A COMPARATIVE STUDY ON PERCEPTION AND PREFERENCE OF CUSTOMERS OF PUBLIC AND PRIVATE SECTOR BANKS TOWARDS E-BANKING IN TIRUNELVELI DISTRICT

THESIS SUBMITTED TO

MANONMANIAM SUNDARANAR UNIVERSITY

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE AWARD OF THE DEGREE OF

DOCTOR OF PHILOSOPHY

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TOWARDS E-BANKING IN TIRUNELVELI DISTRICT", submitted by K. THANGA

GLARA for the award of the Degree of Doctor of Philosophy in Commerce of

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her and it has not been submitted for the award of any degree / diploma / associateship /

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PERCEPTION AND PREFERENCE OF CUSTOMERS OF PUBLIC AND

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DISTRICT" submitted by me for the Degree of Doctor of Philosophy in Commerce is

the result of my original and independent research work carried out under the guidance

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ACKNOWLEDGEMENT

First and foremost, I acknowledge my deep sense of gratitude to **God**, **The Almighty** for His blessings that has made this humble research work possible.

The unstinted co-operation of my research supervisor **Dr. S. Arulraj Ponnudurai, M.Com., B.Ed., M.Phil., Ph.D.,** Associate Professor of Commerce, Nazareth Margoschis College at Pillayanmanai, Nazareth, has always been the benchmark for my research. I am very much thankful to him for his scholarly guidance, motivation and kindness.

Next, I articulate my deep sense of gratitude to my co-guide **Dr. C. Eugine Franco., M.Com., M.Phil., M.Ed., Ph.D.,** Associate Professor of Commerce, St. Xavier's College (Autonomous), Palayamkottai, who graciously spared much of his valuable time to provide all possible help, continuous support, valuable guidance and non-stop motivation for the successful completion of this research work. I sincerely hope this work proves worthy of the many discussions we had and the encouragement he has given me over the years.

I would like to express my deep sense of gratitude to **Dr. P. Lourdes Poobala Rayen**, Head of the Department of Commerce, St. Xavier's College (Autonomous),

Palayamkottai for his timely and unforgettable help extended to me whenever I needed during this research work.

It is my privilege and prerogative to express my thankfulness to the Rector Rev. Dr. Danis Ponniah, S.J, Secretary Rev. Dr. Antonysamy, S.J. and the Principal Rev. Dr. Britto Vincent, S. J. for their inspiration and motivation which they instilled

in me towards right perspectives persuaded me to pursue the research work in a successful manner.

I am deeply indebted to my parents, my husband, my kids and all my family members for their encouragement and support which enabled me to complete this research work successfully.

K. THANGA GLARA

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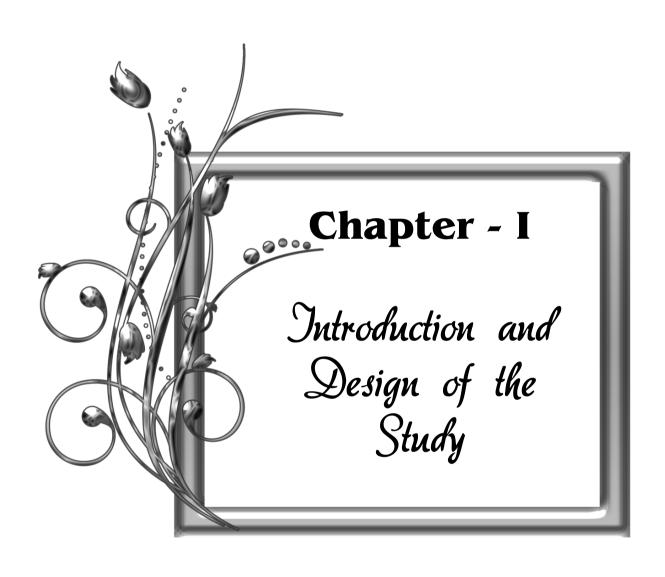
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LIST OF ABBREVIATIONS

Sl.No.	Abbreviation	Expansion
1.	AGFI	Adjusted Goodness of Fit Index
2.	AML	Anti-Money Laundering
3.	ANOVA	Analysis of Variance
4.	ATM	Automatic Teller Machine
5.	AVE	All Variance Extracted
6.	CBS	Core Banking Solutions
7.	CFMS	Centralized Funds Management System
8.	CFT	Combating the Financing of Terrorism
9.	CRM	Customer Relationship Management
10.	DTMF	Dual-Tone Multi-Frequency Signaling
11.	E-Banking	Electronic Banking
12.	ECS	Electronic Clearing Service
13.	EDI	Electronic Data Interchange
14.	EFT	Electronic Funds Transfer
15.	GFI	Goodness of Fit Index
16.	GPRS	General Pocket Radio Services
17.	HDFC	Housing Development Finance Corporation
18.	IB	Internet Banking
19.	ICICI	Industrial Credit and Investment Corporation of India
20.	IDC	Internet Data Center Computing
21.	IT	Information Technology
22.	KYC	Know Your Customers

23.	MAC	Money Access Card
24.	MB	Mobile Banking
25.	NDS	Negotiated Dealing System
26.	NEFT	National Electronic Funds Transfer
27.	OBS	Online Banking Services
28.	POS	Point Of Sale
29.	RBI	Reserve Bank of India
30.	RMSEA	Root Mean Square Error of Approximation
31.	RTGS	Real Time Gross Settlement
32.	SERQUAL	Service Quality
33.	SIC	Squared Interconstruct Correlation
34.	SMS	Short Messaging Services
35.	SPNS	Shared Payment Network System
36.	TB	Telephone Banking
37.	WAP	Wireless Application Protocol



CHAPTER I

INTRODUCTION AND DESIGN OF THE STUDY

1.1	INTRODUCTION
1.1	INTRODUCTION

- 1.2 STATEMENT OF THE PROBLEM
- 1.3 SCOPE OF THE STUDY
- 1.4 OBJECTIVES OF THE STUDY
- 1.5 HYPOTHESES

1.6 RESEARCH METHODOLOGY

- 1.6.1 Sampling Techniques
- 1.6.2 Pilot Study
- 1.6.3 Pre Test
- 1.6.4 Collection of Data
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CHAPTER I

INTRODUCTION AND DESIGN OF THE STUDY

1.1 INTRODUCTION

Banks, in India, should be appreciated for the inclusion of technology, keeping future in mind, in a large scale in their day-to-day operations. In the last two decades, the Indian banking sector has seen many positive developments. Adding another feather in their cap, e-banking is one of the popular technologies used by banks. This is to attract their respective customers who need ease of use and not making them wait in the queue in banks. E-banking is meant to any user, with a personal computer and a browser, can get connected to his bank's website to perform any kind of virtual banking functions.

In e-banking system, the bank has a centralized database which is web enabled. All the services that the bank has permitted on the internet are displayed in the menu. Any services can be selected and further interaction is dictated by the nature of service which is a convenient system for both the customers and banks. It helps customers to provide better and maximum services.

E-banking provides enormous benefits to customers in terms of ease and cost of transactions; either through internet, telephone or other electronic devices. Electronic finance has become one of the most essential technological changes in the financial industry. E-finance as the provision of financial service and markets is using electronic communication and computation. In practice, e-finance includes e-payment, e-trading and e-banking.

The term internet banking or e-banking are used as supplement. Making banking products and other services available to wholesale and retail customers, through an

electronic distribution channel, is called e-banking. In other words, e-banking refers to the banking operations which are done over the World Wide Web. E-banking is the outcome of technological innovations and competition. In fact, banks are using electronic and telecommunication networks for delivering a wide range of value added products and services. The devices to get access to internet have been telephone, personal computers including ATM. The delivery channels have been direct dial-up connections, private and public networks. No matter where online banking comes from or where it is today, it is most certainly here to stay. As a tool of modern living and as a life style aid, e-banking is absolutely indispensable. The fact is that many services that are now being offered with online banking are almost impossible to avail of in regular banking. This holds even truer for developments that the future of online banking will bring.

E-banking has become popular in many countries around the world, providing bank customers with ability to check personal and business account, debit and credit card account balances, online view and print a list of recent transactions and pay bills instantly. Money can be transferred immediately or at a future date from a customer's account to a business partner or to the customer's other accounts. In addition, account transaction details can be downloaded to a computer into a financial software package such as Intuit Quicken or Microsoft Money or a spread sheet. Internet banking also provides access to accounts through interactive digital television or via mobile phones.

E-banking involves adoption of new technologies to optimize operations, strengthening back office operations using improved information systems and exploring possibilities of coming up with new delivery channels of banking products/services. Banks tries to use e-banking as a means to replace their traditional delivery channel via branch banking - mainly due to the cost of setting up of physical branches and increased

overheads associations with maintaining them. As a part of their e-banking initiatives, banks offer the following new delivery channels to customers: Automated Teller Machines (ATM)/ Cash Dispensers (CD), telephone banking, internet banking and mobile banking. Banks use e-banking as mechanism to fight fierce competition that exists in the market and also to retain the customer's base they have. Customer's response to e-banking is enthusiastic and follows predicted path of Technology Adoption Life Cycle Models (Sheyan in 2002). New delivery channels are available through e-banking which allows banks to provide a wide variety of special services to their customers.

1.2 STATEMENT OF THE PROBLEM

In the competitive environment of the post liberalization era, financial sector reforms have significantly relaxed the market. It has become imperative to connect the best customer oriented practices and perceptions and to internationalize them for providing added satisfaction to the customers through the employees. Customer service is not merely the fulfilment of the government guidelines or the mechanical adherence to the time frame of services. It is a philosophy and an attitude of professional commitment, which believes in the ultimate satisfaction of each customer's needs.

Banks have evolved new products and services to attract the customers through innovative technological delivery channels. There are also several special operations which give an intensive marketing push to increase the customer base and usage of technological innovative banking services. For Indian banks, there is a wide market potential amongst e-banking. It can be used as a product to fascinate and tap the market. The customers can be benefitted by the various fund transfers which is one of the features of e-banking. This facilitates instant remittances to the beneficiaries, without the annoyance of acquiring draft, sending it by post or courier and follow-up for its safe

transit. This will facilitate the base of customer and possible opportunities to market their products and services to new segment of customers.

Further, while people, belong to middle age, wish for online banking, people belong to older age group incline to be more cautious towards online as they continue to be held in their old beliefs. While the assessment transaction costs vary and are dependent on various factors and various studies indicate the cost of transaction through internet is about 1/10th cost of the transaction through the branch. Security threats have secured as deterrents to the growth of electronic banking. Many customers do not have the knowledge of computers. Confidence level of customers in innovative banking needs to be taken care of. There is also a lack of awareness on charges in availing e-banking services.

The e-banking industry is facing numerous major challenges and issues today. First and perhaps most important is the security threats. Customers are unquestionably worried about providing their bank account number online or paying an invoice through internet. The challenge faces by e-banking industry and the e-business, in general, is the quality of delivery service including both delivery speed (i.e., short advance time required in ordering) and delivery reliability (i.e., delivery of items/service on time), which cause many e-business failures in the earlier era. Currently there are two different approaches in the e-banking industry a separate (from its traditional office) internet, e-bank (i.e., virtual bank) with all transactions being done online or to add an online banking section to the services already being offered by its major bank office. Both approaches have advantages and issues to be addressed in practice.

With the advent of Information Technology and its massive application in banking, delivery of banking services has become more electronic and online. The

demand for e-banking is necessitated by the growing e-commerce transactions and the paradigm shift in banking led by technology. From the perspective of both users and providers, e-banking is cost effective, quick and convenient. E-banking as a medium of delivery of banking services is gaining acceptance from customers and is fast catching up in India. Customers are realizing the comfort of accessing banking services from home and as a result, a number of bank customers have already adopted e-banking or on threshold of adopting it. Hence, it is needed to identify the reasons why customer's prefer e-banking.

This study is mainly focused to locate customers' perception and preference of public and private sector banks towards e-banking, the problems faced by the customers while using e-banking services and give suitable suggestions to improve the consumption, implementation of cashless transaction in India.

1.3 SCOPE OF THE STUDY

This study aims to find out the perception and preference of customers towards e-banking services offered by public and private sector banks. It also aims at measuring the satisfaction of the customers, service quality of the e-banking, problems faced by the customers and, offer suitable suggestions to solve the problems. This study also compares the perception and preference of customers towards e-banking services offered by public and private sector banks in Tirunelveli district.

1.4 OBJECTIVES OF THE STUDY

- 1. To study the demographic profile of customers.
- To identify the customers' awareness towards the availability of services of e-banking in public and private sector banks.

- To identify the customers' level of usage of e-banking services and to find out the factors influencing in the adoption of e-banking provided by public and private sector banks.
- 4. To identify the level of satisfaction of customers of public and private sector banks towards their usage of e-banking.
- To identify the problems of customers in using e-banking services provided by public and private sector banks.
- 6. To identify the perception and preference of customers towards e-banking.
- 7. To offer relevant and necessary suggestions

1.5 HYPOTHESES

The hypotheses is tentative, intelligence guesses indicating the solution of the problem. It gives speed to the study. When a hypothesis is stated negatively, it is called null hypotheses. It states that no difference exists between the parameter and statistic being compared to or no relationship exists between the variables being compared. The following hypotheses were formulated and tested in accordance with the research objectives:

- H₀: There is no difference on mean score of satisfaction from different bank sectors (public and private sector bank).
- H_0 : There is no difference on mean score of satisfaction from different gender types (male and female).
- H_0 : There is no interaction effect between gender and bank sector on mean score of satisfaction.

 H_0 : There is no difference on mean score of satisfaction from different age types (18-30 years, 30 - 50 years, and above 50 years).

H₀: There is no interaction effect between age and bank sector on mean score of satisfaction.

 H_0 : There is no difference on mean score of satisfaction from different education level.

 H_0 : There is no interaction effect between education and bank sector on mean score of satisfaction.

