

Paradigm shift in the payment regime: Mobile Banking

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Abstract

The most significant contributor for the Cashless economy and Electronic payments emerging in today's scenario is the innovation of digital payment Wallets along with technology acceptance in the hands of common man. The robust growth of mobile banking wallets are highly supplemented with smart phones and 4G connectivity. The present study is focused on consumer preference towards mobile banking among its users linked with education sector and effectively analyses the impact of demographic variables on the usage of this Digital Payment. A total of 60 respondents from educational institutions were analysed with their responses. This study will help in devising appropriate strategies for mobile banking service providers to tap potential customers by throwing light on consumer adoption process in mobile banking.

Key words: Mobile banking, Electronic Payments,

INTRODUCTION

The Reserve Bank of India (RBI) has started working towards making India a cashless economy and to bring in accountability and transparency in each financial transaction. The Union Cabinet has cleared the implementation of a few short and long term measures to promote digital payments to curb cash use in the system. Some of the measures include withdrawal of surcharge, service charge or convenience fee on card and other digital transactions. With this, digital payment, which is already gaining traction, is expected to gain momentum. The rise of the Smartphone as a payment tool is reflected in the brisk growth of mobile banking transactions in the country, according to RBI data and the trend is only expected to grow with the introduction of unified payment interface and payment banks. Mobile banking is emerging as the most significant contributor in pushing cashless and electronic payments. Foreseeing this big opportunity, a banks s has kick-started a movement by

launching various amenities to mobile banking customers and is slowly changing the way Indians transact. Mobile banking is a service provided by a bank or other financial institution that allows its customers to conduct financial transactions remotely using a mobile device such as a smartphone or tablet. Unlike the related internet banking it uses software, usually called an app, provided by the financial institution for the purpose. Mobile banking is usually available on a 24-hour basis. Some financial institutions have restrictions on which accounts may be accessed through mobile banking, as well as a limit on the amount that can be transacted. Mobile banking is dependent on the availability of an internet or data connection to the mobile device.

Transactions through mobile banking depend on the features of the mobile banking app provided and typically includes obtaining account balances and lists of latest transactions, electronic bill payments, remote check deposits, P2P payments, and funds transfers between a customer's or another's accounts. Some apps also enable copies of statements to be downloaded and sometimes printed at the customer's premises.

From the bank's point of view, mobile banking reduces the cost of handling transactions by reducing the need for customers to visit a bank branch for non-cash withdrawal and deposit transactions. Mobile banking does not handle transactions involving cash, and a customer needs to visit an ATM or bank branch for cash withdrawals or deposits. Many apps now have a remote deposit option; using the device's camera to digitally transmit cheques to their financial institution.

Mobile banking differs from mobile payments, which involves the use of a mobile device to pay for goods or services either at the point of sale or remotely, analogously to the use of a debit or credit card to effect an EFTPOS payment

History

The earliest mobile banking services used SMS, a service known as SMS banking. With the introduction of smart phones with WAP support enabling the use of the mobile web in 1999, the first European banks started to offer mobile banking on this platform to their customers.

Mobile banking before 2010 was most often performed via SMS or the mobile web. Apple's initial success with iPhone and the rapid growth of phones based on Google's Android (operating system) have led to increasing use of special mobile apps, downloaded to the mobile device. With that said, advancements in web technologies such as HTML5, CSS3 and JavaScript have seen more banks launching mobile web based services to complement native applications. These applications

are consisted of a web application module in JSP such as J2EE and functions of another module J2ME.

A recent study (May 2012) by Mapa Research suggests that over a third of banks have mobile device detection upon visiting the banks' main website. A number of things can happen on mobile detection such as redirecting to an app store, redirection to a mobile banking specific website or providing a menu of mobile banking options for the user to choose from.

A mobile banking conceptual

In one academic model, mobile banking is defined as:

Mobile Banking refers to provision and availment of banking- and financial services with the help of mobile telecommunication devices. The scope of offered services may include facilities to conduct bank and stock market transactions, to administer accounts and to access customised information."

