



Customer Preference Towards E- Banking Services Select Commercial Banks In Coimbatore City

KEYWORDS

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1.1 INTRODUCTION

Financial services are one of the largest and most important industries in developed economies. Among this, banking is the largest sector. There are several types of banks, such as retail banks, commercial banks, investment banks and credit unions. Increasingly other types of businesses such as supermarkets are also offering financial services.

Banks exist in a wide range of sizes and differ in the type and number of services they provide. Commercial banks dominate this industry, offering a full range of services for individuals and businesses, from safeguarding money and valuables to the provision of loans, credit, and bill payment services. This research largely covers the issues related to retail commercial banks which offer services such as current accounts, saving products and various types of loans to individuals as well as businesses. Issues related to private banking or investment banking are similar in many ways but are outside the scope of this research.

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.

E-banking services first emerged in the early 1980s; credit card, ATM and telephone banking service were three major applications during that period. During the last decade, database information system and other technologies have been applied into banking services at different levels (Wu et al., 2006). After internet is available, e-banking services are now conducted through a secure website operated by their local banks (or a virtual bank). There are currently two types of e-banking systems in the current market: incumbent bank and direct bank (Xu and Zhao, 2000). The first one (incumbent bank) is applying e-banking as an enhancement to its traditional banking sector and integrates branches, ATM, call centre and online service into a whole system, and use e-banking as a new channel of delivering services. In comparison, direct bank (also called virtual bank) is the bank with no branch offices but using internet, telecommunication network and wireless networking to provide banking services.

E-banking services currently available include online enquiry, e-payments, e-transfer, etc. Online 24/7 banking services greatly reduce the labour cost, extend the service edge and increase the banking efficiency and effectiveness

(González et al., 2008; Smith, 2008). In recent years, mobile banking (m-banking) service is emerging as another new direction of e-banking (Gerpott and Kornmeier, 2009). M-banking is, customers use wireless devices (cell phone, PDA, laptop, etc.) to access the internet and conduct the online services at any time from any place. M-banking is viewed as a powerful tool to complement regular e-banking with new developed services (Scornavacca and Hoehle, 2007).

1.2. STATEMENT OF PROBLEM

In the competitive and post liberalization era, every customer is concerned about the safety of their funds and also expects good and effective return from their funds. They are always busy and expect to complete all their engagements from a single place. They are not ready to run around paying their electricity bill at one place, telephone bill at another place. In fact the perception and the expectation of the customers have undergone a vast change with the availability of banking services at their door steps through the help of technology. Sometimes customers faced many problems in e-banking services through unauthorized access within the network, inaccurate processing and transactions, data privacy and confidentiality, more hidden cost and so on. They also manage the funds of their clients in an effective and productive way. Though all the Commercial Banks are providing e-banking services, enquiries on Banks customers have been made on the following. What are the e-banking services provided by the banks?, How far the e-banking services cater to the needs of the customers? To what extent the e-banking services are utilized by the customers, what are the problems faced by the customers while using the e-banking services? Hence the present study has been carried out to examine the above enquiries and offer solutions.

1.4. SCOPE OF THE STUDY

In this global scenario, every Public Sector, Private Sector and Foreign Banks have introduced many customer oriented services apart from the regular Banking activities. The study has been undertaken to highlight the Customer Perception towards Value-added services in Commercial Banks. The study also explores the perception, preference and satisfaction of the various e-banking services provided by the Banks, their reasons for selection of Banks, the e-banking services commonly used by them. The study is confined to Coimbatore city. The sample respondents are the customers of various selected Commercial Banks. As such, there is a scope to examine whether the e-banking services provided by the Banks cater to the needs of various sectors of customers.