 H_0 : There is no difference on mean score of satisfaction from different occupational status.

H₀: There is no interaction effect between occupational status and bank sector on mean score of satisfaction

 H_0 : There is no difference on mean score of satisfaction from different monthly income.

 H_0 : There is no interaction effect between monthly income and bank sector on mean score of satisfaction.

 H_0 : There is no difference on mean score of satisfaction from different usage status.

 H_0 : There is no interaction effect between usage status and bank sector on mean score of satisfaction.

H₀: There is no difference on mean score of service problems of different gender types (male and female).

H₀: There is no interaction effect between gender and bank sector on mean score of service problems.

 H_0 : There is no difference on mean score of service problems of different age types (18-30 years, 30 - 50 years, and above 50 years).

H₀: There is no interaction effect between age and bank sector on mean score of service problems.

 H_0 : There is no difference on mean score of service problems of different education level.

 H_0 : There is no interaction effect between education level and bank sector on mean score of service problems.

 H_0 : There is no difference on mean score of service problems of different occupational status.

 H_0 : There is no interaction effect between occupational status and bank sector on mean score of service problems.

 H_0 : There is no difference on mean score of service problems of different monthly income.

 H_0 : There is no interaction effect between monthly income and bank sector on mean score of service problems.

 H_0 : There is no difference on mean score of service problems of different usage status.

 H_0 : There is no interaction effect between usage status and bank sector on mean score of service problems.

- H_0 : There is no relationship between the respondents' preference on usage level of e-banking features of public and private sector banks.
- H_0 : There is no difference on mean scores of opinion of respondents towards services of public and private sector bank.
- H₀: There is no difference between mean scores of respondents' expectation and satisfaction towards public banks' service quality.
- H₀: There is no difference between mean scores of respondents' expectation and satisfaction towards private banks' service quality.
- H₀: Independent variables (services) have no effect on respondents'e-banking service satisfaction of public sector banks.
- H_0 : Independent variables (services) have no effect on respondents' e-banking satisfaction of private sector banks.
- H₀: Independent variables (problems) have no effect on respondents'e-banking satisfaction of public sector banks.
- H₀: Independent variables (service problems) have no effect on respondents'e-banking satisfaction of private sector banks.

1.6 RESEARCH METHODOLOGY

The systematic method of collecting data and analysing the same in a logical and sequential order is necessary for the validity of any research. In this study, the researcher has used the primary and secondary data.

1.6.1 Sampling Technique

Customers of public and private sector banks using e-banking are the sample of this study. The security constraints are the impasse that the bank authorities are not able to provide the customer database of those who are using e-banking. And so, the researcher uses snowball sampling method for selecting sample respondents. Snowball sampling is a non-probability sampling technique where existing respondents recruit other respondents. The reason for using this sampling type is that it offers an easy way to obtain the raw data for the further analysis and also it saves time and cost since the respondents can be randomly selected.

1.6.2 Pilot Study

A pilot study has been conducted among other things. It has given better knowledge of the problems under the study. It helped to provide information for structuring questions with alternate answers. It gave information about estimating the probable cost and duration of main study.

1.6.3 Pre-Test

A Pre-test has also been conducted with an idea of testing the reliability of the questionnaire designed. A sample of 50 e-banking users was selected for this purpose. Based on the views of the respondents, the needed modifications were carried out and the questionnaire was standardized.

1.6.4 Collection of Data

The primary data are collected through well-defined and well-framed questionnaire. The questionnaire contains the statements measuring various aspects of

e-banking in addition to having statements measuring demographic characteristics of sample respondents. The 5- Point Likert scale items are included in the questionnaire for obtaining the perception and preference of customers towards e-banking. The questionnaires are distributed to randomly selected bank customers in the study region and filled questionnaires are collected in person by the researcher. With 600 distributed, only 485 filled-in questionnaires are received by the researcher with the response rate of 80.83 per cent. While scrutinizing them, some are found with lack of required information and after dropping the questionnaires of insufficient information, 461 questionnaires (76.83 per cent of the total sample) with complete information are finally retained for the study. The numbers of responses collected, after consistent follow up, were 225 questionnaires from public sector banks and 236 from private sector banks.

1.6.5 Tools for Analysis

The following statistical tools have been used for data analysis based on the data enumerated from the questionnaires:

- Percentage Analysis This tool is used to establish the contribution of variables in both optional and multiple choice questions raised in the questionnaire regarding demographic variables and different types of e-banking services offered by public sector and private sector banks.
- *ANOVA* The Analysis of Variance, popularly known as the ANOVA. It can be used in cases where there are more than two groups. When we have only two groups, we can use the t-test to compare the means of the groups. But, it might become unreliable in case of more than two groups. It is used to compare the means of more than two groups.

Garrett's Ranking Analysis Garrett's ranking technique was used to rank the preference indicated by the respondents on different factors. As per this method, respondents have been asked to assign the rank for all factors and the outcomes of such ranking have been converted into score value with the help of the following formula:

Per cent position: $100 (R_{ij} - 0.5) / N_j$

Where,

Rank given for the ith variable by jth respondents R_{ii}

Number of variable ranked by jth respondents N_i

With the help of Garrett's Table, the per cent position estimated is converted into scores. Then for each factor, the scores of each individual are added and then total value of scores and mean values of score is calculated. The factors having highest mean value is considered to be the most important factor.

- Factor Analysis Factor analysis is a technique that is used to reduce a large number of variables into fewer numbers of factors. This technique extracts maximum common variance from all variables and puts them into a common score. As an index of all variables, we can use this score for further analysis. Factor analysis is part of general linear model (GLM) and this method also assumes several assumptions. They are, 'there is linear relationship', 'there is no multi-co-linearity', 'it includes relevant variables into analyses and 'there is true correlation between variables and factors.
- SERVQUAL stands for Service Quality. Service quality (SQ) is a comparison of expectations (E) with performance (P) SQ=P-E. A business with high

service quality will meet customer needs whilst remaining economically competitive. Improved service quality may increase economic competitiveness. In the SERVQUAL instrument, 33 statements (Appendix I) measure the performance across these five dimensions, using a seven point likert scale measuring both customer expectations and perceptions (Gabbie and O'neill, 1996).

- *Multiple Regressions* is used to find the satisfaction and problems of customers of public and private sector banks towards e-banking. Multiple linear regression attempts to model the relationship between two or more explanatory variables and a response variable by fitting a linear equation to observed data. Every value of the independent variable x is associated with a value of the dependent variable y. In statistics, regression analysis is a statistical process for estimating the relationships among variables. It includes many techniques for modelling and analysing several variables.
- *Cronbach's Alpha* is a measure of internal consistency, that is, how closely related a set of items are as a group. It is considered to be a measure of scale reliability. A "high" value for alpha does not imply that the measure is one-dimensional. If, in addition to measuring internal consistency, you wish to provide evidence that the scale in question is one-dimensional, additional analyses can be performed. The formula for the standardized Cronbach's alpha:

$$\alpha = ([N.] _C^{-})/(._(V+(N-1)._C^{-})^{-})$$

1.7 OPERATIONAL DEFINITIONS

The following are the important operational definitions of the study.

1) E-Banking

A method of banking in which the customer conducts transactions through electronically via internet.

2) Preference of E-Banking

It refers to certain e-banking characteristics that any customer wants to have in a good or service to make it preferable to him. This could be the degree of satisfaction, utility from e-banking, etc.

3) Perception of E-Banking

The feelings, attitudes and images that bank customers have regarding the use of the e-banking.

4) Bank Customer

An individual with a bank account in any of the available banks is a bank customer.

5) E-Banking Channels

The automated delivery of new and traditional banking products and services provided directly to customers through electronic interactive communication channels.

6) ATM

An Automated Teller Machine (ATM) is an electronic banking kiosk, which allows customers to complete basic transactions without the aid of a branch representative or teller. The customers can withdraw cash, make deposits, and obtain bank statements.

7) Internet Banking

Internet banking allows a user to execute financial transactions via the internet.

Internet banking is also known as 'Online Banking' or 'Web Banking'.

8) Telephone Banking

Telephone banking is a service provided by a bank or other financial institution that enables customers to perform a range of financial transactions over telephone, without the need for a customer to visit a bank branch in person.

9) Mobile Banking

Mobile banking is the act of doing financial transactions on a portable device (cell phone, tablet etc.)

10) Core Banking

Core banking is a banking service provided by a group of networked bank branches where customers may access their bank account and perform basic transactions from any of the member branch offices.

11) Virtual Banking

Internet based financial institution that offers deposit and withdrawal facilities and other banking services through Automated Teller Machines (ATMs) or other devices without having a physical walk-in to the bank premises.

12) M-Commerce

Commercial transactions conducted electronically by mobile phone.

1.8 LIMITATIONS OF THE STUDY

The present study is limited with bank customers' views about e-banking. This study does not deal with the views of bank employees. The study is also geographically restricted to Tirunelveli region due to time and financial constraints. Only qualitative data as opined by users of e-banking services have been considered. Quantitative data like business volume, quantum of transactions are not considered.

1.9 CHAPTER SCHEME

Chapter I titled Introduction and the Design of the Study, deals with the Introduction, Statement of the Problem, Scope, Objectives, Hypotheses, Methodology, Limitations and Chapter Scheme.

Chapter II covers the Review of Literature and it contains the detailed review of prior studies in the area of banking, e-banking, internet banking and other related areas conducted both in India and abroad for the purpose of identifying the research gap and to develop a theoretical framework for the study.

Chapter III is Theoretical Framework of E-Banking. It focuses on the theoretical framework of e-banking and its channels.

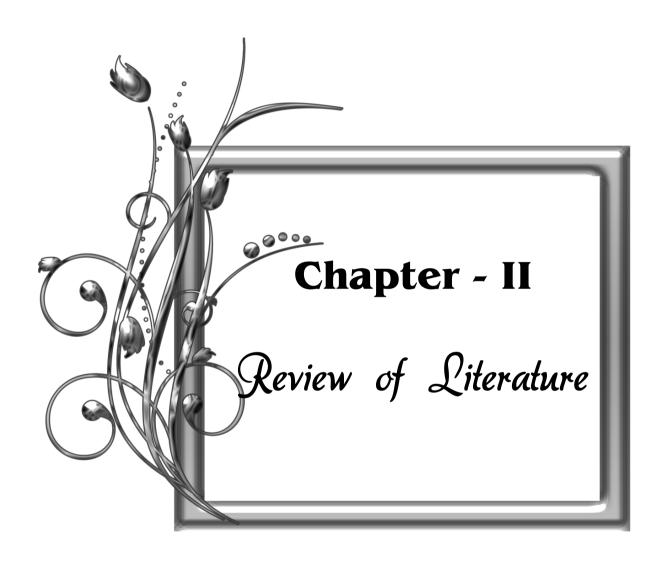
Chapter IV deals with the details of the study area as it entitles Profile of the Study Area.

Chapter V is Analysis of Customers' Demographic Profile and Factor Analysis. It describes the profile of the customers and also analyses the factors influencing customers' for availing e-banking in public and private sector banks.

Chapter VI is Analysis of Customers' Satisfaction Towards E-Banking. It analyses the relationship between satisfaction towards e-banking and demographic profile of customers of public and private sector banks and also it analyses the relationship between problems faced in e-banking and demographic profile of customers of public and private sector banks.

Chapter VII is Customers' Perception Towards E-Banking. It analyses the perception and preference of customers of public and private sector banks towards e-banking.

Chapter VIII is Summary of Findings, Suggestions and Conclusion. It exhibits the summary of findings, suggestions based on the findings of the study, conclusion and scope for further research.



CHAPTER II

REVIEW OF LITERATURE

- 2.1 INTRODUCTION
- 2.2 STUDIES OUTSIDE INDIA
- 2.3 STUDIES IN INDIA
- 2.4 RESEARCH GAP
- 2.5 CONCLUSION

CHAPTER II

REVIEW OF LITERATURE

2.1 INTRODUCTION

Literature survey, an essential part of any research, makes sure that the researcher gets familiar with the grassroots level of the subject background. Arriving at appropriate published materials is a major activity in the early stages of the research. Through a literature review, one can find out the other emerging ideas or trends, approaches, methodologies, obstacles about his/her subject of interest. All said and done, this activity will encourage the researcher to clarify the shortcoming in the subjects, define objectives and make an accurate proposal. The relevant literature is classified and presented under the following two main headings: (1) Studies outside India and (2) Studies in India.

2.2 STUDIES OUTSIDE INDIA

Laforet and Li (2005)¹, in their study, took stock of the market status of online/ mobile banking in China. The objective of the study has been to identify the target customers for online and mobile banking. This is also to compare the attitude of users and non-users towards e-banking in terms of various factors such as technology, security, convenience, etc. The authors selected a sample of 300 respondents from six major cities of China. That has resulted in that online and mobile banking users were predominantly males irrespective of age, status and qualification. Security was considered the most important factor that motivated Chinese consumers for the adoption of online banking. However, the predominant problems faced by the

Laforet, S., and Li, X. (2005). "Consumers' Attitudes toward Online and Mobile Banking in China". International Journal of Bank Marketing, 23(5), 362-380.

customers of Chinese online banks were perception of risks, computer and technological skills, and lack of awareness.

Erickson et al., (2005)² studied the technology acceptance of internet banking in Estonia. The objective of the study has been to see to that to what extent customers accept internet banking as a tool for the satisfaction. The findings of the study suggest that internet banking proved to be beneficial for the customers. However, banks need to put much efforts not only into making a user friendly internet bank, but also to explain their customers how the internet bank is useful to them.

Kassim (2005)³ explored the growing needs and expectations of the consumers with regard to banking in Qatar. Due to competition, banks had to offer a broader range of products and services at more competitive prices through more efficient and convenient channels. The study investigated the discrepancy between customer expectation and perception toward e-banking services. The author compared the expected and perceived value of e-banking services through mean responses which showed that the largest discrepancies were found in the availability of instructions and personnel assistance on how to use e-banking services and functionality. The author concluded that to increase overall service quality of e-banking, management and employees should find out what customers expect in terms of procedure handling, efficiency, accessibility and updated information about products and services.

