispersion of members, the buyers switching between suppliers and outsourcing and a combination of these and some other characteristics is needed in order to identify and assess a virtual organizations. After all, almost every organization includes share tasks or projects, which include other participants, which literally and figuratively take place outside the organization. These partnerships are increasingly maintained by way of electronic communication. However, when we examine inter-organizational trust in virtual organizations from the perspective of a network of organizations and its internal patterns, then we can certainly conclude that the virtual organizations are a new type of network. The novelty lies in the essential role that trust and informational and communication technology plays in inter-organizational relationship.

RECOMMENDATIONS

Based on the findings above, the researcher recommends as follows:

The considerably growing importance of collaboration within organizational life necessitates the formation of inter-organizational processes not on the basis of power but on the basis of trust; therefore formation of organizational processes should be on the basis of trust which will result in institution of interaction between the
employers and the employees within organizations and increase in commitment, job satisfaction, performance and growth of employees and organizations.

For organizational effectiveness, the relationship between trust and alliance performance in inter-organizational relation should be strong, considered-behavioral uncertainty and improve inter-partner relationship.

The influence trust on virtual interaction also should deserve attention due to the importance of trust building in shaping inter-organizational structure and in structuring alliance relationships Organizations should build a strong organizational trust to enhance its success.

For institutional commitment and organizational integration, inter-organization trust should be the primary objective of virtual organizations to facilitate the improvement of organizational profitability and social relationship.

Finally, members of modern day organizations should facilitate effective and efficient trust based relationship to enhance its capital base and remain competitive in today’s turbulent market place.

REFERENCES


