TOWARDS IMPROVING INTER-ORGANISATIONAL TRUST AMONGST SMEs: A CASE STUDY FROM DEVELOPING COUNTRIES

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Abstract: Electronic commerce, particularly business-to-business (B2B) electronic commerce has experienced exponential growth in recent years. So huge has been the volume of trade conducted on the Internet that various estimates paint a picture of B2B in trillions of dollars.

Unfortunately, however, there is considerable evidence to show also that small and medium sized enterprises (SMEs), particularly those in developing countries, have not been reaping any or adequate benefits of this new commerce opportunity as their counterparts in North America and Europe resulting to another form of Digital Divide. One of the major factors responsible for this state of affairs has been identified as low level of trust affecting the relationships between trading businesses.

Trust is very fundamental in every business relationship and transaction. In B2B e-commerce, it is even more imperative, especially given the unique nature of this kind of business in which the major participants do not, and may not, have face-to-face contact with each other.

In this paper, the issues surrounding inter-organisational trust (IOT) in B2B e-commerce relationships and transactions, particularly as they affect the SMEs in developing countries, are explored. The paper also proposes suggestions on how trust can be built through identifying and strengthening the critical trust factors (CTFs) which will allow SMEs and indeed, other businesses in these regions, to leverage their B2B potential.

Keywords: trust, inter-organisational trust (IOT), B2B eCommerce, trust-transactions typology, developing economies.
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1. INTRODUCTION

Studies have shown that, in spite of the progress being recorded in the developed economies of North America and Europe as well as some Asian Pacific nations like India and Indonesia in the area of information and communication technologies (ICTs), the Digital Divide is still widening (Mbarika et al, 2005; Mensah et al, 2005). Part of the problem is that developing countries, especially those within the sub-Saharan Africa (SSA) region, are still experiencing considerable problems in their bid to engage in meaningful digital exchange with the rest of the world.

Modern business activities are very complex and competitive in nature. This has given rise to a situation where it is no longer adequate for entrepreneurs to rely solely on their professional skills to give them the competitive edge and the significant market advantage they require to thrive in their business. Therefore, developing professional trust with their customers becomes a very important contributory factor to their success (Moment, 2001). No matter what business you are engaged in, the most powerful value-added ingredient you can contribute in any business strategy is the trust factor. Burkert (1994) identified three broad facets to trust which are necessary for people when relying on information technologies for communication. These facets are: trust in people, trust in organisations, and trust in technology.

Trust is a fundamental requirement of every economic activity (Clarke, 2002). Business activities in the normal sense are very complex and require a great deal of trust in order to be fully and successfully carried out. This trust requirement becomes even more challenging and complex when the type of business is electronic commerce, particularly B2B. One major contributory factor to this heightened state of trust requirement is the fact that this type of commerce is characterised by the “invisibility” factor (Moor, 1985; IDA, 2000) and is conducted in the virtual realm which, in most cases, does not offer fact-to-face contact among the participants. This lack of direct, physical contact is particularly a problem for small and medium sized businesses (SMEs) (Deelmann and Loos, 2002). One major part of the reason is that the people in the region are still used to the traditional method of trading in which trading partners conduct their businesses by physically interacting with each other. One of the major impediments to adopting B2B e-commerce for SMEs, particularly those operating in developing countries, is the prevalence of high entry barriers brought about, in part, by lack of effective reliance mechanisms aimed at enhancing system trust (Patton & Josang, 2004).