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² Erickson, K.; Kerem, K.; and Nilson, D. (2005), "Customer Acceptance of Internet Banking in Estonia", International Journal of Bank Marketing, Vol. 23, No. 2, pp. 200-216.

Kassim, M.N. (2005), "E-Banking Service Quality: Gaps in Qatar Banking," Journal of Internet Banking and Commerce, Vol.10, No.2, Available at: www.arraydev.com/commerce/JIBC.

Lassar et al., (2005)⁴ explored the relationship between consumer innovativeness and self-efficiency on the internet, online banking adoption and electronic commerce. To understand the relationship, they used Technology Adoption Model (TAM) which suggested that the use of technology based system totally depends upon the consumers' feeling and attitude towards it. The findings of the study suggested that the level of consumers' innovations matters when it comes to adapting and utilizing e-banking products and procedures. The results showed that products like telephone banking, EFT, online banking required active consumer role in using the product. While in bill payment, consumer needs only to set up process initially and then monitor on a semi-regular basis. The author concluded that banks offering e-banking need to recognize the importance of consumer innovation characteristics so that consumer will bear the fruit.

Raopun (2005)⁵ evaluated the level of internet banking services in Thailand and compared the overall service quality of internet banking. The author has used eight dimensional quality model given by David A. Garvin, namely, performance, features, reliability, conformance, durability, serviceability, aesthetics and perceived quality. The results of the study indicated that reliability, security system and information accuracy were the most important perspectives and least important was the perceived quality of commercial bank. The results of the study could be used as a guideline to set up a form of service in order to satisfy the needs of target group accurately and appropriately.

⁴ Lassar, M.W., Manolis, C., and Lassar, S. (2005). "The relationship between consumer innovativeness, personal characteristics and online banking adoption". International Journal of Bank Marketing, 23 (2), 176-199.

Raopun, N. (2005), "A Quality Study of Internet Banking in Thailand", Available at http/www.IJCIM.th.org/v13nsp/pdf.

Gabriel et al., (2005)⁶ tried to evaluate the quality of banking services and customer satisfaction. The authors surveyed 11936 customers of Brazilian banks. They explored five factors for assessing the services of these banks are as follows:

1. Relationship with the customer, 2. Business and financial transactions,
3. Information technology, 4. Brand, and 5. Image of the bank. Out of these five factors, first two factors have significantly higher impact on customer satisfaction.

The authors highlighted that as information technology changes very fast, so utmost care should be given while providing quality service to customer. Further, with the advent of information technology, banks should diversify the portfolio of services so that the customers could not switch to other banks.

Bauer et al., (2005)⁷ in their study validated a measurement model for the construction of website portals quality based on three dimensions that were core services, additional services and problem solving services. These dimensions were major determinants of consumer quality perception for e-banking services. However, security, trustworthiness represented the basic demands of portal users. E-banking web-portal represented a bundle of services and functions. It could not be described as a one dimensional customer rating. In fact, it was represented by multi-dimensional and multifactor construct. The author concluded that by comparing e-service quality model with traditional service quality model, more detailed insights in the field of quality perception were required in order to have detailed vision about quality.

Gabriel, C.; Bellini, P.; and Henrique, L. (2005), "Service Quality in Banks: Brazilian Experience", Journal of Internet Banking and Commerce, Vol. 10, No. 3, December.

Bauer, H.H., Hammerschmidt, M., and Falk, T. (2005). "Measuring the quality of e-banking portals". International Journal of Bank Marketing, 23(2), 153-175.

Wan et al., (2005)⁸ evaluated the adoption of four major banking channels i.e., branch banking, ATM, telephone banking and internet banking in Hong Kong banks. They also highlighted the influence of demographic variables and psychological variables in adopting the distribution channels. The results of the study indicated that among the four channels, ATM was most frequently used followed by internet banking and branch banking. Telephone banking was the least adopted banking channel. Customers adopted these channels because of safety, security, convenience and speediness offered by them. The researchers suggested that banks should improve their website designs and navigations, strengthen website security, allow more ways in which customers could check the accuracy of their transactions and provide more useful financial information in a well-organized manner.

Suleiman et al., (2005)⁹ studied the impact of E-banking on Malaysian banking sector. The study aimed at providing an overview of e-banking adoption in Malaysia. Out of 53.9 per cent, who used e-banking, 85 per cent used it for savings bank facility, 55.8 per cent for current account facility, 37 per cent for bill payment, 35.3 per cent for visa /master card and 30.8 per cent used for third party transfer. The researchers analysed websites of the banks in order to know the impact of e-banking. Evaluation of websites contained 32 elements, and a survey was conducted to obtained customers' perspective of e-banking. The researchers overviewed that results of the study cannot be generalized to the general population. Nevertheless, the results provide a fair indication of what services e-banking users find useful and which group of customers were likely to use the services more.

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Wendy W.N. Wan, Chung-Leung Luk, Cheris W.C. Chow, (2005) "Customers' adoption of banking channels in Hong Kong", International Journal of Bank Marketing, Vol. 23 Issue: 3, pp.255-272, doi: 10.1108/02652320510591711.

Sulaiman, A., Lim and C. H., Wee, A. (2005), "Prospects and Challenges of E-banking in Malaysia", Available at http://www.ejisdc.org/ojs/viewarticle.php?id=184.

Siam (2006)¹⁰ evaluated the effects of electronic banking on the profitability of Jordanian banks. The study investigated the reasons behind providing electronic banking services through internet, their impact on banking services in general, and banks profitability in particular. The results of the study revealed that electronic banking services had a negative impact on the profitability of banks in the short run because of increased capital costs involved in technical and electronic infrastructure, cost of training to employees and also the cost involved in creation of environment where the banks can operate smoothly. However, these services had a positive impact in the long run on the profitability of banks. The researcher recommended that banks need to carry out awareness and promotion campaigns to educate clients and aware them of feasibility through reduced time, cost, effort and also to hold training courses for employees to understand the e-banking business strategies.

Jen-Her Wu, Tzyh-Li Hsia and Michael S H Heng (2006)¹¹ analysed the impact of e-banking on brick and mortar banks through innovation model. The researchers' analysed 8 core capabilities to assist the banks migrated to e-banking environment. Their capabilities fall into two groups relating to configuration of existing business model. They suggested that banks need to develop uniquely innovative services and products on the one hand and innovative business model that changes the way banks operate on the other. They concluded that eight core capabilities (technical dynamic capabilities and business dynamic capabilities) provided a blue print for sustaining a bank's ability to exploit e-banking.

Siam, A.Z (2006), "Role of Electronic Banking Service on the Profit of Jordan Banks". American Journal of Applied Science, 1999-2004.

Jen-Her Wu, Tzyh-Li Hsia and Michael S H Heng, "Core Capabilities for Exploiting Electronic Banking", Journal of Electronic Commerce Research, Vol.7, No.2, 2006. Pp 111-122.

Boatang (2006)¹² explored some of the issues that affected the key decisions of banks while adopting e-banking techniques. The decisions were related to entering e-banking, e-banking channel choice, customers and managing conflicts. The findings of the study indicated operational constraints related to customer location, the need to maintain customer satisfaction and the capabilities of the banks. The author pointed out the need for African banks to understand customer needs, corresponding service to offer, the resources and partnership required to offer it, and develop appropriate e-banking strategies that maximized value for both customer and banks.

Enders et al., (2006)¹³ in their paper addressed a fundamental problem of the disruptive innovation theory which lies in the difficulty to categorize new technologies into sustaining and disruptive innovation. The researchers first discussed basic principles of disruptive innovation theory, outlined five main strategic diversions that incumbent firms need to address when they face disruptive circumstance in their industry. They further discussed different e-banking modes used by Nordea banks, i.e., e-identification, e-signature services, e-billing services, e-salary function, e-payment function. However, e-banking services should be properly analysed for the relativity of disruption.

Nelubiri and Sinti (2006)¹⁴ examined the impact of internet banking on customers' attitude, their needs and behaviour. The objective of the study was to see the internet banking adoption in Malaysia. The authors used five perceived attributes that is relative advantage, compatibility, complexity, trainability and absorbability for

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Boateng, R. (2006), "Developing E-banking Capabilities in Ghanian Banks", Journal of Internet Banking and Commerce, Vol.11, No. 2, August. www.arraydev.com/commerce/ JIBC/2006-08/Boateng.asp.

Enders, A. et.al (2006). "The Relativity as a Sustaining Innovation in the Banking Industry", Journal of Electronic Commerce Research, Vol.7, No.2, pp. 67-76.

Nelubiri, O.N.; and Sinti,Q. (2006), "Consumers Attitudes, Systems Characteristics and Internet Banking Adoption in Malaysia", Management Research, Vol. 29, No.1/2,pp.16-27.

IB adoption. The results of the study indicated that for better understanding of internet banking acceptance, it was very necessary to observe customer attitude and perception towards internet banking. So, the banks should adopt such internet banking facilities which could enhance processing of transaction, inter-activity and customization.

Flavian et al., (2006)¹⁵ explored how customers' perception of traditional bank influences their decision to adopt the services of the internet. The researchers found that if the customer trusts in brick and mortar bank, then it was possible that they feel more motivated to use the online services offered by the same bank due to trustworthiness of the customer in the traditional banking system. The outcome of the results suggests that to use internet banking; trust, income, age, sex, education and employment are the most affecting factors for the use of online banking services and the banks can reduce their costs and widen their market through online banking adoption.

It is difficult to increase the client base of an online business despite the fact that electronic commerce is continuously growing. Competitiveness in electronic commerce is huge because of the large number of agents involved in it, the reduced search costs and the high power obtained by the consumer with the appearance of the Internet (**Ba et al., 2006**)¹⁶.

Gan et al., (2006)¹⁷ examined consumer choices between electronic banking and non-electronic banking in New Zealand. The authors evaluated that decision to use electronic banking was hypothesized to be a function of service quality, perceived risk factors, price factors, service product characteristics, individual factors and

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Carlos Flavián, Miguel Guinalíu, Eduardo Torres, (2006) "How bricks-and mortar attributes affect online banking adoption", International Journal of Bank Marketing, Vol. 24, Iss: 6, pp.406-423.

Ba, S., Stallaert, J. and Zhang, Z., (2006); "Price competition in e-tailing under service and recognition differentiation", Electronic Commerce Research and Applications, Available at http://www.sciencedirect.com/.

Gan, C.; Clemes, M.; Bunchai Limson, V.; and Weng, A. (2006), "A Logit Analysis of Electronic in New Zealand", International Journal of Bank Marketing, Vol. 21, No. 6, pp. 360-383.

demographic variables. The findings showed that service quality, perceived risk factors, user input factors; employment and education were the dominant variables that influence consumer's choice of electronic banking channels. The authors observed that consumer use e-banking because of its suitability, convenience and reliability.

Robbins (2006)¹⁸ tried to evaluate whether the adoption of e-banking by the banks affected the importance of bank location. The study looked into the state of consumer adoption of e-banking products and growth of e-banking products since 1995. The study also investigated whether consumer choice had changed as a result of increased e-banking use and how banks had responded. The study also questioned why location was still important today. The author focused that e-banking was not a perfect substitute of physical presence of banks in the market. Consumers want the convenience of e-banking products but only of those banks which fall close to their place. So, the location of a bank branch and electronic banking were complementary to each other.

Lichtenstein and Williamson (2006)¹⁹ in their research article gave an outlook as to how and which specific factors affect the consumer decision, whether or not to choose internet banking services in the Australian context. The findings of the study brought out that convenience was the main motive for customer to bank on the internet, while there was a range of other influential factors that may be modulated by banks. The research suggested that banks will be able to manage consumer experiences with moving to internet banking only if they understood that such experience involves a

Robbins, E. (2006), "Has Electronic Banking Affected the Performance of Bank 258 Location?", Article Provided by Federal Reserve Bank of Kansas City in Journal of Financial Industry Perspective.

Lichtenstein Sharman and Kirsty Williamson (2006), "Understanding consumer adoption of internet banking: An interpretive study in the Australian Banking context", Journal of Electronic Commerce Research, 7(2), 50-66.

process of adjustment and learning over time, and not merely the adoption of new technology.

In Factors Influencing Customers Acceptance of Internet Banking: Case of Scandinavian, **Hanna-MaijaVainio** (2006)²⁰ primarily raises issues responsible for the failure of Internet Banking. The study has concluded that security has been widely recognized as one of the main barriers for the adoption of Internet. It was also suggested that designing a web page for transaction has one of the key issues in adoption of Internet baking.

According to a study made by **Arne Floh and Horst Treiblmaier** (2006)²¹ surveying might be an adequate instrument for online banks to learn about their customers' attitudes. The comparatively high response rate for an online survey can be taken as an indicator that customers of Dotcoms are actually willing to give feedback and get in touch with their supplier.

Liao and Wong (2007)²² empirically explored the major considerations associated with internet-enabled e-banking systems and systematically measured the determinants of customer interactions with e-banking services. In order to study customers' interaction with internet banking, the respondents were asked to explain the extent of using internet banking services. The results suggested that perceived usefulness, ease of use, security, convenience and responsiveness to service requests significantly explained the variation in customer interactions. Exploratory factor

Arne Floh and Horst Treiblmaier (2006), "What keeps the E-Banking Customer Loyal? A Multi group Analysis of the Moderating Role of Consumer Characteristic on E-Loyalty in the Financial Service Industry", Journal of Electronic Commerce Research, Vol.7, No.2, pp.97-110.

Hanna-Maija Vainio, "Factors Influencing Corporate Customers Acceptance of Internet Banking: Case of Scandinavian Trade Finance Customers". M.Sc. Thesis in Accounting submitted to The Swedish School of Economics and Business Administration, Feb. 2006.

