

CHAPTER-IV

DATA ANALYSIS RESULTS AND DISCUSSION

The analysis of the present study is made through the appropriate statistical tools in consultation with the expert statistician. The study is presented at two stages for better understanding of the reader. The present study is focused on the role of RRBs in the upliftment of socio economic status of the rural population in the sample area. It also covers the level of awareness of banking services, widely used services, technology impact on service quality and availability and the present state of banking services and the suggestions to improve the availability and accessibility of the same in rural areas.

This study can give a real picture of the banking services and its impact on the society in the sample area. This can help the policy makers to review certain policy matters and to device operational strategies for the better performance of the banks and to provide the quality service to the wide public. The study is descriptive in nature and the results are discussed based on the results of the survey.

Objective 1 and 4

The first objective is to study the profile of customers and banking environment prevailing in the Thiruvallur District, TamilNadu and the fourth objective is to find out the relationship between the demographical variables and the level of awareness among the Respondents. Both the objective is done by the following tables.

Gender wise Distribution of the respondents

Gender	No of Respondents	Percentage
Male	204	79.8
Female	155	20.2
Total	359	100

Source: Questionnaire

The table shows the gender wise distribution of the respondents. It is observed from the table out of 359 respondents 204 respondents (79.8 per cent) are male and the remaining 155 respondents (20.20 per cent) are female. It is found that majority of the respondents have bank account as well as visiting banks quite often. The composition of female members in the sample is found very less as majority of female respondents used to go to banks for availing themselves of micro credit.

Age wise Distribution of the respondents

Age Group	No of Respondents	Percentage
Less than 30 years	60	16.7
31 – 40	82	22.8
41 – 50	105	29.2
51 – 60	67	18.9
Above 61Yrs	45	12.4
Total	359	100

Source: Sample Survey

The table presents the age wise distribution of the respondents. It is observed that 105 respondents (29.2 per cent) belong to the age group of 41-50 years; 82 respondents (22.8 per cent) belong to 31-40 years; 67 respondents (18.9 per cent) belong to 51-60 years; 45 respondents (12.4 per cent) belong to the age group of above 51 years. The study found that majority of the respondents belongs to the age group of 41-50 years.

Bank Account Status

Bank Account Status	No of Respondents	Percentage
Yes	313	87.2
No	46	12.8
Total	359	100

Source: Questionnaire

It is observed from the table that 313 respondents (87.2 per cent) have bank account and 46 respondents (12.8 per cent) not having the bank account but used to go to banks for getting drafts and other purpose. The respondents reported that they opened bank account to deposit, credit, transfer the loan amount and withdraw the savings from time to time. However, in practice, no farmer is following gradual withdrawal from the account based on the requirements to perform farm activities. The whole amount is withdrawn at a time.

Educational Qualification

Educational Qualification	No of Respondents	Percentage
Illiterate	14	3.8
Literate	18	5.0
Primary education	55	15.4
Middle School	46	12.8
High School	74	20.6
Higher Secondary	56	15.6
College level	58	16.2
Professional	38	10.6
Total	359	100.0

Source: Sample Survey

The table gives educational status of the respondents. It is found that 74 respondents (20.6 per cent) studied upto high school, 58 respondents (16.2 per cent) have studied upto graduation level. Among the respondents, 56 (15.6 per cent) of them have studied upto higher secondary level followed by 46 respondents (12.8 per cent) at middle school level; 55 respondents (15.4 per cent) studied upto primary school level and 38 respondents were professionals. It is interesting to note that 14 respondents (3.8 per cent) were illiterate and respondents who are able to write and read their names were reported

to be 18 respondents (5 per cent). It is clear from the information that the rural areas are suffering from the lack of educational back ground and there by lack of awareness on the banking services and the benefits of the same. It is indeed there is a need to proceed with the other promotional methods to explain them about the banking services and their impact on the quality of quality of life. This micro level effort can help in breaking the barriers and to bring a change in the existing situation in the rural banking practices.

Occupation

Occupation	No of Respondents	Percentage
Cultivation	174	48.5
Business	122	34.0
Family Occupation	53	14.7
Service Organization	10	2.8
Total	359	100

Source: Questionnaire

The table shows the occupationwise distribution of the respondents. It is observed from the table that out of 359 respondents, 174 respondents (48.5 per cent) were cultivators; 122 respondents (34 per cent) were the business people; 53 respondents (14.7 per cent) were doing family occupation and 10 respondents (2.8 per cent) were working in the service organizations. It is inferred from the observation that majority of the rural folk are depending on the primary sector and its allied activities. It indicates the need for change into regular income activities in a gradual manner.

Primary sector gives only seasonal returns and that too are uncertain due to crop failures or monsoon failures and natural calamities. This can be changed by providing information on the alternative allied activities available to have a regular income to the farming sector customers.

