

# Consumer Perceived Value (CPV) On Mobile Banking – A Study on Selected Commercial Banks in Bangalore

Abraham P Kuruvilla (M.Com FA)

*Kristu Jayanti College*

**Abstract:-** The main purpose of this study is to throw a light on the consumer perceived value on the core facets that are closely associated with the mobile banking provided by commercial banks in Bangalore. Mobile banking is mostly viewed as the provision of banking services via mobile banking other than traditional physical branches. This empirical study was exclusively carried out in Bangalore via a structured questionnaire with a five-point Likert scale. This study was conducted on 134 gratification consumers of mobile banking and they were conveniently sampled from Bangalore on the basis of purposive sampling technique. The core facets that are underlying mobile banking were empirically identified as the ease of use, convenience, trust & reliability, access cost, time savings, privacy & security and government supports on cashless economy.

The outcome of this study clearly revealed that most of the indicative statements pertaining to the core facets that are associated with mobile banking were highly significant from the perspectives of consumer gratification. Out of seven research constructs, the „trust & reliability“ and „privacy & security“ were perceived as the significant threats of accessing mobile banking, which remarkably affected the consumers“ gratification value on the mobile banking services. Meanwhile, ease of use, convenience, time savings, access cost and Government supports on cashless economy were the core basis of consumer gratification to access mobile banking.

## 1. INTRODUCTION

Mobile banking is mostly viewed as the provision of banking services via mobile banking means other than traditional physical branches. Currently, mobile banking exists in the forms of ATM, phone banking, home banking and Internet banking. The evolution of mobile banking has gained an impetus in this modern era of global economy. Commercial banks have traditionally been in the forefront of harnessing technology to improve their products, services and efficiency. They have, over a long time, been using electronic and telecommunication networks for delivering a wide range of value added banking products and services. The delivery channels may include private networks and the devices such as Telephone, Personal Computers (PCs), Automated Teller Machines (ATMs), mobile phones, wallets, etc.

With the popularity of PCs, easy access to Internet and World Wide Web (WWW), Internet is increasingly used by commercial banks as a channel for receiving instructions and delivering their products and services to their customers accurately and speedily. This form of banking is generally referred to as mobile banking, although the range of products and services offered by different banks vary widely both in their content and sophistication. Mobile banking, both as a medium of delivery of banking services online and as a strategic tool for business development, have gained wide acceptance internationally and is fast catching up in India with more and more banks entering the fray.

Mobile banking is broadly defined in this study as the provision of banking services via mobile

banking means other than traditional physical branches. Currently, mobile banking exists in the forms of ATM, phone banking, home banking and Internet banking. Mobile banking can also be defined as a bank without branch which offers its services by means of individual computers or electronic tools, ATM and telephone.

Today, India can be said to be on the threshold of a major mobile banking revolution with net banking having already been unveiled. Nowadays, the internet technology is rapidly changing the design and delivery of banking and financial services. Electronic services offer consumers a number of information-related benefits that favour adoption of mobile banking. These benefits include the opportunity to control bank accounts at any time and place, the access to personalized information for taking investment decisions and the comparison between alternate services (Durkin & Howcroft, 2013).

This study examines the consumers“ perceived value on mobile banking and to explore the significant aspects that are oriented with mobile banking provided by banks in Bangalore. Also, this paper assesses whether the perceived value of mobile banking in Bangalore was constrained by the technology, particularly on the basis of different demographic characteristics, such as gender, age, marital status, education level, occupation, monthly income level, computer literacy, smart phone availability, and internet accessibility at home/office. Findings of this study are useful for the banking sector in formulating appropriate strategies to meet or exceed customer satisfaction,

build customer loyalty and retain the potential customers.

## **2. REVIEW OF LITERATURE**

Last decade was a happy time for the Indian economy to look forward from the perspective of digital economy. The growing middle class city population experienced a new growth in finance, encouraging consumers to do more banking transactions. Thanks to the simultaneous rapid development of the high speed internet service, banking operations have seen fundamental changes and a quantum jump.

