STUDY OF THE FACTORS INFLUENCING THE USAGE OF MOBILE BANKING

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ABSTRACT

In India Mobile Banking is the latest useful technological development system introduced by financial institutions (Banks) to bring banking to the unbanked. Mobile Banking is an application of mobile computing that provides customers with support needed to be able to bank at anytime and anywhere using a mobile handheld device. It is an application of computing the mobiles which will offer the customers with the much needed assistance to be able to bank anywhere anytime using a mobile device and mobile services such as text messaging. The exploration model incorporates the essential ideas of the Technology Acceptance Model (TAM). The model is tried to decide its prescient force as for individual's conduct while considering the utilization of SMS-based Mobile Banking. A review survey was created and utilized to gather information from 101 respondents in Chandigarh. This study recognizes and examines the components which impact customers' decision to use a particular form of mobile banking, and specifically focuses on the evaluation of SMS-based mobile banking.

Keywords: Mobile Banking, Technology Acceptance Model, Mobile Services, Mobile Devices.

Introduction

Mobile banking (also known as M Banking, m-banking, SMS Banking) is a term used for performing balance checks, account transactions, payments, credit applications and other

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banking transactions via a mobile device such as a Mobile Phone or Personal Digital Assistant (PDA). The earliest mobile banking services were offered over SMS. With the introduction of the first fundamental smart phones with WAP abutment premising the use of the mobile web in 1999, the first European banks started to present mobile banking on this staging to their valuable customers.

Mobile banking has until recently (2010) time after time has been performed through SMS or the Mobile Web. Apple's foremost success with iPhone and the swift growth of phones based on Google's Android (operating system) have led to increasing use of special client programs, called applications i.e. apps, downloaded to the mobile device. With that said, advancements in web technologies such as HTML5, CSS3 and JavaScript have seen more banks flinging mobile web based services to enhance original and genuine applications. A recent study (May 2012) by Mapa Research suggests that over a third of banks have mobile device apprehension upon visiting the banks' main website. A number of things can happen on mobile uncovering such as redirecting to an app store, redirection to a mobile banking specific website or administering a menu of mobile banking options for the user to choose from.

According to the conceptual model of Mobile Banking can be said to consist of three interrelated concepts:

- Mobile Financial Information Services
- Mobile Accounting
- Mobile Brokerage

Review of Literature

Cope et al (2013) studied the risk perception, risk tolerance and consumer adoption of Mobile Banking services. They utilized one of a kind dataset to look at how buyers' impression of the dangers of utilizing Mobile Banking, and in addition their very own level of danger resistance, influence reception of versatile saving money. The survey data included 85 questions relating to mobile banking; its usage and consumer behavior, as well as a set of demographic, economic, and geographic information. Authors find that customers who trust that portable keeping money is dangerous or who don't know how safe it is embrace versatile managing an account at much lower rates than the individuals who trust it is sheltered. Authors further find that customers with

more elevated amounts of danger resilience will probably receive portable saving money, even in the wake of controlling for their impression of the wellbeing of versatile Mobile Banking.

Niina Mallat (2007) explored consumer adoption of mobile payments. It displayed a subjective study on customer selection of mobile payments. The discoveries recommended that the relative point of preference of mobile payments was not the same as that predetermined in reception speculations and incorporate autonomy of time and place, accessibility, conceivable outcomes for remote payments, and line shirking. To gain further insight on factors affecting consumer choice of payment instruments, variables such as Relative advantages of mobile payments,Compatibility,Complexity,Network externalities and creation of critical mass, Costs and Payment system securities and trust in payment system providers were taken into consideration. Moreover, the reception of mobile payments was observed to be changing, contingent upon certain situational variables, for example, an absence of other payment techniques or desperation.

Lee et al (2009) studied the determinants of behavioral intention to mobile banking. The study examined and validated determinants of users' intention to mobile banking. The research used a structural equation modeling (SEM) to test the causalities in the proposed model. The results indicated strong support for the validity of proposed model with 72.2% of the variance in behavioral intention to mobile banking. A web-based survey was employed to test the model. A web-questionnaire page was prepared by using an Active Server Page (ASP). The major data was collected from customers who used mobile banking service within Woori Bank in Korea. A pop-up message was announced in the web site, which explained the objectives of the research and contained the link to the Web-Survey. The web-based survey yielded 910 usable responses. The study found that self-efficiency was the strongest antecedent of perceived ease-of-use, which directly and indirectly affected behavioral intention through perceived usefulness in mobile banking. Structural assurances were the strongest antecedent of trust, which could increase behavioral intention of mobile banking. The research verified the effect of perceived usefulness, trust and perceived ease-of-use on behavioral intention in mobile banking.

