Chapter 2
Theoretical Foundations and Literature Review

ABSTRACT

This chapter raises the conceptual issues concerning different concepts relating to technology and trust in B2B e-Commerce. It makes an attempt to organize the contributions of various scholars in this regard in order to build a framework of understanding of the trust and technology issues in B2B e-commerce. In a way, it deals with the context and the attributes on which this book focuses.

THE CONCEPT OF E-COMMERCE

Electronic commerce has been defined in the literature as the use of computer networks for carrying out transactions between buyers and sellers that may be individuals and organizations (Kalakota & Robinson, 2001; Cunningham, 2001; Wigand & Benjamin, 1997; Kauffman & Walden, 2001). The computer networks may be used for interconnections relating to internal applications like purchase order recording, invoicing, etc. They may also be used for external applications such as inter-connecting suppliers/vendors, buyers, and payment systems.

E-commerce has been classified into a number of segments based on the type of external integration and the type of transacting parties i.e., who is selling to whom. Some of the most popular segments are as follows.

B2B or Business-to-Business e-commerce segment includes the e-commerce activities between two or more business organizations. This is perhaps, the largest segment of e-commerce in terms of value of transactions. A number of models of B2B e-commerce are being experimented with, including use of inter-organizational systems, e-Marketplaces/e-exchanges (B2B hubs), etc. *B2C or Business to Consumer e-commerce* segment refers to e-commerce activities between business organizations and individual consumers. B2C e-commerce is perhaps the most visible segment because a large number of consumers participate on fairly regular basis in this segment. *C2C or Consumer-to-Consumer e-commerce* segment includes the electronic exchanges between and among individual consumers. This segment mostly involves bidding/auction processes. *M-commerce or Mobile e-commerce* segment refers to the use of the wireless digital devices in conduct of e-commerce activities. Once connected, mobile consumers can conduct many types of transactions including stock trading, online payments, e-banking etc.

B2B AND B2C E-COMMERCE

B2B and B2C e-commerce collectively form 90% to 95% of total global e-commerce[1]. The other forms of e-commerce include C2C, B2G, etc. Although much of the media attention has been on B2C e-commerce, the B2B e-commerce offers greater opportunities both for the e-procurement and e-marketing particularly serving the purpose of automating and integrating supply chains. It will be not be an over statement to say that the real e-commerce revolution is happening in this segment in contrast with B2C which is expected to follow a more evolutionary path. They have many similarities. For example, both of them involve buying and selling processes; both the segments use the computer networks and other digital technologies for conducting business. The key difference lies in the parties to the trade. In B2C segment buyers are individuals buying for personal consumption whereas in B2B segment the buyers are business organizations buying to meet their procurement requirements for their further production. The difference between these segments is significant not only in terms of the parties but also in terms of the other elements of e-commerce environment such as infrastructure and transactions.

Infrastructure: For an effective B2B e-commerce, significant investment has to be made not only in IT infrastructure but also in business process re-engineering. Most companies involved in B2B e-commerce integrate their systems with those of their trading partners to be able to fully exploit the opportunities offered by B2B e-commerce. On the other hand no such integration is required in B2C e-commerce. Thus, the investment in B2B e-commerce infrastructure by the parties is fairly significant. In addition, maintenance costs are to be incurred in the case of B2B e-commerce. Higher costs of infrastructure and its maintenance in B2B e-commerce make it imperative for the companies to focus on the utilization of the infrastructure in order to ensure suitable return on investment.

Transactions: The transactions in B2C differ from those of B2B segment with respect to both size and frequency of order. In the case of B2C segment, the value per transaction is generally lower than that in B2B segment. This would imply that loss would be smaller in case of bad decision. Whereas the value of the purchase orders in B2B e-commerce is larger and a bad decision can prove to be fairly costly. In addition, the frequency of transactions between the two trading parties is higher in the case of B2B e-commerce. That makes the value per customer to be comparatively much higher in the case of B2B e-commerce. In the case of B2B e-commerce, the buying transaction is a business transaction and therefore the issues such as security and privacy become relatively more significant.

Thus, the trading environment of B2B e-commerce differs significantly from that of B2C e-commerce.[2]

DEFINING B2B E-COMMERCE

A number of definitions of B2B e-commerce are available in the literature. Some of the most commonly quoted are given below:

- *World Trade Organizations(WTO)*[3] has defined B2B e-commerce as "any transaction carried out between organizations in which at least one of the following activities are conducted by electronic media i.e. production, distribution, marketing, sale or delivery."
- *The European Information Technology Observatory(EITO)*[4] has defined B2B e-commerce as "the use of Internet technologies to conduct or enhance transactions and business relations either on the back-office side (relations with suppliers), across internal processes, or on the front-office side".

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