

# **An Electronic Commerce for B2C: A Strategic Approach**

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## **Abstract**

Electronic Commerce(EC) plays the most important role in electronic market. One the electronic market is business-to-consumer(B2C) environment, it is used to manage the relationship between suppliers and customers in dealing with electronic transactions. In the digital world, both suppliers and customers are not required to meet face-to-face, business transactions are done electronically instead. By adopting EC, suppliers maintain better relationship with customers by promoting products electronically, accepting payment transferred from one account to one another and reducing inventory level as well. Customers are able to locate a supplier with products that best describe their features, such as price, negotiation of terms and quality of services.

Keywords: electronic commerce, Internet, electronic market, encryption, just-in-time inventory

## **1. Introduction**

EC is an umbrella term that covers virtually all forms of electronic business process[1]. The essence of EC is buying, selling and marketing on the Internet electronically. A company can engage in electronic business to the extent that EC pervades fundamental business processes and activities[2].

Although there have been several failures in the electronic business arena, whether it is business-to-business(B2B) or B2C EC. There is no doubt that EC has changed the manner that business companies are doing business[3]. It has been shown that the EC can fundamentally change the inter-organizational processes involving buyer-supplier relationships. It reshapes these buyer-supplier relationships by improving a business's core process, and reaching new markets or segments through electronic medium. Over the past ten years, there is a trend that more and more customers who prefer to shop electronically. It is because in the digital world, customers may not need to go out but can do shopping digitally. With a click of the hyperlink, they can locate a service provider(supplier) easily. As EC is becoming pervasive and having high impact on business companies as well as human beings lives[4]. After

years of development of EC, it is believed that EC is increasing the availability of different information, giving customers more knowledge, better service and quality, and faster than before. Suppliers can react to the requirements of customers, fulfill their requests immediately and support their buying decisions in order to create value and win their patronage and loyalty[5]. A proactive strategy to help customers with online services is one of the fundamental requirements of B2C EC[6]. In the electronic market, what online customers expect is fast, accurate, reliable and high quality service. What customers want from suppliers are online information available at any time, queries about suppliers' products must be answered and solved. So suppliers can be easily reached online when problems are arising from customers.

In the electronic market environment, every Internet user is a potential customer to a business company. How to attract the potential customers and maintain the existing ones becomes the strategy of those business companies. For those who want to attract new and keep the existing customers, they need to have effective and efficient customer relationship management and highly restricted security system to manage customer information during transmission process.

The objective of this paper is to discuss various issues of implementing B2C EC system in the digital world. This first section provides a general introduction of EC. Then followed by the discussion about the functions of an B2C performed by both suppliers and customers. The third section describes the concerns of security and privacy issues with implementation of EC. The fourth section presents the intermediation between suppliers and customers. The fifth section details the relationship between suppliers and customers. Then it is followed by the great benefits of designing an EC and the last section ends with conclusion.

## **2. Functions of B2C**

To understand the operations of B2C, it is necessary to understand the functions of B2C playing in the electronic market. The functions of B2C are to bring value to customers and generate revenue for suppliers themselves, through various functions that B2C

performs. The main functions of B2C performed by suppliers include order processing, invoice collection, product delivery, and payment collection. The functions of B2C performed by customers include product search, product comparison, product selection and making payment. A platform of B2C is presented in Figure 1. Between the two sides, transaction data of both trading parties are highly protected by means of security issues. By connecting the parties electronically, a customer can transmit his financial data to the web server of the supplier in a highly secured manner. As a result, customers feel very confident and flexible to provide their personal data over the electronic market.

are able to access details information of products and services electronically wherever and whenever possible. With electronic catalogues available from the Internet market, better communication between suppliers and customers is maintained.

### Payment handling

Electronic payment systems ensure the security of financial transactions transmitted between trading partners. By adopting new Internet-based