According to this model mobile banking can be said to consist of three inter-related concepts:

- Mobile accounting
- Mobile brokerage
- Mobile financial information services

Most services in the categories designated accounting and brokerage are transaction-based. The non-transaction-based services of an informational nature are however essential for conducting transactions - for instance, balance inquiries might be needed before committing a money remittance. The accounting and brokerage services are therefore offered invariably in combination with information services. Information services, on the other hand, may be offered as an independent module.

Mobile banking may also be used to help in business situations as well as financial

Mobile banking services

Typical mobile banking services may include:

Account information

1. Mini-statements and checking of account history
2. Alerts on account activity or passing of set thresholds
3. Monitoring of term deposits
4. Access to loan statements

5. Access to card statements
6. Mutual funds / equity statements
7. Insurance policy management

Transaction

1. Funds transfers between the customer's linked accounts
2. Paying third parties, including bill payments and third party fund transfers
3. Check Remote Deposit

Investments

1. Portfolio management services
2. Real-time stock

Support

1. Status of requests for credit, including mortgage approval, and insurance coverage
2. Check (cheque) book and card requests
3. Exchange of data messages and email, including complaint submission and tracking
4. ATM Location

Content services

1. General information such as weather updates, news
2. Loyalty-related offers
3. Location-based services

A report by the US Federal Reserve (March 2012) found that 21 percent of mobile phone owners had used mobile banking in the past 12 months. Based on a survey conducted by Forrester, mobile banking will be attractive mainly to the younger, more "tech-savvy" customer segment. A third of mobile phone users say that they may consider performing some kind of financial transaction through their mobile phone. But most of the users are interested in performing basic transactions such as querying for account balance and making bill

Future functionalities in mobile banking

Based on the 'International Review of Business Research Papers' from World business Institute, Australia, following are the key functional trends possible in world of Mobile Banking. With the advent of technology and increasing use of smartphone and tablet based devices, the use of Mobile

Banking functionality would enable customer connect across entire customer life cycle much comprehensively than before.

Illustration of objective based functionality enrichment In Mobile Banking:

- Communication enrichment: - Video Interaction with agents, advisors.
- Pervasive Transactions capabilities: - Comprehensive “Mobile wallet”
- Customer Education: - “Test drive” for demos of banking services
- Connect with new customer segment: - Connect with Gen Y – Gen Z using games and social network ambushed to surrogate bank’s offerings
- Content monetization: - Micro level revenue themes such as music, e-book download
- Vertical positioning: - Positioning offerings over mobile banking specific industries
- Horizontal positioning: - Positioning offerings over mobile banking across all the industries
- Personalization of corporate banking services: - Personalization experience for multiple roles and hierarchies in corporate banking as against the vanilla based segment based enhancements in the current context.
- Build Brand: - Built the bank’s brand while enhancing the “Mobile real estate”.

Challenges for a mobile banking solution

Key challenges in developing a sophisticated mobile banking application are :

Handset accessibility

There are a large number of different mobile phone devices and it is a big challenge for banks to offer a mobile banking solution on any type of device. Some of these devices support Java ME and others support SIM Application Toolkit, a WAP browser, or only SMS.

Initial interoperability issues however have been localized, with countries like India using portals like "R-World" to enable the limitations of low end java based phones, while focus on areas such as South Africa have defaulted to the USSD as a basis of communication achievable with any phone.

The desire for interoperability is largely dependent on the banks themselves, where installed applications(Java based or native) provide better security, are easier to use and allow development of more complex capabilities similar to those of internet banking while SMS can provide the basics but becomes difficult to operate with more complex transactions.

There is a myth that there is a challenge of interoperability between mobile banking applications due to perceived lack of common technology standards for mobile banking. In practice it is too early in

the service lifecycle for interoperability to be addressed within an individual country, as very few countries have more than one mobile banking service provider. In practice, banking interfaces are well defined and money movements between banks follow the ISO-8583 standard. As mobile banking matures, money movements between service providers will naturally adopt the same standards as in the banking world.

In January 2009, Mobile Marketing Association (MMA) Banking Sub-Committee, chaired by CellTrust and VeriSign Inc., published the Mobile Banking Overview for financial institutions in which it discussed the advantages and disadvantages of Mobile Channel Platforms such as Short Message Services (SMS), Mobile Web, Mobile Client Applications, SMS with Mobile Web and Secure SMS.