Income Distribution of the respondents

Income (in ₹)	No of Respondents	Percentage
Below 1 Lakh	53	14.8
1 – 3 Lakhs	198	55.1
3 – 5 Lakhs	95	26.5
Above 5 Lakhs	13	3.6
Total	359	100

Source: Sample Survey

The table provides income details of the respondents. It is seen from the table that below one lakh is earned by 53 respondents (14.8 per cent); 198 respondents (55.1 per cent) have reported that their income falls between 1-3 lakhs; 95 respondents (26.5 per cent) have reported that their income is between 3-5 lakhs; and above 5 lakhs is earned by 13 respondents. It is evident from the observation that sizeable number of respondents' income level is between 1-3 lakhs.

Type of House

Type of House	No of Respondents	Percentage
Hut	17	4.7
Shed House	70	19.5
Building	272	75.8
Total	359	100

Source: Questionnaire

The table shows the housing conditions of the respondents. It is observed from the table that 272 respondents (75.8 per cent) have informed that they live in building; 70 respondents (19.5 per cent) have reported that they live in shed house and is followed by 17 respondents (4.7 per cent) who live in huts. It is found from the observation that the housing conditions of the respondents have improved as majority of the respondents in the study live in buildings than hut house.

Dependents in Respondents' family

No. of Dependents	No of Respondents	Percentage
Two	63	17.5
Three	144	40.1
Four	118	32.9
More than four	34	9.5
Total	359	100.0

Source: Sample Survey

The table provides the information about number of dependents in respondents' family. It is observed from the table that 144 respondents (40.1 per cent) have reported that they have three dependents; 118 respondents (32.9 per cent) have reported that they have four dependents; 63 respondents (17.5 per cent) said they have two dependents and 34 respondents (9.5 per cent) have informed that they have more than four dependents.

It is inferred from the observation that majority of the respondent's have 3-4 dependents as an average. It is interesting to note that the increasing size of family members is perceived as strength in rural areas.

Purpose to Visit Bank

Purpose	No of Respondents	Percentage
Deposit and withdraw Money	195	54.4
Avail Loan	68	18.9
Demand draft	60	16.7
ATM	36	10.0
Total	359	100.0

Source: Questionnaire

The table reveals the details of purpose to visit the bank. It is seen from the table that 195 respondents (54.4 per cent) visit the bank for depositing and withdraw the money; 68 respondents (18.9 per cent) visit the banks for availing of loans; 60 respondents (16.7 per cent) visit the bank for getting demand drafts and is followed by 36 respondents (10 per cent) who visit the bank for using ATM and related services.

It is noteworthy to point out from the study that many of the banks are operating ATM services in rural areas and rural bank customers are also using them frequently.

Tenure of Account

Tenure	No of Respondents	Percentage
Less than 5 years	166	46.2
6 – 10	143	39.8
11 – 15	21	5.9
16 – 20	14	3.9
More than 20 Years	15	4.2
Total	359	100.0

Source: Sample Survey

The detail regarding the period of account holder in bank is reported in the table. It is observed from the table that 166 respondents (46.2 per cent) reported that they are account holders of the bank for less than 5 years; 143 respondents (39.8 per cent) informed that they are account holders for 6-10 years; 11-15 years reported by 21 respondents (5.9 per cent) and above 16 years reported by 29 respondents (5.1 per cent).

It is interesting to note from the observation that majority of the respondents have account in banks less than 10 years.

References Given

Reference given by	No of Respondents	Percentage
Friends	129	35.9
Relatives	56	15.6
Colleagues	33	9.2
Neighbours	87	24.2
Banker	54	15.1
Total	359	100.0

Source: Questionnaire

The table discloses the information regarding the reference or introduction to banking services of the respondents. It is observed that 129 respondents (35.9 per cent) reported that their friends have introduced the banking services to them; 56 respondents (15.6 per cent) reported relatives introduced banking services to them; 33 respondents (9.2 per cent) said colleagues have introduced banking services to them; 87 respondents (24.2 per cent) informed that neighbours have introduced banking services to them and the remaining respondents have informed that bankers i.e. staff of the banks have introduced banking services to them. It is found from the observation that majority of the respondents came to know of the banking services through their friends.

