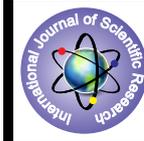


Customers Evaluation of Electronic Payments and Clearing System in Indian Banks



Commerce

KEYWORDS : E-Banking, E-Commerce, E-Payment

Ponmuthumari. S

24/12 Meenakshi Nagar, Porur, Chennai 600116

ABSTRACT

The process of deregulation and reforms in the Indian Banks resulted in the creation of an efficient and competitive banking system. The payment systems like card-based payment systems, ECS, EFT, RTGS, NEFT and CTS have offered a variety of services to the customers. During the last three years, all the electronic modes of payment have shown better growth than the physical check-based system. The Reserve Bank of India is, therefore, taking necessary steps to provide efficient and integrated payment and settlement system in the country and is also taking steps to mitigate the loss and risk. The present paper primarily aims to study the impact of electronic banking on payment and clearing system and identifies the important factors for the customers to choose electronic banking as a mode of payment.

Introduction

The banking sector is considered to be the backbone of the Indian economy. The economic reforms and the various e-banking techniques followed by the banks during the last decade strengthened their financial position. The studies on the performance of Indian payment System during the last three years indicate that in India, all the electronic modes of payment have shown better growth than the physical check-based system. The Reserve bank of India (RBI) is therefore, taking necessary steps to provide efficient and integrated payment and settlement system in the country and is also taking steps to mitigate the loss and risk.

Review of literature

Ashiya (2006) evaluated developments made by electronic payments. The author evaluated different modes of e-payment used across the globe. The main objective of the study was to find the current offerings and development provided by electronic payments. The author evaluated different modes of e-payment such as plastic cards, debit cards, credit cards, smart cards, electronic cheques etc. These electronic ways provided an excellent instrument for payment system. The author analyzed that security was the main concern among electronic payments. However, e-payment this sophisticated technology could be used as a tool for the enhancement of customer loyalty and business of banks as it had reduced the risk & cost and could increase the customer loyalty.

Ramani (2007) studied the impact of e-payment system on the Indian banking sector. E-payment facilities handling of large volume of business payments, hassle-free remittances, quicker and faster remittances at low cost, and paperless transactions.

Raja et al. (2008) evaluated the impact of e-payment system on the business opportunities. They identified that due to the growth of internet users, various electronic payment mechanisms had been developed to cater the diversity of applicants. The researcher identified three main issues related to e-payment that were security issues, low interest among businessmen, and heavy reliance on traditional payment methods. They also analyzed that there were technical and cultural problems which hinder the path of e-payments. However, to make e-payments more effective, security threats should be reduced; and people should be realized that traditional payment methods were more time consuming than electronic payment methods. They should also be realized that plastic card payments were more convenient, easier and more secure than cash or cheques.

However, there is no systematic and comprehensive analysis of the impact of e-banking on payment and clearing system in the Indian Banks. Therefore, this paper tries to fill this research gap and evaluates the impact of e-banking on payment and clearing system.

Objectives

The present paper primarily aims to study the impact of electronic banking payment and clearing system and identifies the important factors through factor analysis for the customers to

choose electronic banking as a mode of payment. The main objectives of the paper are to:

1. To study the customers' perception of e-payment services in the Indian banking sector.
2. To study the level of awareness and usage of e-payment techniques

Sampling and Data Analysis

The sampling population of this research includes 500 bank customers of nationalized and private banks in Thoothukudi district. Out of which 250 customers are from nationalized and remaining 250 from private banks.

The customers of five public sector banks, viz., State Bank of India, Bank of Baroda, Punjab National Bank, Canara Bank and Indian Bank, and five private sector banks, viz., ICICI Bank, HDFC Bank, AXIS Bank, TMB Bank, and City Union Bank, were selected and the rationale for selection of these banks was their asset base structure.

Stratified random sampling method is adopted for choosing the samples. The data collected through the questionnaire was analyzed by using factor analysis.