According to Daniel (2014), the provision of customer interactivity is an important criterion that attracts consumers in the delivery of mobile banking. Cunningham & Gerrard (2016) also identified other factors of paramount importance in ensuring the success of mobile banking, namely ease of use, convenience, trust & reliability, cost effective, time savings, and privacy & security. In the context of the mobile banking, e-service quality is defined as a consumer's overall evaluation and judgment on the quality of the services that are delivered through the internet (Liao, Yen & Li, 2014; Santos, 2013). Based on this, e-service quality has been conceptualized as a base for interactive information service (Ghosh, Surjadjaja & Antony, 2014). For this reason, Freeman & Rolland (2010) suggested that the conceptualizations of e-service quality must be expanded to the global level and e-service quality needs consideration on all aspects of the banking transaction, including service delivery, customer service and support.

To sustain in long-term relationships, banking institutions have to embrace the concept of customer satisfaction. As supported by McMahan (1996), for banks to survive in the electronic banking era, the retail banks will have to earn consumer loyalty through product features and services excellence. Customers perceived fears of divulging personal information to web sites might be misused by internet hackers over the internet, especially for financial transactions (Sathye, 2015; Aladwani, 2001).

Obviously, customers have doubts about the trustability of the e-bank's privacy policies (Cunningham & Gerrard, 2016). Trust has striking influence on consumer's willingness to engage in online exchanges of money and personal sensitive information (Freeman & Rolland, 2010; Wang et al., 2015). Security and privacy are two important dimensions that may affect consumers' intention to adopt e-based transaction systems. Perceived usefulness is defined as the extent to which a person believes that using a system enhances job performance, while perceived ease of use is defined

as a person believes that using a system will be free of effort (Wang et al., 2015).

In light of current prevalence of mobile banking, commercial banks have been trying to popularize and improve their mobile banking systems (Wang et al., 2015). The increasing use of mobile banking as an additional channel of marketing banking services has significantly improved the financial performance of the community banks (Acharya, Kagan, & Lingam, 2016). While commercial banks are fully experienced in capturing economies of scale, developing the business in international trade, increasing market potential and creating „brand" image with the physical side of their operations, mobile banking presents a different set of challenges (Cheng, Lam, & Yeung, 2014). Moreover, the banks with poor online services are bound to lose its competitive edge to those who invest in mobile banking system (Amin, 2007).

The present study focuses on exploring the consumers' perceived value on various core aspects of mobile banking offered by commercial banks in Bangalore. According to various academic literatures on internet banking and/or mobile banking, the core facets discussed in this study were observed to be the key in exploring consumers' perceived views on mobile banking and they appeared to be extremely significant in the context of the present study. The proposed conceptual framework examines the causal relationship between seven research constructs such as ease of use, convenience, trust & reliability, access cost, time savings, privacy & security, and Government Supports.

## **3. METHODOLOGY OF THE STUDY**

The primary purpose of this study is to explore the consumer perceived value on the core facets that are closely associated with mobile banking rendered by commercial banks in Bangalore. In order to realize purpose of this study, the following two hypotheses were effectively framed by the researchers.

□ H1: The consumers, who are inclined to use the updated technology, are likely to access the mobile banking provided by commercial banks in Bangalore.

□ H2: Test for a significant difference in the perceived value of the consumers on various core facets of mobile banking on the basis of their demographic characteristics.

From the relevant literatures of this study, seven critical dimensions of mobile banking were identified, namely (i) ease of use, (ii) convenience, (iii) trust & reliability, (iv) access cost, (v) time savings, (vi) privacy & security, and (vii) Government Supports. The structured questionnaires with five-point Likert scale were

administered to a total number of 300 respondents sampled from major areas of Bangalore on the basis of purposive sampling technique.

To assure the convenience and avoid the bias, the questionnaires were effectively administered to the consumers who were highly exposed to mobile banking rendered by commercial banks in Bangalore. The questionnaires were distributed to the respondent's face-to-face and the response rate was quite satisfactory. To ensure content validity, the items used in the questionnaire were constructed on the basis of the extensive literatures as discussed above. To assure their views properly on the subject, the screening questions were asked to ensure that the respondents have been accessed mobile banking before responding the questionnaires.

#### **Findings of the Study**

The major findings of this study can include demographics of the sample, descriptive statistics & reliability of the research variables, and one-way ANOVA results of the research variables.