INFERENCE STATISTICS

The researcher has applied Z test to test whether there is any significant difference in mean scores of the variable taken for the study. The results of the same is given below

Mean Scores and Z test for level of Awareness of Banking Services

BANKING SERVICE	N	MEAN	S.D	Z value	P value
Deposits Collection	359	4.31	0.838	81.753	0.004**
Granting Loans	359	4.19	0.974	79.378	0.002**
Issuing Drafts	359	3.27	1.613	62.014	0.003**
Agency Functions	359	1.46	0.845	27.550	0.004**
Funds Transfer	359	2.04	1.375	38.686	0.003**
Reference Services	359	1.46	0.845	27.550	0.002**
ECS Payments	359	2.04	1.375	38.686	0.001**
ATM Services	359	4.43	0.923	84.023	0.004**
Tax Collections	359	2.28	1.268	43.225	0.002**
Pension Payments	359	3.76	1.056	71.250	0.003**
Online Services	359	2.18	1.405	41.220	0.004**
Safe lockers	359	1.94	1.255	36.681	0.002**
Educational Loans	359	3.76	1.056	71.250	0.001**
Mutual Funds	359	1.46	0.845	27.550	0.004**
Investment Advice	359	1.46	0.845	27.550	0.003**
Housing Loans	359	2.44	1.072	46.392	0.002**
Demat Services	359	1.46	0.845	27.550	0.004**
Insurance Products	359	2.34	1.482	44.175	0.002**
Mobile Banking Services	359	2.61	1.185	49.559	0.003**
Credit Card Services	359	1.64	1.101	30.981	0.004**

Source: Computed from sample survey

Note: The p value below 0.005. ** denotes significant at 1 per cent level.

The table shows the mean scores and Z test values for level of awareness about banking services. It is observed from the above table, that major banking services which show awareness among the sample respondents are ATM Services with the mean value of 4.43, followed by deposit collections, granting loans, educational loans, pension payment, and issuing drafts with the mean values of 4.31, 4.19, 3.76 and 3.27 respectively.

The z test values are also significant at 1 per cent level as the p value is less than 0.01. Therefore, the researcher arrives at concluding that there is no significant difference in sample and population mean.

Poor level of awareness is recorded for the agency services, investment advice, mutual funds, DEMAT services, reference services etc with the mean score of 1.46 among the sample respondents in the rural areas. It indicates that the primary functions are known among them and the secondary services are not that familiar among the respondents in the sample area. Proper promotional methods can improve the situation and to provide many services in the sample area.

Factor Analysis: Usage of Banking Services

The researcher has used factor analysis in order to estimate the latent relationship within the variables. The factor analysis tools like Principal Component Analysis (PCA) with Varimax rotation are used for the same. Kaiser Mayer Olkin sample adequacy test has been administered to estimate the sample adequacy for factor analysis and Cronbach alpha test used for reliability of the statements.

Extraction values for usage of banking services

Items	Initial	Extraction
Deposits Collection	1.000	.873
Granting Loans	1.000	.823
Issuing Drafts	1.000	.303
Agency Functions	1.000	.985
Funds Transfer	1.000	.928
Reference Services	1.000	.985
ECS Payments	1.000	.928
ATM Services	1.000	.968
Tax Collections	1.000	.749
Pension Payments	1.000	.999
Online Services	1.000	.927
Safe lockers	1.000	.390
Educational Loans	1.000	.999
Mutual Funds	1.000	.985
Investment Advice	1.000	.985
Housing Loans	1.000	.891
Demat Services	1.000	.985
Insurance Products	1.000	.833
Mobile Banking Services	1.000	.817
Credit Card Services	1.000	.610

Extraction Method: Principal Component Analysis.

Note: The variables Issuing drafts, safe lockers, are removed in the II iteration and factor analysis is repeated and during the III iteration the variable ATM services are also removed.

Factors Loadings

BANKING SERVICES	COMPONENTS				
	1	2	3	4	5
Demat Services	.971	UTILITY SERVICES			
Agency Functions	.971				
Investment Advice	.971				
Mutual Funds	.971				
Reference Services	.971				
Credit Card Services	.774				
Online Services		.938	E-SERVICES		
Funds Transfer		.904			
ECS Payments		.904			
Insurance Products		.892			
Housing Loans			.941	INCOME AND INVESTMENT SERVICES	
Mobile Banking Services			.902		
Tax Collections			.860		
Educational Loans				.999	SOCIAL SERVICES
Pension Payments				.999	
Granting Loans	PRIMARY SERVICES				.949
Deposits Collection					.947

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 5 Iterations

Based on the loadings, all the items are segregated into five desired major services of a bank. The factors are named as utility services, E-services, Income and investment services, Social services and Primary services. The grouping is similar to the grouping of banking services by RBI and the Indian bankers association. Only variation is the level of awareness on certain basic services is low and the advanced and technology oriented services are observed as high among the respondents and the same is observed statistically in the table. Based on the customer survey no single strategy can be adopted in promoting all the banking services. Independent strategies with specific goals can help in enhancing the banking services in the rural areas and it can help in economic upliftment of the rural areas of the study area.

Factor Analysis: Problems in Availing of Banking Service

In order to find out the problems in availing of the banking services, among the rural customers, Principal Component Analysis with Varimax rotation is used. The sample adequacy for the factor analysis is found by using Kaiser Mayer Olkin sample adequacy test and the cronbach alpha value for all the variable is 0.673 (67.3 per cent). Four factors have emerged in the analysis; the results along with the loading are presented below.