Ghodke et al (2013) studied consumer awareness & perception towards usage of Mobile Banking. The study attempted to know the consumer awareness about mobile banking & perception about the same. The major focus of the study was on Consumer awareness and Consumer attitude towards Mobile Banking. Their study aimed at examining the impact of these

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factors on other to determine the consumer awareness and perception about M-Banking. The study shows that consumers are aware about mobile banking service provided by their bank. Consumers are familiar about various banking transactions that can be done with the help of mobile banking. Consumers think that mobile banking is easy to use; it is very useful for them as it will give them flexibility to do transactions irrespective the time of day. Consumers think that major advantage of mobile banking is 'Anywhere anytime banking'.

Pahnila et al (2004) studied the consumer acceptance of online banking. The study focused on advancements in electronic banking technology which have created innovative ways of handling daily banking errands, especially via the online channel. The acceptance of online banking services has been rapid in many parts of the world, and in the principal e-banking countries the number of e-banking contracts has crossed 50 percent. Their study investigated online banking acceptance in the light of the traditional technology acceptance model (TAM), which is leveraged into the online environment. On the basis of a focus group interview with banking professionals, TAM literature and e-banking studies, they developed a model indicating online banking acceptance among private banking customers in Finland. Out of 427, only 268 questionnaires were being filled by the respondents thus making it 68% of the survey. The findings of the study indicated that the perceived usefulness and information on online banking on the Web site were the main factors influencing online-banking acceptance.

Objectives of the study

The objectives of the study are:

1) To assess the factors that impact on the usage of Mobile Banking.
2) To assess the factors that best evaluate a Mobile Banking application or service in terms of its adoptability.

Formulation of Hypotheses

The various hypotheses which have been developed are the following:

H1a: Speed is having significant positive effect on the perceived usefulness of Mobile Banking

H1b: Mobility Access is having significant a positive effect on the perceived usefulness of Mobile Baking

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H1c: Advertising is having significant a positive effect on the perceived usefulness of Mobile Banking

H1d: Enhanced functions is having significant a positive effect on the perceived usefulness of Mobile Banking

H2: Alternatives is having significant a negative effect on the perceived usefulness of Mobile Banking

H3: Compatibility is having significant a positive effect on the perceived ease of use of Mobile Banking

H4: Self efficacy is having significant a positive effect on the perceived ease of use of Mobile Banking

H5: Perceived cost is having significant a negative effect on behavioral intention to use Mobile Banking

H6: Perceived risk is having significant a negative effect on behavioral intention to use Mobile Banking

H7: Perceived usefulness is having significant a positive effect on behavioral intention to use Mobile Banking

H8: Perceived ease of use is having significant a positive effect on behavioral intention to use Mobile Banking.

Research Methodology

The sample size was consisted of one hundred and one respondents from Chandigarh region. Convenience sampling method has been used. It is a type of non-probability sampling which involves the sample being drawn from that part of the population which is close to hand. The respondents include population from public sector banks and private sector banks, working professions, students and general customers of banks. Structured questionnaire has been used to gather information. Closed ended questions and Likert scale questions have been included in the questionnaire.

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Questionnaire

Independent variables in this study were selected on the basis of extensive literature survey. All the variables (9) are tabulated in Table 1 each of these variables measured between two to four questions which tailored with the mobile banking context. Hence, a total of 33 questions were constructed and captured the intention to adopt mobile banking. Responses to these questions were measured by a five-point Likert scale. For example, "1" denoted as strongly disagree, "2" denoted as disagree, "3" denoted as neutral, "4" as agree, and "5" as strongly agree. Negatively stated items from the survey are reversely coded. These items are Item 2 and Item 3 of perceived of ease of use, Item 2 of advertising, Item 1 of functions, and Item 3 of compatibility i.e. question numbers 4,5,13,14, and 32.

