

# A Study on Mobile Banking Service Quality and Its Impact On Customer Relationship

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## Abstract

A new communications technology is redefining the convergence of telecommunications and computing. Mobile banking services have replaced traditional banking methods and simplified complicated and elaborate processes. Now, sending, withdrawing, and receiving money is a lot easier. Checking account balance, paying bills and applying for loans do not need you to visit your bank branch. All of this and more can be accomplished by using a mobile phone. Most of these mobile banking services and apps are made available by the banks to their customers for free. Now, banking is not only simple but also cheaper. Let's delve deeper into the trend that has taken over the banking industry by a storm. Also, this blog will shed light on the emerging mobile banking trends. Mobile banking has emerged as a possible powerful provider of bundled banking services. New platforms and protocols are being developed able to create and support a support a seamless and truly global service platform. The mass adoption of mobile banking will depend on the provision of secure, reliable and easy to customise user interfaces. This paper examines impact of mobile service quality with reference to security, practicality, sociality, aesthetics, and enjoyment on customer relationship with an idea to build trust in customer with satisfaction. An online survey was conducted using a sample of 100 respondents, all owners of a mobile device and all accustomed to conducting banking activities on mobile platforms. Results were analyzed using chi-square test. Findings confirm the service quality dimensions influences the satisfaction level of the customers. Therefore satisfaction significantly and positively impacts the trust.

**Keywords :** Mobile Banking, Mobile Banking Service Quality, Satisfaction, trust

## Introduction

Mobile banking has emerged as a promising new application of the next generation electronic commerce - mobile commerce. Is mobile

commerce prevalent? Siau et al (2001) point out that mobile commerce adoption strongly depends on the user infrastructure (user-accessible mobile devices) and on the available network infrastructure (mobile telecommunications networks). Pitruzzello (1998), Lan et al (2000), Guardini et al 2000), Kiesnoski (2000) argue that commerce applications, including mobile banking, cannot be implemented successfully without an integrated and seamlessly converging underlying infrastructure, and suggest approaches towards achieving coexistence and transparent handoff in a global coverage perspective. Others point out (e.g. Banai, 2001) that a co-factor for the successful adoption of mobile banking is the timely development of value-added mobile banking services.

Mobile Banking Mobile banking can be defined as the ability to conduct bank transactions via a mobile device, or more broadly – to conduct financial transactions via a mobile terminal (Drexel us & Herzig, 2001). This definition is a suitable working one as it includes not only basic services such as bank account statements and funds transfer bur also electronic payment options as well as information based financial services (e.g. alerts on account limit or account balance, access to stock broking). It compares ell with the definition found in (Kiesnoski, 2000) where mobile banking is referred to as the “ability to bank virtually anytime, anywhere”.

In recent years, households around the world have witnessed a tremendous influx of portable electronic devices. Consider, for example, mobile telephone penetration among US adults which currently stands at 80 percent, 71 percent of which are internet-enabled smart phones (Board of Governors of the Federal Reserve System, 2015). With adoption having quickly spread to a mass of consumers, even the banking industry could not escape the trend. Indeed, owing to the ever increasing number of mobile devices equipped with an internet connection, notably 3G and 4G, mobile banking has grown rapidly (Laukkanen, 2007;

Shunbo et al., 2016). Mobile banking, in concrete terms, refers to an interaction in which a customer is connected to a bank via a mobile device such as cell phone, smart phone or personal digital assistant (PDA)" (Laukkanen and Kiviniemi, 2010, p. 373). It complements existing electronic channels such as automated banking machines and internet banking (Hoehle et al., 2012) adding features such as mobile payment capability and mobile wallet functions (Wessels and Drennan, 2010; Moser, 2015).

Mobile options available to consumers have expanded considerably in only a few short years. In transitioning from traditional branch operations and first generation web-based solutions to the mobile web and mobile applications, banks face challenges a new in managing and building significant relationships with their customer base. For example, by nature, electronic services are self-service technologies intended to replace human interaction, an important component of relationship marketing, by human/computer interactive system dialogue (Hoffman and Novak, 1996; Sang and Rono, 2015). Then again, mobile banking also features considerably enhanced flexibility, ubiquity and connectivity (Ha et al., 2012), and comes replete with proactive capabilities (alerts, push notifications and geolocation) for customizing the offer and seizing the social potential of these platforms. With the advent of mobile banking, fresh insight is needed to understand more fully the complex facets of consumer/bank relationships (Lin et al., 2014).