Extraction values for problems in availing of banking services

Items	Initial	Extraction
Lack of awareness	1.000	.930
Lack of availability	1.000	.679
Poor proximity to bank	1.000	.966
Lack of co-operation Form Banker	1.000	.915
No Proper guidance	1.000	.966
No Regularity in Functioning	1.000	.966
No trained staff	1.000	.930
Poor Usage Of The Service In A bank	1.000	.843
Lack of guarantee on performance	1.000	1.000
Lack of uniformity	1.000	1.000
Hidden costs	1.000	1.000
Risk of cyber crime	1.000	1.000
Poor governance of complaints	1.000	.843
Limited services offered	1.000	.915
Poor customer response	1.000	.966
Autocratic behaviour	1.000	1.000
Poor CRM	1.000	1.000
Lack of transparency	1.000	1.000

Extraction Method: Principal Component Analysis.

Note:

Variable: No Proper networking was deleted due to communalities less than 0.5.

Objective 2

The second objective is to find out the level of awareness and to identify the problems in availing banking services among the Customers in rural areas. The following table shows it.

Factors loading for problems in availing of banking services

PROBLEMS	LOADING	FACTOR NAME
Poor Customer Response	.983	FUNCTIONAL PROBLEMS
Poor Proximity To Bank	.983	
No Proper guidance	.983	
No Regularity in Functioning	.983	
Poor Usage Of The Service In A bank	.918	
Poor Governance Of Complaints	.918	
Limited Services Offered	.927	AVAILABILITY AND ACCESSIBILITY PROBLEMS
Lack of co-operation Form Banker	.927	
No Trained Staff	.919	
Lack Of Awareness	.919	
Lack Of Availability	.816	
Lack Of Guarantee On Performance	.962	
Risk Of Cyber Crime	.962	CONTROL PROBLEMS
Hidden Costs	.962	
Lack Of Uniformity	.962	
Lack Of Transparency	.999	
Poor CRM	.999	BEHAVIOURAL PROBLEMS
Autocratic Behaviour	.999	

The Problems faced by the customers are broadly classified into four types, namely, functional problems due to poor customer response and poor guidance, availability and accessibility problems due to Lack of co-operation from the banker and lack of trained staff, Control problems due to risk of cyber crimes, hidden costs and finally behavioral problems due to autocratic behaviour, lack of transparency and poor customer relationship management.

Functional problems are arising due to physical and psychological environment in the bank. These can be resolved with specific time frame and with the co-operation of customers and the employees of a bank. Availability and accessibility problems needs to be solved on priority basis by providing skill training to all the employees in the usage of technical services and its operational aspects. Behavioral problems can be resolved through relationship managers and by having good interpersonal communications with the customers.

The problems quoted are generic in nature and existed in almost all the branches, but the degree of sensitivity from service to service is vary based on the nature of accounts and the size of transactions and the type of customers. A unique policy decision on service quality may help in resolving such issues in all the areas over a period of time.

This requires a single stand strategy with long run implementation goals. Such initiatives can bring a change both in the individuals and the system as a whole and helps to bring a changed banking service quality in the sector. This can bring lot of smiles in the customer's face. A smile in the customer face can give an extra mile to the bank in its growth and development.

FRIEDMAN TWO-WAY ANOVA:

The researcher has applied two-way ANOVA to ascertain the significant difference between level of awareness and banking services.

Hypothesis: Banking services are gender biased.

H₀: There is no significant difference between genders with respect to level of awareness of banking services

H₁: There is significant difference between genders with respect to level of awareness of banking services

ANOVA Test Result

ANOVA with Friedman's Test						
		Sum of Squares	Df	Mean Square	Friedman's Chi-Square	p-value Sig
Between People		1813.215	357	5.079		
Within People	Between Items	7829.589 ^a	20	391.479	3660.489	.003**
	Residual	7485.268	7140	1.048		
	Total	15314.857	7160	2.139		
Total		17128.072	7517	2.279		
Grand Mean = 2.47						
a. Kendall's coefficient of concordance W = .457.						

ANOVA						
		Sum of Squares	df	Mean Square	F	p-value Sig
Between People		1813.215	357	5.079		
Within People	Between Items	7829.589	20	391.479	373.422	.002**
	Residual	7485.268	7140	1.048		
	Total	15314.857	7160	2.139		
Total		17128.072	7517	2.279		
Grand Mean = 2.47						

The table provides ANOVA test result for the variables genders and level of awareness of banking services. Since p value is less than 0.01, the researcher rejects the null hypothesis that there is no significant difference between genders with regard to level of awareness of banking services. Hence, the researcher concludes that there is significant difference between genders with respect to level of banking services.