1.5. OBJECTIVES OF THE STUDY

The general purpose of the study is to investigate the influence of e-banking on service delivery in commercial bank. However, the study specifically seeks to:

To identify the preference towards e- banking services of select commercial banks in Coimbatore city

1.6. HYPOTHESIS OF THE STUDY

1. All the variables related customer preferences towards e- banking services select commercial banks are uncorrelated

1.6. METHODOLOGY AND RESEARCH DESIGN

The Methodology and design adopted for the study was as follows:

1.6.1. SAMPLE DESIGN

The primary objective of the study is to examine the customer perception, preference and satisfaction towards e- banking services of select commercial banks in Coimbatore city. A sample of five hundred customers from public private banks were selected for the study. Ten banks were selected by following stratified random sampling procedure by giving due representation in Coimbatore City.

1.6.2. SOURCES OF DATA

The primary objective of the study is to ascertain the customer perception, preference and satisfaction towards e-banking services of select commercial banks in Coimbatore city. The study is first of its kind and mainly based on primary data. The primary data was collected through the questionnaires administered to different types of selected sample respondents. The secondary data were collected from different sources. Hence, the researcher has collected information from ten banks, with three hundred and fifty each from public and private sector banks of Coimbatore city.

1.6.3. STATISTICAL TOOLS USED FOR ANALYSIS

The primary data have been collected from the potential respondents from different areas and has been properly sorted, classified, edited, tabulated in a proper format and analyzed by deploying appropriate statistical tools. The statistical tests are conducted at 5 per cent level of significance. The following statistical tools are used like Reliability Test and Factor analysis.

ANALYSIS AND INTERPRETATION

DIMENSIONALITY OF THE MULTI-SCALE ITEMS (FACTOR ANALYSIS)

Factor Analysis is a set of technique which by analyzing correlations between variables reduces their numbers into fewer factors which explain much of the original data, more economically. Even though a subjective interpretation can result from a factor analysis output, the procedure often provides an insight into relevant psychographic variables, and results in economic use of data collection efforts. The subjective element of factor analysis is reduced by splitting the sample randomly into two and extracting factors separately from both parts. If similar factors result, the analysis is assumed as reliable or stable³. . The Varimax Rotation method is used in factor analysis.

For example, there are k (l=1...k) variables, n (j=1...n) banks and m factors. The factor analysis model, in the matrix notation then, may be written as follows:

$$X_{(k \times n)} = A_{(k \times m)} \times Z_{(m \times n)}$$

where: X = the matrix of variables of order (k x n)
 A = the matrix of factor loadings of order (k x m)
 Z = the matrix of factors of order (m x n)

TABLE -1 KMO AND BARTLETT'S TEST FOR FACTORS RELATED TO CUSTOMER PREFERENCE TOWARDS E-BANKING SERVICES SELECT COMMERCIAL BANKS

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.845
Bartlett's Test of Sphericity: Approx. Chi-Square	2053.797
Sig	0.00

From the above table, two tests namely, Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity have been applied to test whether the relationship among the variables has been significant or not. The Kaiser-Meyer-Olkin Measure of sampling adequacy shows the value of test statistics is 0.845, which means the factor analysis for the selected variable is found to be appropriate or good to the data. Bartlett's test of sphericity is used to test whether the data are statistically significant or not with the value of test statistics and the associated significance level. It shows that there exists a high relationship among variables.

TABLE -2. EIGEN VALUES AND PROPORTION OF TOTAL VARIANCE OF EACH UNDERLYING FACTORS RELATED TO CUSTOMER PREFERENCE TOWARDS E- BANKING SERVICES SELECT COMMERCIAL BANKS

component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.935	24.676	24.676	4.935	24.676	24.676	2.461	12.303	12.303
2	1.398	6.989	31.665	1.398	6.989	31.665	2.308	11.540	23.842
3	1.344	6.721	38.386	1.344	6.721	38.386	2.028	10.141	33.983
4	1.240	6.202	44.588	1.240	6.202	44.588	1.965	9.827	43.810
5	1.141	5.703	50.291	1.141	5.703	50.291	1.296	6.481	50.291

Extraction Method: Principal Component Analysis

The results of the factor analysis presented in the table – 2 regarding factors influencing the job satisfaction of present working condition, have revealed that there are nineteen factors that had Eigen value exceeding “one”. Among those four factors, the first factor accounted for 24.68 percent of the variance, the second 6.989 percent, the third factor 6.721 percent, the fourth factor 6.202 per cent and the fifth factor 5.703 per cent of the variance in the data set. The first five factors are the final factors solution and they all together represent 50.29 percent of the total variance in the scale items measuring the factors related to customer preference towards e- banking services select commercial banks. Hence from the above results, it is certain that are factors related to customer preference towards e- banking services select commercial banks.