#### **Demographics of the Sample**

The structured questionnaires were administered to a total number of 300 respondents in Bangalore. The response rate of this empirical survey is 44.8 percent and among 300 samples, 134 samples were productive and usable as all the indicative items in the questionnaire were adequately responded. A most of the sample respondents (56.8 percent) are male respondents and remaining 43.2 percent are female. A majority of the sample respondents (43.5 percent) are in the age group of 25-35 years of age, 32.8 percent belong to the age group of above 35 years, and 23.7 percent fall in the age group of below 25 years. While 44.2 percent are married, 55.8 percent are single.

The survey shows that majority of the sample respondents (40.6 percent) are post graduates, 36.8 are degree holders, and 22.6 percent are diploma holders. The most of the sample respondents (42.2 percent) are employed in private companies, 21.3 percent are professionals, 12.4 are employed in Government companies, and 24.1 percent are business men. A majority of the sample respondents (38.0 percent) have a moderate monthly income level of Rs.30,000 to Rs.50,000, 33.9 percent have a monthly income of below Rs.30,000 and 28.1 percent have a monthly income of above Rs.50,000.

While a majority of the sample respondents (62.9 percent) have computer literacy and have the experience of surfing the internet and 37.1 percent have only the experience of surfing the internet and don't have computer literacy. The most of the sample respondents (64.0 percent) are not able to access the internet at work place and 36.0 percent

are able to access the internet at home/office. More than 60 percent of the sample respondents (71.6 percent) are holding smart phones and remaining 28.4 percent don't have the smart phones, but access internet at office/home.

#### **Descriptive Statistics & Reliability Test**

The Table 1 portrays a set of perspective statements concerning core facets of mobile banking. When the sample respondents were requested to rate their level of agreement with each of the perspective statements on a 5-point Likert scale, the consequent responses obtained in this regard were presented in Table 1. According to Table 1, the results were found to be very different from the mid-value 3.0.

With regard to Ease of Use (EU), it was obviously found from the Table 1 that there was a higher level of concurrence among the sample respondents for the indicative statement "It is easy for me to learn how to use mobile banking" with a highest mean score of 4.36 and standard deviation of 1.174. Followed by, "I don't need someone's help to access mobile banking" with a mean score of 4.25, and "It is easy to use mobile banking for all my banking transactions" with a mean score of 4.05.

In respect of Convenience (C), it was obvious from the Table 1 that there was high level of agreement observed among the sample respondents for the indicative statement "It is highly convenient to access mobile banking while doing my banking transactions" with a highest mean score of 4.18. Linked to this, the other significant indicative statements concerning the convenience of mobile banking found to have a mean score of more than mid-value 3.0 were "Overall, mobile banking is more convenient than other means of doing banking transactions (mean= 4.11)", and "I feel trendy to use mobile banking nowadays (mean= 4.08)".

With respect to Trust & Reliability (TR), the mean responses of the sample respondents for all the indicative statements concerning trust & reliability of mobile banking were observed to be less than the mid value 3.0. Among these, the mean response was found to be relatively high for the indicative statement "Mobile banking is trustworthy (Mean Score= 2.74).

With respect to Access Cost (AC), the mean level of agreement among the sample respondents was found to be higher than the mid value of 3.0 for the indicative statements "Fees & charges on mobile banking are less (Mean Value = 3.64)", and "The cost of telecommunication connectivity is reasonable and affordable (Mean Value = 3.59)".

With regard to Time Savings (TS), it was obviously found from the Table 1 that there was a higher level of concurrence among the sample respondents for the indicative statement "Mobile banking helps me to complete my transactions

quickly” with a highest mean score of 4.16. Followed by, “Overall, mobile banking saves me time” with a mean score of 4.12, and “Mobile banking minimizes the magnitude of time for doing my banking transactions” with a mean score of 4.03.

In respect of Privacy & Security (P&S), the mean agreement level of the sample respondents for all the indicative statements concerning privacy & security of mobile banking was found to be less than the mid value 3.0. Among these, the mean response was found to be relatively high for the indicative statement “I always feel safe providing personal & private information via mobile banking (Mean Score= 2.56)”.

