Key Factors in E- Banking: Concepts & Applications

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ABSTRACT - With the phenomenal growth of B2C e-commerce, most industries including banking and financial services sector have been influenced, in one way or another. Several studies suggest that customers have not adopted B2C e-commerce in the same degree primarily because of risk concerns and trust- related issues. This paper extends an area of information systems research into a marketing of financial services context by look in into the element of trust and risk in e- banking. A conceptual model of trust in e banking is proposed with two main antecedents that influence customer's trust: perceived security and perceived privacy. Trust is being defined as a function of degree of risk involved in the e- banking transaction, and the outcome of trust is proposed to be reduced perceived risk, leading to positive intentions towards adoption of e- banking.
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Introduction

With the development of the internet, more knowledge is accessible to people anywhere at anytime. Facilitating communication, data transmission, and global interaction, the internet is a playing field unlike any other. Transcending the traditional barriers of time and space, the internet is redefining the world of banking. The internet has created new methods for carrying out a variety of financial transactions. With these developments, a new era of banking has emerged which has come to be known as "e-banking". E-banking encompasses an array of financial transactions, once done through the tangible exchange of information, now are done electronically. While the benefits of such advancements have been welcomed, there also have been drawbacks. Issues such as security, fraud, and theft have deterred people from participating in the internet e-banking revolutions [1].

The extension of money and banking to the cyberspace is an inevitable development in the information age. Over the past few years, many financial institutions have launched e- retail banking over the internet. Given the requirements of matching marginal gains against marginal costs, evaluating the profitability of market development along specific dimensions and segments, and determining whether the new technology would be accepted, it is imperative that this decision is continually re-evaluated. Commercial banks face significant challenges on both the supply side and demand side, associated in particular with competition, product-service quality and differentiation, transaction security, cost efficiency, and demographic change [2].

Many banks have hired qualified teams of network administrators as a part of their IT departments to ensure the safety of both the customer and the institution that operate from and log into the banks network. Future compliance with these security measures also will lead to techniques such as biometrics and electronic fingerprint ability. Banks are also encouraged to focus on security from within by exploring scenarios of disgruntled employees or hackers from within the organization. The responsibility for safety and protection also lies with the customer [3]. The development of customer identification numbers, passwords, and other forms of customer identifications permitting users to into a banks web site and make secure transactions are the main emphasis behind consumer protection. Password protection is the one of the biggest problems facing customers. Creating passwords that are not easily recognizable prevents outside parties with malicious intent from computer hacking. Many banks now require passwords to be case sensitive, include a certain number of characters, and contain both numbers and letters. In addition, customers are recommended, and in some cases required, to change their password on a regular basis [4, 3].

Customers' trust on electronic banking transactions as compared with face to transactions have some unique dimensions, such as the extensive use of technology for transactions, the distant and impersonal nature of the online environment, and the implicit uncertainty of using an open technological infrastructure for transactions. The spatial and temporal separation of the bank branch and the customer, and that of the customer.

The financial advisor increases fears of opportunism arising from product and identify uncertainty. Customers trust in an internet environment thus, is very important as there is little guarantee that the online vendor will refrain from undesirables, unethical, opportunistic behavior, such as unfair pricing, presenting inaccurate information, distributing personal data and purchase activity without prior permission [4,5]. To further complicate the situation there is a concern about the reliability, of the underlying internet and related infrastructure the banks and financial service providers employ to interface with customer. Overall, these unique differences reduce customer perceptions of control over their online transactions, increasing their apprehension about adopting e-banking and providing unique challenges to banks and financial service providers to find ways in which to initiate and foster electronic relationships with their customers [6]. It is important to understand the factors that might influence consumer's intentions to engage in banking and financial services over internet. As discussed in the next section an important factor that is recognized as key for the continued growth of electronic banking is the concept of trust. Congruent with this, the aim of this paper is to explore the nature, drivers and consequences of customers trust on the banking and financial services over internet. such understanding of customers trust will provide the practitioners and researchers with a set of manageable, strategic levers to build such trust, which will promote greater acceptance of electronic banking and financial services [7,8].