Liao, Z.; and Wong, K.W. (2007), "The Determinants of Customer Interaction with Internet Enabled E-Banking Services", National University of Singapore, Department of Economics, Working Paper, No.701.

analysis and reliability test indicated that these constructs were relevant and reliable. Confirmatory factor analysis confirmed that they possessed significant convergent and discriminatory validities. Both perceived usefulness and perceived ease of use have significant impact on customer interactions with e-banking services. Perceived security, responsiveness and convenience also represented the primary avenues influencing customer interactions. In particular, stringent security control was critical to e-banking operations. The findings had managerial implications for enhancing extent of e-banking operations and developing viable e-banking systems and services.

Laukkanen (2007)²³ highlighted the attributes in multi-channel electronic banking. The main objective of the study was to understand the diverse retail channel preference of online bank customers by examining their channel attribute preferences in electronic banking. For the research purpose, the author divided the customers into two groups those who pay their bills over the internet, and those who use a mobile phone for the service. With the help of conjoint analysis, the results of the study revealed that internet and mobile users differ in their preferences towards electronic channels attributes in bill paying. It was found that screen size followed by location and response time were the most important attributes for internet users. However, locations followed by screen size and response time were the most important attributes for mobile users. The author concluded that banks and producers should diversify consumer group so that the use of electronic banking techniques and services could be increased.

Kautish (2008)²⁴ described the paradigm shift of banking sector from traditional banking to online banking. The objective of the paper was to discuss the

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Laukkanen, T. (2007), "Customer Preferred Channel Attributes in Multi-Channel Electronic Banking", International Journal of Retail and Distribution Management", Vol. 35, No.5, pp.393-412.

Kautish, S. (2008), "Online Banking: A Paradigm Shift", E-Business, Vol. 8, No. 10, pp. 54-59.

derivation of value added tool of online banking system which was used to attract new customers and retain the existing ones. It helped the banks to acquire more business from existing customers. People preferred to use online banking because of its availability, better performance, ubiquity, speed and its effectiveness. Further, the author discussed two bank models integrated banking model where the banks provide internet banking services as an extension to their basic services like ATM and phone banking. So, it is a kind of hybrid approach and the other was stand-alone internet banking model, where the banks totally rely on the online channel. To improve the services through e-banking, banks should think from the customers' perspective and there should be creativity and innovation in designing and implementation of e-banking processes. The author concluded that as e-banking was a relatively new concept in the global banking scenario so the best of this concept was yet to come.

The research, User Acceptance of Online Banking Services in Australia by Prof. Neha Lim (2008)²⁵ has investigated both positive and negative factors influencing customers' acceptance of Online Banking Services (OBS) in Australia. A research framework was developed based on the Unified Theory of Acceptance and Use of Technology (UTAUT). One hundred and ninety respondents in Australia participated in a survey on their perceptions toward OBS. Results show that although respondents strongly believe that using OBS would benefit their daily life, many issues (such as security concerns and technology anxieties) reduce their self-efficiencies. Recommendations were given to promote a safe, efficient and conducive environment for user adoption of online banking.

Neha Lim (2008), Swedish Business School Orebro University, Sweden, published in proceedings of the 10thInternational Business Information Management Association Conference, Kualal Lumpur, Malaysia (ISSN 0976-2183) July.

Safeena et al., (2010)²⁶ determined the consumer's perspective on internet banking adoption. Finding shows that perceived usefulness, perceived ease of use, consumer awareness and perceived risk are the important determinants of online banking adoption and have strong and positive effect on customers to accept online banking system.

2.3 STUDIES IN INDIA

According to a study made by **T.M. Bhasin** (2001)²⁷, with the wide spread use of technology in the baking area both with the county and outside, it is for sure that technology can play a vital role in turning around the future of the rural India. As the technology deployment in the banking industry and financial institutions is more than two decades old, it is the right time to leverage the benefits of technology in financial inclusion of the rural India in a big way. In fact, what could not be achieved during the past six decades of independence now looks achievable in the near future with the use of contemporary technological tools.

The advent of internet banking is a new roadway to serve corporate clients. This results in the reduction of the use of a large amount of paperwork. There will be little human interface between banks and clients. Internet banking enables the banks to branch out their services to wider areas. On the other hand, banks also can move into the phase of centralized banking and distributed banking can continue in respect of retail banking. This also facilitates easy access. Since, people are getting educated and in their technology driven mechanical life, they find it more convenient to use internet banking (**Durai, K. 2005**)²⁸.

Safeena. et al, (2010), "Customer Perspectives on E-business Value: Case Study on Internet Banking", JIBC, Vol. 15, No.1, April.

Bhasin, T.M. (2001), "E-Commerce in Indian Banking", IBA Bulletin, Vol. 24, No.4, pp. 43-57.

Durai, K. (2005), "Trends in Indian Banking Sector", Readers Shelf, Vol. 1, No.10, July.

Chalam and Nageswara (2006)²⁹ focused that as the computer touched each and every aspect of the economy, so banking sector was not an exception to it. The objective of the study was to find out change in banking sector through the techniques of e-banking. The authors evaluated several e-banking products like ATM, EFT, ECS, EDI, telebanking, etc. E-banking had benefited to the individual through anywhere, anytime banking; to traders and merchants through immediate settlement of payment; to banks through unlimited network, online banking, attracting and retaining the customers, debit and credit card facilities; and to the nation through globalization of trade, more exports, more transparency in business, etc. The researchers concluded that emerging challenge in e-banking was due to lack of awareness among people, no cyber laws by government and low density of telephone lines and low computerization of banking activities. They recommended that banks should adopt hardware and software security measures, appoint skilled personnel and adoption of digital signature certification authority so as to tackle the major challenges in e-banking.

Walter (2006)³⁰ evaluated why people use or choose technology enabled services like internet banking, telephone bill paying and internet shopping service. The author used a behavioural model for the study. The findings of the study showed that customers' adoption rate to use internet and telephone banking was influenced by their willingness to use the service, their personal capacity to engage in the service, the risks and advantage involved in the services. The paper also depict that while choosing technology enabled services, customers want convenience, time saving, faster service and security. The author concluded that for more use of technology enabled services, it

²⁹ Chalam, G.V.; and Nageswara, K.S.(2006), "E-banking Application in Indian Banks: Emerging Issues", Professional Banker, Vol.17, No.2, pp.72-82.

Walter, H.R. (2006), "Why Consumers Use and Do Not Use Technology Enabled Services", Journal of Service Marketing, Vol. 20, No. 2, pp.125-135.

should make more customers friendly, reduce the system complexity and undue waiting time involved in the service handling.

Ashiya (2006)³¹ evaluated developments made by electronic payments. The author evaluated different modes of e-payment used across the globe. The main objective of the study was to find the current offerings and development provided by electronic payments. The author evaluated different modes of e-payment such as plastic cards, debit cards, credit cards, smart cards, electronic cheques etc. These electronic ways provided an excellent instrument for payment system. The author analysed that security was the main concern among electronic payments. However, e-payment this sophisticated technology could be used as a tool for the enhancement of customer loyalty and business of banks as it had reduced the risk and cost and could increase the customer loyalty.

Jain and Hundal (2006)³² described the importance of mobile banking and barriers in the adoption of mobile banking. The paper examined the forces that can act as barriers in mobile banking service adoption. The objective of the study was to find the reasons why the people had not fully accepted the technology though it provided much advantage to the banking customers as compared to previous technologies. The paper attempted to identify the various barriers, viz. access problems, dissatisfaction and inability of service providers in the adoption of mobile banking services. The results of the study indicated that consumers got disheartened by the complicated function while accessing the mobile banking services which lead to rise in their dissatisfaction level, as no proper guidance was provided to them. The researchers

Ashiya, M. (2006), "Electronic Payments: Current Offerings and Developments", Professional Banker, Vol. 10, No.1, September, pp. 55-62.

Jain, A.; and Hundal, B.S. (2006), "Barriers in Mobile Banking Adoption in India", The ICFAI Journal of Bank Management, Vol. 5, No. 3, pp. 64-73.

suggested that service providers should be aware of the problems of their customers. The findings of the study gave a brief outlook for the practical implication for managers and policy-makers who have to make strategies and decisions in order to cater the unexplored service market.

Krishnamurthy (2006)³³ highlighted the advantages, risks, innovations and convenience involved in e-banking. ATM, telephone, internet and cluster banking helped banks to deliver the products more effectively. The author, in his paper, also described operational efficiency of e-banking. It included basic e-banking, simple transactional and advanced transactional e-banking. Each site offered a differential kind of services to customers. The author also commented upon some risks such as loss of secrecy of the customers, financial stability, fraud prone possibilities, eruption of legal claims, etc. So, the author suggested that banks should adopt such a strategy in which risks and innovation in banking products move parallel and simultaneously.

Paul (2006)³⁴ discussed the role of technology and scope of remote channels, their implication, strength, weakness, opportunity and threat in banking sector. The author evaluated that IT development affects banking in two ways. Firstly, it had contributed in reduction of costs associated with management of information by replacing paper based and labour intensive methods with automated processes. Secondly, it had modified the ways in which customers had access to banks' services and products. The researcher found that the introduction of RTGS, NDS, and CFMS had increased the safety, security, efficiency and soundness in payment system. Lastly,

Krishnamurthy, M. (2006), "Product Innovation in Banking Industry", Professional Banker, Vol. 8, No. 6, pp. 51-55.

Paul, J. (2006), "Global Trends in Banking Sector: Analysis of High Tech Services and Remote Channels," IBA Bulletin, Vol.1, No.5, May, pp.10-15.

the author revealed that technology had a great impact on the structure of banking sector in the form of bank branches, bank personnel and alliance.

Raghvan (2006)³⁵ highlighted the transformation in the banking sector due to effect of information technology, tele-communication and electronic data processing. He also attempted to visualize the perception of banks in India in the year 2020 taking into account the impact of internet banking, ATMs, EFT on the performance of banks and initiative taken in liberalization, privatization and globalization. He also evaluated the future of online and internet banking. Due to tangible and proven benefits, automation of manual processes; online and internet banking was slated to increase manifold. He also evaluated that currently an estimated 46 lakh net users were online and this was estimated to touch 160 lakh by March 2008. Furthermore, he analysed the projected indicators of banks in India in 2020 with special emphasis on internet banking, online banking and electronic banking.

According to a study made by **Sangeeta Arora and Shubpfeet Kaur** (2007)³⁶, Banks, the world over, are transcending their normal business operations and diversifying their activities in response to economic and financial sector reforms. The Indian banking industry too has been seen steadily shifting away from traditional sources of revenue like loan making etc., towards non-traditional activities that generate fee income, service charges, trading revenue and other types of non-interest income.

Raghavan, R.S. (2006), "Perception of Indian Banks in 2020", Journal of Accounting and Finance, Vol.55, No.4, pp.600-606.

Sangeeta Arora and Shubapreet Kaur (2006), "Financial Performance of Indian Banking Sector in Post Reforms Era", The Indian Journal of Commerce, Vol.59, No.1, Jan-Mar.

A cheque is a pulling device which can draw funds from the payers' account, whereas an electronic payment is a pushing device, which carries the funds to receiver's account (Bikram Jit Singh Mann and Sunpreet Sahni (2007)³⁷

Technology is rapidly changing the face of banking industry and enhancing the demand for better than the best services. It is helping banks in breaking the bottlenecks in superior customer experience. Technology has made the world a global economic village. Banking services are no more confined in brick and mortar environment. Technology has made it possible to transact business anytime, anywhere and from any branch office of a bank (**P.K. Khanna, 2007**)³⁸.

Manoharan (2007)³⁹ highlighted the e-payment system in India and its performance impact on Indian banking sector. The author described that competition in banking industry had forced the banks to rethink the way they operate their business. So, e-banking has made it possible to find alternate banking practices. In the paper, the author divided the payment system in India into three parts, i.e., large value payment system, retail payment system, and retail electronic system. Each one includes different categories of e-payment. The author studied the performance of various Indian payment systems in the last three years in which RTGS emerged as the principal payment system in India for wholesale payment. The study focused that having a huge opportunity of e-payment system in India still 90 per cent of transactions were cash based. So, an effort should be made to increase the use of e-payment, and RBI should make efforts to strengthen the legal framework of electronic banking system.

Bikram Jit Singh Mann and Sunpreet Sahni (2007); "Internet Banking", The Indian Banker, A monthly journal by Indian Banks Association, Mumbai, India, Vol.11, No.4, April, P.31.

Khanna, P.K. (2007), "Customer Service in Banks", The Indian Banker, A monthly journal by Indian Banks Association, Mumbai, India, Vol.11, No.2, February, P.20.

Manoharan, B. (2007), "Indian E-payment System and its Performance", Professional Banker, Vol.7, No.3, pp. 61-69.

Ramani (2007)⁴⁰ studied the impact of e-payment system on Indian banking sector. E-payment was required for handling large volume of business payment and remittances for hassle free, quicker and faster payment remittances at low cost, and paperless transactions. The researcher highlighted various steps taken by RBI for the e-payment. It includes RTGS, deferred net settlement system such as electronic clearing services debit and credit, electronic fund transfer and NEFT. The researcher studied that these methods had increased the use of core banking solutions, data warehousing and data mining. E-payment had reduced the chances of fraud, improved customer service by cutting the delay in payment obligation.

Singh and Malhotra (2007)⁴¹ made an attempt to discover factors affecting a bank's decision to adopt internet banking in India. The study was based on 88 banks comprising of public, private and foreign banks covering financial years from 1997 to 2005. The results of the study showed that large banks having high fixed expenses, high income and expenditure tend to use more technology. Banks had used internet banking as complementary channel to existing branch network. However, the private and foreign banks were quick adopter to internet banking than public sector banks. The adoption of this innovation by other banks increases the probability that a decision to adapt will be made as it has increased the profitability and productivity of banks.