To engage and retain mobile customers, banks need to develop effective mobile strategies such as highlighting and promoting the benefits and value of the mobile services (Laukkanen, 2016). Service quality as a concept has been widely examined in marketing literature and resulted in the development of an instrument of measure known as SERVQUAL (Parasuraman et al., 1988). Service quality has also been investigated in electronic environments and while studies have revealed interesting new findings, they have received less attention in e-banking (Ayo et al., 2016).

In the banking sector, service quality research has tended to focus primarily upon internet, banking machine and telephone banking (Curran and Meuter, 2005). There is a growing need to understand service quality in the rapidly expanding mobile context, especially given that customers

perhaps value service quality dimensions differently in mobile vs web-based channels. The concepts of service quality, e-service quality and mobile service quality are all different and must therefore be revisited.

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### **Mobile Banking Services**

Mobile banking is a system that allows members of financial institutions to conduct a number of financial transactions through a mobile device such as a mobile phone or tablet. The different types of mobile banking technologies are classified by the way a financial institution chooses to communicate with members and allow access to financial services.

#### **1. Web Browsers**

The mobile web browser also known as WAP (Wireless Application Protocol) allows financial institution members who have smart phones or tablets access to a modified version of the institutions online site. Full account access is given from the site, allowing you to monitor account activity, request account transfers and make payments. Accessing the financial institution's website from a mobile phone or tablet does not usually result in a charge from the financial institution but, you could possibly see a charge depending on the conditions of your mobile service provider.

## 2. Text Banking

For members who wish to take advantage of mobile banking but do not have a smart phone, text banking may be the best option for you. You may request your financial institution to send you alerts via text messages. These alerts are available for account balances, payments, direct deposits, and a countless number of account activity. Some financial institutions allow members to sign up for these alerts through their online banking service for free while others charge a fee, in addition to the text messaging fees members may be charged by their cell phone carriers. In some cases text messaging may also be used to communicate with financial institution personnel instead of e-mail or sending a message through an online web site's contact center. For instance by texting certain codes or instructions, financial institution members may be able to send donations from their deposit accounts. These donations are sent to charitable organizations or causes with which the financial institution has an established partnership. There can be a whole array of codes a member can send to the financial institution. Just remember that each financial institution is different with the use of their coding, so make sure you know and learn the codes if you are planning to sign up for the text banking option.

## 3. Smart Phone Applications

The newest and rapidly growing form of mobile banking technology is the development of smart phone and tablet banking applications. These applications give you one-touch access to many account features. Similar to the web browser technology, you have access to your accounts through a mobile phone application. Some institutions allow you to take a picture of a check and make a virtual ATM deposit/payment with your phone. More typical services include account transfers, bill payments and activity monitoring. These services allow you to conduct transactions even if you are not near a computer. You can monitor fraudulent activity and instantly notify financial institution personnel if you notice any suspicious activity. Once again, when accessing a mobile service app you could possibly see a charge depending on the conditions of your mobile service provider. There are other services too which include account transfers, bill payments and activity monitoring. These services allow customers to conduct banking transactions even if they are not near a computer. They can monitor for fraudulent

activity and instantly notify bank personnel if there is an issue

## Mobile Banking Service quality

Lin (2013) defines mobile banking service quality as a global consumer judgment of the quality and excellence of mobile content delivery in the context of m-banking. Studies exploring the dimensions of mobile banking service quality (Sagib and Zapan, 2014; Jun and Palacios, 2016) and motivations for using/adopting mobile banking (Hanudin et al., 2012; Chemingui and Iallouna, 2013; Ha et al., 2012) employ dimensions primarily associated with utilitarian consumer value such as perceived usefulness, perceived risk, perceived compatibility (with lifestyle or device), responsiveness, reliability, security, perceived cost and ease of use. Interestingly, some authors have integrated into their model some dimensions more in keeping with hedonic consumer values, dimensions particularly relevant to the mobile context such as perceived enjoyment (Hanudin et al., 2012; Chemingui and Iallouna, 2013), as well as a social dimension (Singh and Srivastava, 2014; Hanafizadeh et al., 2014). In fact, individuals use smart phones and mobile applications for the majority of their social media interaction (Kumari, 2016). Hedonic elements such as perceived enjoyment and social aspects can play an important role in evaluating the quality of professional, information-based web services which tend to dominate in e-banking (Bauer et al., 2005). An enhanced understanding of the specifics of mobile banking service quality and how the latter relates to commitment, trust and satisfaction is needed to identify the primary drivers of successful customer relationships in the banking sector.