THEORETICAL PERSPECTIVE AND DEFINITION OF TRUST

Trust has long been considered as a catalyst in many buyer – seller transactions that can provide consumers with high expectations of satisfying exchange relationships [9]. Many researchers have argued that trust is essential for understanding interpersonal behavior and economic exchanges [10, 11] The notion of trust has been examined in various contexts over the years are related to bargaining [12], industrial buyer–seller relationships [13], distribution channels [14], partner co-operation in strategic alliances [15], 1998), and the use of market research [16] personality psychologists traditionally have viewed trust as an individual characteristic [17]. They have conceptualized trust as a belief, expectancy, or feeling deeply rooted in the personality and originating in the individuals early psychological development, also known as disposition to trust. However, this approach can only be taken into account but is an uncontrollable factor that cannot be influenced by the web merchant [18].

RESEARCH ON TRUST IN E-BANKING

The particular case of electronic banking that lacks the physical presence of bank branch and a physical interaction between the bank personnel and the customer, render a unique environment, in which trust is of paramount importance. Retail banks can build mutually valuable relationships with customers through atrust–based collaboration process [19]. Howevre, the way in which trust may be gained and the impact it has on online banking outcomes are not yet well understood [20]. Trust in electronic banking is a new and emerging area of interest in the filed marketing of financial services research. Extant literature on trust related to online banking is scarce and focused on more general issues of e- commerce.

BACKGROUND TO E-BANKING AND ITS SUCCESS FACTORS

Some researchers in the field of e-banking have been engaged in quantifying the current provision of electronic services by the banks from an innovation and marketing point of view [21]. Liao and cheung (2002), have explored the perception of customers about ebanking. King and liou (2004) and compared the e-channel with other channels. Some strategic issues such as outsourcing of e- banking initiatives have been discussed by Cantoni and Rossignoli (2000) or competitive advantage of e-banking by Griffiths and Finlay (2004), but the area of strategic organizational issues of e–banking has generally not been covered adequately by the current body of the literature. This research was aimed to help bridge this gap. This section summaries some of the research done in this area. We have divided these factors into three categories: strategic, operational and technical. This categorization will help to explain our findings in terms of the nature of success factors in e- banking adoption [22, 23].

STRATEGIC FACTORS

The interactive nature of e-banking also creates an opportunity to gain a much deeper understanding of the customer during his/ her interaction with the bank can be analyzed using data mining techniques and this marketing decision capability may ultimately determine the success of the banks internet channel [4]. To succeed in the e-banking arena, companies need to transform their internal foundations to be effective because of the reasons mentioned above. The new type of business would consist of finely tuned integration of business, technology and processes [24]. Therefore one critical issue is reengineering of the business processes, which also includes technological processes.

OPERATIONAL FACTORS

The most common factor cited by many in literature, is good customer service [25] Legislation has increased customers rights while technology and competition have increased their choice of products and providers. The increasing amount of information on the internet and changes in social behaviours has reduced the loyalty factor considerably. These changes will result in the growth of users with sophisticated needs and new channels are required to serve most of these needs. Harden (2002) argues that e–channels erode a direct relationship with customers and stresses the need for personalization in customer communication. According to Jayawardhena and Foley (2000), banks must continually invent new products and services in light of changes brought by the internet and also make existing products more suitable for online delivery. Similarly, Riggins (2000) identified a number of critical success factors of internet banking in the context of the Australian banking industry. These include: developing the will to innovate rapidly, aggressively marketing the banks website address to generate first time visitors, online decision support tools for personal financial management, the creation of an online virtual community for financial services, and bundling of products/ services [26].

TECHNICAL FACTORS

Security, which may include protection of consumer's personal data and safe transactions to prevent misuse, is paramount for the growth of any sort of online trade, including e- banking. Security in this context includes secure transactions as well as secure front and back up systems [25, 27].

Franco and klein (2006) stress the importance of upgrading existing technological infrastructure (which may still largely depend on slow and fragmented legacy systems)to bring it up to the speed with the internet trade. Storey, Thompson, Bokma, and bradnum (2000) state that technology failures lead to loss of custom, often forever. Shortcomings in technological infrastructure are often the biggest hurdle in adoption of the e-banking channel and its integration with other channels [11].