2. NEED FOR TRUST IN B2B

The emergence of globalisation facilitated by developments in ICTs has created more impetus for collaboration and partnership as avenues for achieving commercial success (Bryant and Colledge, 2002). For such collaboration and partnerships to succeed however, trust plays a central role. Trust, as a concept, can be seen as the assured reliance on the character, ability, strength or truth of someone or something (Merrian-Webster Online). Trust is a sine qua non in every interpersonal and commercial relationship. This is so because, as McKnight & Chervany (2001) observe, “it (trust) is crucial whenever (and wherever) risk, uncertainty, or interdependence exist”. It is even so if such a relationship is business oriented. Trust has been described as “the glue” in dyadic buyer-seller relationships (Pressey and Mathews, 2004).
In the online environment, the decision to engage in a business relationship is a daunting one, especially when viewed from the perspective of the myriad of uncertainties in the area of product quality and vendor reputation which task the buyer’s decision making process (Grabner-Kräuter, 2002). This is why trust is regarded in online business as “a mental shot-cut” to a buying decision (Kutteinen, 2005). Business to business (B2B) e-commerce has been found to be the largest and most dominant sector of the online business in terms of turnover (Barlett, 2001; Laudon and Traver, 2002; UNCTAD, 2002).

According to the Infocomm Development Authority of Singapore (IDA) (2000), a Gartner survey reveals that 12 times more fraud exists in Internet transactions while WebAssured found that fear of fraud is the primary reason users decide against making online purchases. The result is that even though the technology is available, some consumers and businesses still lack the trust and confidence in the network to conduct online transactions, and to optimise the vast opportunities offered by electronic commerce.

This situation is more so in developing countries, particularly those in SSA.

As Clarke (2002) puts it, trust is crucial to enable some kinds of transaction to take place. Such contexts often exhibit a combination of such characteristics as a significant risk exposure for one or more of the parties; a significant elapsed time during which the risk exposure exists; and little knowledge by one or more of the parties about one another, the tradable item, the trading process, and the contingent outcomes. Trust is a catalyst for human co-operation as it allows people to interact spontaneously and helps the economy to operate smoothly (Patton & Josang, 2004).

### 3. COMPONENTS OF TRUST

In an electronic commerce relationship trust can be inter-personal; inter-organisational; as well as intra-organisational. Of the three aspects of trust however, inter-personal and inter-organisational are the more prevalent and indeed, relevant ones to e-commerce relationships between parties. This is because they affect the business relationships between parties. **Inter-personal trust (IPT)** is the trust relationship existing between two individuals, especially in a consumer-to-consumer (C2C) setting, or an individual’s trust toward another specific party or the trustworthiness of the third party (Tan & Sutherland 2004). **Inter-organisational trust (IOT)** on the other hand, is the trust relationships existing between two business enterprises as found in a business-to-business (B2B) setting. While **intra-organisational trust** is that which exists within an enterprise, between divisions, departments, sections, offices and branches.

Three dimensions of trust in an e-commerce vendor-customer relationship have been identified as: competence, integrity and benevolence (Yin, 2001; Putman, 2001; Chen & Dhillon, 2003). According to them, ‘competence’ is the ability of a company to fulfill promises made to the customers; ‘integrity’ looks at how consistent, reliable, and honest the company’s acts are; while ‘benevolence’ refers to the ability of the company to hold its consumers’ interests ahead of its own self-interest and indicates sincere concern for the welfare of the customers.

In a collaborative B2B electronic business environment, trust issues are viewed from four broad perspectives: the vendor, the customer, the technology, and the interactions (relationships, transactions) between the vendor and the customer. However, further analysis
of trust literature indicates that there exists a fifth element: the intermediating agencies or facilitators (Fig 1).

Facilitators include: governments, banks (and other financial institutions), consultants/experts and, in some cases (depending on the nature of the relationship) shippers (or postal and shipping agents). Governments create the enabling environment (through legislative and enforcement functions), banks act as both media for financial exchanges and assurance (or insurance) agents to the parties in the relationship; consultants advise, maintain and upgrade the technology that facilitates both the security of the transactions and the privacy of the participants; while (again, depending on the nature of the commodities being traded) shipping agents (like postal services, DHL, UPS, etc) facilitate the exchange of the commodities from the vendor to the customer. The vendors, customers and facilitators therefore make up the main stakeholder groups in the B2B relationship. As shown in Fig 1, the activities of the stakeholder groups are influenced by such external environmental factors as political, economic, technological and socio-cultural.