## Objective of Study

- The study investigates the impact of security associated with mobile platform of one financial institution on satisfaction, and trust,
- The study examines the impact of practicality associated with mobile platform of one financial institution on satisfaction and trust
- The study examines the impact of aesthetics associated with the mobile

platform of one's financial institution on satisfaction and trust.

- The study investigates the impact of sociality associated with the mobile platform of one's financial institution on satisfaction and trust.
- The study investigates the impact of enjoyment associated with the mobile platform of one's financial institution on satisfaction and trust.
- The study investigates the relationship between satisfaction and trust

### Review of Literature

In recent times, the mobile phone users have increased largely and according to ITU reports, (2016), internationally, 3.2 billion individuals are using the Internet, of which 2 billion belongs to the developing countries. This progression in the technology has opened a innovative domain of prospects for business houses as well as retailers to sell and advertise their range of goods and services for clients anywhere and everywhere. In today's world, users are "on-the-go" and they value those objects which are easily accessible to the users. Banking is one instance of such services. Those days were gone when users used to stand in a queue to fulfill their financial and non- financial banking needs. In today's world of advanced technology, by using electronic banking (e-banking), users can easily transfer funds between their accounts on click of a button. According to the report of Deloitte (2011), there are few users of M-banking instead of so much advancement in the mobile technology and banking sector.

(Venkatesh and Davis, 1996; Venkatesh and Davis, 2000; Venkatesh and Bala, 2008; Yusoff et al., 2009) Banking by means of internet is driving the world into another range of banking by enabling the customers to lead their everyday business and banking related activities at their place. Internet banking services have a relative favorable position over physical banks regarding "opportunities and exactness of data stream" that limits the data dormancy in an extraordinary basic leadership condition. In data framework look into, Technology Acceptance Model (TAM) is thought to be the most broadly utilized and strong model to

foresee the individual appropriation of another innovation.

Utilizing Technology Acceptance Model (TAM) as a hypothetical base, this review has guessed and tried an incorporated model to clarify different elements influencing singular acknowledgment and utilization mobile banking in India. Aside from the customary develops of TAM, perceived convenience and perceived value, another build perceived risk has been added to the model. Perceived hazard has web composition and trust as its forerunners. The justification behind coordinating perceived risk in (TAM) is expanding administrative focus on basic test to offer protected and secure virtual condition to engage their clients to make full utilization of e-banking services.

**Luran (2005)** intends to recognize the components deciding clients' acknowledgment of mobile banking. While there has been significant research on the technology acceptance model (TAM) that predicts whether people will acknowledge and deliberately utilize data frameworks, confinements of the TAM incorporate the exclusion of an essential trust-based develop with regards to electronic/portable business, and the presumption that there are no hindrances keeping a person from utilizing an IS whether he or she does as such.

**According to Shaikh (2013)**, use of smart phones has increased and this has become the main reason for the increase in demand of M-banking services, this is forcing many banks to offer these services with innovative applications, specially designed for their clients to improve customer retention, to increase financial inclusion, enhance market share and offer employment opportunities. In spite of these benefits of using M-banking services for various financial transactions and non-financial transactions, it is not very popular as it was expected.

**(Hanafizadeh et al., 2012)** Numerous studies examine m-banking and related factors that affect customers' adoption of it, using together qualitative and quantitative approaches. Despite substantial research on m-banking acceptance that has seemed in intercontinental journals across corrections, such a review signifies a significant milestone in the expansion of a research field. It delivers a prospect to step back and review the

communal intelligence that has been collective from an eclectic body of investigation that uses several samples, procedures, and models. This exertion is principally significant when the answers of isolated studies controvert one another.

**Ankit Kesharwani (2011)** tried to develop the technology acceptance model (TAM) with regards to internet banking adoption in India under security and privacy risk. Keeping the TAM proposed by Davis as a hypothetical premise, an augmented TAM connecting security-and protection related issues for internet banking adoption is conceptualized. The study stressed that in addition to the conventional develop of TAM, another novel construct of perceived risk has been included. The effect of web architecture and trust on internet banking adoption has likewise been inspected and appeared to be critical in India with regards to internet banking adoption.

