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Trust in Mobile Banking: The Effect of Culture

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ABSTRACT

Mobile banking is a new financial innovation that is gaining acceptance at varying levels in different parts of the world. Mobile banking is a technological innovation whose acceptance can be explained by the technology acceptance model in information systems. Furthermore, intentions to use a mobile banking service can be explained by an individual's initial trust in the banker. Previous research has also established the role of culture in the acceptance and use of technology. Our study integrates all these three perspectives and examines them in order to understand their linkage to behavior.

Keywords

Trust, mobile banking, culture, TAM

INTRODUCTION

It is estimated that there are four billion mobile phone subscribers worldwide. From 1999 through 2004, the number of mobile subscribers in Africa jumped to 76.8 million, from 7.5 million, an average annual increase of 58 percent. The US had over 270 million mobile phone users as of 2009. The advancement and ubiquity of mobile phones have provided an opportunity for mobile phone companies and Banks a chance to introduce new financial innovations. One financial innovation that has been developed is mobile phone banking. Mobile phone banking is the use of a mobile phone in carrying out banking transactions. From a mobile phone, customers are able to access their banking accounts in order to check their account balances, make transfers, pay bills and perform other banking transactions.

While the mobile phone infrastructure provides unprecedented opportunities for initiating customer relationships, trust is an essential ingredient for those relations to bear fruit. Trust is a strategic imperative for mobile commerce (m-commerce) companies. Culture also plays a role in the adoption and acceptance of mobile commerce. This is new ground and not many studies on trust and the effect of culture on trust in mobile phone banking have been conducted. This is the gap we seek to fill.

We attempt to fill this gap by trying to find answers to the following to research questions:

- How can a mobile-phone banking customer TRUST be initiated by the banker?
- What effect does masculinity/feminism have on a mobile-phone banking customer initial TRUST?
- What effect does individualism/collectivism have on a mobile-phone banking customer initial TRUST?

THEORETICAL BACKGROUND

Trust

Researchers in information systems have conceptualized initial trust as “trusting beliefs dealing with benevolence, competence, honesty, and predictability that lead to trusting intention” (McKnight et al., 1998). Institution based trust is the belief that guarantees are present to ensure a successful outcome in a business transaction. Two dimensions of institutional based trust are structural assurance and situational normality. Structural assurance means safety nets such as legal recourse,

guarantees and regulations exist in the specific context. Situational normality means the situation is normal and favorable for a transactional success (McKnight et al., 2002).

Culture

Culture has also been defined as the collective programming of the mind which distinguishes the members of one human group from another (Hofstede, 1980). Hofstede developed an index model that identifies five primary cultural dimensions: individualism, power distance index, masculinity, uncertainty avoidance, and long term orientation. Individualism refers to the preference for a social framework where individuals take care of themselves as opposed to collectivism where individuals expect the group (extended family or organization) to take care of them in exchange for their loyalty. Power distance is the extent to which members of a society accept that power in institutions and organizations be distributed equally. Masculinity/femininity refers to the preference for achievement, assertiveness and material success. Uncertainty avoidance refers to the degree to which members of a society feel comfortable with uncertainty and ambiguity. Long term orientation is a measure of people's consideration of the future; being comfortable with sacrificing now for long term benefit (long-term orientation) or more focused on immediate results (short-term orientation). Long-term oriented societies foster pragmatic virtues oriented towards anticipated future rewards, in particular saving, persistence, and adapting to changing circumstances. Short-term oriented societies foster virtues related to the past and present such as national pride, respect for tradition, preservation of "face", and fulfilling social obligations.

Technology Acceptance Model

For nomological completeness we include the Technology Acceptance Model (TAM) in our study. TAM is an adaptation of the Theory of Reasoned Action (TRA) to the field of IS. TAM posits that perceived usefulness (PU) and perceived ease of use (PEOU) determine an individual's intention to use a system with intention to use serving as a mediator of actual system use. PU is defined as the "degree to which a person believes that using a particular system would enhance his or job performance". PEOU refers to "the degree to which a person believes that using a particular system would be free of effort". PU is also seen as being directly impacted by PEOU (Davis, 1989).

RESEARCH MODEL AND HYPOTHESES

This section examines the relationships among the research constructs and develops the hypotheses as shown in figure 1. We consider two culture types in our study, type I and type II. Type I culture is masculine and individualistic. Type II culture is feminine and collectivist.

