

## **Impact of Technology in Banking Services**

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### **Abstract**

Banking system occupies an important place in a nation's economy. A banking institution is indispensable in a modern society. It plays a pivotal role in the economic development of a country. Thus, economic development of a country depends upon the success of its banking industry and this success is determined largely by understanding the needs and satisfaction of its customers. In the earlier societies functions of a bank were done by the corresponding institution dealing with loans and advances. The present study aimed that to know the impact of technology in banking services.

### **Introduction**

The banking and financial services sector is in a position to benefit most by leveraging technology and is a sector that has absorbed the technology to a great extent. Now a days a condition has reached in which this sector cannot survive without the support of information and communication technology. Banks, world over, have been effectively deploying information and communication technology as a strategic resource to achieve speed, efficiency, cost reduction, customer service and competitive advantage. Technology enabled banking services offer value to customers providing them with anywhere, anytime and anyway banking. Though these technological changes have been pioneered in India by new private sector and foreign banks, now such a situation has reached where even the traditional banks in the public sector and old private banks are increasingly pursuing technology-enabled services.

### **Need for the Study**

Technology has introduced new business paradigm. Current banking sector has come up with many initiatives that oriented to providing better customer services with the help of new technologies. Banking through technology has emerged as a strategic resource for achieving higher efficiency, control of operations and reduction of cost by replacing paper based and labour intensive methods with automated processes thus leading to higher productivity and profitability. Financial innovation associated with technological change totally changed the banking philosophy and that is further tuned by the competition in the banking industry. Challenging business environment within the banking system create more innovation in the fields of product, process and market. The rapid diffusion Indian banking sector provides a platform to use innovative technologies to enhance operational efficiency and quality of service to attain and retain customers. The rapid growth in use of technology in banks offers opportunities to banks to use customers' passion for this innovative service for strategic advantage.

### **Statement of the Problem**

The Indian banking Industry is an essential component of the service industries. At present, the core issues faced by banks are on the fronts of customer's service expectation, cutting operation cost and managing competition. For this, banks are exploring new financial products and service options that will help them to grow without losing existing customers. The technology alone can help the banks in meeting these objectives. Now-a-days, customers are being provided with multiple modes of accessing tech-savvy banking transaction, including tele-banking, mobile banking, Internet banking and ATMs. The banking industry like many other financial service industries face rapidly changing market, new technology, economic uncertainties, fierce competition and customers that are more demanding. The busy schedule of people requires greater importance for time management also. The changing climate has presented an unprecedented set of challenges. Banking, being a customer oriented service industry, the customer is the focus and customer service is differentiating factor. As additional problem of uninformed consumers is that they rarely know the right questions to ask. Even if they asked a good question, the answer might be so technical that the consumer would find it difficult to understand.

### **Objectives of the Study**

1. To know the expectation of respondents in using tech-savvy banking services in Erode district
2. To suggest better ways and means to enhance the better services

### **Review of Literature**

Karjaluoto (2002) evaluated the electronic banking adoption in Finland. The study showed that the proportion of people in Finland, who have adopted online banking, was higher than anywhere else in the world. All the Finnish banks offered a full range of internet banking services. The researchers also found that different people have different attitude towards new technology. Some were innovators, who were interested in new technology and positive towards it. Some were early adopters and some were late adopters who have negative attitude towards it. Laggards had extremely negative attitude towards it. The study also found that matured customers were late adopters of internet banking. Prakash R. Pillai (2008) attempted to analyze the influence of the human resource development climate existing in banks on the learning orientation of the bank employees. Capable employees are the greatest assets of all organization. The proficiency of employees plays an essential role in the context of the diverse challenges faced by the contemporary organizations.

### **Methods**

Research in common parlance refers to a search for knowledge. One can also define research as a scientific and systematic search for pertinent information on a specific topic. In fact, research is an art of scientific investigation. The present study used both primary as well as secondary data. For this research, ten public sector banks were selected in Erode district. From the ten public sector banks, each bank 60 customers were selected by using random sampling method. Field survey technique was employed to collect the pertinent data from the 600 selected sample respondents in Erode districts. Questionnaire was the main tool for collecting the data. The secondary data was also collected for the study. The data thus collected from the primary sources were arranged in the simple tabular statements. Factor analysis was used for the further analysis.

## Results

The expectation in using tech - perceptive banking services was studied by measuring opinion of the respondents through 20 statements of cognitive components, affective component and co native components. These 20 statements were chosen and classified in an orderly form, and factor analysis was employed and the detailed analysis and discussions are done at various stages.