In his research paper banking with Information Technology Emerging Challenges and Potentials, **Dr. R. K. Uppal** (2007)⁴² concludes that transformation is taking place in almost all banks. This transformation will helpful to cope with new economic and financial policies in the banking sector. IT is playing a crucial role to

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⁴⁰ Ramani, D. (2007), "The E-Payment System", E-business, Vol.7, No.5, pp.35-41.

Singh, B., and Malhotra, P. (2007), "Determinants of Internet banking adoption by banks in India", Internet Research, 17 (3), 323-339.

Uppal, R.K. and Jatana, Rimpi (2007), "E-banking in India – Challenges and Opportunities", ISBN : 81-7708-137-3, Year: 2007, www.us-creations.com.

create drastic changes in the banking industry, particularly in the new private sector and foreign banks. Private Banks take a big share of the cake; our public sector banks are still lagging behind regarding various financial parameters. It can be concluded that mere introduction of IT alone will not be sufficient to bring necessary performance improvement and enhance the competitive edge.

Prof. V. Chandrasekar (2007)⁴³ in his article Tomorrow's Technology for Tomorrow's Banking, has concluded that consolidation in banking is triggered by the fact that banks need to employ new technologies to compete in the market and remain profitable. One critical area that needs careful consideration at the time of mergers is integration of different technology platforms and software which not only have process and control implications but may involve substantial costs in terms of money and time and retraining of personnel. Technology has, thus, moved from being just a business enabler to being a business driver for banks. Technology can help enhance the performance of banks when effectively aligned with business strategy. Effective deployment of technology will be key for banks in their efforts to meet the business challenges.

Sarangapani and Mamatha (2008)⁴⁴ explained the concept of e-banking and highlighted all the concerns and challenges while implementing the same. The authors emphasized that e-banking was necessary not only for improving the quality of services rendered to the customers but also for better marketing of products. The authors evaluated various e-banking models for banking transactions like ATM, EFT, ECS, SPNS, PC banking, mobile banking and internet banking. But they mainly emphasized

Chandrasekar, V. (2007), "Tomorrow's Technology for Tomorrow's Banking" The Journal of Indian Institute of Banking And Finance, Vol.78, No.2, pp. 33-35.

Sarangapani, A.; and Mamatha, T.(2008a), "E-banking: Implementation and Challenges", E-Business, Vol. 9, No.7, pp.32-34.

on virtual banking, smart cards, e-cheques and internet banking. They analysed the websites of various banks for internet banking adoption in which private sector banks were providing maximum IB services followed by public sector banks, foreign banks and old private sector banks. The author suggested some measures which could contribute towards greater adoption of e-services. The customers should be taken into confidence that the transactions made by them are risk free, and there is no scope of any fraud. Further, they should also be assured that hackers can do no harm to their interests. Furthermore, the system should be free from legal intricacies.

Raja et al., (2008)⁴⁵ evaluated the impact of e-payment system on the business opportunities. They identified that due to the growth of internet users, various electronic payment mechanisms had been developed to cater the diversity of applicants. The researchers classified the e-payments into three main groups, namely, cash like systems, check like systems, and hybrid systems which were further classified into credit cards, debit cards and electronic cheques. They identified three main issues related to e-payment that were security issues, low interest among businessmen, and heavy reliance on traditional payment methods. They also analysed that there were technical and cultural problems which hinder the path of e-payments. However, to make e-payments more effective, security threats should be reduced; and people should be realized that traditional payment methods were more time consuming than electronic payment methods. They should also be realized that plastic card payments were more convenient, easier and more secure than cash or cheques.

Raja, J.; Velmurgan, S.M.; and Seetharaman, A. (2008), "E-payments: Problems and Prospects", Journal of Internet Banking and Commerce, April, Vol.13, No.1, pp.1-17.

Sarangapani and Mamtha (2008)⁴⁶ studied the impact of Information Technology on banking sector and its security related aspects. Due to recent developments in banking industry and with introduction of Basel-I and II implementation; customers are more demanding now and it requires innovation in banking services. The researchers found that now the banking industry has been more customer-oriented with unlimited market place, extensive product breadth and e-enabled services provided to the customers. The IT initiatives in banking industry have resulted into reduction of time. Introduction of negotiated dealing system, screen based trading and RTGS for online settlement of inter-bank transfers of fund had also resulted into safe, secure and quick movements of funds. The authors also studied e-security aspects of banking which pose damage and threat to the existing e-banking system. It includes unauthorized access to computer system or network, stealing information, e-mail bombing, data diddling, denial of service, viruses, etc. The authors concluded that existing legal framework was adequate to meet the challenges of e-banking; and it had become essential to create awareness of e-banking among customers, banks and society.

Suresh (2008)⁴⁷ highlighted that recently developed e-banking technology had created unpredicted opportunities for the banks to organize their financial products, profits, service delivery and marketing. The objectives of the study were to evaluate the difference between traditional and e-banking, and to identify the core capabilities for the best use of e-banking. The author analysed that e-banking will be an innovation if it preserved both business model and technology knowledge, and disruptive if it destroys both the model and knowledge. He also differentiated e-banking from traditional

Sarangapani, A.; and Mamtha, T. (2008b), "IT Initiatives in E-Banking and their Security Aspects", Professional Banker, Vol.8, No.10, pp. 45-53.

Suresh, R. (2008), "E-banking: The Core Capabilities to Exploit", The Management Accountant, Vol.43, No.6, June, pp. 49-53.

banking in five ways, namely, value proportion, market scope, cost structure, profit potential and value network. However, in order to exploit technical and business capabilities of e-banking, banks should generate more customers inside and outside India so that more revenues could be generated that lead to better future of Indian economy.

Technology appears to be a promising solution to be more inclusive in taking the financial services to the doorsteps of the community. It is observed that ATM transaction costs are as much as five times less expensive than those of a bank teller. Other technologies, particularly mobile phones, are now widely used among poor people. (R. Devaprakash, 2008)⁴⁸

Dr. Prakash Baskhi (2009)⁴⁹ in Impact of Technology on Payment Systems has said the effective use of technology has dramatically improved the efficiency of leading to improved productivity profitability. operations in banks and The advancement in computer systems data communications and alternate electronic delivery channels also helped banks to substantially reduce their capital and operating cost from the customer's perspective. Technology can provide them significant value proposition through the new convenient e-product and channels. Technology enables bank to have better centralized control systems. The normal approach of automating 20 Per cent branches covering 80 per cent business is followed by large banks conveniently ignoring their rural branches as they are not economically viable for their expensive core banking solutions. On the other hand there is a huge potential at this bottom of the pyramid for bringing in the large amount of cash used by villagers into the banking system.

Devaprakash, R. (2008), "Branchless Banking: Way forward in Indian context", The Indian Banker, A monthly journal by Indian Banks Association, Mumbai, India, Vol. Ill No.8, August 2008, p.28.

Dr. Prakash Baskhi, Published in The Indian Banker Vol. 1, No. 9, April 2009.

Prof. Vivekananda, K. (2009)⁵⁰, in his study A Secured Hybrid Architecture Model for Internet Banking (E-Banking), has stated that e-banking has made carrying out personal and financial operations relevantly easier and convenient. This facility enables to transfer money to other accounts and checking current balance alongside the status of any financial transaction made in the account. However, in order to maintain privacy and to avoid any misuse of transactions, it is necessary to follow a secure architecture model that ensures the privacy and integrity of transactions and enthuses confidence that Internet banking is stable. In this research paper, A Secured Hybrid Architecture Model for the Internet Banking Hyper Elliptic Curve Cryptosystem and MD5 is described. This hybrid model is implemented with the hyper elliptic curve cryptosystem and it performs the encryption and decryption processes in an efficient way merely with an 80-bit key size.

Dr. Rajesh Tyagi (2009)⁵¹ in Insurance of E-commerce Risk has said that the security of information may be one of the biggest concerns to Internet users. For electronic banking users - who most likely connect to the Internet via dial-up modem - are faced with a smaller risk of someone breaking into their computers. Only organizations such as banks with dedicated Internet connections face the risk of someone from the Internet gaining unauthorized access to their computer or network. However, Internet Banking system users still face security risks with unauthorized access into their banking accounts. Moreover, Internet Banking system users are also concerned with non-reputability that requires reliable identification of both the sender and the receiver of online transactions. Non-secure electronic transaction can be altered to change the apparent sender. Therefore, it is extremely important to build in

Vivekannand, K. (2009), Asst. Professor, PSG College of Arts and Science Coimbatore, Tamilnadu, published Journal of Internet Banking and Commerce April 2009 Volume 14.

Rajesh Tyagi (2009), Published in the Journal of E-Banking and Commerce Issue2 Vol.14/ No. 1, April.

non-reputability which means that the identity of both the sender and the receiver can be attested to by a trusted third party who holds the identity certificates

Uppal, R.K. (2011)⁵² threw light on growth of information technology in various banks. The objective of this research is to analyse the extent of technological developments in various bank groups. Findings shows as compared to new private sector banks and foreign banks, in public sector banks very less IT has taken place. The maximum technology is taking place in new generation private sector banks and foreign.

Rao, K. Rama Mohana and Lakew, Tekeste Berhanu (2011)⁵³ examines the service quality perceptions of customers of public sector and private sector banks in the city of Visakhapatnam, India. The author reveals that the Reliability and Assurance dimensions of service quality scored the highest ratings while the Tangibles dimension got the lowest score. Moreover, the study found a strong dissimilarity in service quality perceptions between customers of private sector and public sector banks.

Santhiyavalli, G. (2011)⁵⁴ determined the customer's perception of service quality of the select branches of State Bank of India and study the major factors responsible for their satisfaction. In this research SERQUAL Model has been used and study indicates that among five dimensions 'Reliability', 'Responsiveness', 'Empathy' and 'Tangibility' are the major factors responsible for customer satisfaction.

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Uppal, R.K (2011), "E-delivery channels in banks-A fresh outlook", Journal of Arts Science and Commerce ISSN 2229-4686, www.researchersworld.com Vol.– II, Issue –1.

Rao, K. Rama. Mohana and Lakew. Tekeste Berhanu (2011), "Service Quality Perceptions of Customers: A Study of The Customers' of Public Sector and Private Sector Commercial Banks in India", International Journal of Research in Commerce and Management, Volume No. 2, Issue No. 11, November.

Santhiyavalli G (2011), "Customer's perception of service quality of State Bank of India - A Factor Analysis", IJMBS Vol. 1, Issue 3.

Dharmalingam, S. and Kannan, K.V. (2011)⁵⁵ evaluate the service quality in retail banking in the Tamil Nadu, based on different levels of customers' perception regarding service quality. Data are collected from Three Private Banks, i.e. ICICI, AXIS and HDFC Bank. Sample size of this research is 240. The result indicates that customers' perception is highest in the tangibles area and lowest in the Product Variety area.

Surbhi Singh and Renu Arora (2011)⁵⁶ presented a paper on a comparative study of banking services and customer satisfaction in public, private and foreign banks of Delhi and this study shows that the customers of nationalized banks were not satisfied with the employee behaviour and infrastructure, while respondents of private and foreign banks were not satisfied with high charges, accessibility and communication.

Prof. Sultan Singh (2011)⁵⁷ in his article The Research Article E-Banking Scenario and Its Impact on Customers Satisfaction in India says that there is a significant difference in the present e-banking scenario of ATMs, Internet banking, mobile banking and credit cards in India. Also, there is a significant difference in the impact of ATMs, Internet banking, mobile banking and credit cards on customer satisfaction in public sectors banks in the India. No doubt, opportunities in e-banking are immense and there is need to explore them.

Dharmalingam. S. and Kannan. K. V (2011), "Customer Perception on Service Quality of New Private Sector Banks in Tamilnadu - an Empirical Study", JBFSIR Volume 1, Issue 5.

Surabhi Singh and Renu Arora, (2011), "A comparative study of banking services and customer satisfaction in public, private and foreign banks", J Publications.

Prof (Dr) Sultan Singh (2011), Dean and Chairperson, Devi Lal University, Sirsa, published International Journal of Research in Commerce and Management (ISSN 0976-2183) April.

Ms. Linda Mary Simon (2012)⁵⁸ A study on customer perception towards services provided by Public sector bank and Private sector bank in Coimbatore region reveals that private bank is providing better services to its customers than the public sector bank. It is evident that public sector banks have a strong presence in the market, but in recent times they are facing stiff competition from private sector banks in the range and quality of services offered.

In the article Vulnerabilities in E-banking: A Study of Various Security Aspects in E-banking by **Dr. Dhiraj Sharma** (2012)⁵⁹ and his associates have stated that due to lower transaction costs, 24 hours services, increased control over transactions, higher volume of transactions in less time, remote transaction facilities and much wider array of banking products and services; Internet Banking has become an integral part of modern banking. However, besides these opportunities Internet Banking operation increases different levels of risks for banks. Customers relying on Internet Banking services may have greater intolerance for a system that is unreliable or one that does not provide accurate and current information. The advent of online services has given greater choice to customers. Clearly, the longevity of Internet Banking depends on its accuracy, trustworthy and accountability. One of the major problem areas with Internet banking appears to be with the security and safeguarding of information exchanged between the customer and bank. However, it is important to keep in mind that if the Internet has its advantages then there are drawbacks too. These drawbacks are so severe that they can adversely affect banking activities, which in turn affect customers as well as organizations. Total eradication of online frauds, thefts, spyware and malware

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Ms. Linda Mary Simon (2012), "A Study on Customer Perception towards Services provided by Public Sector Bank and Private Sector Bank in Coimbatore Region". Indian Journal of Research. ISSN 2250- 1991.Vol.1.Issue.12. December, Pp.113-115.

Dr. Dhiraj Sharma, Dr. Sawtantar Singh Khurmi (2012), published in International Journal of Computing and Business Research ISSN (Online): 2229-6166.

proliferation is not possible but early detection and preventive measures can be quite useful.