With respect to Govt. Supports (GS) initiated by the Government for encouraging and motivating digital or mobile banking among people, the mean level of agreement among the sample respondents was found to be more than the mid value of 3.0 for the indicative statements “Government encourages and promotes the usage of mobile banking (Mean Value = 3.68)”, and “Government shows keen interest in creating a mobile banking ecosystem in the country (Mean Value = 3.25)”.

**Table 1: Descriptive on Consumer Perceived Value on Core Facets of Mobile banking**

Core Facets	Mean Score	S.D
<u>Ease of Use:</u>		
1. It is easy for me to learn how to use mobile banking.	4.36	1.174
2. It is easy to use mobile banking for all my banking transactions.	4.05	1.113
3. I don't need someone's help to access mobile banking	4.25	1.168
<u>Convenience:</u>		
1. It is highly convenient to access mobile banking while doing my banking transactions.	4.18	1.035
2. I feel trendy to use mobile banking nowadays.	4.08	1.003
3. Overall, mobile banking is more convenient than other means of doing banking transactions.	4.11	1.036

<u>Trust &amp; Reliability:</u>		
1. Mobile banking is trustworthy	2.74	0.854
2. Mobile banking is highly reliable to secure my transactions.	2.42	0.752
3. Overall, I fully trust and rely on mobile banking.	2.42	0.752
<u>Access Cost:</u>		
1. The cost of telecommunication connectivity is reasonable and affordable	3.59	0.946
2. Fees & charges on mobile banking are less.	3.64	0.841
<u>Access Cost:</u>		
1. Mobile banking helps me to complete my transactions quickly.	4.16	0.856
2. Mobile banking minimizes the magnitude of time for doing my banking transactions.	4.03	0.958
<u>Privacy &amp; Security:</u>		
1. I always feel safe providing personal & private information via mobile banking.	2.56	0.698
2. I am not panic to use mobile banking because of online frauds.	2.37	0.856
3. I don't feel mobile banking is riskier than conventional banking	2.43	0.742
<u>Govt. Support:</u>		
1. Government encourages and promotes the usage of mobile banking.	3.68	1.229
2. Government shows keen interest in creating a mobile banking ecosystem in the country.	3.25	1.210

**ANOVA on Core Service Facets of Mobile banking**

The descriptive statistics such as Mean ( $\mu$ ) and Standard Deviation ( $\sigma$ ) were computed to determine the nature of the research variables in response to consumers' perceived value on the mobile banking offered by commercial banks in Bangalore. The Table 2 indicates a set of seven research constructs concerning the consumers' perceived views on mobile banking. When the respondents were requested to rate their level of agreement with a set of statements using a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree), the consequent responses obtained in this regard were presented in Table 2 along with the results of One-Way ANOVA and reliability test.

According to Table 2, the results were found to be very different from the mid-value 3.0. Of these seven constructs, "Ease of Use" was observed to be the significant construct with the highest mean score of 4.22 with respect to the consumers' perceived value on the mobile banking rendered by commercial banks in Bangalore. Followed by, the other significant constructs identified with the help of this study were "Convenience" with the mean score of 4.12, "Time Saving" with the mean score of 4.10, "Access Cost" with the mean score of 3.62, "Government Supports" with the mean score of 3.47. On the other hand, the constructs "Privacy & Security" and "Trust & Reliability" were found to be highly insignificant with the lowest mean score of 2.45 & 2.60 in response to the consumers' perceived value on the quality dimensions of mobile banking services provided by commercial banks in Bangalore.

**Table 2: Descriptive Statistics and ANOVA on Core Facets of Mobile banking**

S. N O	Dimensio ns	Mea n Score	SD	F- valu e	p- value	Si g.
1	Ease of Use	4.22	1.254	32.04	0.031*	Si g.
2	Convenience	4.12	0.965	35.11	0.021*	Si g.
3	Trust & Reliability	2.60	0.754	22.46	0.059**	Not Si g.
4	Access Cost	3.62	1.235	28.75	0.036*	Si g.
5	Time Savings	4.10	1.056	33.45	0.028*	Si g.