**Ritu Narwal (2014)** confirmed that developments in telecommunications have facilitated the banks to establish pioneering procedures for the admission of banking services, out of all, one is mobile banking; in which a user interacts with the bank via cellular phone. In service use, cellular phones are used not only for talking and sending text messaging (SMS), but its usage is likely to increase with the advancement in the technology. The prospects of these innovative technologies in provision have generated new challenges to the originators of financial banking services; it has helped to attain the competitive advantage by saving the costs or increasing the user satisfaction. In order to meet these challenges, M-banking service providing firms seems to be more interested in enhancing their understanding of an individual's behavior. This research work attempted to study the mobile banking overview and its issues and challenges. Mobile banking has provided all users with day to day banking operations to the users with just one click of his mobile handset with the supported application.

**Kuang-Hsun Shih and Ching-Yi Lin (2015)** explained dimensions affecting customer intention to adopt mobile banking services. The four independent variables included perceived usefulness, perceived ease of use, service quality and perceived security; the mediator variable was attitude, and use intention was the independent variable. This study adopted the TAM, service

quality, perceived security and TPB to analyse and predict customer intention to adopt mobile banking services.

**S. V. Krishna Kishore and Aloysius Henry Sequeira (2016)** investigated mobile banking service adoption in rural Karnataka. Sub-objectives assess the relationship of independent variables, performance expectancy (PE), effort expectancy (EE), social influence (SI), attitude, and perceived risk (PR), with dependent variable, behavioral intention (BI). The study also attempted to measure moderation of age and gender on PE, EE, SI, and attitude's path toward BI.

**Cláudio Hoffmann Sampaio et al, (2017)** specifically focusing on the use of mobile banking apps, this study examines how perceived justice moderates the relationship between the benefits offered by mobile banking and the consequences of satisfaction with mobile banking. This research employs a model in which mobile banking offers comprehensive benefits, satisfaction and consequences that favour mobile banking; in addition, the model also tests the moderating role of perceived justice and uncertainty avoidance in this context.

**Tingting Zhang et al (2018)** examined consumers' adoption of mobile technology to facilitate their banking services and activities, and to investigate the factors influencing their adoption and engagement. Traditional technology acceptance model factors – perceived usefulness and perceived ease of use – are identified as effective factors in influencing consumers to adopt mobile technology for facilitating banking services. Moreover, technology safety concerns, including reliability and privacy factors, are found to play an important role in motivating consumers to embrace mobile banking. The “fun” feature of the technology and consumers' innovativeness characteristics are considered important in influencing mobile banking adoption. Trust in the banks has its predominant role in mobile technology adoption for banking services.

#### **Hypothesis**

H1: Security/privacy associated with the mobile platform of one's financial institution positively impacts satisfaction.

H2: Practicity associated with the mobile platform of one's financial institution positively impacts satisfaction.

H3: Aesthetics associated with the mobile platform of one's financial institution positively impacts satisfaction.

H4: Sociality associated with the mobile platform of one's financial institution positively impacts satisfaction.

H5: Enjoyment associated with the mobile platform of one's financial institution positively impacts satisfaction.

H6: Satisfaction positively impacts Trust regarding one's primary financial institution.

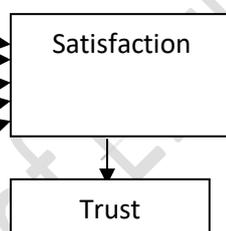
**Research Methodology**

The study seeks to empirically test the impact of mobile banking service quality (i.e. security/privacy, practicity, design/aesthetics, sociality and enjoyment) on relationship quality (trust, and satisfaction).

**Mobile Service Quality**

Security
Practicity
Aesthetics
Sociality
Enjoyment

**Relationship Quality**



**Sampling**

**Sample size** –100

**Sample Unit** – Customer using mobile application or mobile website provided by their financial institution to conduct banking activities using a smart phone or tablet in Hyderabad.

**Sampling Technique:** Convenient sample of over 18 years of age.

**Research Instrument:** Chi-square Analysis,

**Statistical Tools:** SPSS/ MS Excel.

**Survey instrument:** The first part of questionnaire contained demographic characteristics of the respondents and device, internet usage, mobile application, and mobile software. The second part a structured questionnaire comprising of open and

close-ended question was used for the collection of data. Likert scale has been used as a scaling technique in the questionnaire.

