

Factors Affecting Mobile Banking Adoption in the United States

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Abstract

This quantitative correlational study was focused on how consumers' perceptions affect their intention to use mobile banking in the United States. Among U.S. consumers with smartphones, Internet access, and a bank account; 68% used Internet, 33% used telephone-based banking, and only 21% engaged in some type of mobile banking activities in 2011. The web-based survey used in this study was derived from the technology acceptance model extended by the innovation diffusion theory. Data were collected by e-mail from a random sample of 398 people in the United States. The structural equation modeling technique was used to analyze data. The results indicated that, perceived compatibility, credibility, and costs were the significant predictors of mobile banking adoption in the United States.

Problem

Although smartphones are the most dominant forms of mobile computing in the United States, mobile banking adoption penetration rate is still low. None of the studies conducted worldwide have focused on the factors affecting m-banking adoption among U.S. consumers.

The problem addressed was that, among U.S. consumers with smartphones, Internet access, and a bank account, 68% used Internet, 33% used telephone-based banking, and only 21% engaged in some type of m-banking activities in 2011.

Purpose

The main purpose of this quantitative correlational study was to test the relationships between the extended TAM factors (independent variables) and the action to adopt mobile banking (dependent variable).

Dissertation Committee

Dr. Lawrence Ness (Chair),
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and Dr. Raghu Korrapati (URR)

Relevant Literature

Mobile devices have become so ubiquitous that they changed the way consumers interact with their financial institutions (Luo, Li, Zhang, & Shim, 2010).

Mobile banking has become a new business model influenced by all kinds of factors (Sheng, Wang, & Yu, 2011). Compared to traditional financial channels such as automated teller machines (ATMs), Internet banking, and phone banking; **m-banking** added ubiquity, mobility, and flexibility (Lin, 2013).

Past studies (e.g., Dimitriadis & Kyrezis, 2010; Sripalawat, Thongmak, & Ngramyarn, 2011) have shown that the mobile banking delivery channel had a relatively **low penetration rate** because most consumers did not adopt it (Shen et al., 2010). In order to overcome consumers' resistance, financial institutions need to identify the source of that resistance, and develop strategies to overcome it (Laukkanen & Kiviniemi, 2010).

Among the competing theoretical frameworks, the **technology acceptance model (TAM)** was found to be more appropriate for this study. TAM extended by **innovation diffusion theory (IDT)**. The study undertaken helped identify the predicting factors to mobile banking adoption in the United States.

The **extended TAM constructs** (Koenig-Lewis, Palmer and Moll, 2010) included (a) **perceived usefulness**, (b) **perceived ease of use**, (c) **perceived compatibility**, (d) **perceived trust**, (e) **perceived credibility**, (f) **perceived risk**, and (g) **perceived cost**.

Research Question

Which constructs of perceived usefulness, ease of use, compatibility, trust, credibility, risk and cost have stronger relationships with m-banking adoption in the United States?

