

The Effect of Online-to-Mobile Trust Transfer on the Foundation of Mobile Banking Trust

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ABSTRACT

The paper mainly studies the influences of trust transfer on the establishment of consumers' initial trust. Based on the theory of signal transmission and self-efficiency, the study builds a trust transfer model aiming at the same subject between different environments. The results shows that when the consumers' perceived change of environment is little, prior successful experiences will improve the consumers' perceptions of self-ability, which probably lowers the effect of bank's role on the establishment of initial trust. Therefore, banks should cultivate consumers' perceptions of their relative advantages in the original environment and thus improve the consumers' dependency in the new environment to avoid the loss of consumers and build a long-term relationship.

Keywords: Trust; Mobile Banking; Online-to-Mobile Trust Transfer

1. Introduction

Mobile banking is an emerging application of mobile commerce that could become an additional revenue source to both banks and telecom service providers [1]. It enables customers to access their bank account through mobile devices to conduct conventional and innovative financial transactions without the limitations of place and time [2]. China was reported as the largest internet and the biggest mobile phone market in the world. Given the size of the Chinese market, it is necessary to pay attention to this area.

Despite the alleged benefits of mobile banking, its acceptance has been short of industry expectations. One plausible explanation may be consumers' lack of initial trust in mobile bankingservices [2,3]. After all, mobile banking is a form of service convergence enabled by innovative technologies. When a new innovative service is introduced, there is no direct prior experience to fall back on. It is therefore expected that a person's initial trust, based on certain perceptive and possibly irrational forces such as cognitive cues, will play an important role in the decision to adopt mobile banking [2,4].

The objective of this research is to reveal the mechanisms associated with the initial formation of people's trust in mobile banking. And this research will fill a research gap by focusing on online to mobile trust transfer process, which has received almost no attention [5-7]. To achieve the research goal, a research model is introduced

to define relationships among the studied variables, and relevant hypotheses are proposed. The research model and accompanying hypotheses are empirically validated based on survey data gathered from online banking users who had mobile device and had not signed up for mobile banking. The paper concludes with a discussion of findings and subsequent implications.

2. Theoretical Foundation and Hypothesis

As a type of mobile-commerce, mobile banking is spreading in Chinese. In fact, m-commerce itself is a subset of e-commerce, and therefore mobile banking can be considered an e-commerce application [8]. Mobile banking is an innovation that could become one of m-commerce's value-added applications and could have a huge economic impact 8. Despite the overall low enthusiasm for m-commerce, people are more willing to embrace mobile banking.

2.1. Trust Transfer

Trust transfer means transfer of trust from one domain, such as offline, to another, such as online. For example, the trust that customers perceive in an offline company, like Wal-mart, tends to extend easily to favorable perceptions about its web service. Trust for certain company means consumer brand knowledge that relates to the cognitive representation of the brand [9]. Consumer

brand knowledge can be defined in terms of the personal meaning about a brand stored in consumer memory [10, 11]. Therefore, if customers possess a sound memory about an online bank's brand, then such memory affects consumer's usage behavior about the mobile banking offered by the same brand [12,13].

Based on the survey of bank corporate clients in Singapore, Nex (2003) found that customers' trust towards the land-based bank was the key factor influencing the adoption of electronic banking service which offered by the same bank. He also found the cumulative effects of customer satisfaction have a positive impact on the propensity to use electronic banking [14]. Kun chang lee (2007) identified four types of trust transfer based on the diversification of behavior environment. They also found that the trust in an offline bank will influence four perceptions about its online banking counterpart (flow, structure assurance, perceived web site satisfaction and perceived extent of future use) [10]. Huei-Huang Kuan *et al.* (2007) examined the formation of online trust encountered by potential customers of a brick and click retailer before they visit its online website. Their research revealed that word-of-mouth, offline trust and expected sanctioning power were significant in forming online trust [15]. Yang qing *et al.* (2007) empirically tested the trust transference from offline presence to online presence and addressed the underlying reasons. They testified that the offline trust is one of the major sources contributing to its initial online trust building [16].