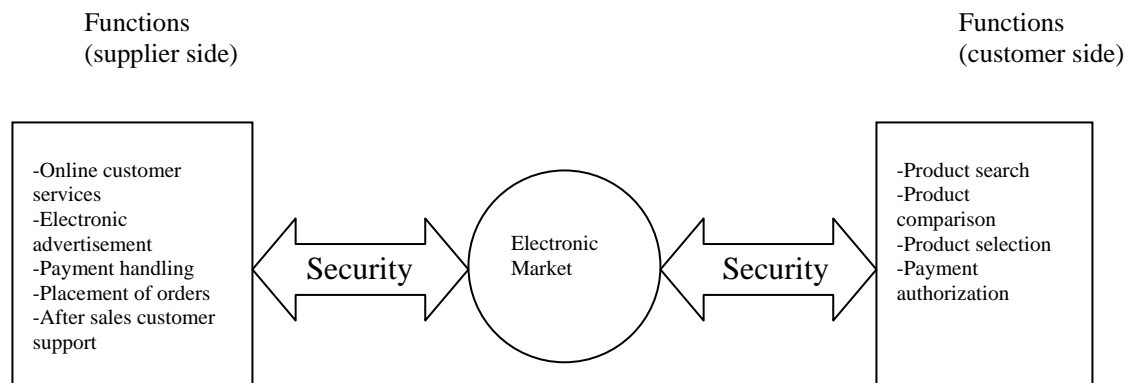


Figure -1 A platform EC model for B2C

## 2.1 Functions of B2C – supplier side

### Online customer services

This service is to use the electronic market to provide services to customers electronically. This electronic market is very important between both suppliers and customers, because suppliers and customers do not need to see each other face-to-face, the requested services are processed electronically over the Internet instead. From this electronic market, suppliers are able to answer customer inquiries, provide information of electronic catalogues, allow customers to order online, track their account and order status immediately. Customers are able to search products that best meet their requirements with attributes such as best price, service quality and the quality of the product. Besides, a customer generally can easily compare price and product attributes from other online suppliers electronically.

### Electronic catalogue

Compared with traditional advertising channels, electronic catalogues are low cost, easy to reach customers, and efficient for customers to access. Using Internet-based electronic catalogue, customers

payment collection method, it shortens the time spent by both suppliers and customers to transfer and accept money from one account to another and reduces the number of human made errors. The new Internet-based electronic payment systems include traditional credit card, smart card, digital cash, electronic fund transfer, electronic check system etc. All instructions information regarding the electronic payment method must be available from electronic suppliers, so that customers can follow the instructions to finish the transactions and settle the payments electronically.

### Placement of orders

To be competitive among business competitors in the business community, suppliers must offer low cost, better quality, flexible and fast product delivery service to customers. With direct marketing concept, the EC system must be flexible enough to allow customers to specify product requirements, which include the features of product, the anticipated delivery date and time, options of payment handling and delivery schedule. This approach enables the suppliers not only to move the product items constantly from warehouse but also to increase the task interdependence between stages in the physical production chain and improve the physical movement

flow of materials and information flow in the production cycle.

#### **After sale customer support**

In Internet-based environment, electronic customer support after sales becomes indispensable. As salespeople and customers do not meet face-to-face, then electronic communication by means of electronic mail is extremely important between them. Through electronic mails, customers can contact suppliers for further assistance for setting up or installing the purchased products, troubleshooting and contacts for maintenance and improvement information. In order to have further communications related to customer support, the construction of newsgroup is also necessary, newsgroup is an electronic place where the supplier's customers can have online discussions interactively.

## **2.2 Functions of B2C – buyer side**

#### **Product search**

With this function, customers can search a supplier's product that best describes with products' features such as reasonable price, best negotiation term and quality of service. What the customers want from electronic market is that the information must be available electronically 24 hours a day and 7 days a week.

#### **Product comparison**

With many online stores on the electronic market, sometimes it is difficult for customers to find what they want and make a decision of what to buy immediately. Before making a purchase, customers usually like to make comparison between online stores of their products offered. There is a good opportunity that the electronic suppliers must provide interactive and informative websites from which customers can compare easily.

#### **Product selection**

Sometimes, experienced customers may find it difficult in accessing supplier's product information, the inexperienced ones may find it even worse, due to inflexible and non-interactive web site design. Interactive experiences shows tailored made design can induce the customer to commit to a purchase. So the designs of supplier's web site must be flexible enough, easier to use by both experienced and non-experienced customers. Therefore, they can select products, compare product's attributes, and make purchase at any time without any difficulties.

#### **Payment authorization**

After making a decision to buy from electronic suppliers, customers then indicate how the payment is made electronically. For this process, a customer can choose to settle the payment by using electronic payment systems, digital cash or other electronic fund methods. The process of transmitting and executing financial information must be highly restricted and confidential. All of the transactions are secured with data encryption system during the transmission process. So that customers feel confident to provide their personal and financial data over the network.

## **3. Concern of security and privacy issues**

EC provides not only cost cutting opportunities but also improving business efficiencies to both suppliers and customers[7]. Especially, it offers suppliers greater market coverage, high sales and minimum marketing costs and less being stuck inventory[8]. So security and privacy are said to be the two of the biggest concerns in electronic market[9]. A B2C must have a very strong, well-designed and well-tested security policy in place. This makes the customers feeling confident with transactions made electronically, because they trust suppliers who maintain the privacy and confidentiality capabilities of their electronic website. For this, public key encryption system must design in order to solve the problem using a pair of keys generated by the encryption software. Messages that are encrypted by one of the keys can be decrypted only by the other key of the pair. The receiver keeps one key private and makes other public. Only the receiver can decrypt the message using the private key[10]. As such, the financial data being transmitted electronically is highly restricted to other parties. Although many suppliers have taken seriously into consideration with this issue, especially in the field of B2B, but it sometimes does cause concern for both suppliers and customers about all types of electronic business transactions[3]. So there are many suppliers who use many different security techniques to provide secured data transmission, such as the adoption of firewalls and intrusion detection systems, along with a security protocol to secure encrypted transmitted data which is used to provide security and confidentiality of customer information and transaction data.

