

Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks in Tamil Nadu

K.Shaik Mohamed Kasim¹, Dr.S.Nasar²

¹ Ph.D Research Scholar, ²Assistant Professor cum Research Supervisor

^{1,2} PG & Research Department of Commerce, Dr.Zakir Husain College, Ilayangudi, Affiliated to Alagappa University

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Abstract: Digital banking enhances convenience and efficiency by enabling customers to access banking services anytime and anywhere through digital platforms. It also promotes financial inclusion, cost reduction, and faster transactions, contributing to overall economic growth. The main objective of the study is to analyse the Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks in Tamil Nadu. Both Primary and secondary data has been used for the study. Primary data has been collected from structured questionnaire with sample size of 385. The findings of the study shows that The most important problems faced by customers while availing digital banking services is difficulty in using complex digital banking interfaces.

Keywords: Digital Banking, Convenient, Internet Connectivity, Mobile Applications, Digital Platforms.

1. INTRODUCTION

1.1 Introduction:

Digital banking refers to the delivery of banking products and services through electronic platforms such as the internet, mobile applications, automated teller machines (ATMs), and other digital channels without the need for customers to visit physical bank branches. With rapid advancements in information and communication technology, digital banking has transformed the traditional banking system by offering convenient, fast, and cost-

India, the adoption of digital banking has accelerated significantly over the past decade due to increased smartphone usage, improved internet connectivity, and supportive initiatives by the Government of India and the Reserve Bank of India. Services such as internet banking, mobile banking, Unified Payments Interface (UPI), digital wallets, online fund transfers, digital lending, and electronic bill payments have become an integral part of everyday financial transactions. Digital banking enhances customer convenience by enabling anytime-anywhere access to banking services, reducing transaction time, and minimizing operational costs for banks. Despite its numerous advantages, digital banking also presents challenges related to security, privacy, digital literacy, and technological infrastructure. Nevertheless, digital banking continues to play a crucial role in promoting financial inclusion, transparency, and efficiency in the banking sector. As technology evolves, digital banking is expected to further reshape the Indian financial system by offering innovative, secure, and customer-centric solutions.

1.2 Review of Literature:

Sinha and Singh (2024)¹ examined the factors influencing merchants' behavioural changes toward the adoption of mobile payment services. The study revealed that perceived experience was the most influential factor, followed by word-of-mouth learning, affecting merchants' intentions to use MPS both directly and indirectly, and offered practical implications for banks, payment service providers, and financial institutions.

Ashish (2018)² investigated the reasons for adopting digital payment systems in India using a sample of 110 respondents and also identified the problems faced by users while making digital payments. The study noted that issues such as corruption, black money, and difficulties in tracking transaction statements motivated the government to promote digital payments, as they enhance transparency and support the goal of a cashless economy. However, the findings revealed that lack of public awareness and knowledge, along with fears of hacking and financial loss, remain the major challenges to wider adoption.

Shamsher and Ravish (2017)³ examined customer perceptions and the influence of demographic factors on the adoption of digital payment modes in Delhi. Using purposive sampling, data were collected from 150 respondents, and statistical tools such as frequency analysis, ANOVA, and Cronbach’s alpha were applied. The study revealed that demographic variables, particularly education, significantly influence the adoption of digital payment systems, and concluded that the increasing use of smartphones and internet awareness has accelerated the adoption of digital payments.

1.3 Objective of the study:

The main objective of the study is to analyse the Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks in Tamil Nadu.

1.4 Research Methodology:

In customers point of view, the sample size has been derived 150 customers in each districts will be randomly selected in selected districts of Tamil Nadu. The sample collected from three districts such as Chennai, Coimbatore and Kancheepuram. Therefore, the sample size for the customers is 450.

1.4.1 Sources of Data:

For the purpose of the study the researcher collected both primary as well as secondary data.

1.4.2 Primary Data:

The Primary data are required to analyze the digital banking services offered by Indian Commercial banks. The data were collected from both bankers and customers by using well-structured questionnaire in the selected districts of Tamil Nadu.

1.4.3 Secondary Data:

The secondary data were collected from Journals, Magazines, Books and RBI Reports, Statistical Handbook of India, Government of India; NABARD and State level bankers committee in Tamil Nadu.