Mobile banking are the best bet to usher in digital payments. There are three key drivers:

1. **Strong growth in smartphones:** The digital payments landscape in India has witnessed unprecedented growth largely driven by increased Smartphone penetration. Smartphone user base has increased by 60% in the metros, but more importantly, it is the penetration in the tier 2 and 3 areas which is of critical importance. 61 million people from tier 2 and 3 use smart phones for online shopping.

2. **Adoption of Aadhaar & UPI:** Data availability along with Aadhaar based authentication will allow for seamless adoption of the digital wallet. Initiatives such as Aadhaar, UPI will have a catalytic effect on the industry.

3. **Improved 3G & 4G services:** 3G and 4G services are being offered at extremely affordable prices, giving a huge boost to mobile commerce. With 4G becoming more and more affordable, we expect Smartphone users from tier 2 and 3 regions to adopt digital wallets.

OBJECTIVES OF THE STUDY

1. To study the awareness and preference towards the usage of mobile banking
2. To find out the impact of various demographic variables on the usage of mobile banking
3. To study the factors influencing the respondents to opt for mobile banking

METHODOLOGY

Sample size: This study was conducted in the urban area of Cochin city, largest urban agglomeration in Kerala. The sample size of the study was 60 respondents, consisting of Urban

population. The respondents were the users of Mobile banking. The questionnaire were distributed among 100 respondents, only 60 valid responses were received.

Tools for Data Collection: Primary data and secondary data have been used. Primary data was collected through the structured questionnaire and the secondary data was collected from various Books, Journals, Articles, Newspapers, Magazines and Websites. The data collected were further analyzed by using statistical tools like percentages, T test and Chi-square test Regression and

Period of the study: The data were collected during the month of December 2017.

Hypothesis

1. There is no significant relationship between respondents Gender and Income towards cash less payments.
2. There is no significant relationship between respondents age and Income towards cash less payments.

REVIEW OF LITERATURE

Many empirical studies have been conducted on the subject of cashless society in India and abroad. The major emphasis of research has been on various issues like frauds, security, usage pattern, new method of e-payment, etc. The previous work done on cashless society needs perusal. It has been reviewed to indicate in a general way the type of work done on this subject in India. It is expected that the critical examination of the studies would give focus to our problem and help to indicate the areas which have remained neglected at the hands of the researchers.

From the review of literature, it was found that hardly there was a study which examined the preference towards cash less payments among urban youth. This study, an attempt is made to include the usage of mobile banking in the analysis.

Barker (1992) in his study, Globalization of mobile banking usage: The case of a developing economy” measured the attitude of Turkish consumers towards mobile banking, and the approach of card issuers by surveying two samples of 200 card holders and non-holders. The respondents were categorized into better educated, middle aged members of the upper middle class. The most significant reasons for using a credit card were “ease of payment”, followed by “risk of carrying cash”, Non holders do not carry credit cards because they do not know much about it; informal sources of information appear to be more influential than mass media advertising in penetrating the market; proposes that the usage and the administration of credit cards are influenced very much by the infrastructure of the country and therefore, credit card companies have to re appropriate their marketing and administrative procedures rather than following a standardized approach.

Mathur and George (1994), “Use of credit-cards by older American” shows the usage behavior pattern of older people with credit card spending. Using a large national sample of respondents from different age groups, finds that older adults use credit cards as frequently as younger adults when circumstances for consumption in both groups are similar. Contrary to it, the commonly held belief that older people do not use credit cards, the data suggests the need for practitioners to stop thinking about consumer targets in terms of age and focus more on circumstances that determine one’s likelihood to use credit cards. Factors such as income, employment, retirement status, shopping habits should be considered. While credit card usage may overall decline with age, certain segment of mature consumers continues making use of credit cards throughout the life.

Kaynak (1995), “Correlates of credit card acceptance and usage in an advanced developing Middle Eastern Country.” Study shows that with the surge of technological developments, innovation and increase in the level of socio-economic progress the acceptance of credit cards and usage has increased like anything.

An empirical research study conducted in urban Turkey indicates that there are certain relationship between socio-economic and demographic characteristics of Turkish consumers and their credit card holding and usage behaviours. It was observed that one of the determinants of credit card use is related to the age of the family head and family life–cycle stage. Generally, those household heads who are in middle and upper age having large discretionary income level are more likely to use credit cards. This may be termed a social class effect of credit card usage and acceptance. Despite most of credit card users are urban dwellers, more educated with professional type of jobs, and high income earners. Authors feel that targeting more people to use credit cards is indeed a marketing challenge.