A MODEL OF E-TRUST FOR ELECTRONIC BANKING

The literature on trust provides a useful basis for investigating consumer trust and its antecedents in the context of electronic commerce, but as pointed out by Mayer et al. (2005) many researchers confuse trust with its antecedents. This section aims to remove this confusion by proposing a simple yet parsimonious model of trust on electronic banking, with strong support from literature. While proposing their model of organizational trust Mayer et al. (2005) suggested that a parsimonious model with a manageable number of factors should provide a solid foundation for the empirical study of trust on another party. Based on the above discussion and the review of literature, a theoretical model for of trust in e-banking is proposed in Figure.1.

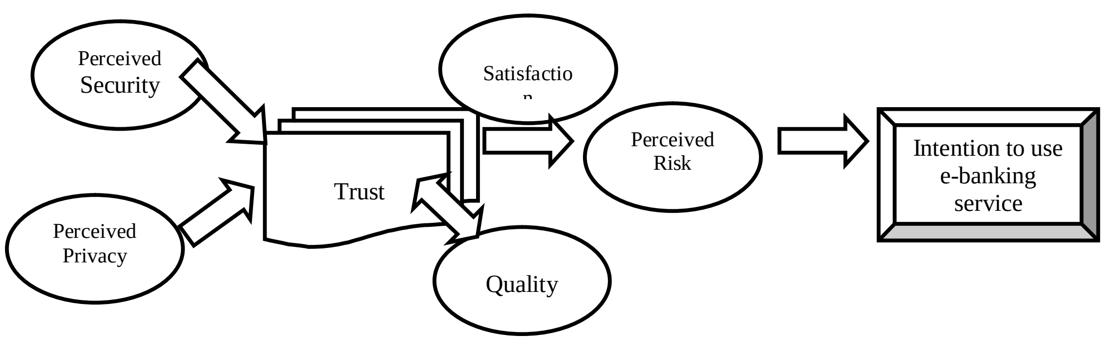

Fig 1. The proposed model of e-trust for e-banking [28]

PERCEIVED SECURITY

Security is being defended as a threat which creates circumstance, condition, or event with the potential to cause economic hardship to data or network resources in the form of destruction, disclosure, modification of data, denial of service, an/or fraud, waste, and abuse [22] under this definition, in context of electronic banking threats can be made either through network and data transaction attacks or through unauthorized access to the account by means of false or defective authentication. Perceived security then is the customers perception of the degree of protection against these threats. Security has been widely recognized as one of the main obstacles to the adoption of electronic banking seems to remain one of the most significant barriers for adoption. The rapid developments in technology have made significant contributions to securing the internet for electronic business. However, the challenges remain in this area, and security remains a substantial issue for the development of electronic businesses, especially electronic banking. The need for security has already been recognized within the electronic banking community and a number of technologies have been developed to secure electronic transactions [29, 30].

PERCEIVED PRIVACY

Privacy has been identified to be a major, if not the most critical, impediment to e-commerce: In our view, the single, overwhelming barrier to rapid growth of e–commerce is a lack of consumer trust that consumer protection and privacy laws will apply in cyberspace. Consumers' worry, deservedly, that supposedly legitimate companies will take advantage of them by invading their privacy to capture information about them for marketing and other secondary purposes without their informed consent [2] Consumers in online environment in contrary to traditional retail environments, perceives little control over information privacy and this has a striking influence on their willingness to engage in exchange relationships with merchants. Due to the fall in cost data transmission and emerging technologies, it is now easier to collect personal information from customers and share it with third parties.

According to stone and stone (2000) customers are likely to have positive perceptions about privacy when: information is collected in the context of an existing relationship. (b) They perceive that they have the ability to control the future use of the information. (c) The information collected or used is relevant to the transaction, and (d) they believe that the information will be used to draw reliable and valid inferences about them [31].