Hypothesis 2: Aged persons are aware of banking services well than younger persons.

H₀: There is no significant difference between ages with regard to level of awareness on the banking services.

H₁: There is a significant difference between ages with regard to level of awareness on the banking services.

ANOVA Test Result

ANOVA with Friedman's Chi-square Test						
		Sum of Squares	df	Mean Square	Friedman's -Square	p-value Sig
Between People		1835.159	357	5.141		
Within People	Between Items	7465.117 ^a	20	373.256	3471.439	.004**
	Residual	7932.026	7140	1.111		
	Total	15397.143	7160	2.150		
Total		17232.302	7517	2.292		
Grand Mean = 2.54						
a. Kendall's coefficient of concordance W = .433.						

ANOVA						
		Sum of Squares	df	Mean Square	F	p-value Sig
Between People		1835.159	357	5.141		
Within People	Between Items	7465.117	20	373.256	335.986	.003**
	Residual	7932.026	7140	1.111		
	Total	15397.143	7160	2.150		
Total		17232.302	7517	2.292		
Grand Mean = 2.54						

Note: ** denotes significant at 1 per cent level

It is found that the probability value is less than 0.01, and therefore, the researcher rejects the null hypothesis that there is no significant difference between ages with regard to level of awareness of banking services. As a result, the researcher accepts the alternative hypothesis that there is a significant relationship between age and level of awareness of banking services.

Hypothesis 3: Educational standard improves better access of banking services

H₀: There is no significant difference between educational with regard to level of awareness of the banking services.

H₁: There is a significant difference between educational standard with regard to level of awareness of the banking services

ANOVA Test Results

ANOVA with Friedman's Test						
		Sum of Squares	df	Mean Square	Friedman's Chi-Square	p-value Sig
Between People		1827.152	357	5.118		
Within People	Between Items	7599.962 ^a	20	379.998	3573.936	.004
	Residual	7625.753	7140	1.068		
	Total	15225.714	7160	2.126		
Total		17052.867	7517	2.269		
Grand Mean = 2.49						
a. Kendall's coefficient of concordance W = .446.						

ANOVA						
		Sum of Squares	df	Mean Square	F	p-value Sig
Between People		1827.152	357	5.118		
Within People	Between Items	7599.962	20	379.998	355.793	.003
	Residual	7625.753	7140	1.068		
	Total	15225.714	7160	2.126		
Total		17052.867	7517	2.269		
Grand Mean = 2.49						

Since the p value is less than 0.01, the null hypothesis is rejected at 1 per cent level. As a result, the researcher accepts the alternative hypothesis that there is a significant difference between educational qualifications with regard to level of awareness of the banking services. The result indicates that if a respondent has higher educational standard, he has access to or is aware of banking services easily. Educational qualifications may improve the level of awareness, but the usage of the service requires savings potential and the need for usage of the banking service.

Rank Analysis

Poor practice of Banking Habits

In order to find out the reasons for poor usage of banking services in the sample area, pre tested reasons were quoted in the structured questionnaire and asked the respondents were asked to rank them independently. The cumulative score of the responses received is tabulated and ranked them accordingly. Based on this it is easy to know the reasons for poor usage and a strategy can be formulated to improve upon it.

It also helps in taking remedial and curative actions against the current practices. This may help in reaching the customers and to achieve the customer trust and the social objectives of banking system. The results of the analysis are presented below:

Rank analysis of the reasons for poor usage of banking services

S.No	Reasons	Cumulative Score	Rank
1	Poor availability of services/ Products	173	II-Rank
2	Lack of awareness on modus operandi	183	I- Rank
3	Myth of cost and safety	163	IV-Rank
4	Poor advertisement on the services available	149	VI
5	Lack of consistency in transactions	170	III-Rank
6	Poor co-operation from banking staff	143	VII
7	Poor network connectivity	125	IX
8	Proximity and safety issues	130	VIII
9	Limited time and services	108	X
10	Low level of interest towards financial services	154	V-Rank

It is evident from table, that the major reasons for poor usage of banking services in the rural areas are lack of awareness on modus operandi of the services with the mean score of 183, poor availability and accessibility of services and products with the mean score of 173, lack of consistency in transactions in the operations of a bank with the mean score of 170, myth of cost and safety issues with the mean score of 163 and low level of interest towards financial products and services among the rural customers with the mean score of 154, stood at one to five ranks respectively.

Factor Analysis

Importance of Banking Services

In order to find out the level of agreement on the importance of banking services among the rural customers, Principal Component Analysis with Varimax rotation is used. The sample adequacy for the factor analysis is found by using Kaiser Mayer Olkin sample adequacy test and the cronbach alpha value for all the variable is 0.693 (69.3 per cent). Five factors are emerged in the analysis; the results along with the loading are presented below.

