Chapter 1

Modeling User Acceptance of Internet Banking in Malaysia:
A Partial Least Square (PLS) Approach

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ABSTRACT

This study is the first empirical research that compares three well known technology adoption models in the in the field of e-banking. It aims to determine the dominant factor(s) which influence the user intention to use Internet banking. Three models (TAM, TPB, and TRA) were used to test the impact of five factors (perceived ease of use, perceived usefulness, attitude, subjective norms, and perceived behavioral control) on intention to adopt e-banking by 239 individual bank customers in Malaysia. Survey questions from prior studies were adopted and customized. Partial least Square (PLS) SmartPLS M2 Version 2.0 was used for data analysis. Results reveal that the five factors have a direct positive effect on behavioral intention to use Internet banking. However, attitude toward behavior has the highest beta, followed by perceived usefulness, and subjective norm, while perceived behavioral control exerts the weakest effect. In testing the explanatory power of the different models, results found TAM model has the best explanatory power, followed by TPB and TRA models. Findings of the study should benefit banks in improving their use of e-banking technologies as a strategic weapon, and can be used to target more potential customers.

INTRODUCTION

Banks decide to invest in Internet banking for many reasons; among these are: pressures to cut costs, increase information richness for customers, pressures to produce more without increasing costs, improve the quality of services in order to stay in business or to reach a wider audience. The number of banks adopting Internet banking is increasing over the world even in less developed countries, e.g. but not limited to, Hong Kong (Liao et al. 1999; Wan et al., 2005), Singapore (Tan & Teo 2000; Wang et al., 2003), Malaysia (Ramayah et al., 2006; Ramayah et al., 2008), Finland (Pikkarainen et al., 2004), USA (Lassar et al., 2005), Korea (Suh & Han, 2002), Taiwan (Shih & Fang, 2004, 2006), and Estonia (Erriksson et al., 2005).

This paper focuses on the current state of e-banking in Malaysia. This is an opportunity for banks since the number of Internet users is increasing and represent a growth of 170% between 2005 and 2010. Indeed, the World Stats reported that there are 16.9 million users (representing 64.6% of the population) in 2010, compared to 3.7 million in 2000 (Internet World Stats, 2010). In surfing on the wave of e-banking, all 10 domestic banks and 4 foreign banks among 13 are offering Internet banking services (for details see Goi, 2005). Although huge investments have been spent on building Internet banking systems to grasp potential customers, reports show that potential users may not be using the systems, despite their availability (Wang et al., 2003; Ramayah et al., 2005; Luarn & Lin, 2005), and other studies found that half of the people that have tried Internet banking services would not become active users (Robinson, 2000). Therefore, efforts are needed to understand the determinants of Malaysian users in adopting Internet banking, that we named e-banking. We refer to this concept as the provision of banking services via Internet. Offered services may include, but not limited to, account information and balance enquiry, electronic bill payments, summary reports of transactions, funds transfer, check cancellation, checkbook application, financial planning and analysis, loan application, share margin trading account.

What causes potential customers to adopt these services? Is it merely the instrumental and cognitive complexity beliefs (usefulness and ease of use)? Does it depend on the attitudinal perceptions of customers? Are individuals also influenced by other issues (social pressure or social norm), such as their interaction through a social network, their predisposed tendency to try out a new technology? Does it depend on the behavioral control (capabilities, availability of resources and knowledge)? If these factors are indeed important in the acceptance decisions of potential customers, are they interrelated? If so, how are they related and what are the mechanisms through which they achieve their effects on the acceptance decisions? Such questions have widespread practical as well as theoretical ramifications because the expected benefits from the investments in information and technology are realized only when they are adopted by their intended users and subsequently used. This paper seeks to bring elements of response to these issues from a Malaysian perspective.

There has been little prior research into critical influences on e-banking services adoption in Malaysia. The banking sector in Asia including Malaysia is a rapidly growing market. Many western banking are very interested in establishing in this part of the world and building branches since there are 13 foreign banks among 23 in Malaysia. Therefore, it is important to understand the management actions and investment in e-banking. To achieve this goal, this study reports important empirical data on the adoption of e-banking services. In achieving this goal the study aims to examine the extent to which existing and previous model comparison studies (Davis et al., 1989; Mathieson, 1991; Taylor & Todd, 1995b; Chau & Hu, 2001; Riemenschneider et al., 2003; Celuch et al., 2004; Shih & Fang, 2004) are valid in the e-banking sector. Specifically, this study empirically tests the applicability of three well known models in

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