Impact of E-banking on Payment and Clearing System

To know the impact of e-banking on payment and clearing system, the response of customers has been also taken into account. An attempt has been made to know the satisfaction of the customers regarding e-payment system. The system has been beneficial in handling large volume of business payment/ remittances. It also provides alternative for faster delivery of banking services acceptable to wide range of customers.

Table 1
Mean and Standard Deviation of Customers Perception Regarding Payment System

Statements	Mean	S.D
E-payment handles a large volume of business/ payment/remittances.	4.96	0.920
E-payment provides alternative for faster delivery of banking services acceptable to wide range of customers	4.95	0.854
It provides convenient service to customer and reduces the chances of frauds	4.85	0.874
It has reduced the substantial risks involved in payment system.	4.43	0.986
E-payment solves the purpose of online purchasing, online shopping, and e-commerce	4.9	0.873
The transactions made through e-payment are faster, more accurate, secure and user-friendly.	4.76	0.953
Fees charged for e-payment are affordable.	4.74	0.835
E-payments are growing at faster speed than paper based instruments.	5.07	0.890
E-payment has helped to reduce the costs.	4.98	0.798
Customers are aware of emerging e-payment options.	4.81	0.729

Mean and standard deviation scores of all the dimensions of e-payment were calculated. The highest mean score, i.e., 5.07 was found for the dimension called 'e-payment growing at much faster speed than paper based instruments' (5.07) followed by the 'cost involved in payment system' with a mean score of 4.98. Customers also agree that 'e-payment handles a large volume of their payments' and provides them 'faster delivery of banking services. So, the respondents are agreeing with all the benefits facilitated by the e-payment system.

Variables influencing payment system

The factor influencing payment system has been analyzed with the help of factor analysis

Factor analysis has many alternative algorithms that can be used to extract factors out of a set of variables. The method used here is the principal components analysis. The primary decision in stage 1 of factor analysis is to decide how many factors to extract from the data. The sample rule of thumb normally used says that all factors with an Eigen value of 1 or more should be extracted.

In stage 2, the Rotated factor matrix is used to assign variables to factors and to interpret factors. This matrix should be viewed column wise. For each column factor the variables which have a high (close to 1) loading should be identified and a combined meaning for the factor found. This leads to a phrase which is the name given to the factor.

These factors can be used to design communication or marketing strategies. Factor analysis also provides an estimate of the variance explained by each factor, which can be used as a measure of its relative importance.

The score of the influencing variable leading to job satisfaction have been included for the factor analysis. The rotated component matrix for the influencing variables is given in the below table 2

Table 2
Rotated Component Matrix for the Variables Influencing Payment system

Sl. No.	Variables	Component			
		1	2	3	4
1.	Volume	0.830	0.012	0.084	0.096
2.	Fast delivery	0.815	0.032	0.055	-0.088
3.	Frauds	-0.082	0.073	0.746	-0.007
4.	Risk reduction	-0.025	0.827	-0.062	-0.080
5.	Online	0.399	0.392	-0.043	0.177
6.	Convenience	0.093	0.712	0.226	0.081
7.	Affordable	0.039	-0.151	0.392	0.655
8.	Growth	0.298	0.149	0.182	0.342
9.	Cost	0.303	0.068	0.661	0.068
10.	Awareness	0.052	-0.111	0.734	-0.705

Extraction Method: Principal component analysis
Rotation method: Varimax with Kaiser normalization

The above table mentions the KMO measure of sampling adequacy and Bartlett's test of sphericity. The value of KMO is greater than 0.5, hence, all the factors are not considered equally important for the study. Further, Bartlett's test of sphericity shows the significance at 0.000 levels.

The above table 2 indicates the rotated factor loading for the 10 variable. It is clear from the table that all the 10 variables have been extracted into 4 factors.

