### Chapter 3

# Exploring Antecedents of Behavior Intention to Use Internet Banking in Korea: Adoption Perspective

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#### **ABSTRACT**

This study is aimed at analyzing adoption and usage behavior within the context of Internet banking services in South Korea. In a country where the penetration rate of the Internet is very high, it seems that the self-efficacy would play a crucial role in affecting the Internet banking adoption. To pursue this research question, this study adopts TAM and incorporates the self-efficacy into TAM as one of antecedent variables such as risk, Internet experience, facilitating conditions. The proposed research model is tested empirically with 185 usable questionnaires and partial least square (PLS) method. Experimental results showed that the self-efficacy plays a prominent role in influencing the Internet banking usage compared to other factors.

#### INTRODUCTION

Banking is an information intensive business, and information technology is rapidly changing the way personal banking services are designed and

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delivered. For retail banks, the Internet is a new distribution channel, offering less waiting time and high spatial convenience than traditional branch banks. It provides a very effective approach to managing one's finances, as it is easily accessible 24 hours a day. Internet banking allows customers to use the Internet as a transactional, as well

as an informational medium. Users of Internet banking perform common banking transactions such as ordering checks, paying bills, transferring funds, printing statements, and checking account balances. With the rapid diffusion of the Internet, banking in cyberspace is fast becoming an alternative channel providing banking services and products.

Needless to say, the Internet banking is closely related to the recent trend of the e-commerce. It is widely accepted in literature that in many countries, e-commerce is widening its portion and gaining gravity in commerce activities (Cheng, Lam, & Yeung, 2006). For instance, U.S. B2C ecommerce revenues reached \$76 billion in 2002, \$90 billion in 2003, \$109 billion in 2004, and \$133 billion in 2005 (Cheng et al., 2006; Ebusiness Engineering, 2003). In South Korea, the e-commerce transaction reached US\$330 billion in 2004, the portion of which in total transactions is almost 19.1% in 2004 (Korea Institute for Electronic Commerce, 2005). Common feature observable in the two countries is that traditional commerce is rapidly either replaced with or backed up by the e-commerce. Therefore, this study also assumes that the Internet banking needs more rigorous empirical analysis from a perspective trying to explain why its adoption rate is so high in a specific country.

In this sense, this study was conducted to investigate the Internet banking environment of South Korea, a country that features outstanding Internet infrastructure. First serviced July 1997, Internet banking is offered by 18 banks in Korea as of September 2005. The number of Internet banking users reached 10 million in November 2001, surpassed the 20 million mark in June 2003, and stands at 24.27 million as of December 2004 (Korea Institute for Electronic Commerce, 2005). The average number of Internet banking transactions such as balance enquiry, fund transfer and loan service is 9 million each day, which is a 24.7% increase from 7.22 million the previous

year. Internet banking is now responsible for 27.4% of all bank transactions in South Korea.

Although usage of Internet banking in South Korea is substantially higher compared to other Asian economies like Hong Kong and Singapore, studies have yet to be released to describe the South Korean consumer behaviors of adopting and using Internet banking (Chan & Lu, 2004; Cheng et al., 2006; Kim, Shin, & Lee, in press; Lai & Li, 2005, Liao & Cheung, 2002). In turn, this study attempts to analyze the factors that affect the behaviors of consumers who use Internet banking in Korea, placing an emphasis on the importance of self-efficacy because South Korea is one of the highly Internet-driven societies and it is natural for us to believe that many South Koreans are accustomed to using the Internet for various purposes in their daily lives.

Therefore, the research question of study is presented as follows. First, an expanded model is presented that reflects internal constraint and external constraint in the Technology Acceptance Model. Second, this study shall be compared with results from other research activities to provide theoretical and practical suggestions for other countries where Internet banking and its applications have yet to mature. In this paper, we first provide the study's prior literature on Internet banking, and describe the theoretical model and hypotheses. We follow by presenting our research design, methodology and data analysis, results. We conclude with a discussion and suggestions for further research.

## PRIOR LITERATURE ON INTERNET BANKING

Since 1999 there have been studies on acceptance of Internet banking conducted by numerous researchers in various countries based on theories such as TAM (Technology Acceptance Model), TRA (Theory of Reasoned Action) and TPB (Theory of Planned Behavior) (Chan & Lu,

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