For an initial transaction to take place there is a strong element of trust between the parties. One party must be willing to reduce the complexity involved in deciding whether to depend on another (known as the “trustee”) or not (Meents et al, 2003). This becomes more imperative given that there is inherent inability on both parties to control the actions of each other or to correctly predict each other’s behaviour. Furthermore, the trustworthiness of each
of the parties is not easily verifiable as is the case in a traditional face-to-face transaction (Pavlou, 2002). However, as Gefen (2000) explained, as long as the trustor is convinced that the other party (trustee) can be trusted in living up to their agreements, the trustor can reduce the decision complexity by ignoring any other potentially negative behaviours of the trustee.

In any B2B relationship, the trustor-trustee roles are interchangeable as either of the parties can assume the role of a trustor or trustee at one point or another in the life of a transaction. If for instance, SME1 supplies a commodity to SME2 before receiving the payment for the item, SME1 becomes the trustor and SME2 the trustee in this particular transaction. If on the other hand SME2 makes payment in the understanding that SME1 will deliver the goods, then SME2 becomes the trustor for the transaction. The roles of the partners are enriched when customers themselves become vendors of similar or different products and services. Early positive experiences can enhance their trust in such dealings. However, a negative experience may destabilise an otherwise smooth operation. Provided that the payment takes place before SME1 dispatches the commodity to the shippers or directly to SME2, SME1 does not have to worry in the same way that SME2 is concerned. SME2 can part with their money and ‘trust’ that everything will operate in the expected manner and therefore they will receive their goods. In turn these goods will be of the correct specification and quantity.

In a business to consumer (B2C) scenario however, the trustor-trustee role is not usually exchangeable. The business (vendor) is usually the trustee while the consumer (customer) the trustor. One good example of this kind of relationship exists between Amazon.com and its customers where the customer pays for the goods and hope that Amazon.com delivers the goods paid for. From this standpoint, the customer is the trustor (paying for commodity) and believing the trustee (Amazon.com) to deliver the goods after processing the payment.

**4. CHARACTERISTICS OF IOT IN B2B SETTINGS**

Electronic commerce (E-commerce) is the sharing of business information, maintaining business relationships, and conducting business transactions by means of telecommunications networks (Zwass, 1996). In today’s business environment where the operational boundaries between firms have become fluid, it is often both pragmatically and analytically unfruitful to separate inter-organisational and intra-organisational business processes. In this context therefore, B2B E-commerce includes the sell-buy relationships and transactions between companies, as well as the corporate processes that support the commerce within individual firms.

The early stages of most B2B transactions feature most of these characteristics observed by Clarke (2002) in one form or the other. For instance, there is always little knowledge by one or more of the parties about one another, especially before the relationships get started. Trust therefore, becomes very important if such transactional relationships have any chance of blossoming. Furthermore, the outcome of the initial interaction is very critical in determining the nature and level of trust to be developed in the relationship (Sherrie Xiao, 2003).

One major characteristic of B2B relationships is that the parties commonly have little or no knowledge of one another at the beginning of the relationships. They are also usually in different locations. They therefore cannot depend on physical proximity, hand-shakes, body-
signals, a common legal jurisdiction, or even necessarily a definable jurisdiction. Trust can be used in establishing and reinforcing business partnerships (Ratnasingam, 1998).

In a study conducted in two Latin American countries of Brazil and Chile, Avgerou et al. (2005) explored the distinctions existing in such aspects of trust as trust in technological artifacts or processes; trust in a specific ICT-mediated service; and trust in government. They also explored the distinction between trust as an interpersonal relationship and trust as a social or institutional phenomenon, and posit that in the second situation, trust ‘captures citizens’ expectations of fairness, impartiality and reliability vis a vis the impersonal and less tangible mechanisms, structures or processes underlying modern state and society at large’.

Inter-Organisational Trust (IOT) is the directional relationship existing between one organisation and another or between one group of organisations and another group or another single organisation in which one party (the trustor) is willing to believe that the other party (the trustee) is willing to honour the terms of their business obligations. This kind of relationship has a scope which means that it applies to a specific purpose or domain of action (Josang et al, 2005). IOT can also be bi-directional. This is what is often referred to as the mutuality or reciprocity of trust in which both parties trust each other for the same purpose (Josang et al, 2005).