## **4. Intermediation between suppliers and customers**

By connecting suppliers and customers together electronically, EC plays the most important role for digital intermediary. With digital intermediary, suppliers and customers are matched, so that they do not see each other face-to-face. Demand and supply information can be aggregated and disseminated. The suppliers can aggregate their product offerings and help their customers to search for desired product

information and price. If the dealing agreement is made between suppliers and customers, facilitating mechanism for handling transactions are provided so that payment and logistics can be arranged next.

With the advent of EC, customers are able to use information technology(IT) to find suppliers and product offerings. By applying IT to electronic market, it reduces the time spent by customers in supplier comparison and selection, price discovery, delivery scheduling and other associated business transactions. It now takes less time and effort than ever before to search for product information when shopping electronically.

## **5. Customer-supplier relationship**

In the past, many customers and suppliers maintained direct relationship by emphasizing on the creation of a huge customer database, using a mixture of low prices and high advertising expenses to attract those new ones. Their experiences with this strategy have not been shown favorable[13]. Or in other ways, many suppliers failed to satisfy customers after visiting their web sites[14]. A prior study reported that 28 percent of all online purchase attempts failed, due to problems ranging from web site performance to product delivery[15]. A study showed that the overall relationship between the two parties is customer satisfaction with a supplier's product was determined by satisfaction with the order management cycle[16]. This includes production scheduling, fulfillment, shipping, installation and billing. While another study reported the two-side relationship is customer trust in which Internet shopping is determined in part by whether customers trust suppliers and products they cannot see or touch, and electronic system with which they have no previous experience. Since Internet shopping is a relatively new phenomenon with enormous potential, Internet shopping activities involve more uncertainly and risk than traditional shopping. A customer cannot physically check the quality of a product before making a purchase, or monitor the safety and security of sending sensitive personal and financial information through the Internet to a party whose behaviors and motives may be hard to predict[17].

Establishing good relationship with customers, many suppliers have to transform the first time buyers into long-term and loyal customers. Satisfied first time buyers can purchase more and more than those who are dissatisfied. The experience of Dell and other successful online suppliers shows that satisfaction with the fulfillment process, including designing an easy to use electronic system, delivering the right product on time, and responding to customer inquiries promptly, are key drivers of building up better relationship with customers[18]. As such, the

electronic system of suppliers should be flexible, so that customers can buy products easily, compare various features of products such as price among suppliers, before a selection is made and an order is placed. Before the arrival of ordered items, a customer may be able to check the progress online, so that customers can decide whether to keep or return the items.

By attracting customers to come back regularly to a web site, the perception of trust to Internet shopping by customers is also another important concern. Internet shopping involves trust not simply between the suppliers and customers, but also between the customer and the electronic system through which transactions are executed. To increase customer trust in Internet shopping, the suppliers should focus on increasing their integrity in the minds of customers by demonstrating through honesty and strict adherence to a set of principles accepted by consumers. Such as marketing campaign would be a good method to convey a clear message of honesty. In addition, company policies, such as the handling of customer relationship, should be guided by a consistent set of principles that are visible to customers. One way of doing this is to display up front in an eye-catching place on the supplier's Internet storefront.

## **6. Great benefits of EC**

The development of EC is dramatically lowering entry barriers, especially for those who do not have EC system designed and implemented. Today business companies can enter EC trading environment easily. With a number of electronic suppliers increased by accessing the Internet, the competition among electronic suppliers increase substantially[11].

On the other hand, the EC dramatically changes the way that a business company trading business with and offering product/service to customers. For example, Dell Corporation allows its customers to specify the requirements of manufacturing products and conditions of delivering products to themselves. With this adoption, suppliers and customers are directly connected together, so that orders will be received faster and will be filled at a quicker speed. This allows suppliers substantially to reduce their inventory levels. By bringing suppliers closer to a just-in-time inventory scheme, storage costs as well as the cost related to obsolete inventory would become virtually non-existent. This provides a positive impact on the profit figure of a corporation[12]. By adopting the electronic technology, it affects the balance power in relationships between suppliers and customers by increasing or decreasing the switching cost of the trading parties. By lowering customer's search cost,

customers are easier and feasible to compare product price among suppliers, and thus increases price competition[7]. This competition resulting from lowered search costs increases price rivalry among existing competitors, reduces switching costs of customers, and thereby shifts bargaining power to customers[11].

## 7. Conclusion

This paper discussed the functions of B2C from which suppliers today are no more required to meet their customers face to face. Instead they use EC system to trade with customers electronically. By implementing EC, it increases the speed of fulfilling customer orders. This allows suppliers to substantially reduce their inventory levels. By bringing the suppliers closer to a just-in-time inventory scheme, storage costs as well as the cost related to obsolete inventory would become virtually non-existent. To customers, because the EC makes price and product features comparison easily. This competition resulting from lowered customer search costs increases rivalry among competitors and reduces switching costs of customers.

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