2.2. Hypothesis and Model

Figure 1 shows the research model of this paper. The objective of this research is to reveal the mechanisms associated with the initial formation of people's trust in mobile banking and intention to use the service. And what's new for this paper is that we focus on the impact of online to mobile trust transfer process, which has received almost no attention.

According to the theory of innovation, the characteristics of an innovative technology influence the degree of its adoption and diffusion [17]. Despite the noted weaknesses of handsets, such as small screen size and keypad, mobile banking offers benefits unmatched by traditional offline and online banking services. Convenience, flexibility and other perceived advantages may contribute to the formation of trust even before a customer actually uses a service [18]. Therefore, we posit that:

H1: Customers' perceptions of security contribute positively to the formation of customers' trust in mobile banking.

H2: Customers' perceptions of privacy protection contribute positively to the formation of customers' trust in mobile banking.

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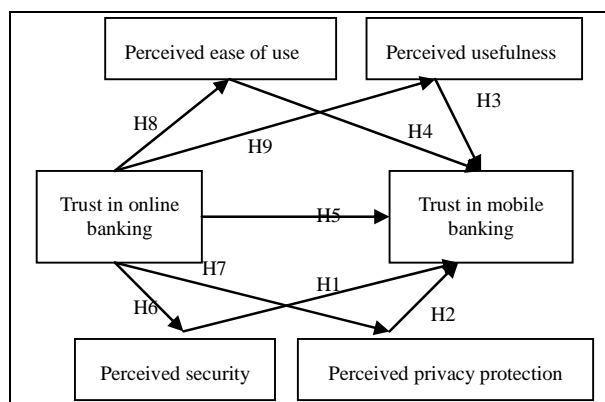


Figure 1. Research model.

tics of an innovative technology influence the degree of its adoption and diffusion [19]. Despite the noted weaknesses of handsets, such as small screen size and keypad, mobile banking offers benefits unmatched by traditional offline and online banking services. Convenience, flexibility and other perceived advantages may contribute to the formation of trust even before a customer actually uses a service [17]. Therefore, we posit that:

H3: Perceived ease of use contribute positively to the formation of customers' trust in mobile banking.

H4: Perceived usefulness contribute positively to the formation of customers trust in mobile banking.

Morgan and Hunt (1994) felt trust exists "when one party has confidence in an exchange partner's reliability and integrity" [20]. If a customer is trust in a bank in the internet channel, he or she must have enough confidence on the bank's ability, integrity and benevolence. Therefore, customers' trust in online banking service will be helpful to reduce customers' perceived risk to use mobile banking service of the same bank. Online banking trust would, thus, positively influence the formation of mobile banking initial trust.

H5: Trust in an online banking positively influence the formation of mobile banking initial trust.

Bank's availability of formalized structural assurances will discourage opportunistic behaviors and protect customers from financial lost. If customers trust in the bank's online service, this trust should transfer to beliefs that the bank's mobile system is safe and secure. This is natural, especially for the similar technology background of online banking and mobile banking. Therefore, we proposed that:

H6: Trust in an online banking positively influence perceived security of mobile banking.

H7: Trust in an online banking positively influence perceived privacy protection of mobile banking.

The technology background of mobile banking is similar to the online banking. Customer's prior experience with computer and internet technology will influence both attitudes towards mobile banking and actual behav-

iors [8]. Swinyard and Ghee (1985) found that ATM card holders were have more favorable attitudes towards ATMs, towards change, and towards computers, and to be more venturesome and have more self-confidence [21]. Similarly, we proposed that the more they trust in the online banking, the more they believe that new technology will make their life better, and the more they believe mobile banking will consistent with their life style, past experience. So it is logical to hypothesize that:

H8: Trust in an online banking positively influence perceived ease of use of mobile banking.

H9: Trust in an online banking positively influences perceived usefulness of mobile banking.

3. Research Method and Data Collection

The research was carried out on online banking customers who have available device to use mobile banking but never use it. A questionnaire was designed based on a seven-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). To test the psychometric properties of the constructs, a questionnaire pretest was given to 97 e-commerce association members. The respondents were volunteers and were not told the research's objective. The convergent validity and unidimensionality of each construct was verified using a principal component factor and analysis for factors with eigenvalues above 1, using a varimax rotation. Each item loaded on the intended construct, and each Cronbach's alpha exceeded 0.8. The measurements used display in **Table 1**. Respondents included 525 cell-phone users who have the experience of online banking. In all, 313 respondents were selected from them.