M.E. Doddaraju (2013)⁶⁰ presented a study on customer satisfaction towards public and private sector banking services with special reference to the Anantpur District of Andhra Pradesh concluded that satisfaction level with regard to public sector units' courtesy shown by bank staff at the counter is very low. Therefore, the banks should pay special attention to "Human Resource Development" by giving timely training to the employees to conduct themselves better.

In Customer Satisfaction with Service Quality: an Empirical Study of Public and Private Sector Banks in Tirupati Region, **Prof. V.G. Murugan** (2014)⁶¹ has presented an eye-opener research on the banking industry. The author clearly points out that customer service is an integral part of any facet of banking and it defines the future of any banking organization. In India, this realm has undergone vast changes induced by regulatory and competitive forces since 1991. Since the banking industry revolves around customers, it is necessary to identify the key success factors – in terms of customer satisfaction - keeping in view increasing market size and intense competition. The service quality of public sector and private sector banks has been measured using the service quality scale, which was used to determine different dimensions of service quality. Chi square analysis was used to understand the impact of service performance dimensions (tangibility, trustworthy, responsiveness, assurance and empathy) on customer satisfaction. It was found that customers of public sector banks are more satisfied with the service quality, than those of private sector banks.

Doddaraju, M.E. (2013), "A Study on Customer Satisfaction towards Public and Private Sector Banking Services [with Special Reference to Anantapur District of Andra Pradesh]", GJMBS ISSN 2248-9878 Vol. 3, No. 3, pp. 287-294.

Prof. V. G. Murugan (2014), Research Scholar, Bharathiar University Coimbatore published in the International Journal of Research in Commerce and Management Vol. 3, Issue No. 1, January.

In his research paper The Gap between Customer Expectation and Perception in Retail Banking, **Prof. Ganesh, P.** (2014)⁶² confirms that there is significant gap between customer's expected service and perceived service level in retail banking across all service quality dimensions, which leads to dissatisfaction and a non-committal approach towards the service provider. A customer is not just money in the cash register; he is a human being with feelings and deserves to be treated with respect. Any business without a focus on customer satisfaction is at the mercy of the market.

In the research article Technology Enabled Rural Banking, **Dr.N.K Thingalaya** (2014)⁶³, has concluded that rural market presents a great opportunity for Indian banks. Properly targeted, they can serve as a secure source of business for the bank while at the same time leading to the accelerated growth of the rural economy. Technology initiatives can serve as allies in this matter and enable banks to reach population groups which were till date denied the benefits of banking until now.

2.4 RESEARCH GAP

The literature review shows that there are many foreign researches and few Indian researches on e-banking. The earlier foreign studies in the field of e-banking covers attitude of customers, satisfaction, service quality of e-banking, impact of e-banking, and customer's choice between e-banking and non e-banking. It also covers factors influencing customers' acceptance of e-banking. The earlier Indian studies in the field of e-banking exhibits barriers in adopting mobile banking, e-payments, adoption of Internet banking by banks, impact of information technology in banking sector, growth of information technology in banks, customers' perception towards

Ganesh, P. (2014), Research scholar, Anna University, Coimbatore, published International Journal of Research in Commerce and Management (ISSN 0976-2183) December.

Thingalaya, N.K. (2014), Published in The Journal of Indian Institute of Banking and Finance Vol. 83, No. 2, April-June.

banking services between public sector and private sector banks, service quality of banks, and security aspects of e-banking.

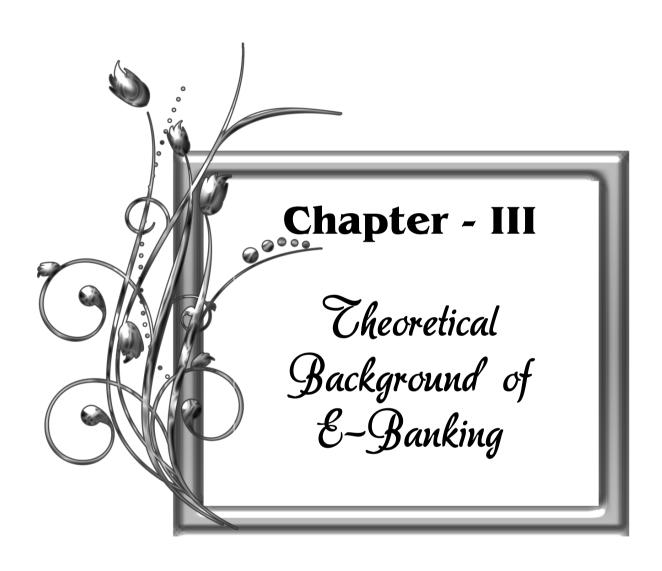
In Indian context, there are few studies related to e-banking, there is no exclusive comparative study on perception and preference of customers of public and private sector banks towards e-banking in Tirunelveli district. Hence the present study has made an attempt to fill up the research gap with the help post research model.

2.5 CONCLUSION

From the review of various literatures pertaining to e-banking / internet banking, it is understood that websites play an important role in the success of internet banking / e-banking among bank customers. E-banking and internet banking, believed to be convenient facilities, are available for the customers. Through this facility, one can check balance in their accounts, transfer funds between accounts, pay bills online. Besides these, one can apply for loans, trade stocks or mutual funds from home with the help of their desktop computers or laptop with internet connection.

Some authors identified the trust, security concerns and difficulty in use among the customers as the leading future challenge of online banking. It is elicited by many authors that ATM is one of the widely used technology based services among the bank customers. It is further understood from the reviews of literatures that internet banking is a boon for banks in order to compete with their rival banks, save costs, enhance mass customization, marketing and communication activities to attract their customers. The intention of the customers, relating to various aspects of e-banking/internet banking and usefulness, need additional theoretical information which is relevant to the study, and for the betterment of the study. However, in order to further popularize e-banking and internet banking in India, there is adequate scope for further studies in

these aspects and hence this present investigation is considered necessary. For the successful completion of the study, various theoretical aspects associated with the study areas are dealt with in the following chapter.



CHAPTER III

THEORETICAL BACKGROUND OF E-BANKING

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CHAPTER III

THEORETICAL BACKGROUND OF E-BANKING

3.1 INTRODUCTION

Banking sector is considered the raison d'être of any financial system and economy. Commercial banks are vital in playing an important role in the development of under-developed and developing economics by mobilization of resources and their better allocation. The Indian banking system is regulated by the Central Bank of the country i.e., Reserve Bank of India (RBI) which was nationalized in 1949. The RBI is the primary regulator for the banking sectors. The Central Government exercises direct and indirect control over banks through RBI to protect the depositors and to stabilize the banking system. Extensive powers have been conferred on RBI under the RBI act 1934 and the Banking Regulations Act, 1949 to ensure smooth functioning of banking sector.

In 1969, the government nationalized 14 major banks to break the ownership and control of few private leaders of commerce and industry over the economic power and banking system. This also enabled balanced geographical majority of the population. Banking segments in India have been booming of late due to high liquidity, changing demographic profiles, changing interest rates and increasing demand for consumer finances. A brief scrutiny of the Indian banking industry would unearth the reasons behind the current scenario governed by the Banking Regulation Act of India, 1949.

The Indian banking industry can be broadly classified into two major categories: Non-Scheduled banks and Scheduled banks. Scheduled banks comprise of commercial banks and the co-operative banks. In terms of ownership, commercial

banks are further grouped into nationalized banks, the State Bank of India and its group banks, Regional Rural banks and private sector banks. However, all the banks basically offer the same type of services and facilities to the customers in this fast growing Nation. The banker who wants to compete with others has to depend more on the efficient services and co-ordinate relationship with his customers. The only factor that distinguishes one bank's service from that of the other is the 'Customers' Satisfaction' relating to their services rendered by the bank. It is considered the most important factor that customer influences the choice of the bank. The success of banks generally depends on the customer satisfaction relating to new technological services rendered by the banks.

The banking industries are mostly customer driven and their survival in competitive environment largely depends on the user friendly technological services provided to help customers. Technology plays a vital role in improving the quality of services provided by the banking sector. Advert and adoption of internet by the banking sector has helped their customers save their time, distance and communication making globe a small village. Financial sector, being no exception, influences banks, in numerous ways such as competitive cost, customer service increase in education and income level of customers etc., to evaluate their technology and assess the electronic commerce and e-banking strategies. E-banking allows banking from anywhere, anytime and is used for transactions, utility payments etc.

3.2 E-BANKING

E-banking helps any user with a personal computer and a browser to get connected to his bank's website in order to do any of the virtual banking functions. The term "electronic baking" or "e-banking" covers both computer and telephone banking. In other words, it is said that it is updated 'on-line real time'. The system is updated

immediately after every transaction automatically. E-banking has enabled its respective customers to fulfil their banking requirements sitting in the comfort of their homes or offices. It has rendered banking services faster, efficient, cost effective, flexible and available from anywhere and at any time. E-banking has outdated the narrow relationship of branch and its customer. This e-banking has also paved the way for the wider bank and customer relationship enabling the customer to avail the facilities with any of its bank's branches with equal ease. Electronic means of banking include electronically operated device such as computers, ATMs, etc. In addition to this, internet, telephone, mobile handset and other means are also used as part of e-banking. An eminent feature of e-banking is that it provides round-the-clock access to banking operations.

E-banking system can vary significantly in their configuration depending on a number of factors. Financial institutions should choose their e-banking system configuration, including outsourcing relationships, based on four factors:

- Strategic objective for e-banking
- Scope, scale and complexity of equipment, systems and activities
- Technology expertise and
- Security and internal control requirements

E-banking systems rely on a number of common components or processes.

The following list includes many of the potential components and processes seen in a typical institution:

- Website designing and listing
- Firewall configuration and management
- Intrusion detection system or IDC (network and host-based)

- Network administration
- Security management
- Internet banking server
- E-commerce applications (e.g., bill payment, lending, brokerage)
- Internal network servers
- Core processing system
- Programming support
- Automated decision support systems

These components work together to deliver e-banking services.

3.3 E-BANKING SERVICES

E-banking refers to the execution of banking transactions or access to banking information through electronic means. E-banking services are offered in a two tier structure. A basic tier of e-banking services includes customer account inquiry, funds transfer and electronic bill payment. A second or premium tier includes basic services besides one or more additional services like brokerage, cash management, credit applications, credit and debit cards, customer correspondence, holdings, financial advice, foreign exchange trading, insurance, online trading, opening accounts, requests and intimations, tax services, e-shopping, standing instructions, investments, asset management services, etc. E-banking services are offered in three levels. They are as follows:

- Information only System
- Electronic Information Transfer System
- Fully Electronic Transactional System

3.4 E-BANKING CHANNELS: AN OVERVIEW

This following paragraph throws light on the delivery of e-banking (i.e.) ATM, Internet banking, Telephone banking and Mobile banking:

3.4.1 ATM

An Automated Teller Machine (ATM) is an electronic banking kiosk. These ATMs, as popularly called, allow customers to complete their basic banking transactions without going in person to their respective branches. An ATM card is any payment card issued by a financial institution that enables a customer in order to perform transactions such as deposit, cash withdrawals, obtaining account information etc. ATM cards are known by a variety of names such as bank card, MAC (Money Access Card), client card, key card or cash card, among others. Most payment cards, such as debit and credit cards can also function as ATM cards. However, ATM card is available in same card format irrespective of different banks and different banking functions. The use of a credit card to withdraw cash at an ATM is treated differently to a Point of Sale (POS) transaction, usually attracting interest charges from the date of the cash withdrawals. Interbank networks allow the use of ATM cards at ATMs of private operators and financial institutions other than these of the institution that issued the cards. ATM cards can also be used on improvised ATMs such as "Mini ATMs", merchant card terminals that deliver ATM features without any cash withdrawal. These terminals can also be used as cashless scrip ATMs by cashing the receipts they issue at the merchant's point of sale. The first ATM appeared in London in 1967, and in less than 50 years, ATMs spread around the globe, securing a presence in every major country and even tiny little Island nations such as Kiribati and the Federated States of Micronesia. In other words, ATMs are ubiquitous these days.

3.4.1.1 Features of ATM

The following are the features of ATM:

- Round-the-clock cash withdrawals with conveniently located 24/7 ATMs at key locations.
- Cash and cheque deposits 24 hours. Just deposit the money at respective
 ATMs and the money will be credited into the target account on the next working day. Similarly cheques can also be deposited.
- Balance enquiry and statement of account absolutely free. ATM screen will
 reveal the balance in the account. A mini statement comprising last few
 transactions can also be obtained from the ATM.
- *Cheque book request* One can make request for a cheque book at the ATM and it will be delivered to your house in due time.
- Pay your utility bills: Under this useful feature provided by most of the banks, you can make payment for utility bills such as paying EB bill, recharging one's mobile phone etc.
- Transfer funds between accounts within the same bank: If one has the ATM card, then most of the banks allow one to transfer the funds from one account to another account on a real time basis. Some banks also let one transfer funds from another account to any third party provided the account is with the same bank.

3.4.1.2 Advantages of ATM

 ATM provides banking services to its customers 24 hours a day, 7 days a week and 365 days a year.

- Essential banking services like deposits, withdrawals, transfer of funds etc can be accessed by customers from any part of the world.
- Banks can expand their services to any corner of the world by providing electronic access to its customers.
- ATM reduces human intervention and thereby reduces the cost of operations and increases profitability of banks.
- Now-a-days, almost every shopping mall, restaurant and other organizations are accepting credit card payments.
- ATM is very beneficial for travelers as they do not have to carry large amounts of cash.
- ATM provides privacy while conducting banking transactions.

3.4.1.3 Disadvantages of ATM

- ATM machine does not guarantee a 100% availability of cash all the time.
- If ATM networks do go out of service, customers could be left high and dry to
 make transactions until the beginning of their banks the next morning or the
 next working day.
- The cost levied to a customer using an ATM is higher.
- Robbers preyed on people using money machines in poorly lit or wise unsafe locations and criminals also devise ways to steal customers' PINs.
- In a country like India, where banks have a large number of rural and non-computerized branches, ATM services cannot be provided.
- Cash deposit facility is restricted and not safe as dropping of envelope, ATM is not advisable.