DATA ANALYSIS & INTERPRETATION

Table 1 Demographic profile of the respondents

Particulars	categories	No of respondents	percentage
Age	21-30 years	45	75
	31-40 years	9	15
	41-50 years	3	10
	51 & above	3	10

Gender	Male	32	53.3
	Female	28	46.7
Education	Intermediate	10	16.6
	Graduate	17	28.4
	Postgraduate	33	55.0
Annual Income	Rs.200000 - Rs.300000	29	48.3
	Rs. 300001 - Rs.400000	17	28.3
	Rs. 400001 - Rs.500000	8	13.4
	Above 500001	6	10.0
Profession	Service	30	50.0
	Business	10	16.6
	Profession	15	25.0
	Any other	5	8.34

Source: Primary Data

75% of the respondents are in the age group of 21 to 30, 53.3% of the respondents are Male, 55% of the respondents are post-graduates, 50% of the respondents have been working in service area and 48.3% of the respondents earn annual income ranging from 200000 to 300000.

Table 2 Preference regarding usage of Mobile Banking option for purchasing products/services.

Product/Services	No: of respondents	Percentage
Books	4	6.7
Movie Tickets	6	10.0
To pay bills	10	16.7
Railway/Bus reservation	5	8.3
Cloths	2	3.3

Recharge Mobile & DTH	12	20.0
To transfer Money	17	28.3
Buy Electronic products	4	6.7

Source: Primary Data

As per the above table, 28.3% majority of the respondents preferred to use mobile banking to transfer money followed by Recharging mobile or DTH payment and so on.

Table 3 Related to factors influencing to opt for Mobile Banking payments

Factors Influencing to opt for Mobile Banking Payments	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
Instant Payments	0	0	0	06(10%)	54(90%)
Reputation of the company	0	0	02(3.3%)	16(26.7)	42(70%)
One stop shop	0	1(1.7%)	8(13.3%)	21(35%)	30(50%)
Seamless process	0	2(3.3%)	7(11.6%)	19(31.6)	32(53.3)
Instant Refunds	0	0	0	10(16.6%)	50(83.3%)
Rewards and offers	0	0	08(13.3%)	12(20%)	40(60.6%)

Source: Primary data

From the above table it is clear that 90% of the respondents believe that instant payments is an important factor to opt for Mobile banking payments and 83.3% of the respondents look over the instant refund one of the factor provided by the mobile banking.

Table 4 Factors refraining the usage of Mobile Banking

Factors refraining the usage of Mobile Banking	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
Prefer to use other cashless payment option	0	6(10%)	9(15%)	20(33.3%)	25(41.7%)
concerned about the security of Mobile Banking	5(8.3%)	7(11.7%)	8(13.3%)	10(16.7%)	30(50%)
don't see value in Using Mobile Banking	5(8.3%)	9(15%)	24(40%)	12(20%)	10(16.67%)
The cost of data access on wireless plan is too high	8(13.3%)	4(6.7%)	9(15%)	17(28.3%)	22(36.7%)
Possibility of information theft during wireless transmission at point of sale	5(8.3%)	5(8.3%)	7(11.7%)	23(38.3%)	20(33.4%)

Source: Primary Data

From the above table No.4 it shows that 50% of the respondents are strongly agree that they are concerned about the security of Mobile payments and 42% prefer strongly agree that they prefer to use other cashless payment option.

Table 5 Overall preference towards Mobile Banking

Particulars	No. of respondents (n=60)	Percentage
Low	33	55
High	27	45
Mean:117.95/Median:114.50/S.D:11.322/Min:89/Max:146		

Source: primary data

The overall preference towards Mobile Banking with reference to the city is low.