One noticeable characteristic of IOT is its fragility. Slovic (1997) observes that trust is easier to destroy than to create. IOT takes a long time to establish and is vulnerable and susceptible to falter through a combination of other extraneous factors. These factors include hacking, viruses and worms, as well as such fraudulent activities as phishing, identity theft, and advance fee scam. There is growing evidence that the e-commerce market is growing. According to eMarketer, in 2003, US retail e-commerce generated $56 billion, up from $44.3 billion a year earlier (eMarketer, 2004). However, as the market grows so also the magnitude and number of fraud in online business increase.

<table>
<thead>
<tr>
<th>Some Identified Factors Affecting B2B Transactions</th>
<th>Responses on Willingness to Participate if the Identified Factors are Remedied (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very Willing</td>
</tr>
<tr>
<td>Cost of Internet Technology</td>
<td>30</td>
</tr>
<tr>
<td>Trust in Internet Tech</td>
<td>47</td>
</tr>
<tr>
<td>Trust in Customers</td>
<td>34</td>
</tr>
<tr>
<td>Protection against Fraud</td>
<td>28</td>
</tr>
<tr>
<td>Security of Online Transactions</td>
<td>46</td>
</tr>
<tr>
<td>Availability of Relevant Tech</td>
<td>23</td>
</tr>
<tr>
<td>Availability of Relevant Skills</td>
<td>37</td>
</tr>
<tr>
<td>Trust in Suppliers</td>
<td>14</td>
</tr>
<tr>
<td>Legal Protection of E-commerce</td>
<td>33</td>
</tr>
</tbody>
</table>

Table 1: Respondents’ Responses on their Willingness to Participate in B2B if Inhibiting Factors are Remedied
The seventh annual fraud survey conducted by CyberSource (a provider of electronic payment and risk management systems) showed that in the US alone, scams siphoned off $200 million more in 2005 than it did in 2004 resulting to an 8 percent increase in ill-gotten gains (Kuchinskas, 2005). Nigeria (Smith et al, 1999) and Uganda (Shelly, 2004) are two of the countries in SSA where such fraudulent activities as advance fee fraud and other criminal activities have built a generation of techno-sceptical entrepreneurs. In our recent study conducted in Nigeria, it was observed that a lot of the country’s SMEs shy away from using the Internet to conduct their businesses. Their main reasons range from trust (in technology, customers and consultants), fear of fraud to fear of security of online transactions. As shown in Table 1 however, most of the SMEs used in the study still expressed strong willingness to participate in e-commerce activities if the underlying problems are rectified.

The situation in Nigeria and Uganda is by no means peculiar to the two countries alone. In fact, according to UNCTAD (2003) report, several developing countries experienced digital attacks in 2002 resulting to negative media attention which undermined public confidence and trust in Internet transactions. Furthermore, as observed by Shelly (2004), African business scene is characterized by increasing level of poverty, low level of formal employment and (for example, Kenya) a high level of cheque fraud “sometimes with the help of bank staff”. All this impact greatly on the level of IOT between trading partners as well as the society generally.

5. TRIGGERS FOR ENGENDERING IOT

Lasting IOT like trust generally is based on experience over time. One of the major difficulties in establishing IOT is the challenge of making a success of the initial exchange. As Pichler (2000) observed, establishing initial trust can be a major challenge to newcomers in e-commerce, particularly those who do not have well established off-line brands. Initial trust therefore is very important as merchants can not build transaction history which is a major building block to lasting IOT (Patton & Josang, 2004).

Some factors are very central in enticing Internet users to trust an e-commerce web site (Sisson, 2002; Lee, 1999; Riegelsberger & Sasse, 2001; Lumsden & MacKay, 2006). Most traditional cues for assessing trust in the physical world such as the warmth of a shop assistant offering to help you, the size and layout of the shop floor and the ability of the consumer to see or feel the products before making a purchase decision are not available online (Patton & Josang, 2004). In order therefore to attract and keep online customers’ trust, some more affective approaches have to be adopted. This becomes even more imperative given that e-commerce involves interactions over space and time, and hence requires more trust cues than traditional shopping (Riegelsberger, 2003). Most current strategies in e-commerce trust-building centre mainly on cognitive trust even though some human trust decisions are based on affective reactions, which can be triggered by interpersonal cues.