- ATM card, if misplaced, lost or stolen, may be misused by any miscreant. There
 are a number of such reported incidences happen now-a-days.
- By using ATM, customers lose personal touch with their bankers.
- There is a limitation of cash withdrawals per day from their respective banks'
 ATMs.

3.4.2 Internet Banking

Internet banking allows a user to execute financial transactions via the internet. Internet banking is also known as "Online Banking" or "Web Banking". An internet banking system will typically connect to or be part of the core banking system operated by a bank and is in contrast to branch banking which was the traditional way customers accessed banking services. To access a financial institution's internet banking facility, a customer with internet access would need to register with the institution for the service and setup a password and other credentials for customer verification and safety. Internet banking facilities provided by banks differ from bank to bank, and country to country. To know all internet banking services and process, one has to thoroughly refer to the guidelines which are made available in the welcome kit. Moreover, proper care has to be taken regarding the confidential documents of the customers. Internet banking allows customers to perform a wide range of banking transactions electronically via the bank's website. When first introduced, internet banking has been used mainly as an information presentation medium in which banks marketed their products and services on their websites. With the development of asynchronous technologies and secured electronic transaction technologies, however, more banks have come forward to using internet banking both transactional as well as internet banking users can now perform common banking transactions such as paying bills, transferring funds, printing statements and inquiring about account balances.

3.4.2.1 Features of Internet Banking

The following are the features of internet banking:

- We can search balance and transaction history.
- We can get e-statements and statement references.
- We can order new statements.
- Pay bills with BPAY and receive bills online with BPAY view.
- Pay single payment and multi payments.
- International and RTGS payments.
- Open or apply for selected accounts.
- We can change password, user ID, security image, security phase.

3.4.2.2 Advantages of Internet Banking

- With the help of internet banking, one can access any information regarding
 one's account and transactions anytime of the day. This means that people
 no longer have to depend on the office hours of their bank to obtain
 information.
- Internet banking offers the convenience of banking facilities for 24 hours a day, from anywhere, at any time of the day or night. It is a free facility provided by the banks to their customers, expediting the payment of bills and helping people keep track of the balancing their account.
- Internet banking customers can watch their daily balances, by going on the internet to the bank's website. One can take stock of the information in their account any time or day.

- In addition to this, fund transfer, both national and international; have also become faster and convenient with internet banking. Now-a-days, one can transfer funds from one account to another account within a few minutes.
- One can receive other important information regarding banking policies,
 rates of interest offered on different types of bank accounts and formalities
 required in executing various transactions.
- Banks, besides the above-mentioned facts, can also cater to the needs of thousands of customers at the same time. All these factors have significantly increased the profit margins of banks by lowering their operational costs.
- Internet banking has tremendously reduced the time required to process banking transactions, thereby making banking faster and convenient.
- Internet banking has made the opening of an account quite simple and easy and without much paper work.
- Especially with the increasing acceptability of digital signature around the world, internet banking has made life much easier and banking much faster and more pleasant, for customers as well as bankers.
- Stopping payment on cheques, re-ordering cheques, requesting copies of paid cheques, savings and checking account statements are some of the other facilities of internet banking.

3.4.2.3 Disadvantages of Internet Banking

• In order to use the internet banking services, the user needs a computer and time to log on to the website of the bank. This means that the target clientele is

restricted to those who have a home PC or can access the net through the office or cyber-cafes.

- The use of internet banking requires the use of uninterrupted telecommunication facility. Where phone connections are not perfect and where on a home PC, the modem often gets disconnected, frequent and tedious log-on becomes necessary.
- Often it becomes frustrating to browse the internet to be able to access the host
 of financial products that are made available in the website of the bank.
 Navigating around websites on home computers is often slow and frustrating
- The use of internet banking depends much on the trust reposed by the customers of a bank on the internet banking initiative of the bank. It therefore becomes imperative that internet start-ups gain the trust of depositors before they will make deposits. Customers may get less protection as against with established banks.
- Security threats on the internet leads to perception of internet banking as an unsafe channel. This dissuades the customers in making popular use of the internet banking.

3.4.3 Telephone Banking

Telephone banking is a service provided by a bank or other financial institutions that enables customers to perform a range of financial transactions over telephone, without the need to visit a bank branch or automated teller machine. The timings of telephone banking are usually longer than that of branch working hours, and some financial institutions offer the service on a 24/7 basis. Most financial institutions have restrictions on which accounts may be accessed through telephone banking, as well as a

limit on the amount that can be transacted. From the bank's point of view, telephone banking minimizes the cost of handling transactions by reducing the need for customer's to visit a bank branch for non-cash withdrawal and deposit transactions. Transactions involving cash or documents (such as cheques) are not able to be handled using telephone banking and a customer needs to visit an ATM or a bank branch for cash withdrawals and cash or cheque deposits. Usually, statements regarding telephone banking use accessible online. To use a financial institution's telephone banking facility, a customer must first register with the institution for the service. They would be assigned a customer number and they may be given or setup their own password for customer verification. To access telephone banking, the customer would call a special phone number setup by the financial institution. The service can be provided using an automated system, using speed recognition and DTMF technology or by live-customer service representatives. After calling the number, they would enter, on the keypad, the customer's number and password. Some financial institutions have setup additional security steps for access. Most telephone banking services use an automated phone answering system with phone keypad response or voice recognition capacity. To ensure security, the customer must first authenticate through a numeric or verbal password or through security questions asked by a live representative. A secure, fast, and convenient way to obtain a range of services by using a telephone without visiting the branch, e.g., information on account, conduct of selected transactions, report loss go ATM card, order a cheque book, draft, etc.

3.4.3.1 Features of Telephone Banking

The following are the features of telephone banking:

- Customers can enquire balance of their account through telephone banking.
- One can order accounts statement.

- It has the facility of cheque book request.
- Fund transfer between different accounts held by the customer at the bank;
 for security reasons, these accounts are usually linked by the customer in advance by a visit to the branch.
- One can transfer fund to third parties.
- General account queries and advice usually done by a human operator even if the system used automated voice response technology.
- Customers can make loan applications and loan payments through telephone banking.
- One can obtain product information.
- Customers can stop payments on cheques, requesting copies of cleared cheques and also reordering of cheques.

3.4.3.2 Advantages of Telephone Banking

- Telephone banking is increasingly accepted as one of the most modern banking and financial services.
- It has found a high level of acceptability especially among the professional people.
- It provides a mass-market delivery mechanism for financial services.
- The customers of telephone banking can access information to their account and do a few transactions without visiting the branch even when they are out of station.
- Telephone banking has the advantages of conveniences, economy and efficient time management.

3.4.3.3 Disadvantages of Telephone Banking

- Telephone banking requires that the customers make use of the time in transacting banking business that they may otherwise usefully spend.
- Telephone banking invariably results in causing disturbance to the normal course of work of the employer's office in which the customers work.
- Telephone banking invariably results in a situation of loss of privacy for the customer who calls up the bank for transacting business. There is always a fear of the conversation with the bank being overheard or interrupted.
- Often customers are relevant to talk to a real person on the telephone about banking matters. The customers' needs to share their personal information to human operators. This may dissuade the customers from making active use of the telephone banking services.

3.4.4 Mobile Banking

Mobile banking or m-banking enables a customer to make banking services through a mobile device. These services have been introduced initially through Short Messaging Services (SMS), Wireless Application Protocol (WAP), or General Pocket Radio Services (GPRS) enabled mobile devices. Mobile banking services allow customers to check account balances, transfer funds between accounts and order for electronic bill payments. There is a vast market potential for mobile banking due to its availability, all the time functionality and the option to bank virtually anytime and anywhere. RBI had set up the operational guidelines for banks for mobile banking transactions in October 2008 under the payments and settlements act 2007 with fewer revisions and clarifications in further releases.

The key points are,

- Only banks who implemented core banking solutions (CBS) can provide mobile banking to its customers.
- The services are restricted to banking customers and debit / credit holders issued as per RBI guidelines.
- Only banks which are licensed and have a physical presence in India can offer mobile banking services.
- Only INR based transactions allowed and cross border inward and outward transfers are prohibited.
- Mobile banking services should be offered through any mobile phone independence of the network operator.
- To ensure inter-operability between banks, and between their mobile service providers, the message formats like ISO 8583, with suitable modifications were to be adopted.

The kind of banking and financial services that gives a real-time mobile access to customers on the move is call mobile banking, the service being offered through mobile phones.

3.4.4.1 Features of Mobile Banking

The following are the features of mobile banking:

- Mobile banking customers can avail the many services under SMS banking.
 They are:
 - ➤ Making balance enquiry.
 - ➤ Making query of the last five transactions.
 - > Sending mail to the bank relationship officer.

- ➤ Changing SMS password.
- Opting out of SMS.
- Banking done through WAP enabled phone is called 'WAP banking'. The mobile banking customers can avail WAP banking services. They are:
 - Viewing details of account.
 - ➤ Making balance inquiry.
 - ➤ Making query of the last five transactions.
- Mobile banking is a part of m-commerce whereby business and trade takes place through mobile on-line.
- Mobile banking offers the entire internet based banking services such as on-line account opening, account verification, funds transfer, etc.

3.4.4.2 Advantages of Mobile Banking

- Mobile banking does not require much invest and they need not modify their existing infrastructure.
- It helps banks to maintain good relationships with their customers.
- Through mobile banking, banks get valuable database of the customers which helps them in effective CRM practices.
- It helps them in quick feedback and help in customer retention and customer loyalty.
- It helps the banks to give SMS advertising to give information about their services to their existing customers.
- Customers can enjoy banking anytime, anywhere with the help of their mobiles.

- Mobile banking is cost effective for both bankers and customers.
- The information can be stored automatically in mobile as a proof in the form of SMS whether sent or received.
- Customers do not require a computer to carry out the desired transaction or activity.

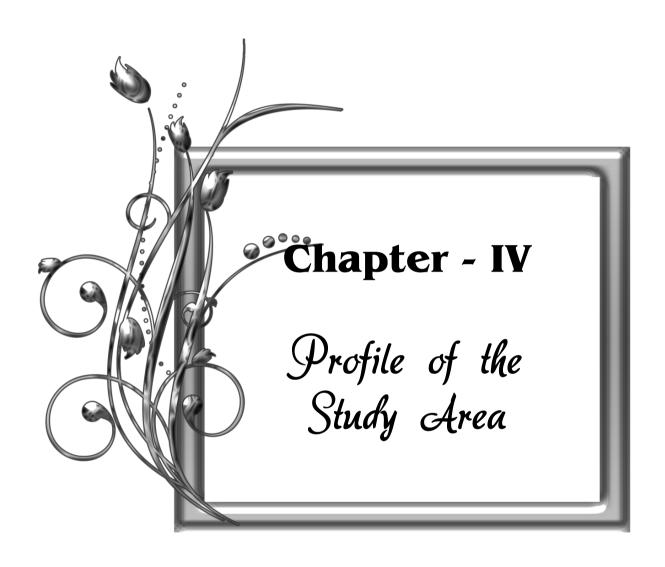
3.4.4.3 Disadvantages of Mobile Banking

- Mobile banking is subject to Know Your Customer (KYC) Combating the
 Financing of Terrorism (CFT), Anti-Money Laundering (AML) and all
 other RBI guidelines issued from time to time which act as a hurdle for its
 growth.
- Even though formal banking channels like mobile banking are available, their trend for failure continues because of insufficient telecom network coverage.
- Heterogeneous interest of stakeholders, lack of technology standards and technology stability issues are likely to be the barriers in early stage of mobile banking implementation.
- Only Short Message Service (SMS) and Inter Active Voice Response (IVR)
 are the practical options for mobile banking in India. Non-availability of
 SMS / IVR options in a language of user's choice could become a barrier
 for end user adoption of mobile banking services in India.

Customer service with respect to payment systems includes service level at
the point of service, information dissemination and grievance redress and
poor response at any stage, particularly for financial information transaction
could lead to a serious dissatisfaction and loss of consumer trust in services
of Telco's and its channel.

3.5 CONCLUSION

Banking sector, both public and private, have joined the bandwagon by adapting to e-banking. Rigorous use of technology in the banking sector leads to the emergence of e-banking. E banking is becoming immensely popular globally and India is no exception to it. E banking developments have witnessed a sea change in the banking landscape in India. After the wedding of Indian banks with IT, a large percentage of the transactions are not taking in the physical premises of the banks. It goes without saying that the increasing volumes of transactions in India may be viewed as an indication that banking customers, particularly the young, have almost tasted the benefits of e-banking services. Though it is a highly cost effective delivery channel, the risk associated with this kind of banking should not be overlooked.



CHAPTER - IV

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CHAPTER IV

PROFILE OF THE STUDY AREA

4.1 HISTORY OF TIRUNELVELI

Tirunelveli, known as Nellai and called by the British as Tinnevelly, is a city in the south Indian state of Tamil Nadu. It is the administrative headquarters of the Tirunelveli district. Tirunelveli is located 700 km south west of Chennai, the state capital and 58 km away from Thoothukkudi, the Pearl City. Tirunelveli city is located on the west bank of the Thamirabarani River. Palayamkottai, called the southern Oxford known for its educational institutions, is on the east bank. Both Tirunelveli and Palayamkottai are called the twin cities of the district. Tirunelveli is believed to be an ancient settlement; it has been ruled at different times by the early Pandyas, the medieval and later Cholas, the later Pandyas, the Malbar and Tirunelveli Sultanates, the Vijaya Nagar Empire, the Madurai Nayaks, Chanda Sahib, the Carnatic kingdom and the British. Tirunelveli has a number of historical monuments such as the Nellaiappar temple which is very famous among the districts in Tamil Nadu. Industries in Tirunelveli include administrative services, agricultural trading, tourism, banking, agricultural machinery and educational services. The city is an educational hub of southern Tamil Nadu, with institutions such as Tirunelveli Medical College, the Veterinary College and Research Institution, Tirunelveli Law College and the Government College of Engineering. Tirunelveli is administered by a municipal corporation established in 1994 by the municipal corporation act.