Table 1: Constructs and Number of Items

Variables	Sub variables	Number of Items
Customer service	Speed	3
	Mobility access	2
	Advertising	2
	Functions	2
Alternatives	-	2
Self efficacy	Ability	2
	Experience	2
	Knowledge	2
Perceived cost	-	3
Perceived risk	-	3
Perceived usefulness	-	2
Perceived ease of use	-	4
Compatibility	-	3
Intentions to use	-	1

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Data Analysis

Linear regression and correlation are widely used to explore a relationship between the variables in the research projects. Hypothesis testing is based on the standardized path coefficient (r-path coefficient). To support the hypothesis, the p-value of the r-path coefficient should be significant at the 0.05 level. In this research, r-path coefficient calculation is conducted through the following steps:

1) Independent variables: speed, mobility access, advertising, functions and mobility access are individually correlated against the dependent variable perceived usefulness (Hypotheses H1a,H1b,H1c,H1d and H2)

2) Independent variables : compatibility and self efficacy are individually regressed against the dependent variable perceived ease of use (Hypotheses H3 and H4)

3) Independent variables: perceived cost, perceived risk, perceived usefulness and perceived ease of use are individually regressed against the dependent variable intention to use (Hypotheses H5, H6, H7 and H8).

H1a: Speed and Perceived usefulness

Correlations

		mnperceaseofsue	mnspeed
Pearson Correlation	mnperceaseofsue	1.000	.238
	mnspeed	.238	1.000
Sig. (1-tailed)	mnperceaseofsue	.	.008
	mnspeed	.008	.
N	mnperceaseofsue	101	101
	mnspeed	101	101

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Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.238ª	.057	.047	.63529	.057	5.962	1	99	.016

a. Predictors: (Constant), mnspeed

Hypothesis H1a, that speed is having significant positive effect on the perceived usefulness of Mobile Banking, is supported (r=0.238, p< 0.05). This states that Mobile Baking is useful to the customers as it provides with faster transactions than other options. Hence, Hypothesis H1a is accepted.

H1b: Mobility access and Perceived usefulness

Correlations

		mnpercusefulness	mnmobility
Pearson Correlation	mnpercusefulness	1.000	.600
	mnmobility	.600	1.000
Sig. (1-tailed)	mnpercusefulness	.	.000
	mnmobility	.000	.
N	mnpercusefulness	101	101
	mnmobility	101	101

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.600ª	.360	.353	.88576	.360	55.646	1	99	.000

a. Predictors: (Constant), mnmobility

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Hypothesis H1b, that mobility access is having significant positive effect on the perceived usefulness of Mobile Banking, is supported (r=0.60, p<0.05). This suggests that Mobile Banking is useful for users as they are able to access their bank account and do banking anywhere at any time. Hence, Hypothesis H1b is accepted.

H1c: Advertising and Perceived Usefulness

Correlations

		mnpercusefulness	mnadv
Pearson Correlation	mnpercusefulness	1.000	.255
	mnadv	.255	1.000
Sig. (1-tailed)	mnpercusefulness	.	.005
	mnadv	.005	.
N	mnpercusefulness	101	101
	mnadv	101	101

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.255^a	.065	.055	1.07054	.065	6.869	1	99	.010

a. Predictors: (Constant), mnadv

Hypothesis H1c, that advertising is having significant positive effect on the perceived usefulness of Mobile Banking, is supported (r= 0.255, p<0.05). This suggests that it would be useful for the customers to use Mobile Baking if they had enough knowledge about it and also about the different services that it provided. Hence, Hypothesis H1c is accepted.

H1d: Functions and perceived usefulness

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Correlations

		mnpercusefulness	mnfunctions
Pearson Correlation	mnpercusefulness	1.000	.071
	mnfunctions	.071	1.000
Sig. (1-tailed)	mnpercusefulness	.	.239
	mnfunctions	.239	.
N	mnpercusefulness	101	101
	mnfunctions	101	101

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.071[a]	.005	-.005	1.10423	.005	.507	1	99	.478

a. Predictors: (Constant), mnfunctions

Hypothesis H1d, that functions is having significant a positive effect upon the perceived usefulness is not supported as (r=0.71, p>0.05). This relationship is not significant. This suggests that enhanced functions of Mobile Banking are not useful to the customers. Hence, Hypothesis H1d is not accepted.