Procedures

Sample

- SurveyMonkey affiliate U.S. Adults

Instrument

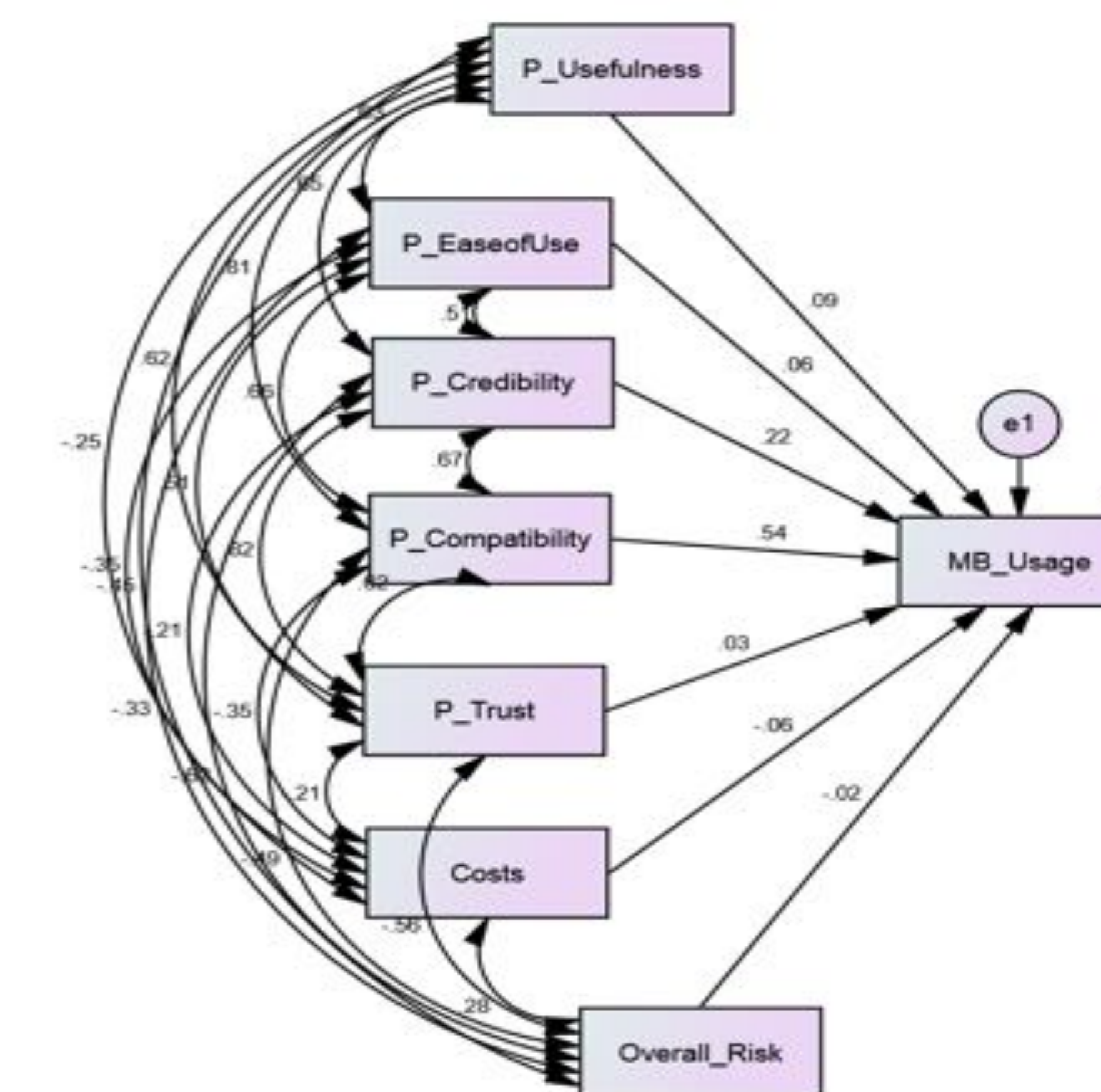
- The instrument based on TAM extended by IDT was created and validated by Koenig-Lewis, Palmer and Moll (2010) in a previous similar study.

Procedure

- Self-administered surveys sent randomly online.
- 1, 688 emails sent with 398 complete surveys (24%)

Data Analysis

SPSS was used for **descriptive analysis**. To answer the research question, **structural equation modeling (SEM)**, SPSS Amos version 21, was used.



Findings

SEM Results

- Goodness-of-Fit Index = .969
- Perceived compatibility** ($\beta = .54, p < .05$) and **perceived credibility** ($\beta = .22, p < .05$) were the significant factors to positively affect m-banking adoption in the United States.
- Perceived cost** ($\beta = -.06, p = .042$) was negatively associated with m-banking adoption.

Limitations

Although TAM has been proven to be a valid model to predict technology adoption, it is not comprehensive enough to test all the factors affecting m-banking. There are still many unknown confounding factors that were not tested in this study that may influence m-banking usage in the United States.

Conclusions

This study narrowed the gap in the literature. This study provided a better understanding of mobile banking acceptance in the United States to financial institutions, marketers, and mobile device manufacturers. Furthermore, this study provided information for combating financial exclusion against the unbanked and under-banked populations.

Social Change Implications

The report by the U.S. Federal Reserve Board of Governors (2012) revealed that mobile phone usage was highest among younger people, minorities, and low-income individuals who were more likely to be unbanked or under-banked.

Mobile banking expansion has the potential to bring social change because most underserved populations can afford cheap mobile devices and use them to engage in financial transactions.