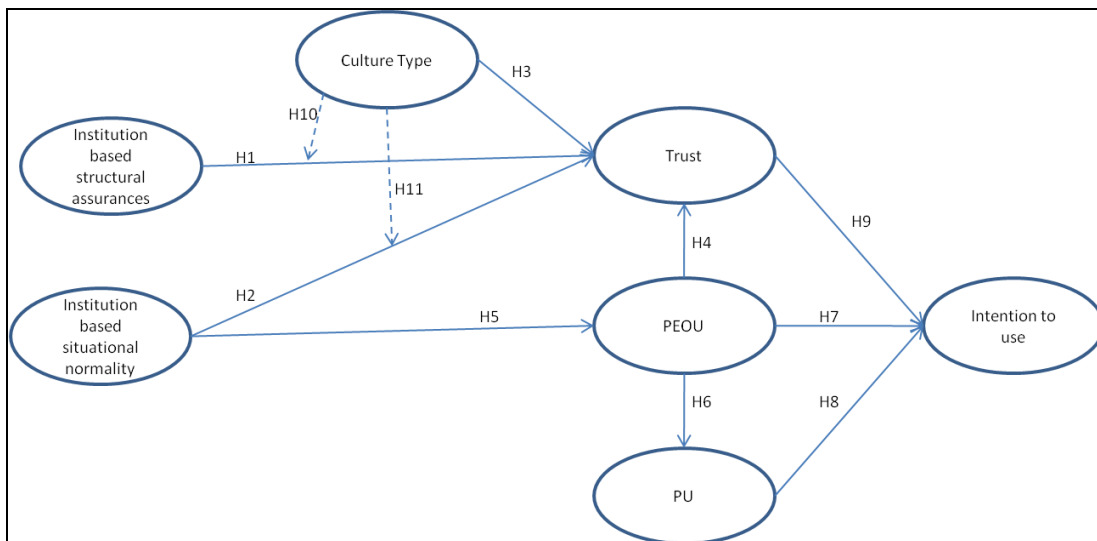


Figure 1. Research Model

- H₁: Perceptions of structural assurances build into a mobile banking service will positively affect trust in mobile banking service.
- H₂: Perceptions of situational normality will positively affect trust in mobile banking service.

- H₃: Type II culture will positively affect trust in mobile banking application
- H₄: PEOU will positively affect trust in the mobile banking application.
- H₆: Perceived ease of use will positively affect perceived usefulness of a mobile banking application.
- H₇: Perceived ease of use will positively affect intention to use a mobile banking application.
- H₈: Perceived usefulness will positively affect intention to use a mobile banking application.
- H₉: Trust in the mobile banking application vendor will positively affect intention to use the mobile banking application.
- H₁₀: Institutional based structural assurances will positively affect trust in mobile banking less for individuals from feminine and collectivist cultures than from individuals from masculine and individualistic cultures.
- H₁₁: Institutional based situational normality will positively affect trust in mobile banking less for individuals from feminine and collectivist cultures than from individuals from masculine and individualistic cultures.

RESEARCH METHOD

Participant recruitment

The sample will be taken from college students in Business Schools in two locations; one in North America and the other in Africa. Participants from the North American context have high individualism and high masculinity cultural orientation. Participants from Africa have high collectivism and high femininity cultural orientation. In our instrument, we will have questions that will confirm these cultural dimensions.

Experimental procedures and measurement instrument

A free simulation consisting of a series of mobile phone screen shots depicting a banking transaction using a mobile phone will be shown to the participants. In free simulation experiments, treatment levels are not predetermined (Vance et al., 2008).

After showing them the screen shots on a computer, a survey instrument consisting of validated (Gefen et al., 2003) measures would be used to determine or measure each participants self evaluation of the constructs in the research model.

EXPECTED CONTRIBUTION TO THEORY AND PRACTICE

The original technology acceptance model study by Davis and culture study by Hofstede were conducted in organizational settings. Our primary contribution will be the application of these findings at the individual level. The second contribution will be the application of the TAM model to a culture different from the North American culture where the original TAM study was conducted. The third contribution will be the application of the TAM model from computers to small handheld mobile devices. Overall, our contribution will be an integrated model consisting of trust, culture, and TAM applied to mobile banking.

For the practitioner, the lesson to be learned from this study will be how build initial trust in the context of a specific culture which has important implication for the success of any business.

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