Some cues capable of engendering B2B IOT include (but not limited to) Professionalism of Design, Longevity, Service, Selection, Testimonial (positive anecdotal comments from previous users), Personal experience, Trust-Assurance indicators (eg presence of known security vendors like VeriSign, etc). There is also the need to avoid such Human Computer Interaction (HCI) pitfalls as Difficult Interface, Poor Navigation and Poor user-friendly designs (Fogg et al, 2001).

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Table 2 shows the responses generated from the 122 SMEs that participated in the study. They were asked to score how the issues surrounding IOT (including trust in Online Transactions) would affect the decision of small business entrepreneurs to participate in B2B e-commerce activities. It shows that a significant majority of the respondents feel that Trust plays a significant role in determining why a lot of small businesses in SSA do not conduct their businesses online.

<table>
<thead>
<tr>
<th>How the following Trust factors affect SME Decision to Participate B2B in SSA</th>
<th>Response (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust in Online Transactions</td>
<td>73</td>
</tr>
<tr>
<td>Trust in Customers</td>
<td>71</td>
</tr>
<tr>
<td>Trust in Internet Tech</td>
<td>82</td>
</tr>
<tr>
<td>Trust in Experts</td>
<td>50</td>
</tr>
</tbody>
</table>

Table 2: Trust Factors affecting SMEs’ B2B Participation Decision

While a huge majority of the Respondents (82%) view Lack of Trust in Internet Technologies as being responsible for lack of B2B participation by many small businesses in SSA, 73% of them blame that reluctance on Lack of Trust in Online Transactions. One interesting feature of these results is that SMEs are equally divided on the effect of Internet Experts on their decision to conduct their business activities online.

6. HOW TO ENHANCE IOT AMONGST SMES IN DEVELOPING COUNTRIES

SMEs in developing countries suffer from a plethora of disadvantages which hamper their efforts to join the rest of the world in exploiting the benefits of e-commerce. According to Goldstein & O’Connor (2000), a lot of SMEs in developing countries are still grappling with some governmental, institutional and technical problems such as e-commerce requirements, legal norms and standards covering among other aspects contract enforcement, consumer protection, liability assignment, privacy protection, intellectual property rights). There are also those problems relating to process and technical standards (e.g. regarding the way payments are accepted on the Internet and products are delivered to the final user, security, authentication, digital signatures, and connectivity protocols).

There are indications however that some of these and other problems have been receiving due attention by both the governments and private-sector entrepreneurs in some of these countries. In Singapore for instance, the government in 2000 announced plans to position the country as an e-commerce hub through the implementation of such initiatives as:

a) Establishing a secure e-commerce environment;
b) Building confidence in e-businesses;

c) Building confidence in consumers to transact on the Internet; and

d) Educating and increasing awareness of the benefits of e-commerce (IDA, 2000).

It is therefore not surprising that of the 115 nations which featured in the current World Information Technology Report published by World Economic Forum (WEF, 2006), Singapore comes second after the US as the country with the highest networked index. However, Singapore’s ascendancy and position in the global rankings is not reflected on the other developing countries’ positions, particularly those from SSA. According to the rankings, 15 of the 56 countries on the bottom half of the table are from SSA.

One other obvious way in which SMEs in developing countries can engender IOT is to use technological solution to directly address the risks involved in B2B transactions. This therefore calls for improved payment systems like using the escrow (or mediator) approach favoured by most of the respondents in the IDA (2001) study and as suggested in this paper. Banks are known to be amongst the facilitators of B2B relationships. If a customer is assured that the payment he has made can be retrieved if the goods paid for are not received, then, all things being equal, he may be willing to deposit his payment into a bank.

Approaches to trust building in B2B relationships can be both cognitive and affective (Corritore et al, 2001; Riegelsberger, 2003). One of the affective IOT building strategies is communicated through the web interface. Fogg et al (2001) established that people’s perceptions of web credibility can be determined by such factors as physical address details and high quality photographs of employees. There is also the need for the provision of company information that is easy to find; prices (including taxes and shipping costs) early in the interaction.

