

## Customer's Information Security Management System in E-commerce

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**Abstract-** Customer privacy in e-commerce is a controversial issue in marketing. In this paper we try to explain how consumer perceived trust and perceived risk influence e-commerce business. This article is based on a literature review that highlights the importance of consumer perceived trust on e-business and customer information security management system by e-business.

**Keywords-** Electronic Commerce, customer's perceived risk, security, privacy

### 1. INTRODUCTION

Various kinds of e-services, which are the services provided to customers through electronic media, such as the internet has raised issues of privacy has attracted much attention [10]. Protecting the privacy of confidential information is quickly becoming a measure of success in the business world. Companies improve their reputation when they take care to safeguard the personal data people entrust to them [7]. It is acknowledged that perceived risk can prevent customers from purchasing from an online retailer [2]. Trust can also be described as a well recognized mechanism for assessing the potential risk associated with cooperating with autonomous agents, it can be based on either experience or recommendation. In another definition, trust is demonstrated by confidence in the goodwill of others which is produced through interpersonal interactions dealing with matters of uncertainty, 'or risk' [9]. Many writers have posited that trust has a positive influence on customers' perceptions and is a precursor to consumer engagement in internet shopping [2]. Researchers suggest that to place trust in a party involves risk taking in decision-making. Trust is identified as an individual's confidence in the intentions and capabilities of a relationship partner and the belief that a relationship partner would behave as one hoped [1]. Consumer trust is an important factor in practically all business-to-consumer interactions and a crucial aspect of electronic commerce. Most empirical studies on consumer online trust focus on interpersonal trust, where the object of trust is the internet vendor whereas the influence of technology or system trust on online consumer behavior is largely neglected [3]. Research evidence suggests that trustworthiness leads to competitive advantage and

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trustworthiness of a company has a significant impact on the customers' trust in the company [5]. Moreover, trustworthiness has a positive impact on the attitudinal as well as the behavioral loyalty of customers and loyal customers are more likely to recommend the service providers to others leading to improved performance of the firm [5]. Unfortunately, the phenomenal information explosion of customers has opened up opportunities for crackers, hackers, disgruntled employees, corporate adversaries, and terrorists to launch attacks against corporations and governmental concerns [7]. Trustworthiness is a crucial factor when business is being held in an online environment, some systematic steps are necessary to manage identity, reputation, and risk [9]. Many e-service users are becoming more concerned about the threat of losing control of their personal or private information. In this situation, people would like to be more informed about the current state and the impending as well as potential changes of the external environment. At the same time, they are now more cautious and demanded about protecting their own privacy. The issue of sharing and protection of information has received much attention in literature of service and information management [10].

## **2. PERCEIVED TRUST**

Online marketing transactions necessitate online customer trust, the number of people purchasing online has grown at a slower rate than those who use the internet. Consumers need to have sufficient trust on the particular to place an order online and even submit his or her financial information and other personal data in undertaking other financial transactions, such as online banking [1]. The continuing uncertainty and skepticism of consumers in regard to the internet means that acquiring their trust will be an incremental process [21]. For most of the internet users, trust in transactions online will be built up experientially over time. Therefore, organizations utilizing the internet should not hope for results too soon and abandon their attempts to woo the customers to purchasing online. Consumer trust on the e-business can be built incrementally by their past experience, and starting with small purchases and then building up to bigger and more expensive ones as their trust in the medium or the organization increases. Dimensions of trust online include security, privacy and reliability [25].

## **3. RISK OF CUSTOMERS IN E-COMMERCE**

Security and privacy in e-commerce settings are of considerable importance to consumers, businesses, and regulators. Security breaches of internet transmissions and databases enable the unauthorized use of consumers' confidential information (e.g., name, address, password, social security and credit card numbers) and often result in identity theft [16]. Prior research acknowledges the risks to consumer information privacy and of information misuse in the e-commerce setting. In reality, the prospect of privacy losses and information misuse in e-commerce settings may offset any convenience, time, and/or financial savings afforded to consumers. The fact that a typical online transaction entails third-party access to personal financial data may be a source of worry for some customers. Though procedures may have been changed to allow customers to pay remotely, little thought has been given to measuring the effectiveness of these changes [1] and security breaches are occurring at a growing rate [30]. For example, the sophistication of phishing and harming scams has increased and affects more unsuspecting web surfers each year. Online users are unwilling to risk their confidential information, including credit card details [1]. Moreover, banks, credit agencies, and payment processors continue to suffer losses of consumers' confidential personal information [30].