Table Showing KMO and Bartlett's Test on sample adequacy		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.693
Bartlett's Test of Sphericity	Approx. Chi-Square	597.708
	Df	45
	Sig.	.000

Table for Communalities values

Communalities		
	Initial	Extraction
To Uplift rural economic empowerment	1.000	.493
Empower Women	1.000	.697
Provide Loans	1.000	.582
Bridge The Gap Between The Demand and Supply of Funds	1.000	.922
Create Wealth	1.000	.731
To Create Financial Awareness	1.000	.923
Create Opportunities	1.000	.741
Provide Funds for Farming sector	1.000	.562
Provide The Technology Financial Services to Poor	1.000	.552
Overall Economic Development	1.000	.598
Extraction Method: Principal Component Analysis.		

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Table for Component Matrix

Component Matrix^a					
	Component				
	1	2	3	4	5
To Create Financial Awareness	.947				
Bridge the Gap Between The Demand And Supply of Funds	.942				
Create Opportunities		.844			
Create Wealth		.830			
Provide Loans			-.611		
Provide Funds For Farming sector			-.539		
To Uplift rural economic empowerment			.476		
Provide the Technology Financial Services to Poor				.693	
Overall Economic Development				-.561	
Empower Women					-.614
Extraction Method: Principal Component Analysis.					
a. 5 components extracted.					
Note: Variable 81 is deleted from further analysis due to cross loadings					

Rotated Component Matrix

Rotated Component Matrix ^a					
	Component				
	1	2	3	4	5
Bridge the gap between the Demand and Supply of Funds	.960	Empowerment Factors			
To Create Financial Awareness	.959				
Create Opportunities		.856	Social Factors		
Create Wealth		.853			
Provide Funds for Farming sector			.731	Economic Factors	
To Uplift rural economic empowerment			-.670		
Provide Loans	Social Banking Factors			.673	
Provide the Technology Financial Services to Poor				.654	
Empower Women	Development Factors				-.742
Overall Economic Development					.700
Extraction Method: Principal Component Analysis.					
Rotation Method: Varimax with Kaiser Normalization.					
a. Rotation converged in 8 iterations.					

The importance of banking services for the growth and development is grouped into five factors. There are two items loaded as empowerment factors. These factors can bring a change in the economic independence and phase of financial stability. The Second set of items loaded are named as Social factors , which can bring change in the social status of the customers by providing opportunities for growth.

The third sets of items loaded are titled as economic factors which are imported for the financial independence among the customers. Fourth set of items loaded comes under the frame of social banking factors, which are focusing to uplift the economic status of the rural mass. And finally two items are loaded, named as development factors.

Factor Analysis

Opinion of banking services offered by banks

The researcher has applied factor analysis in order to find out the latent relationship between the variables. Opinion of banking services offered by the banking institution has been taken for analysis.

Table for Communalities values for Banking Services offered by Banks

Communalities		
	Initial	Extraction
Collecting Deposits	1.000	.635
Granting Loans	1.000	.323
Agency Functions	1.000	.999
Customer Utility Services	1.000	.999
Technological Services	1.000	.669
CRM	1.000	.651
Safe Vault Facilities	1.000	.597
Fund Transfer Services	1.000	.536
Online Banking	1.000	.613
Grievance Handling	1.000	.678
Extraction Method: Principal Component Analysis.		

Table for Rotated Component Matrix for Banking Services offered by Banks

Rotated Component Matrix^a					
Banking services	Component				
	1	2	3	4	5
Customer Utility Services	.999	Customer Delighted Services			
Agency Functions	.999				
Grievance Handling		.811	Appreciable services		
Technological Services		.799			
CRM			.790	Notable services	
Online Banking			-.752		
Collecting Deposits	Indicative services			.780	
Fund Transfer Services				.643	
Safe Vault Facilities	Improvable services				.756
Granting Loans					-.527
Extraction Method: Principal Component Analysis.					
Rotation Method: Varimax with Kaiser Normalization.					
a. Rotation converged in 5 iterations.					

It is observed from the above table, that the customer satisfaction items related to the services offered by the rural banks is identified and grouped by using the principal component analysis. Fine factors have emerged. Each of the factors was named independently by reviewing the nature of items loaded and the loaded value differentiation.

The factors identified are customer delighted service, appreciable services, notable services, indicative services and improvable services. The degree of differentiation is done on the basis of the quality ranks given by the customers. The

highly satisfied services are categorized as delighted services and the poor service quality observed items are classified as improvable services. All other services are ranked in between based on the loadings.

Z-test: Large Sample Test

In order to find out the degree of satisfaction on the banking services offered by the banks, among the sample respondents, Z-test is administered on the data. The descriptive statistics along with the results of the Z-test is presented in the following tables.