6	Privacy & Security	2.45	0.623	17.27	0.068**	Not Si g.
7	Government Supports	3.47	0.958	27.23	0.039*	Si g.

**One-Way ANOVA of Research Variables**

The second hypothesis (H2) of this study was framed to test for a significant difference in the consumers' perceived value regarding various facets of mobile banking on the basis of their demographic characteristics. To examine if demographic variables influence the consumers' perceived value on various facets of mobile banking, the relationships between various demographic variables were tested with one-way analysis of variance (ANOVA). The results were presented in Table 3.

On the basis of frequencies and percentages of the demographic profile, meaningful light of conclusion can be derived. Results of the one-way ANOVA show that the different age group, education level, income level, computer literacy, internet accessibility at office/home of the sample respondents were found to have the significant relationships with the consumers' perceived value on various aspects of mobile banking such as ease of use, convenience, trust & reliability, access cost, time savings, privacy & security, and Government supports.

**Table 3: Relationship between Demographic Variables and CPV on various Core Service Aspects of Mobile banking Services**

S.NO	Demographic Variables	F-value	p-value	Sig.
1	Gender	6.233	0.425**	Not Sig.
2	Age	10.243	0.041*	Sig.
3	Marital status	5.144	0.512**	Not Sig.
4	Education level	11.341	0.038*	Sig.
5	Occupation	8.264	0.052**	Not Sig.
6	Income level (monthly)	12.215	0.032*	Sig.
7	Computer literacy	13.256	0.024*	Sig.

8	Internet accessibility at office/home	12.253	0.030*	Sig.
9	Smart phone availability	4.326	0.564*	Not Sig.

**4. CONCLUSION**

As the paradigm of IT and telecommunication rapidly changes the fabrics of banking sectors in today’s age of modern era, the operation of mobile banking has become more indispensable, paramount and diversified in the fierce competitive environment of business. Specializing in unlimited, speedy and convenient services, mobile banking has transformed the conventional system of banking in many developed and developing countries. Mobile banking is becoming increasingly popular due to precision, convenience and flexibility it offers. Banks are forced to offer mobile banking services to enhance its banking operations and achieve the cost advantage.

The present study, exploratory in nature, was designed to empirically examine the consumers’ perceived value on mobile banking rendered by commercial banks in Bangalore and to explore a conceptual framework that throws a lime light on the salient facets that are closely associated with the mobile banking. This exploratory study was exclusively employed to extract the core facets that are significantly affecting the service quality dimensions of the mobile banking. They are empirically identified as ease of use, convenience, trust & reliability, access cost, time savings, privacy & security, and Government supports.

**REFERENCES**

[1] Abdul Kadir, H. (2011), “Impacts of service quality on customer satisfaction: study of mobile banking and ATM services in Malaysia”, *Int. J. Trade. Econ. Fin.*, Vol. 2, No. 1, pp. 62-74.

[2] Abdullah, M.A.A. (2005), “Security, perceptions, and practice: challenges facing adoption of mobile banking in Saudi Arabia”, PhD dissertation, The School of Engineering and Applied Science, The George Washington University, Washington, DC.

[3] Acharya, R. N., Kagan, A. & Lingam, R. S. (2016), “Mobile banking application and community bank performance. The International Journal of Bank Marketing, Vol. 26, No. 6, pp. 418-439.

[4] Aladwani, A. (2016), “Mobile banking: a field study of drivers, development challenges and expectations”, *International Journal of*

*Information Management*, Vol. 21, No. 3, pp. 213-25.

[5] Amin, H. (2007), “Internet banking adoption among young intellectuals”, *Journal of Internet Banking and Commerce*, Vol. 12, No. 3, pp. 1-13.

[6] Angelakopoulos, G. & Mihiotis, A. (2011), “Mobile banking: challenges and opportunities in the Greek banking sector”, *Electronic Commerce Research*, Vol. 11, No. 3, pp. 297-319.

[7] Ashwini, U. & Geetika, N.T. (2008), “Mobile banking in India: issues and prospects”, *Journal of Bank Management*, Vol. VII, No. 2, pp. 47-61.

[8] Balachandher, K.G., Santha, V., Norhazlin, I. & Prasad, R. (2000), “Electronic banking in Malaysia: a note on evolution of services and consumer reactions”, *Journal of Internet Banking and Commerce*, Vol. 5, No. 1, pp. 75-86.