1.5 Data Analysis and Interpretation:

1.5.1 Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks – Rank Analysis:-

Rank analysis was performed on the mean score variables to identify which is the most influencing variable problems faced by customers while availing digital banking services in selected commercial banks. The Table 1.1 depicts the problems faced by customers while availing digital banking services in selected commercial banks by using rank analysis.

Table 1.1 Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks – Rank Analysis

S.No	Factors	Mean	Rank
1	Lack of awareness and digital literacy among customers	4.752	2
2	Fear of cyber fraud, hacking, and online scams	4.632	3
3	Security and privacy concerns related to personal and financial data	4.386	6
4	Technical issues such as server failure and app crashes	4.528	4
5	Transaction failures and delayed confirmations	4.418	5
6	Poor or unstable internet connectivity	3.891	7
7	Difficulty in using complex digital banking interfaces	4.856	1
8	Inadequate customer support and slow grievance redressal	3.528	8
9	Limited availability of digital banking services in rural and semi-urban areas	3.461	9
10	Hidden charges, transaction limits, and lack of transparency	3.321	10

Source: Primary Data

Lack of awareness and digital literacy among customers (4.856), Fear of cyber fraud, hacking, and online scams (4.752), Security and privacy concerns related to personal and financial data (4.632), Technical issues such as server failure and app crashes (4.528), Transaction failures and delayed confirmations (4.418), Poor or unstable internet connectivity (3.891), Difficulty in using complex digital banking interfaces (4.856), Inadequate customer support and slow grievance redressal (3.528), Limited availability of digital banking services in rural and semi-urban areas (3.461) and Hidden charges, transaction limits, and lack of transparency (3.321). The most important problems faced by customers while availing digital banking services is difficulty in using complex digital banking interfaces.

1.6 Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks – Factor Analysis:-

Factor analysis is a multivariable statistical technique that explains the inter relationship among the total set of observed variables. Factor analysis is a way of grouping of variables based on the inertia of common characteristics which would serve as a common denominator for such as classification. It is an analytical tool, which can aid in the preliminary investigation and in the interpretation of the relationship among a large number of inter-related and inter-dependent variables. The primary purpose of factor analysis is the resolution of a set of observed variables in terms of new categories called factors. Factor analysis may be useful for any one of the following functions.

- [1] It can point out the latent factors or dimensions that determine the relationship among a set of observed or manifest values.
- [2] Secondly the factor analysis is useful when things need to be grouped.
- [3] Finally, Factor analysis can be used for empirical clustering of observations.

There are different factors which influence the problems faced by customers while availing digital banking services in selected commercial banks such as Lack of awareness and digital literacy among customers, Fear of cyber fraud, hacking, and online scams, Security and privacy concerns related to personal and financial data, Technical issues such as server failure and app crashes, Transaction failures and delayed confirmations, Poor or unstable internet connectivity, Difficulty in using complex digital banking interfaces, Inadequate customer support and slow grievance redressal, Limited availability of digital banking services in rural and semi-urban areas and Hidden charges, transaction limits, and lack of transparency.

The respondents were asked to provide their opinion in the five point technique scaling of strongly Agree, Agree, Neutral, Disagree, and strongly disagree. The researcher has used the multivariate technique by name factor analysis in order to classify the related variables. This test can be applied only after finding out the suitability of data. Hence, **Kaiser – Mayer – Olkin (KMO)** is used to check the adequacy and suitability of the data for factor analysis. The test measures the sampling adequacy for each variable in the analysis. The sample size is always more and the data is appropriate for the factor analysis.

There are ten variables towards Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks. The researcher has decided to use the factor analysis. Before grouping the variables, the normality has to be ascertained. Hence for ascertaining the normality, KMO has been used. The (KMO) measures of sampling adequacy index are used to examine whether the data are appropriate to examine the factor analysis. The principal component analysis has been administered for grouping the variables of problems faced by customers while availing digital banking services in selected commercial banks. It is a method of data reduction. The proportion of the variance of a particular item due to common factor is called communality. The initial value of the communality in a principal component analysis is 1. The extraction of communalities estimate the variance in each variable accounted for the factors in the factor solution. The communalities value is below 0.4 which imply that the factor analysis is not appropriate, either to collect more data or to rethink which variables to include. If the KMO value lies between .7 and .8, it is good for factoring. Bartlett's test of sphericity is a test statistics used to examine the shape of normal distribution and also verify the smoothness of the curve. The Table 1.2 explains the test. They are Kaiser – Mayer – Olkin (KMO) measures of sampling adequacy and Bartlett's test of sphericity. It gives the statistics of KMO, Bartlett's test of sphericity and chi-square analysis of association, degrees of freedom and the probability value. The researcher has given 10 important variables identified with the help of factor analysis. Before making factor analysis the researcher tested the sampling adequacy with KMO test. The result of the KMO test is presented in the Table 1.2