Table Z test for level of satisfaction on the banking services

Knowledge Factor	Mean value	Z value	P value
Collection Deposits	3.301	62.542	0.000**
Granting loans	2.359	44.703	0.000**
Agency Functions	2.696	51.089	0.000**
Customer utility services	2.696	51.089	0.000**
Technological Services	2.975	56.367	0.000**
Customer Relationship Management	2.861	54.203	0.000**
Safe Vault Facilities	3.081	58.372	0.000**
Fund Transfer Services	2.359	44.703	0.000**
Online Banking	3.212	60.853	0.000**
Grievance handling	3.136	59.428	0.000**

Source: Computed from the questionnaire

Note: ** denotes significant at 1 per cent level

The service quality of the banking services are taken as a base in ranking the above services and collecting deposits ranked as highly satisfied and granting loans are ranked as poor service. This is a customer analysis and true to some extent, because banks are dealing with others money and very much interested in collecting deposits and are conservative in granting loans.

Since the p value is less than 0.001, the null hypothesis that there is no significant difference among the perceptions of the customers with respect to level of satisfaction on the collecting deposits, granting loans, agency functions, utility functions, technical services, customer relationship management, safe vault facilities, fund transfer services, online banking and grievance handling provided by the banks in the sample area is rejected at 1% level of significance. Hence, there exists a significant difference among the perceptions of the customers with respect to level of satisfaction on the collecting deposits, granting loans, agency functions, utility functions, technical services, customer relationship management, safe vault facilities, fund transfer services, online banking and grievance handling provided by the banks in the sample area.

Objective 3

The third objective is to analyze the factors motivating to use banking services among the customers in Thiruvallur district, TamilNadu. The objective is full filled by the following calculations.

Factor Analysis

Motivating factors to use banking services

In this part of the analysis, the scholar is trying to group the items into factors, which motivate the customers to visit the bank and to avail themselves of banking services. Each of the items is measured with likert's scale on the level of agreement and grouped by using the Principal component analysis. The results of the analysis are presented below.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.581
Bartlett's Test of Sphericity	Approx. Chi-Square	79.968
	Df	45
	Sig.	.001

Table for Communalities values for motivating factors to use banking services

Communalities		
	Initial	Extraction
Safety to the Funds	1.000	.563
Future Contingencies	1.000	.587
Financial Protection	1.000	.395
Builds Confidence	1.000	.655
Any Time can be Withdrawn	1.000	.591
Helps in Need	1.000	.649
Easy Way of Usage	1.000	.642
Creates lot of Financial Awareness	1.000	.504
Value for Money can be Realized	1.000	.719
Protection to the Family	1.000	.567
Extraction Method: Principal Component Analysis.		

Table for Rotated Component Matrix for Motivation factors

Rotated Component Matrix^a					
	Component				
	1	2	3	4	5
Value for money can be realized	.796	Economic Factors			
Future contingencies	.676				
Protection to the family		.738	Contingency Factors		
Creates lot of financial awareness		.675			
Builds confidence			.800	Trust factor	
Helps in need	Precautionary Factors			.736	
Any time can be withdrawn				.615	
Easy way of usage	Safety Factors				.761
Safety to the funds					.648
Extraction Method: Principal Component Analysis.					
Rotation Method: Varimax with Kaiser Normalization.					
a. Rotation converged in 7 iterations.					

The motivating factors to use banking services in the rural areas are grouped into five factors by using factor analysis. The factors identified are named as economic factors, contingency factors, trust factors, precautionary factors and safety factors. These factors are the primary motives to the customers to use banking services in the sample area. It is also noted in the review of literature that these are the factors motivating customers in all the areas irrespective of the place. Hence, the motivating factors to use banking services are generic in nature.

Chi-Square Statistics

The researcher has applied chi-square statistics to find out the dependency between the variable. The researcher has attempted to test whether is there any association between education standards and motivating factors to utilize banking services. The result of the analysis is shown below.

Null Hypothesis: There is no association between educational standard and motivation factors to utilize banking service

Chi-Square values

Motivating Factors	Chi-square value	P value
Safety to the funds	8.217	0.51 ^{NS}
Future contingencies	6.936	0.86 ^{NS}
Financial protection	9.358	0.67 ^{NS}
Builds confidence	4.097	0.98 ^{NS}
Any time money can be withdrawn	20.757	0.54 ^{NS}
Helps in need	6.752	0.68 ^{NS}
Easy way of usage	10.708	0.55 ^{NS}
Creates lot of financial awareness	9.765	0.63 ^{NS}
Value for money can be realized	10.959	0.53 ^{NS}
Protection to the family	4.640	0.86 ^{NS}

NOTE: ^{NS} NON SIGINIFICANT

The above table highlights the chi-square value for educational standard with respect to motivating factors. Since the p value is greater than 0.01, the researcher accepts the null hypothesis that there is no association between education standard and motivating factor.

It can be inferred from the analysis that educational standard did not influence the motivational factor to utilize the banking services as the both variables are independent.