**TABLE ---3
COMMUNALITIES FOR FACTORS RELATED TO FACTORS RELATED TO CUSTOMER PREFERENCE TOWARDS E- BANKING SERVICES SELECT COMMERCIAL BANKS**

S.NO.	ITEMS	Initial	Extraction(h ²)
1	Convenient accessibility	1.000	.461
2	Convenient location of ATMs	1.000	.604
3	Sound reputation of the bank	1.000	.627
4	Speed of sign on and logout	1.000	.423
5	Online shopping	1.000	.383
6	Security/less risk to use	1.000	.404
7	Low hidden cost for services	1.000	.480
8	Savings in Time	1.000	.431
9	Online bill payment	1.000	.450
10	Checking balance online	1.000	.496
11	E- Ticketing	1.000	.619
12	Apply credit cards online	1.000	.372
13	Prepaid mobile charges	1.000	.572
14	Bank's website is completely secure	1.000	.588
15	Download previous bank transaction history	1.000	.492
16	Information provided on website is accurate	1.000	.581
17	Bank carefully collects information through website	1.000	.580
18	Any where banking service	1.000	.540
19	Quick confirmation is provided by the e-channels	1.000	.410
20	Bank ready to give the service by online chat	1.000	.543

Extraction Method: Principal Component Analysis

The above table (Communalities) represents the application of the Factor Extraction Process, it was performed by Principal Component Analysis to identify the number of factors to be extracted from the data and by specifying the most commonly used Varimax rotation method. In the principal component analysis, total variance in the data is considered. The proportion of the variance is explained by the fourteen factors in each variable. The proportion of variance is explained by the common factors called communalities of the variance. Principal Component Analysis works on initial assumption that all the variance is common. Therefore, before extraction the communalities are all 1.000. Then the most common approach for determining the number of factors to retain i.e., examining Eigen values was done.

**TABLE 4
ROTATED COMPONENT MATRIX FOR FACTORS RELATED TO CUSTOMER PREFERENCE TOWARDS E- BANKING SERVICES SELECT COMMERCIAL BANKS**

Variable code	Component				
	I	II	III	IV	V
X ₇	.650	.188	.081	.127	-.010
X ₁₅	.614	.312	-.101	.041	-.075
X ₈	.589	.109	.255	-.048	.073
X ₉	.516	-.208	.244	.200	.246
X ₁₀	.511	.025	.437	.268	-.125
X ₅	.506	.198	.318	.063	.167
X ₆	.501	.237	.063	.373	.187
X ₁₇	-.005	.662	.298	.224	.060
X ₁₈	.327	.621	-.030	.082	-.201
X ₁₆	.115	.610	.099	.414	.120
X ₁₉	.190	.543	.094	-.257	.069
X ₄	.317	.526	.143	.206	.256
X ₁₂	.120	.511	.306	.300	-.207
X ₂	.071	.227	.731	.103	.048
X ₃	.267	-.008	.724	.029	-.177
X ₁	.072	.289	.508	-.015	.376
X ₁₃	-.014	-.042	.223	.711	.122
X ₂₀	.194	.240	-.106	.659	.056
X ₁₁	.227	.110	.129	.533	-.506
X ₁₄	.170	.045	-.048	.171	.725

