An Extension to the Delone and Mclean Information Systems Success Model and Validation in the Internet Banking Context

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INTRODUCTION

Web-based applications in the recent years helps organizations to retain customers, and offering new services and products to them (DeLone & McLean, 1992; Tan & Teo, 2000). Internet Banking is considered as an online revolution of the traditional banking services which offers customers the greatest expediency for performing banking transactions via the Internet (Furst, Lang, & Nolle, 2000; Patnasingam, Gefen, & Pavlou, 2005). More precise definition of Internet Banking is given by Sathye (1999):

With the term electronic banking we consider all the possible transactions of a bank which are performed with the use of electronic means, mainly through Internet, but also through VPNs (Virtual Private Networks), Intranet, Extranet, phone and mobile phone, and these transactions do not necessitate that the customer must visit a branch.

There is a fundamental shift in banking delivery channels since mid-1990s (Pikkarainen, Pikkarainen, Karjaluoto, & Pahnila, 2004) and many banking executives perceived technology as the key solution for controlling costs (C.-P.

Lee, Mattila, & Shim, 2007). Internet Banking improves the bank's profit levels through the reduction of both variable and infrastructure costs, provides a source of differentiation and competitive advantage, provides global reach, adds another communication and feedback channel, increases customer satisfaction through the reduction of waiting times. thus improving service performance (Harridge-March, Wong, Rexha, & Phau, 2008). Internet Banking has appeared as the trend in banking, nowadays, and emerged as one of the payment models required to enable pure e-commerce models, rather than traditional banking (Zolait, 2010).

Some of the benefits to customers identified (Angelakopoulos & Mihiotis, 2011) are no time limitation, better time organization, no geographical limits, lower costs, 24 hour support, effortless accessibility for disabled people, integrated environment for Internet Banking transactions. In recent years, a large number of banks have started to adopt Internet Banking as an additional channel to reach and interact with clients. For financial institutions, Internet or Electronic banking is recognized as a tool that can significantly reduce their overhead costs as well as day-to-day expenses (Alhinai, Albadi, Alshihi, & Al-Gharbi, 2013).

BACKGROUND

Despite the recent advancements in internet security technologies such as, digital signatures, certificates, encryption algorithms. authentication mechanisms, consumers are still concerned about the security of monetary transactions over the internet (C. Yoon, 2010). In a report of Internet and Mobile Association of India (IAMAI-2010-11) it was found that people are hesitant to do banking transactions through the web sites of the bank, because of: security concerns (43 percent); preference for face-to-face transactions (39 percent); lack of knowledge about online transactions (22 percent); lack of user friendliness environment (10 percent); and lack of this facility in current bank (2 percent). M.-C. Lee (2009) found that the intention to use online banking is adversely affected mainly by the security/privacy risk. Hence, for the success of Internet Banking security plays a key role in customer trust of the website and satisfaction, which ultimately contribute to the success of the Information System(IS). Moreover, studies on IS Success related to Internet Banking are very scarce in the literature (Hoehle et al, 2012). Furthermore, the studies were conducted in developed countries and there is a paucity of studies in developing countries. This study intends to address the knowledge gap with the help of the proposed model. Therefore, the following research questions are framed based on the research gap:

1. What are the factors contributing to the success of Internet Banking?
2. What are the impacts security dimension make in the IB use and IB user satisfaction?

Finding the answers to the research questions can initiate improvement and enhance the performance of services provided via the electronic channel. It may also provide valuable feedback for the banks for satisfying the expectations of the bank customer, who intend to use IB in future. It is expected that this study will result in a re-evaluation of the IS Success model under new circumstances, enhance understanding of consumer behaviors in correspondence with IB service, and provide suggestions for making sustainable IB usage. The next few sections form the literature survey of IB studies and relevant theories associated with the proposed framework.

LITERATURE REVIEW

The seminal work of Delone and Mclean (DeLone & McLean, 1992) pawed the way for measuring IS success, which was elusive to researchers till then. Their (DeLone & McLean, 1992) paper proposed a six factor taxonomy in system quality, information quality, use, user satisfaction, individual impact, and organizational impact, using the multitude of measures existed in previous literatures. The authors also proposed temporal and causal relationship between the constructs.

The IS success model presumes that system quality and information quality, individually and jointly, affect user satisfaction and use. It also posited use and user satisfaction to be reciprocally interdependent, and presumes them to be direct antecedents of individual impact. In addition, the amount of use can affect the degree of user satisfaction either positively or negatively and vice versa. According to the IS Success model Individual impact should also lead to organizational impact.

DeLone and McLean (DeLone & McLean, 1992) characterize system quality as desired characteristics of the information system itself, and information quality as desired characteristics of the information product. They incorporate four scales from the Bailey-Pearson (Bailey & Pearson, 1983) instrument into system quality (convenience of access, flexibility of the system, integration of the system and response time) and nine scales into information quality: accuracy, precision, currency, timeliness, reliability, completeness, conciseness, format and relevance.

Delone and Mclean (Delone & McLean, 2003) came up with an update of their model, based on the research finding from their 1992 model. The

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