The researcher has applied the same chi-square statistics to know the association between the occupations with respect to motivating factors for banking service.

There is no association between occupation and motivating factor to use bank.

Chi-Square values

Motivating Factors	Chi-Square value	P value
Safety to the funds	20.515	0.001*
Future contingencies	8.514	0.744 ^{NS}
Financial protection	8.092	0.778 ^{NS}
Builds confidence	12.534	0.404 ^{NS}
Any time money can be withdrawn	5.462	0.941 ^{NS}
Helps in need	23.396	0.005*
Easy way of usage	11.398	0.495 ^{NS}
Creates lot of financial awareness	13.055	0.365 ^{NS}
Value for money can be realized	7.787	0.802 ^{NS}
Protection to the family	6.607	0.678 ^{NS}

NOTE: ^{NS} NON SIGNIFICANT * SIGNIFICANT

The result of the chi-square analysis is presented in the above table. It is clear from the table that except two motivating factors such as safety to the funds and helps in needs, other factors did not have any association as the p value is greater than 0.05. Therefore, the researcher accepts the null hypothesis that there is no association between occupations with respect to motivational factor for banking services except two factors described above.

Objective 5

The fifth objective is to offer suggestions to minimize the gaps in the practice of banking habits and the services offered to the customers in Thiruvallur district, TamilNadu. The following suggestions full fills fifth objective.

Factor Analysis

Suggestions to improve the banking services

In this part of the analysis, the researcher is trying to group the suggestions quoted as items in the questionnaire into factors, which can help to improve the banking services. Each of the items is measured with likert's scale on the level of approval and grouped by using the Principal component analysis. The results of the analysis are presented below.

Table for communality value for suggestions to improve banking services

Communalities		
	Initial	Extraction
Development of proper infrastructure	1.000	.853
Popularization of banking products	1.000	.850
Establishment of good administrative systems	1.000	.783
Proper maintenance and control	1.000	.544
Improving the proximity facilities	1.000	.930
Improving the safety and security	1.000	.854
Controlling of frauds	1.000	.569
Strict vigilance on corruption	1.000	.860
Creation of awareness	1.000	.679
Establishment of customer care centers	1.000	.963
Govt. initiative towards banking institutions	1.000	.734
Involvement of NGOs	1.000	.675
Improvement of communication systems	1.000	.568
Encouraging people to start accounts	1.000	.776
Subsidies and incentives to the customers	1.000	.519
Encouraging private banks	1.000	.676
Awareness camps and Follow-up Services	1.000	.660
Micro credit schemes	1.000	.963
Encouraging women and BPL class	1.000	.719
Encouraging co-operative System	1.000	.484
Extraction method: principal component analysis.		

Table for Factor Loadings

Suggestions	Loading	Name of the Factor
Micro credit schemes	.980	Innovation measures
Establishment of customer care centers	.980	
Improving the safety and security	.916	
Improving the proximity and facilities	.962	Availability measures
Strict vigilance on corruption	.922	
Establishment of good administrative systems	.873	
Development of proper infrastructure	.921	Accessibility measures
Popularization of banking products	.917	
Encouraging women and BPL class	.802	Promotional measures
Improvement of communication systems	.591	
Encouraging co-operative system	.566	
Involvement of NGOs	.769	Co-Operative measures
Encouraging private banks	.696	
Awareness camps and Follow-up Services	.697	Awareness Measures
Proper maintenance and control	.599	
Creation of awareness	.505	
Controlling of frauds	.722	Safety Measures
Govt. initiative towards banking institutions	.824	Policy Measures
Encouraging people to start accounts	.876	Motivational
<p>Extraction Method: Principal Component Analysis.</p> <p>Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 13 iterations.</p>		

The suggestions to improve the quality of banking services offered in the sample area are surveyed among the customers. The items quoted in the structured questionnaire are rotated using the principal component analysis with Varimax with Kaiser Normalization and nine types of factors are emerged with different score loadings. Each of the factors identified is named on the basis of the nature of the items loaded. The factors identified are Motivational factors, policy measures, safety suggestions, and awareness related suggestions, co-operative measures, promotional measures, accessibility measures, availability measures and innovative measures in the order of descending order.

Conclusion

This chapter deals with the analysis and interpretation of data and discussion. The problems existed in the rural area are lack of awareness and accessibility, lack of motivating factors to attract the customers, safety and reliability of the banks. The suggestions drawn are mostly related to promotional and customer relationship management. This needs to be taken care on priority basis. Still banking in rural areas has long way to go in providing the quality services to the rural poor at affordable cost. Let's pray for this noble cause to be happened at the earliest possible time for the benefit of the rural customers and to the Indian economy at large. Rural India has lot of potential to explore and grow mutually for the benefit of the primary sector and to the society at large.