Furthermore, web designers in these regions must strive towards establishing secure online environments for users. One of the ways of achieving this is through the use of public key infrastructure (PKI) which addresses the key issues of authentication, confidentiality, integrity and non-repudiation required for secure online transactions. Authentication control ensures the establishment of the right identity for the parties involved in the transaction. Confidentiality is concerned with keeping personal details of the participants out of reach by a third party. Integrity addresses the data and information shared online making sure no alteration takes place; and non-Repudiation control ensures that the parties cannot disown the transaction by, for instance, exploiting the non-personal nature of e-commerce.

7. A TRUST-TRANSACTIONS TYPOLOGY

In any B2B IOT relationship, the levels of Trust and the volume of Transactions move (in general) along the same direction. If therefore the level of Trust is low, then invariably the volume of Transactions would fall. We encapsulate this kind of relationship in the B2B Trust/Transactions (TT) typology shown in Fig 2. This typology demonstrates the fluidity of IOT in business relationships.

We assume that the ideal situation (i.e. high level of Trust and high volume of Transactions – ‘H,H’) is where all organisations aim towards. This is when previous successes enhance IOT and generate a high volume of Transactions in a constant improvement loop. An increase in
the volume of Transactions whilst the level of Trust remains low (as shown in quadrant ‘H.L’) engenders fragility (even though there may be relative success in the relationships currently). Also it is highly unlikely to build high level of Trust just on the strength of a low volume of Transactions, and if that is so it is not financially viable.

![Fig 2: Showing B2B Trust/Transactions Typology](image)

The IOT levels as well as the volume of Transactions vary depending on a lot of other factors. Some of these factors have been identified to include competence (the confidence in the business partner’s ability), credibility (size and reputation of the firm), integrity (honesty and reliability of the business partner), and benevolence (the courtesy, friendliness and goodwill between the business partners) (Yee, 2001; Chen & Dhillon, 2003).

8. ASSESSMENT USING THE TRUST/TRANSACTIONS TYPOLOGY

The TT typology can be used in achieving critical trust factor (CTF). In every business relationship, there is always the need to build the trust level to such an extent that the partners feel ‘safe’ in dealing with each other. CTF refers to the point in the life of a business relationship where the partners have known each other enough to take bigger risks. That point marks a kind of watershed point in the relationship. Once the critical trust factor (CTF) stage is reached, success is more likely.

The TT typology can be used by consultants and companies to assess or self-assess the current state of technology-enabled transactions and the level of IOT. Once this is established, a customised programme of trust building can be designed provided that the organisation is, at least in principle, interested in increasing their transactions volume.
Once the SMEs attain the CTF in their business relationships, then their relationships will start moving towards mutuality. In that state, they can trust each other so much that they can deliver goods on the promise that payment would be made at a future date. It is important however not to compromise the viability of the organisation through increase of the transaction value if the trust remain low. Similarly, if the trust is already low, it will be difficult and dangerous to increase the volume of transactions. Ideally, it is desirable to move from the ‘L,L’ quadrant or sector to the ‘L,H’ sector in that order. A high volume of transactions may back-fire if many of them fail in some way eroding the level of existing trust.

9. CONCLUSIONS AND FURTHER WORK

IOT is a very essential ingredient in the establishment and nurturing of business relationships between two organisations. In a collaborative B2B environment, IOT plays a key role in attaining the CTF which can contribute greatly to a high volume of transactions. SMEs in developing countries are major contributors to the economic growth of their respective economies. For them to adequately play this role however, they need to earn the trust of the global community in their business relationships. For this to happen, their IOT with businesses across the globe must be enhanced and maintained at a high level.

More research needs to be conducted on the other ways of building IOT and on how much effect developed IOT can have on the volume of transactions between parties participating in B2B relationships. There is also the need to further study the relationships between IOT and Transactions with a view to fine-tuning the TT typology.

10. REFERENCES AND CITATIONS