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Table 4 represents the Rotated Component Matrix, which is an important output of principal component analysis. The coefficients are the factor loadings which represents the correlation between the factors and the nineteen variables (X₁ to X₂₀). From the above factor matrix it is found that coefficients for factor-I have high absolute correlations with variable X₇(Low hidden cost for services) , X₁₅ (Download previous bank transaction history) , X₈ (Savings in Time), X₉ (Online bill payment) , X₁₀ (Checking balance online), X₅ (Online shopping) and X₆ (Security/less risk to use) that is, **0.650, 0.614, 0.589, 0.516, 0.511, 0.506 and 0.501** respectively. Similarly factor-II has high absolute correlation with variable X₇(Bank carefully collects information through website), X₁₈ (Any where banking service) , X₁₆ (Website Information is accurate) , X₁₉ (Quick confirmation is provided by the e-channels), X₄ (Speed of sign on and logout) and X₁₂ (Apply credit cards online) that is, **0.662, 0.621, 0.610, 0.543, 0.526 and 0.511** respectively. Next, factor III has high absolute correlation with variable X₂(Convenient location of ATMs), X₃(Sound reputation of the bank) and X₁ (Convenient accessibility) that is, **0.731, 0.724 and 0.508** respectively. Factor-IV has high absolute correlation with variable X₁₃(Prepaid mobile charges) and X₂₀ (Bank ready to give the service by online chat) that is, 0.711 and 0.659 respectively. Finally, Factor-V has high absolute correlation with variable X₁₁(E- Ticketing) and X₄(Bank's website is completely secure) that is, -0.506 respectively. For example in this study, factor one is at least

somewhat correlated with twelve variable out of the fourteen variables with absolute value of factor loading greater than or equal to 0.5. In such a complex matrix it is difficult to interpret the factor. So we proceed to compute the rotated factor matrix.

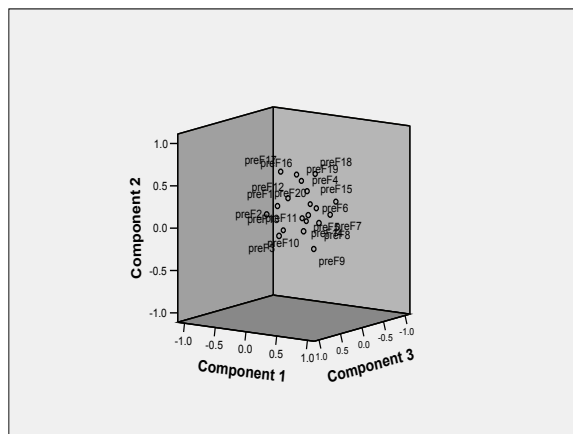
TABLE 5
Component Transformation Matrix

Component	1	2	3	4	5
1	.585	.526	.444	.420	.086
2	.237	-.435	.672	-.527	.161
3	.131	.464	-.320	-.548	.604
4	.154	-.506	-.179	.468	.685
5	-.749	.250	.466	.163	.364

The above table reveals the factor correlation matrix. If the factors are uncorrelated among themselves, then in the factor correlation matrix, the diagonal elements will be 1's and off diagonal elements will be 0's. Since matrix was rotated with Varimax, barring some variables all other variables are found to have, even if not zero correlations but fairly low correlation.

CHART -1

Component Plot in Rotated Space



CONCLUSION

Thus the twenty variables in the data were reduced to five Component factor and each factor may identified with the corresponding variables. The following factor matrix it is found that coefficients for factor-I have high absolute correlations with variable X_7 (Low hidden cost for services), X_{15} (Download previous bank transaction history), X_8 (Savings in Time), X_9 (Online bill payment), X_{10} (Checking balance online), X_5 (Online shopping) and X_6 (Security/less risk to use) respectively. Finally, the modern commercial banks are doing yeoman service to its valuable customers after introduction of various Value-added services namely, e-banking, and internet banking and so on. Till now only limited customers are using the E-banking services offered by the modern banks. If the present study helps the policy maker of the bank to educate the entire customer base about the value added services provided and to make optimum use of them, the researcher would feel immensely rewarded.

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