4. Empirical Results and Findings

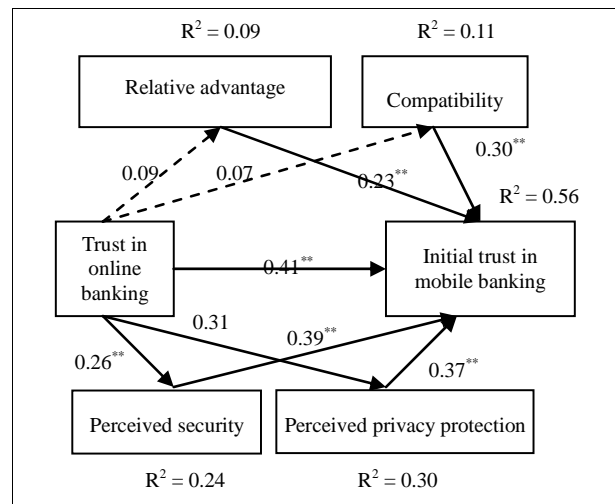
The proposed hypotheses were tested with PLS. The results of the analysis are depicted in **Table 2** and **Figure 2**. The results show that the hypotheses are all supported except H8, H9. These result suggested that trust transfer have the significant impact on initial trust formation in the context of new technology based banking service. The explained variance of relative advantage and compatibility is lower than 20%, this is partly because that only one factor is involved in this model to explain. Online banking trust had strong and positive influence on the mobile banking initial trust (H5) and its antecedents (H1, H6). This supports the existence of online-to-mobile trust transfer process. Trust in online banking had no obvious influence on relative advantage and compatibility, this maybe because the difference between the online and mobile banking services.

5. Managerial Implications and Limitations

Based on the empirical results, this study arrives at the

Table 1. Descriptive statistics of samples.

Measure		Items	Freq.	Percent
Total			178	100%
Age		21 - 29	81	50.2%
		30 - 39	64	38.5%
		40-	21	12.0%
		Missing	12	9.3%
Male	Position	Employee	58	29.7%
		Chief employee	89	53.9%
		Manager	26	12.5%
		Director	1	0.8%
		Others	4	3.1%
Work Experience (year)		0 - 3	16	12.5%
		3 - 6	42	17.2%
		6 - 9	44	18.8%
		9 - 12	43	33.6%
		12-	24	10.9%
		Missing	9	7%
Total			135	100%
Age		21 - 29	66	54.1%
		30 - 39	50	35.3%
		40-	15	5.9%
		Missing	4	4.7%
Female	Position	Employee	48	56.5%
		Chief employee	23	27.1%
		Manager	10	11.8%
		Director	1	1.2%
		Others	3	3.5%
Work experience (year)		0 - 3	6	7.1%
		3 - 6	8	9.4%
		6 - 9	20	23.5%
		9 - 12	38	44.7%
		12-	10	11.8%
		Missing	3	3.5%



* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Figure 2. Results.

Table 2. The results of data analysis.

Measures	Items	Composite reliability	Average variance extracted
Trust in online banking	3	0.879	0.793
Trust in mobile banking	3	0.857	0.701
Perceived usefulness	3	0.899	0.795
Perceived ease of use	4	0.847	0.700
Perceived security	3	0.785	0.621
Perceived privacy protection	4	0.817	0.699

following implications. First, the trust in online banking is important to trigger customers' positive perception about mobile banking. Our research model shows that the trust of online banking has strong and positive influence on the formation of mobile banking initial trust. Then, an online company with strong online trust can build up a high level of mobile trust. Second, the online-to-mobile trust transfer process provides a unified view for understanding the effects of online trust on mobile trust. The empirical results suggest that the bank can leverage their online trust to produce mobile structural assurance and perceived compatibility.

The study can be more reasonable if based on longitudinal data. This constitutes a limitation of our research. Sample size is another limitation, although the size is adequate. The education background of the respondents is not taken into account. The culture is also the key factor to influence customers' usage behavior, we leave it for future research.

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