Table 1.2: Kaiser – Mayer – Olkin (KMO) Bartlett’s Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.782
Bartlett's Test of Sphericity	Approx. Chi-Square	521.364
	Df	58
	Sig.	.000

Source: Primary Data

The above Table 1.1 shows that KMO value is 0.887. It indicates high value, which means factor analysis is useful for the present data. The significant value of Bartlett’s test of Sphericity is 0.000 which means it is less than 0.05 and indicates that there is a significant relationship among the variables exists. The result of KMO test and Bartlett’s test indicate that the present data is useful for factor analysis.

1.6.1 Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks – Communalities

The following Table 1.3 highlights the communalities of factor analysis about Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks. The given Table 1.3 shows the communality values of variables. It is regression values of each variable in scale, which are shared by all other variables. The cut off value for variables is 0.4. The variable below 0.4 values are not considered for further studies. In case all the variables have the value above 0.4, they will be considered further for factor analysis.

Table 1.3: Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks – Communalities

S.No	Components	Initial	Extraction
1.	Lack of awareness and digital literacy among customers	1.000	0.678
2.	Fear of cyber fraud, hacking, and online scams	1.000	0.756
3.	Security and privacy concerns related to personal and financial data	1.000	0.795
4.	Technical issues such as server failure and app crashes	1.000	0.689
5.	Transaction failures and delayed confirmations	1.000	0.856
6.	Poor or unstable internet connectivity	1.000	0.682
7.	Difficulty in using complex digital banking interfaces	1.000	0.656
8.	Inadequate customer support and slow grievance redressal	1.000	0.878
9.	Limited availability of digital banking services in rural and semi-urban areas	1.000	0.763
10	Hidden charges, transaction limits, and lack of transparency	1.000	0.754

*Source: Primary Data

The Table 1.3 shows the variance of the ten variables ranging from 0.600 to 0.891. It also shows that the ten variables exhibit a considerable variance from 50 percent to 90 per cent. Hence it is to be concluded that all these variables are capable of segmenting themselves with respect to the Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks.

1.6.2 Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks – Total Variance:

The total variance analysis is important to know the rotated sum of square value. The rotated three factors are determined based on the total Eigen value if the factor is greater than one. The total cumulative variance is explained by the total percentage of variance by each retained three factors. The Table 1.4 gives the individual variance of the predominant factors which emerge out of ten variables.

Table 1.4: Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks - Total Variance

Total Variance Explained						
Component	Initial Eigen values			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.218	43.285	12.386	4.284	30.456	30.456
2	6.608	47.196	47.196	2.914	17.314	47.772
3	1.523	10.879	58.076	1.898	12.486	60.258
4	1.005	7.181	65.257	2.581	11.286	71.544
5	0.948	6.774	72.031	1.384	10.521	82.065
6	0.354	2.526	93.403			
7	0.279	1.996	95.399			
8	0.254	1.811	97.210			
9	0.206	1.470	98.680			
10	0.185	1.320	100.000			

Extraction Method: Principal Component Analysis.

*Source: Computed (SPSS Statistics 2.0)

It could be seen from the Table 1.4, that Eigen values are greater than one for different factors. From this one, it is confirmed that, the ten variables are grouped into different predominant factors. The rotated sum of squared loading is greater than 50 per cent. The ten variables are reduced in to five predominant factors with the individual variances of 30.456, 47.772, 60.258, 71.544 and 82.065. It is also found that the total variance of 10 variables is greater than one.

1.6.3 Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks – Rotated Component Matrix

Factor analysis is a powerful technique which is used to identify the underlying dimensions for a set of variables. The main task is to reduce the number of variables in order to simplify subsequent analysis. Rotated component matrix is useful to identify the groups among the ten variables towards Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks. The Table 1.5 explains the rotated component matrix result of the factor analysis.

The rotated factor loading received by factors F1, F2, F3, F4 and F5 are presented in the Table.