H2: Alternatives and perceived usefulness

Correlations

		mnpercusefulness	mnalternatives
Pearson Correlation	mnpercusefulness	1.000	.096
	mnalternatives	.096	1.000
Sig. (1-tailed)	mnpercusefulness	.	.169
	mnalternatives	.169	.
N	mnpercusefulness	101	101
	mnalternatives	101	101

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Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.096ᵃ	.009	-.001	1.10191	.009	.927	1	99	.338

a. Predictors: (Constant), mnalternatives

Hypothesis H2, that alternatives is having significant affect on perceived usefulness is not supported as (r=0.96, p>0.05). This relationship is not significant. This suggests that alternatives of Mobile Banking are not having perceived usefulness to the customers. Hence, Hypothesis H2 is not accepted.

H3: Compatibility is having significant a positive effect on the perceived ease of use of Mobile Banking

H4: Self efficacy is having significant a positive effect on the perceived ease of use of Mobile Banking

Correlations

		mnselfefficacy	mncompatibility	mnperceaseofsue
mnselfefficacy	Pearson Correlation	1	.583**	.356**
	Sig. (2-tailed)		.000	.000
	N	101	101	101
mncompatibility	Pearson Correlation	.583**	1	.342**
	Sig. (2-tailed)	.000		.000
	N	101	101	101
mnperceaseofsue	Pearson Correlation	.356**	.342**	1
	Sig. (2-tailed)	.000	.000	
	N	101	101	101

**. Correlation is significant at the 0.01 level (2-tailed).

From the above table it is clear that compatibility is having positive relation with perceived ease of use (p<0.05). Further, the self-efficacy is also having positive relation with perceived ease of use (p<0.05). This suggests that Hypothesis H3 and H4 are accepted.

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Correlations

		Mn cost	Mn risk	Mn percusefulness	Mn Per cease of use	Mn Intention to use
Mn cost	Pearson Correlation	1	.395[**]	-.154	.211[*]	.122
	Sig. (2-tailed)		.000	.125	.034	.223
	N	101	101	101	101	101
Mn risk	Pearson Correlation	.395[**]	1	-.027	.295[**]	.280[**]
	Sig. (2-tailed)	.000		.788	.003	.005
	N	101	101	101	101	101
Mn per cusefulness	Pearson Correlation	-.154	-.027	1	.283[**]	.244[*]
	Sig. (2-tailed)	.125	.788		.004	.014
	N	101	101	101	101	101
Mn per cease of use	Pearson Correlation	.211[*]	.295[**]	.283[**]	1	.180
	Sig. (2-tailed)	.034	.003	.004		.071
	N	101	101	101	101	101
Mn intention to use	Pearson Correlation	.122	.280[**]	.244[*]	.180	1
	Sig. (2-tailed)	.223	.005	.014	.071	
	N	101	101	101	101	101

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

The result shows a lack of support for hypothesis H5 that perceived cost has a negative effect on the intention to use mobile banking since the data is (p=0.223) is rejected.

The result demonstrates a lack of support for hypothesis H6 that perceived risk has a negative effect on the intention to use mobile banking (p=0.005) is accepted.

Hypothesis H7, that perceived usefulness has a positive effect on intention to use mobile banking, is supported (p=0.014) is accepted.

H8, that perceived ease of use has a positive effect on the intention to use mobile banking (p=0.071) is rejected.

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Conclusions

On the basis of results, it is concluded that most of the factors have significant and positive impact on the usage of Mobile Banking. There is a significant difference in the usage of Mobile Banking among the respondents of different professions. Amongst a total of 101 respondents, the respondents within the age group 21-30 years of age were found to be using the Mobile Banking the most. The variables such as speed, mobility access and advertising have a positive impact on the perceived usefulness suggesting that Mobile Banking is useful to the customers as it provides faster transactions, anywhere/anytime access along with good teaching lessons on how to use Mobile Banking. The result shows a lack of support for the perceived cost has a negative effect on the intention to use mobile banking. The perceived risk has a negative effect on the intention to use mobile banking and the perceived usefulness has a positive effect on intention to use mobile banking. Lastly, the perceived ease of use has a positive effect on the intention to use mobile banking. Thus, it can be concluded that speed, mobility access and advertising have a positive impact on the perceived usefulness suggesting that Mobile Banking is useful but perceived risk, function and alternatives are having a negative effect on intention to use mobile banking.

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