PERCEIVED TRUSTWORTHINESS

People make important buying decisions based, in part, on their level in the product, salesperson, or the company. Similarly, electronic banking decision involves trust not simply on the transaction medium but also between the customer and the bank or financial service provider. Mayer and his colleagues have identified and validated three main element of trustworthiness: integrity (trustee honesty and promise keeping), benevolence (trustee caring and motivated to act in the trustor's interest and competence [1].

QUALITY

Quality can be defined as excellence. Dabholkar (2000) posited that within service contexts, the evidence supports an assertion that customers who view technology based service as easy-to-use, reliable, and enjoyable also perceive service quality in such technology–mediated service offerings (i.e.- service). Perceived service quality is believed to contribute to positive business outcomes such greater levels of customer satisfaction and, by extension, favorable marketing behaviors such as repurchase and positive word–of–mouth behaviors [32].

SATISFACTION

Satisfaction, on the other hand, is the consumer fulfillment response (Oliver, 2007). Szymanski and Hise (2000) argued for the impotence of e-satisfaction in technology–mediated relationships. The authors suggested that the conceptual domain of e-satisfaction appears similar to that understood from the general marketing literature. This assertion further supports our reliance on Oliver's (2007) constitutive definition for purposes of this research study. In addition, satisfaction judgments are generally believed to be superior to quality perceptions.

B2B, or business–to–business e- businesses, are companies that sell to one another online. B2C, or business–to- consumer e-businesses, are companies who sell to consumers via websites (Lerouge & Picard, 2000; Morrish, 2001) some writers argue that integrating both B2B and B2C capabilities may become essential to respond to customer demands and streamlining their supply chain management .C2B refers to trade between consumers and businesses, and is best exemplified by companies like Priceline. Com. C2C refers to trade between consumers and is best exemplified by companies like eBay.

The relationship between satisfaction and loyalty has also enjoyed a measure of attention in the recent literature. This research study envisions loyalty as super ordinate to satisfaction in that loyalty can capture long–term relationship elements that lie outside the domain of satisfaction in a business–to business (B2B) context (Barnes et al, 2000). This B2B perspective appears consistent with Heskett, Sasser, and Schlesinger (2007) and Hunter (2007) who asserted that three primary measurements of customer loyalty commonly known as the three R's included [33]:

1. Revenues and profits from retention of loyal customers.
2. Repeat sales
3. Referrals

From a practitioner perspective, Pastore (2001) suggested that customer loyalty and satisfaction will continue to play key roles as companies evaluate spending budgets based on a study by NFO prognostics (proprietary). In fact while the study suggested that satisfaction scores and reference ratings are generally strong, many professional service buyers are shopping around with each new IT project. Such shopping around behavior is an indicant of a weak marketing relationship. This finding strengthens the basic premise of this research study calling for relationship–marketing-based models specific to the e-banking industry. In summary, the weight of the evidence to date suggests that satisfaction should be subordinate to loyalty in the formation of customer behaviors .Assuming a base level of satisfaction, the research expects loyal customers to engage in activities that support and strengthen their relationship with the sponsoring e-banking company, as well as engage in positive word–of mouth activities within the professional Community.

DISCUSSION AND CONCLUSIO

Trust is been identified as key to e-commerce. If trust is vital, then building trust is even more crucial. This paper provides several preliminary insights into the role of perceived security, perceived privacy and the perceived trustworthiness attributes on the issue of trust in electronic banking. The paper also highlights the importance of using security and privacy as two distinct concepts, even though they are conceptually related. It has attempted to review the nature of customer's trust on ebanking and proposed a research model of customer trust on e-banking. The model presents the major relationship between customer trust and two major potential antecedents perceived security and perceived privacy. The trust model presented in this paper provides a coherent framework for further empirical research on the phenomenon of trust in e–banking [34].

This paper, tell the e-banking practitioners which trust antecedent to focus on in order to increase customer trust and thus increase the adoption rate of e- banking. Bearing in mind that we have proposed that trust antecedents are perceptual in nature, they can be influenced by appropriate advertising and marketing campaigns, visible privacy policies and the web site design of the bank. Finally, research into the trust model developed in this paper will help accelerate the adoption of e- banking by removing one of the major obstacles to its development, namely, lack of trust.

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