Table 1.5 Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks – Rotated Component Matrix

S.No	Variables	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
1.	Lack of awareness and digital literacy among customers	.781				
2.	Difficulty in using complex digital banking interfaces	.826				
3.	Fear of cyber fraud, hacking, and online scams		.754			
4.	Security and privacy concerns related to personal and financial data		.789			
5.	Technical issues such as server failure and app crashes			.689		
6.	Transaction failures and delayed confirmations			.756		
7.	Poor or unstable internet connectivity				.841	
8.	Limited availability of digital banking services in rural and semi-urban areas				.762	
9.	Inadequate customer support and slow grievance redressal					.723
10	Hidden charges, transaction limits, and lack of transparency					.761

*Source: Computed (SPSS Statistics 2.0)

Factor-I:

The First factor consists of two variables related to Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks such as Lack of awareness and digital literacy among customers (.781), Difficulty in using complex digital banking interfaces (.826). So, all these Variables are termed as “**Digital Literacy**”.

Factor – II:

The Second factor consists of three variables related to Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks such as Fear of cyber fraud, hacking, and online scams (.754), Security and privacy concerns related to personal and financial data (.789). So, all these Variables are termed as “**Security and Trust Concerns**”.

Factor – III:

The Third factor consists of two variables related to Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks such as Technical issues such as server failure and app crashes (.689), Transaction failures and delayed confirmations (.756). So, all these Variables are termed as “**Technical and Transactional Problems**”.

Factor – IV:

The fourth factor consists of two variables related to Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks such as Poor or unstable internet connectivity (.841), Limited availability of digital banking services in rural and semi-urban areas (.762). So, all these Variables are termed as “**Infrastructure and Accessibility Constraints**”.

Factor – V:

The fifth factor consists of two variables related to Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks such as Inadequate customer support and slow grievance redressal (.723) and Hidden charges, transaction limits, and lack of transparency (.761). So, all these Variables are termed as “**Service Quality and Transparency Issues**”

1.6.4 Relationship between Age and Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks – ANOVA:

Analysis of Variance (ANOVA) is a statistical technique that is used to compare the means of more than two groups. The null hypothesis for this test is that there is no significant association between Age and Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks. The Table 1.6 deals with the association between the Age and Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks.

H₀: There is no significant relationship between the Age and Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks

Table 1.6 Relationship between Age and Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks – ANOVA

ANOVA						
Problems		Sum of Squares	Df	Mean Square	F	Sig.
Digital Literacy	Between Groups	38.267	2	19.133	23.215	.002
	Within Groups	474.733	383	.929		
	Total	513.000	385			
Security and Trust Concerns	Between Groups	6.844	2	3.422	2.265	.000
	Within Groups	506.156	383	.991		
	Total	513.000	385			
Technical and Transactional Problems	Between Groups	7.911	2	3.956	3.012	.000
	Within Groups	505.089	382	.988		
	Total	513.000	385			

Infrastructure and Accessibility Constraints	Between Groups	6.821	2	2.814	4.526	.014
	Within Groups	523.042	382	.872		
	Total	529.863	385			
Service Quality and Transparency Issues	Between Groups	9.842	2	4.218	2.891	.003
	Within Groups	483.212	382	.689		
	Total	493.054	385			

Source: Primary Data

The Table 1.6 reveals the ANOVA test results. Based on the result, the significant value is found to be lower than 0.05 for Digital Literacy, Security and Trust Concerns, Technical and Transactional Problems, Infrastructure and Accessibility Constraints and Service Quality and Transparency Issues. So, the null hypothesis is rejected and it is concluded that there is a significant relationships between the Age and Problems Faced by Customers While Availing Digital Banking Services in Selected Commercial Banks.

1.6.5 Conclusion:

The study concludes that difficulty in using complex digital banking interfaces is the most significant problem faced by customers while availing digital banking services. This highlights the need for banks to design user-friendly, simple, and intuitive digital platforms, along with improving digital literacy initiatives to enhance customer adoption and satisfaction. In addition, the findings suggest that inadequate awareness and lack of technical skills further intensify customers' difficulties in using digital banking services. Security concerns and fear of cyber fraud also negatively influence customers' confidence in digital platforms. Therefore, banks should focus on simplifying interfaces, strengthening security measures, and providing effective customer support to ensure wider acceptance of digital banking.

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