In factor analysis, the analytical process is based on a matrix of correlation between the variables. Valuable insights can be gained from an examination of this matrix. If the factor analysis should be proper, the variables must be correlated. If the correlation between all the variables is very low and negligible, then the factor analysis may not be appropriate.

The result of the fitness test regarding factor analysis based on Inter Correlation Matrix has been presented in table 1.

**Table 1**

<b>KMO and Bartlett's Test</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.789
Bartlett's Test of Sphericity	Approx. Chi-Square	3592.464
	Df	190
	Sig.	.000

Table 1 exhibits the KMO results. If the values of this test stand very small or low, it indicates, that the correlation among the variables is not satisfactory and factor analysis will not be suitable. However, as apparent in table 4.46, the value is 0.759, which is not less than 0.5 and hence satisfactory. Therefore, the factor analysis for the present study is effective and suitable.

In the present study, the data matrix comprising a large number of identified variables, which are inter-related, have been tested for the amount of variance that each variable shares with all other variables and the same has been presented in table 2.

**Table 2**

<b>Communalities</b>		
	<b>Initial</b>	<b>Extraction</b>
Provide smoothen and free flow of Information	1.000	.530
Speed up of delivery time	1.000	.588
Make financial transaction easier	1.000	.615
Help to reduce errors and frauds	1.000	.607
Availability of sufficient guidance	1.000	.678
Help in customizing solutions to fulfill clients	1.000	.552
Each transaction password approved by customer	1.000	.546
Provide timely and better solutions	1.000	.732
Improve personal efficiency	1.000	.688
Provide service with reasonable changes	1.000	.534
Provide better quality products/services	1.000	.759
Provide innovative products/services with attractive facilities	1.000	.588
Hassle free transaction	1.000	.599
Quick connectivity	1.000	.524
Web page loads quickly	1.000	.684
Web security	1.000	.484
Usage of virtual keyboard	1.000	.459
Encryption technology	1.000	.673
Menu navigation with help	1.000	.695
Fast and effortless transaction with bank	1.000	.673
Extraction Method: Principal Component Analysis		

The communalities shown in table 2 measures the amount of variance, a variable shares with all other variables. It is a proportion of each variable's variance as explained by the principal component. A large communality means a large amount of the variance a variable has extracted by the factor solution. It shows that variables with a comparatively higher value are well represented in the common factor space, while the low value variables are not. Thus, the table indicates that the extracted communalities are high and acceptable for all the variables.

**Extraction Method: Principal Component Analysis**

It is necessary that the scale constructed and the components extracted should be able to explain the variance in the data. To analyse this variance, the eigen values are calculated. A low eigen value contributes very little to the explanation of the variances in the set of variables being analysed. The sum of eigen values, as expected, is equal to the number of variables being analysed.

To measure the important factors determining the expectation in using tech - savvy banking services, the initial eigen values, extraction sums of squared loadings and the rotation sums of squared loadings have been presented in table 3.

**Table 3**

<b>Total Variance Explained</b>									
<b>Component</b>	<b>Initial Eigen values</b>			<b>Extraction Sums of Squared Loadings</b>			<b>Rotation Sums of Squared Loadings</b>		
	<b>Total</b>	<b>% of Variance</b>	<b>Cumulative %</b>	<b>Total</b>	<b>% of Variance</b>	<b>Cumulative %</b>	<b>Total</b>	<b>% of Variance</b>	<b>Cumulative %</b>
1	5.158	25.789	25.789	5.158	25.789	25.789	2.459	12.297	12.297
2	2.196	10.980	36.769	2.196	10.980	36.769	2.426	12.132	24.430
3	1.608	8.041	44.809	1.608	8.041	44.809	1.927	9.637	34.067
4	1.164	5.819	50.628	1.164	5.819	50.628	1.915	9.574	43.641
5	1.065	5.326	55.954	1.065	5.326	55.954	1.902	9.511	53.152
6	1.017	5.083	61.037	1.017	5.083	61.037	1.577	7.885	61.037
7	.934	4.672	65.710						
8	.792	3.962	69.672						
9	.767	3.836	73.508						
10	.729	3.646	77.153						
11	.721	3.604	80.758						
12	.607	3.034	83.792						
13	.583	2.914	86.706						
14	.482	2.410	89.116						
15	.473	2.367	91.483						
16	.442	2.211	93.693						
17	.381	1.906	95.599						
18	.339	1.694	97.293						
19	.289	1.446	98.739						
20	.252	1.261	100.00						
Extraction Method: Principal Component Analysis									