Mail order has been considered to be more risky than in-store purchasing and users of the internet encounter more risks than they do in face-to-face transactions [2]. A typical online transaction necessitates giving the vendor access to personal data, such as address, telephone number and financial details. Such access may be a threat for some consumers, especially if they are concerned about fraud or losing money [23].

## **4. E-COMMERCE SECURITY**

However, e-commerce activity continues to grow and increase and is not affected by the recent security and privacy breaches. Retail service providers such as accountants, insurance agents, bankers, and brokers

continue to enhance some new online self-service technologies to reduce costs of providing their services [29].

To reassure customers, marketers need to apply some marketing strategies which will employ some form of virtual evidence in support of marketing claims. Some marketing tactics to reassure customers might include quotations from newspapers, testimony from previous customers, photographs of people using or enjoying the products and services, before-and-after case studies, and expert witness statements. The use of celebrity endorsement can be effective too, particularly for high-involvement products [28]. In order to invoke trust on the part of the customer, e-commerce markets need to assure customers if data privacy and secure financial transactions, policies for return of goods and product warranties should be prominently displayed [2]. One way to build trust in the online context is to use a trusted third-party system in which payment is made through a well-known intermediary, which authenticates the seller. This enables both parties to be protected from debts or fraudulent use of credit cards, and customers to be protected from non-fulfillment of the orders or misuse of their financial data. Settlement intermediaries may give positive effect in increasing the adoption and acceptance of online commerce to the uninitiated [24].

Marketers use many strategies including safe-site symbols and guarantees that help to engender trust in the context where customers unwillingness to risk their confidential information, including credit card details [2]. Furthermore, customers may be concerned about what marketers will do with the personal data they have disclosed. This is due to credit card details which can easily be cloned in the offline world and stolen by others. Customer perceptions of this issue in online transactions may be heightened. Hence, online marketers need to make explicit statements and assurance about the safety of transactions and use of data [24]. Symbols such as trust-marks may help to encourage trust on the part of prospective buyers, especially if national or international governments are involved in their administration and invoke action against those who transgress their codes. The involvement of governments may increase the security level of customers' confidential information which is given to the online-stores [27].

In the online environment criminal acts can be performed with extremely high speed, and without any physical contact [3]. If an unauthorized individual is able to get access to the online banking portfolio of a user, a considerable amount of financial information may be jeopardized and there might be considerable financial losses. Overall, the most crucial categories of perceived risk associated with internet banking are likely to be financial risk and security risk. These may result in the potential loss due to deficiencies in the operating system or misappropriation of funds through illegal external access [27].

Individuals may refuse to use e-business because of fear of unauthorized or illegal duplication and circulation of information. It has been empirically proven that perceived risk is a significant factor in relation to consumer behavior [4]. As long as this problem is concerned, e-commerce systems must be designed to eliminate unauthorized use of customer data while transactions data must also be kept as confidential data and not misused. In order to alleviate customers' perceived anxiety and at the same time to enhance service credibility, the service providers must effectively protect the Internet-based operations together with customer data [25].

## **5. DISCUSSION**

A number of empirical and effective studies have identified the elements that are pertinent to the formation of online trust in order to derive effective implications for enhancing and improve consumer trust in e-commerce. The willingness to buy online or adopt internet banking depends both on the consumer's trust in a specific party (web site or online merchant) and in the internet as underlying transaction medium. The characteristics of the merchant, characteristics of the web site and the underlying technology infrastructure are factors that affect online trust. The results of this study provide strong evidence for the proposed influence of internet trust on risk perception and consumer attitudes toward online business transaction. We can now conceptualized internet trust as trusting beliefs in the reliability and predictability of using internet and the willingness of the consumer to depend on the internet with regard to economic transactions and thus did not include any characteristics of the bank or the bank's web site in our definition.

Online stores should not only need to consider the quality and price of their products, more importantly, it should inform the customers that serious security procedures have been implemented to effectively protect credit card payment and personal privacy associated with online transactions.

## 6. CONCLUSION

Well-known or credible journals, surveys of the general public, and some other research studies has identified that the common problem affecting information security and privacy of customers is e-service providers' lack of security control which allows damaging privacy losses. Apart from that, another problem is the subsequent misuse of consumers' confidential information, as in identity theft. These may affect customers' confidence toward online business transaction in a variety of privacy risk assessments by consumers. To examine how such risks can be reduced, we drew upon research on perceived risk and information privacy to propose that consumer assessments of privacy risk regarding e-service activities are a function of their security and reliability concerns.

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