Table No. 6 Chi-Square test on association between age of the Respondents and their opinion about usage of Mobile Banking

Age	Overall usage of			Statistical Inference
	Low (n=33)	High (n=27)	Total (n=60)	
21 to 30 years	22 (66.7%)	23(85.2%)	45 (75%)	X ² =5.589 Df=3 .133>0.05 Not
31 to 40 years	5 (15.2%)	4 (14.8%)	9 (15%)	

41 to 50 years	3 (9.1%)	0	3 (5%)	Significant
51 years & above	3 (9.1%)	0	3 (5%)	

Source: Primary Data

Research hypothesis: There is a significant association between age of the respondents and their opinion about the usage of Mobile banking

Null hypothesis: There is no significant association between age of the respondents and their opinion about the usage of Mobile banking.

Findings: The above table reveals that there is no significant association between age of the respondents and their usage of Mobile banking. Hence, the calculated value greater than table value ($p > 0.05$). So the research hypothesis is rejected and the null hypothesis is accepted.

Table 7 Chi-Square Test on association between preferable products/Services by the Respondents and their opinion about overall usage of Mobile Banking

Preference regarding usage of Mobile Banking for Purchasing products/services.	Overall usage of Digital wallets			Statistical Inference
	Low (n=33)	High (n=27)	Total (n=60)	
Books	4(12.1%)	0	4(6.7%)	Df=7
Movie Tickets	3(9.1%)	3(11.1%)	6(10%)	.326 > 0.05 Not Significant
To pay bills	4 (12.1%)	6(22.2%)	10(16.7%)	Significant
Railway/Bus reservation	1 (3%)	4(14.8%)	5(8.3%)	
Cloths	1 (3%)	1(3.7%)	2 (3.3%)	
Recharge Mobile or DTH	8 (24.2%)	4(14.8%)	12 (20%)	
To transfer money	9 (27.3%)	8(29.6%)	17(28.3%)	
Electronic products	3 (9.1%)	1(3.7%)	4(6.7%)	

Source : Primary Data

Research hypothesis: There is a significant association between preferable products/services by the respondents and their opinion about overall usage of Mobile Banking

Null hypothesis: There is no significant association between preferable products/services by the

respondents and their opinion about overall usage of Mobile Banking

Findings: The above table reveals that there is no significant association between preferable products/services by the respondents and their opinion about overall usage of Mobile Banking. Hence, the calculated value greater than table value ($p > 0.05$). So the research hypothesis is rejected and the null hypothesis is accepted.

Table 8 T-Test on Difference between Gender of the Respondents and their opinion about Overall usage of Mobile Banking.

Overall preference for Mobile Banking	Mean	S.D	Statistical Inference
Male(n=32)	118.13	12.725	T=.127 Df=58 .899>0.05 Not Significant
Female(n=28)	117.75	9.702	

Source : Primary Data

Research hypothesis: There is a significant difference between gender of the respondents and their opinion about overall usage of Mobile Banking

Null hypothesis: There is no significant difference between gender of the respondents and their opinion about overall usage of Mobile Banking

Findings: The above table reveals that there is no significant difference between gender of the respondents and their opinion about overall usage of Mobile Banking. Hence, the calculated value greater than table value ($p > 0.05$). So the research hypothesis is rejected and the null hypothesis is accepted.

CONCLUDING REMARK AND RECOMMENDATION

Cash as a mode of payment is an expensive proposition for the Government. The country needs to move away from cash-based towards a cashless (electronic) payment system. This will help reduce currency management cost, track transactions, check tax avoidance / fraud etc., enhance financial inclusion and integrate the parallel economy with main stream. Additionally as the Mobile Banking usage crosses the boundaries of big cities and gains popularity into the hinterland, the electronic

payment system will generate huge volumes of data on the spending behaviour of persons in these areas.

Finally, considering the advantages the mobile banking payment system generates over the paper based payment system, the study looks into few of the impediments and recommends some measures so as to promote the growth of the digital wallet payments:

1. There should be inter-operability between different Mobile Banking Applications.
2. As most of respondents are concerned about the security of digital payments, the security system should be strengthened so that people won't scare about their money and transactions.
3. The numbers of merchants currently listed are limited; therefore the mobile Banking should expand their horizons towards other untapped merchants.
4. The Mobile Banking may also introduce credit facility to the loyal customers looking into their usage.
5. The usage of digital wallets is still at nascent stage only 36.7% of the internet users go for Mobile banking, therefore the Banks should promote the same through their marketing and advertising campaign.

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