From table No. 3, it was observed that the labelled “Initial Eigen values” gives the Eigen values. The Eigen value for a factor indicates the “Total Variance” attributed to the factor. From the extraction sum of squared loadings, it was learnt that the first factor accounted for a variance 5.158 which was 25.789 %, the second factor accounted for the variance 2.196 which was 10.980%, the third factor accounted for the variance 1.608 which was 8.041%, the fourth factor accounted for the variance 1.164 which was 5.819%, the fifth factor accounted for the variance 1.065 which was 5.326% and the sixth factor accounted for the variance 1.117 which was 5.083%. All these five factors put together showed the total percentage of the variance with 61.037.

**Determination of factors based on Eigen values**

In this approach, only factors with Eigen values greater than 4.00 are retained and the other factors are not included in this model. The six components possessing the Eigen values, which were greater than 4.00, were taken as the components extracted.

**Table 4**  
**Rotated Component Matrix**

Variables	Component					
	1	2	3	4	5	6
Web page loads quickly	.750					
Fast and effortless transaction with bank	.736					
Provide service with reasonable changes	.611					
Speed up of delivery time	.572			.466		
Menu navigation with help		.810				
Improve personal efficiency		.778				
Provide smoothen and free flow of Information		.669				
Quick connectivity		.561				
Provide better quality products/services			.834			
Web security			.556			
Make financial transaction easier			.504	.484		
Hassle free transaction			.448		.423	
Availability of sufficient guidance				.734		
Help in customizing solutions to fulfill clients				.648		
Provide innovative products/services with attractive facilities					.724	
Help to reduce errors and frauds				.417	.617	
Usage of virtual keyboard					.501	
Each transaction password approved by customer						
Encryption technology						.739
Provide timely and better solutions						.733
Extraction Method: Principal Component Analysis Rotation Method: Varimax with Kaiser Normalization						

The rotated component matrix shown in table 4 is a result of VARIMAX procedure of factor rotation. Interpretation is facilitated by identifying the variables that have large loadings on the same factor. Hence, those factors with high factor loadings in each component i.e. values greater than 0.4 were selected.

The statements 2, 10, 15 and 20 were grouped together as factor 1 and accounted for 25.789% of the total variance and have been named as 'Sensible'. The statements 1, 9, 14 and 19 were grouped together as factor 2 and accounted for 10.980% of the total variance and have been named as 'Rapid'. The statements 3, 11, 13 and 16 were grouped together as factor 3 and accounted for 8.041% of the total variance and have been named as 'Defense'. The statements 2, 3, 4, 5 and 6 were grouped together as factor 4 and accounted for 5.819% of the total variance and have been named as 'Assistance'. The statements 4, 12, 13 and 17 were grouped together as factor 5 and accounted for 5.326% of the total variance and have been named as 'Pretty'. The statements 8 and 18 were grouped together as factor 6 and accounted for 5.083% of the total variance and have been named as 'Expertise'. Thus, the factor analysis condensed and simplified the 20 statements and grouped them into 6 factors explaining 61.037% of the variability of all the statements.

From the analysis, it is evident that out of 20 statements of expectation in using tech - savvy banking services, 20 statements were grouped into 6 component factors and were termed as sensible, rapid, defense, assistance, pretty and expertise.

### **Suggestions**

1. It should also focus on doing its advertisement among public so that the people should be awarded of this bank and its new schemes and technologies
2. Proper training facilities should be provided to the bank employees to utilize the modern technologies
3. Mobile phone banking technologies in India as it stands now may be suitable to attract current Internet banking users, who are looking for a suitable channel, compatible with a busy lifestyle, in which there is little time to be visiting bank halls or ATM machines. However to distribute banking services to the less affluent part of the society, banks need to offer more time to try the service

### **Conclusion**

Today banking is known as innovative banking. Information technology has given rise to innovations in the product designing and their delivery in the banking and finance industries. Customer services and customer satisfaction are their prime work. Technology banking has emerged from such an innovative development. Banks today operate in a highly globalized, liberalized, privatized and a competitive environment. In order to survive in this environment banks have to use technology. Mobile banking and internet banking are the most advanced regions in new technology adoption and where technological advancement has been extended in banking services too. Based on the results, it is suggested that bank employees should be more sensitive and aware of the new technologies. Additionally, an effort should be made to improve banking services with modern technologies to the customers.

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