**Data Analysis**

**Hypothesis Testing**

**Hypothesis 1**

**Security & Satisfaction**

**Chi-Square Tests**

	Value	dof	Asymp. Sig. (2-sided)
Pearson Chi-Square	110.513 <sub>a</sub>	12	.000
Likelihood Ratio	21.189	12	.048
N of Valid Cases	101		

**Interpretation**

A Chi-Square test was conducted to describe the association among mobile platform security and satisfaction. Which it was found there is a positive association between mobile platform security and satisfaction.

**Hypothesis 2**

**Practicity & Satisfaction**

**Chi-Square Tests**

	Value	dof	Asymp. Sig. (2-sided)
Pearson Chi-Square	101.345 <sup>a</sup>	4	.000
Likelihood Ratio	11.566	4	.021
N of Valid Cases	101		

**Interpretation**

A Chi-Square test was conducted to describe the relationship among practicity and satisfaction. Which it was found that practicity has positive influence on satisfaction.

**Hypothesis 3**

**Aesthetics & Satisfaction**

**Chi-Square Tests**

	Value	dof	Asymp. Sig. (2-sided)
Pearson Chi-Square	101.098 <sup>a</sup>	4	.000
Likelihood Ratio	11.317	4	.023
No. of Valid Cases	101		

**Interpretation**

A Chi-Square test was conducted to describe the relationship among aesthetics and satisfaction. Which it was found that aesthetics has positive influence on satisfaction.

**Hypothesis 4**

**Sociality & Satisfaction**

**Chi-Square Tests**

	Value	dof	Asymp. Sig. (2-sided)
Pearson Chi-Square	111.542 <sup>a</sup>	4	.000
Likelihood Ratio	21.054	4	.000
No. of Valid Cases	101		

**Interpretation**

A Chi-Square test was conducted to describe the relationship among aesthetics and satisfaction. Which it was found that aesthetics has moderate influence on satisfaction

**Hypothesis 5**

**Enjoyment & Satisfaction**

**Chi-Square Tests**

	Value	dof	Asymp. Sig. (2-sided)
Pearson Chi-Square	130.705 <sup>a</sup>	8	.000
Likelihood Ratio	50.588	8	.000
No. of Valid Cases	101		

**Interpretation**

A Chi-Square test was conducted to describe the relationship among enjoyment and satisfaction. Which it was found that enjoyment has moderate influence on satisfaction.

**Hypothesis 6**  
**Satisfaction & Trust**

**Chi-Square Tests**

	Value	dof	Asymp. Sig. (2-sided)
Pearson Chi-Square	104.550 <sup>a</sup>	6	.000
Likelihood Ratio	14.587	6	.024
No. of Valid Cases	101		

**Interpretation**

A Chi-Square test was conducted to describe the relationship among Satisfaction and Trust. Which it was found that satisfaction leads to trust.

**Findings**

From the above study it is found that dimension of mobile service quality like security, practices', aesthetics, has high positive impact on satisfaction and sociality and enjoyment has moderate impact on satisfaction. The result of the study shows that dimension of mobile service quality are satisfying the customer which is leading to customer trust on mobile application platform provided by the financial institution.

**Conclusion**

Technology plays an important role in banking sector. Banking is one of the largest financial institutions constantly explores the opportunity of technology enabled services to provide better customer experience and convenience. Mobile phone is a common technology device that became part of every individual in the information era. Mobile Banking is an emerging alternate channel for providing banking services. India is the second largest telecom market in the world, which is having high potential for expanding banking services using mobile. However, mobile banking has become the choice of millions of people. In the future, mobile banking apps are expected to offer new features and better security. Meanwhile, mobile payments and mobile wallets are on the rise and are considered to be the future. They are an increasingly popular way to perform transactions because they're secure, fast and supremely convenient. Mobile payment solutions are often referred to as payment services through which we send or accept in-person payment through a mobile device. Mobile payment technology must operate and comply with financial regulations. This technological innovation has

eradicated the need for carrying cash, cheque, and credit/debit card. All that one needs is a mobile phone to make the payment. Mobile payments are a rapidly evolving technology and it is widely adopted by global industries. With this view the study focused on important dimensions, mobile service quality such as, security, practicability, aesthetics, sociality and enjoyment of respondents are affecting overall customer satisfaction by service quality in m-banking. This study reveals that all the variables of service quality of m-banking have significant positive relationships with customer satisfaction. In addition, it has shown that satisfaction lead to trust of the customers on on mobile application platform provided by the financial institution.

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