Effects of Perceived Risks on Adoption of Internet Banking Services: An Empirical Investigation in Taiwan

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ABSTRACT

Banking services primarily involve the creation, processing, storage, and distribution of financial information. Most of these services can be conveniently handled via Internet-based information technologies. This convenience, however, may be offset to a certain degree by customers’ perception of the risks associated with transacting in the wide-open cyber-world. A key challenge for online bankers is to maintain a secure information infrastructure that effectively manages the perceived risk factors. This research examines usages of Internet banking services, investigates the nature and sources of customers’ perceived risks, and tests hypotheses with regard to impacts of perceived risks on Internet banking adoption. Using primary data collected in Taiwan, the study finds significant relationships among involvement, familiarity, perceived risks, perception of measures for reducing perceived risks, and customer willingness to adopt Internet banking services. The findings have significant implications for the practice and research in Internet banking.

Keywords: consumer behavior; electronic commerce; familiarity; information systems; Internet banking; involvement; perceived risks; technology adoption

INTRODUCTION

Once touted as a disruptive technology, the Internet has been expected to bring about fundamental paradigm changes in the business arena. Following the rapid bursting of e-commerce bubbles in the spring of 2000, however, many companies have been driven to the pessimistic end of the expectation continuum. Recent successes of e-commerce companies, such as e-Bay and Amazon, demonstrate that Internet technology should be viewed as a critical building block and a powerful enabler in developing a flexible and efficient information infrastructure for innovative business strat-
egies (Porter, 2001). The two unique features of Internet technology, rich information content and global reach, can be cleverly leveraged to develop innovative operations that effectively achieve cost reduction, quality improvement, time compression, and customer service enhancement, all at the same time. The Internet-centric technological infrastructure and the customer-centric business strategy have actually become two tightly coupled aspects of companies’ pursuit of sustainable competitive advantage.

The impact of Internet technology is especially obvious in the banking industry. Being information intensive in nature, virtually every component of the banking business’ value chain can benefit from innovative utilization of Internet technology. From the bank’s point of view, potential benefits promised by Internet banking include lower operational cost, shorter turnaround time, real-time managerial information, smoother communications within the organization, more convenient interactions with prospective as well as existing customers, and the provision of value-added services such as access to professional knowledge in financial management (Nielsen, 2002; Sathye, 1999). Recognizing the strategic value of the Internet, all of the 120 largest banks in the United States offer their customers the ability to access a variety of banking services (Scruggs & Nam, 2002). The global banking industry is now facing a fundamental paradigm challenge catalyzed by the advancement of Internet technology.

For banking customers, Internet banking allows for convenient access to a variety of banking services without the limitations of time and space experienced with the traditional mode of banking. However, research reveals that concerns about transaction integrity, information security, and information privacy keep more customers from switching their banking preferences or increasing their level of participation. One trade information source, the Online Banking Report, reports that 20% of Internet users now access online banking services, a total that will reach 33% by 2006. By 2010, over 55 million households will use online banking and e-payment services (http://www.epaynews.com). However, the report also reveals that 85% of U.S. bank customers have security and privacy concerns over online transactions, though 45% of them do find online financial transactions more convenient. These concerns, often referred to as “perceived risks” in academic literature, must be addressed in a proper manner in order for Internet banking to progress to a more mature level of adoption.

The research reported in this article was conducted in order to better understand the role of perceived risk in customers’ adoption of Internet banking. The article is structured as follows. The next section reviews the literature related to perceived risk, risk-reduction measures, involvement, and familiarity. This is followed by a description of the research methodology. The results of data analysis are reported in the subsequent section. The last section discusses major research findings, implications for management practitioners, and suggestions for future research.

**LITERATURE REVIEW**

**Perceived Risk and Risk-Reduction Measures**

The concept of risk dates back to as early as the 1920s (Knight, 1921). The role of perceived risk in the business arena is actively examined in consumer behavior research. In Rao and Farley (1987) and
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