The number of variables in each factor, Eigen value and the percent of variation explained by the factor is presented in Table 3

Table 3
Factors Influencing E-payment system

S. No.	Factor	No. of variables	Eigen value	Percent of variation Explained	Cumulative percent of variation explained
1.	Component 1	2	3.426	34.257	34.257
2.	Component 2	2	1.934	19.335	53.592
3.	Component 3	2	1.755	17.555	71.147
4.	Component 4	2	0.809	8.092	79.239

Source: Primary data

With the help of principal component analysis varimax with Kaiser

Normalization, four components were extracted:

Component 1: Volume and Fast delivery

Component 2: Risk reduction and Convenience

Component 3: Frauds and Cost

Component 4: Affordable and Awareness

First component is the combination of 'Volume' and 'Fast Delivery' as e-payment has reduced the large volume of transactions through online settlement of funds and fast delivery of funds through RTGS.

Second component is the combination of 'risk reduction' and 'convenience'.

Third component is having two variables, namely, 'frauds' and 'cost'. It helps in reduction of the cost as well as control over the fraudulent activities.

Fourth component is having only one factor, that is, 'affordable' which means that fees of e-banking services can be easily affordable by all the customers.

Table 4
Level of satisfaction over the E-Banking Services

Perception	Frequency	Valid Percent	Cumulative Percent
Very uncomfortable	13	3	3
Somewhat uncomfortable	26	5	8
Neither comfortable nor uncomfortable	61	12	20
Somewhat comfortable	176	35	55
Very comfortable	224	45	100
Total	500	100	

The above table brings to light that 35 per cent of the respondents is somewhat comfortable while using the e-banking services whereas 45 per cent of the sample respondent is very comfortable over the services.

Table 5
Level of awareness among customers

Perception	Frequency	Valid Percent	Cumulative Percent
Very unsatisfied	16	3	3
Somewhat unsatisfied	26	5	8
Neither satisfied nor unsatisfied	44	9	17
Somewhat satisfied	244	49	66
Very satisfied	170	34	100
Total	500	100	

It is evident from table 5 that only 34 per cent of the customers are found to be very satisfied with their present level of awareness about the system, whereas 49 per cent are somewhat satisfied and they need to add more to their knowledge.

Table 6
Usage of E-payment Techniques

Time period	Frequency	Valid Percent	Cumulative Percent
Less than 6 months	48	10	10
6-12 months	93	18	28
1-2 years	106	21	49
2-4 years	123	25	74
More than 4 years	130	26	100
Total	500	100	

From the above table it is evident that out of 500 sample respondents, 26 per cent uses of e-payment more than 4 years and 25 per cent avails the service on 2 to 4 years.

Table 7
Improvement in Quality of Service

Perception	Frequency	Valid Percent	Cumulative Percent
Strongly disagree	4	1	1
Disagree	18	4	5
Neutral	100	20	25
Agree	191	38	63
Strongly agree	187	37	100
Total	500	100	

In table 7, an attempt is made to know whether e-banking has improved the quality of service or not. The table reveals that 37 per cent of the respondents strongly agreed and 38 per cent of the respondents agreed that e-banking has certainly improved the quality of service.

Conclusion

The anywhere and anytime banking become easier for the customers through various models of e-banking payments. Though the customers enjoy different benefits of e-banking, for the banks the electronic movement of funds makes less funds available for floating. No doubts , e-payment system in India has made a considerable growth still there is a large gap to be filled into for increasing the usage of e-payment. So it is imperative to enlarge the scope of e-banking by adopting new techniques, customer convenience, motivating rules and legal framework are the four factors leading to popularizing the e-payment system.

REFERENCE

1. Ashiya, M. (2006), "Electronic Payments: Current Offerings and Developments", Professional Banker, Vol. 10, No.1, September, pp. 55-62. | 2. Ramani D(2007), " The E-Payment Sytem", E-Business, Vol.7, No.5, Pp.35-41. | 3. Raja, J.; Velmurgan, S. M.; and Seetharaman, A. (2008)," E-payments: Problems and Prospects", Journal of Internet Banking and Commerce, April, Vol.13, No.1, pp.1-17.