Tirunelveli, fondly called as Nellai, is regarded as one of the important districts in the southern state of Tamil Nadu. Presently, Tirunelveli district is divided into various revenue and administrative divisions for effective governance. Some of the

important divisions of Tirunelveli district include Municipal Corporation, municipalities, town panchayats, village panchayats, revenue villages, and firkkas. With cotton, cement, tourism, paper and other major industrial units' administrative limits, Tirunelveli district is a significant contributor to the state's economic system as well.

4.1.1 Administrative Setup

Tirunelveli district has 3 revenue divisions consisting of 12 taluks, 60 firkas, 19 development blocks, 616 revenue villages and 425 village panchayats.

4.1.2 Topography

The district is located in the southern part of Tamil Nadu and surrounded by Virudhunagar district in the north, Western Ghats in the west, Kanyakumari district in south and Tuticorin district in the east. The lifeline of the district, the river Thamirabarani, feeds the district and quenches the thrust of residents of Tirunelveli and Tuticorin district as well.

4.1.3 Religious Significance

The Nellaiappar temple in Tirunelveli, Sankaranainar temple in Sankarankovil, Kasi Viswanathar temple in Tenkasi and Vanamamalai temple in Nanguneri are the landmarks of the district signifying the Hindu culture. Palayamkottai has many Christian missions and Aathankarai Pallivasal and Pottalpudur Darga are considered to be important sacred places for Muslims.

4.1.4 Tourist Spots

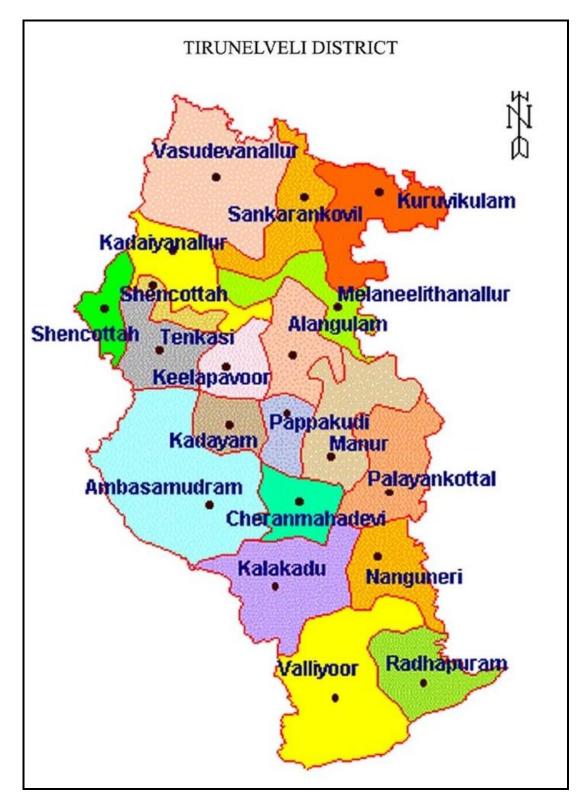
Courtallam is situated at the Western Ghats in Tenkasi Taluk. The famous water falls, rocks and tiny droplets are sprinkle dun the air. The waterfalls of Courtallam are called 'Spa' of south India.

Papanasam Agasthiyar waterfalls also attract the tourist and pilgrims. There is a wild life sanctuary at Mundanthurai and Kalakadu where spotted deer, lion tailed monkeys, elephants and tigers are plenty. Koontankulam birds sanctuary in Nanguneri taluk also attract tourists every year.

4.1.5 Industry

There are 25 medium and major industries such as cement, cotton yarn, calcium carbide, sugar, rice bran oil, printing papers and flour mill, etc. Among the other industries in the district, safety pin, clip, matches, beedi, production of steel vessels and engineering industries are important. The important village industries functioning in the district are power loom, brick kiln, and jaggary production. The products of handloom and power loom like lungi, sarees etc are marketed in northern India. The fine *korai* mats from Pathamadai, a hamlet near Palayamkottai, is one of the world's famous mats known for its quality and durability. Kallidaikuruchi pappads, Karaikurichi mud pots and Tirunelveli *halva*, an eatable item that tastes sweet, are among the specialties which earned many laurels to the district.

FIGURE 4.1
DISTRICT MAP



4.2 PROFILE OF PUBLIC SECTOR BANKS IN TIRUNELVELI DISTRICT

Public Sector Banks are banks where a majority stake (i.e. more than 50%) is held by the government. The shares of these banks are listed on stock exchanges. Following are the public sector banks and their branches in Tirunelveli district.

TABLE 4.1

PUBLIC SECTOR BANKS IN TIRUNELVELI DISTRICT

Sl.	Nome of the Doub	No. of Branches							
No.	Name of the Bank	Rural	Semi-Urban	Urban	Metro	Total			
	Nationalised Banks								
1	State Bank of India	9	10	9	0	27			
2	State Bank of Travancore	4	7	2	0	13			
3	State Bank of Hyderabad	0	0	1	0	1			
	Total	13	17	11	0	41			
1	Allahabad Bank	1	2	0	0	3			
2	Andhra Bank	0	2	1	0	3			
3	Bank of Baroda	0	1	3	0	4			
4	Bank of India	1	2	1	0	4			
5	Bank of Maharashtra	0	0	1	0	1			
6	Canara Bank	13	13	10	0	36			
7	Central Bank of India	3	4	4	0	11			
8	Corporation Bank	4	2	2	0	8			
9	Dena Bank	0	0	1	0	1			
10	IDBI	0	3	0	0	3			
11	Indian Bank	6	10	11	0	27			
12	Indian Overseas Bank	30	26	13	0	69			
13	Oriental Bank of Commerce	0	0	1	0	1			
14	Punjab National Bank	1	4	1	0	6			
15	Syndicate Bank	2	2	3	0	7			
16	Uco Bank	0	1	1	0	2			
17	Union Bank of India	1	2	3	0	6			
18	United Bank of India	0	0	1	0	1			
19	Vijaya Bank	1	1	1	0	3			
	Total	63	75	58	0	196			

Source: Lead bank in Tirunelveli (2016) (Indian Overseas Bank)

Tirunelveli, an emerging economic hub, has as many as 19 different public sector banks spread equally in the district. One of the leading public sector banks in India, the State Bank of India has 27 branches in the district altogether. The so-called always busy and crowded bank has 9 branches in rural areas of the district and 10 branches in semi-urban and 9 in urban areas in order to cater to the needs of the district people. State Bank of Travancore, a fast growing banking sector in the district has 13 branches altogether. It has 4 branches in rural areas, 7 in semi-urban and 2 in urban areas. State Bank of Hyderabad, which is still in its inception stage in the district, has only one branch in urban area. It has not yet branched out in rural and semi-urban areas. Altogether, these three above-mentioned banks amount to 41 branches in the district with 13 in rural, 17 in semi-urban and 11 in urban areas.

There are other public sector banks in Tirunelveli such as Allahabad, Andhra, Bank of Baroda, Bank of India and Bank of Maharashtra. These are quite infamous banks in Tirunelveli in its inception stages. Allahabad bank has only 3 branches in which 1 is in rural and 2 are in semi-urban areas. Andhra bank, as like the Allahabad bank, has 3 branches altogether. There are 2 branches in semi-urban and 1 in urban areas. Bank of Baroda and Bank of India have 4 branches each. The former has 1 branch in semi-urban and 3 in urban areas while the latter has 1 in rural and 2 in semi-urban and 1 in urban areas. Bank of Maharashtra has only one branch in whole of Tirunelveli district representing in the urban area.

Canara bank, the second prolific bank in Tirunelveli district, has 36 branches spread throughout the district. It represents with 13 branches in the rural areas and 13 branches in the semi-urban areas. The urban areas in Tirunelveli see 10 branches of Canara bank.

The Central Bank of India represents with 11 branches in the district in which 3 are in rural and 4 are in semi-urban and 4 are in urban areas.

Corporation banks in Tirunelveli are quite famous among the farmers. One can see 4 branches of Corporation banks in Tirunelveli rural areas and 2 each in semi-urban and urban areas. There is only one Dena bank in the urban area of Tirunelveli district. This bank has no representation in rural and semi-urban areas.

The Industrial Development Bank of India (IDBI) has 3 branches in semi-urban areas of the district. However, this bank has representation neither in rural nor urban areas.

The Indian Bank, quite a famous bank in the district, has 27 branches altogether. This bank has its representation reasonably well in rural areas with 6 branches and 10 in semi-urban and 11 in urban areas. The Indian Bank has as many branches as the State Bank of India has.

The Indian Overseas Bank in Tirunelveli is considered the prolific bank with the most number of branches in the district. This bank has 69 active branches in the district in total. There are 30 active branches in the rural areas of the district and 26 in semi-urban and 13 in urban areas. The Indian Overseas Bank is the only bank in the district with most number of branches in rural areas.

The Oriental Bank of Commerce and the United Bank of India have one branch each in the district in urban areas. The Punjab National Bank and the Union Bank of India have 6 branches each in the district. Both the Punjab National Bank and the Union Bank of India have one branch each in rural areas of the district. However, there are 4 branches for the former and 2 for the latter in the semi-urban areas. There is 1 branch for the Punjab National Bank and, 3 for the Union Bank of India in urban areas.

Syndicate bank has 7 branches in which 2 are in rural and 2 are in semi-urban areas. This bank has 3 branches in urban areas of Tirunelveli district. The Uco bank and Vijaya bank have 2 and 3 branches respectively. The Uco bank represents in semi-urban and urban areas with its branches representing one each. Vijaya bank has its branches in all the rural, semi-urban and urban areas representing one each.

Tirunelveli district sees overall 196 branches of different public sector banks barring some private sector banks such ICICI, Axis bank etc. The semi-urban takes the lion's share in the number of branches with 75. The rural area has 63 branches and the urban area has 58 active branches of different banks. The Indian Overseas Bank in the district has been selected as the lead bank in the year 2016.

4.2.1 Growth of branches of public sector banks in rural area in Tirunelveli district

The following table 4.2 shows the details regarding the growth of number of branches in rural areas of Tirunelveli district.

TABLE 4.2

GROWTH OF BRANCHES OF PUBLIC SECTOR BANKS IN RURAL AREA

BANKS	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
State Bank of India	9	9	9	9	7	5	5	7
State Bank of Travancore	0	0	0	1	1	5	5	4
Allahabad Bank	0	0	0	0	0	1	1	1
Andhra Bank	0	0	0	0	0	0	0	0
Bank of Baroda	0	0	0	0	0	0	0	0
Bank of India	1	1	1	1	1	1	1	2
Bank of Maharashtra							0	0
Canara Bank	7	7	8	10	10	15	13	13
Central Bank of India	2	2	2	2	2	3	4	4
Corporation Bank	0	0	0	0	1	3	3	3
Dena Bank								0
IDBI	0	0	0	0	0	0	0	0
Indian Bank	2	2	2	2	3	4	6	5
Indian Overseas Bank	21	21	22	27	27	30	30	30
Punjab National Bank	1	1	1	1	1	1	1	1
Syndicate Bank	0	0	0	0	0	0	1	2
Union Bank of India	0	0	0	0	0	0	0	1
United Bank of India								0
UCO Bank	1	1	1	1	1	1	1	1
Vijaya Bank	0	0	0	0	0	0	0	1
Total	44	44	46	54	54	59	61	64

Source: Lead bank in Tirunelveli (2016) (Indian Overseas Bank)

This above-shown table deals with the number of branches each bank has started operating in the rural areas of Tirunelveli in the given years. Indian Overseas Bank, the only bank with highest number of branches in the district, has been operating

21 branches in the year 2008-09 and 2009-10. It added one more branch in 2010-11 and operated with 27 branches in 2011-12 and 2012-13 respectively. Adding 3 more branches, The Indian Overseas Bank has been functioning with 30 branches from the year 2013-14 to 2015-16.

Canara bank has been consistently adding new branches with regular interval. In 2008-09 and 2009-10, it had 7 branches, and added one more branch in the year 2010-11. Added with 2 more branches, Canara bank had 10 branches in the years 2011-12 and 2012-13. With a huge jump forward, Canara bank was operated with 15 branches. However, there were 13 branches in the years 2014-15 and 2015-16.

State Bank of India has been operated with 9 branches from 2008-09 to 2011-12. Reducing 2 branches, the bank was operated with 7 branches. Further going down, State Bank of India had 5 branches in the years 2013-14 and 2014-15. However, there is a slight jump forward with 7 branches in the year 2015-16.

Indian bank has been operated with 2 branches from the years 2008-09 to 2011-12. Adding 1 more branch in 2012-13, the bank operated 4 branches in 2013-14. It had 6 and 5 branches in 2014-15 and 2015-16 respectively in Tirunelveli district.

Central Bank of India has been operated with 2 branches from the year 2008-09 to 2012-13. It had 3 and 4 branches for the years 2013-14, 2014-15 and 2015-16 respectively.

State Bank of Travancore saw its first branch in Tirunelveli I 2011-12. Continuing with the same number of branches for the next year i.e. 2012-13, the bank saw a huge jump forward with 5 branches for the years 2013-14 and 2014-15. With no branches in 2008-09 to 2010-11, the bank has 4 branches in 2015-16.

Bank of India, Punjab National Bank and UCO bank had been operated with 1 branch each from the years 2008-09 to 2015-16 with Bank of India adding one more branch in 2015-16.

Corporation Bank saw no branch for the years 2008-09 to 2011-12. However, the first branch by the bank was in the year 2012-13 and followed by 3 branches from 2013-14 to 2015-16.

There were no branches for Allahabad Bank and Syndicate Bank for the years 2008-09 to 2012-13 and 2008-09 to 2013-14 respectively. Allahabad Bank has been operated with 1 branch from the years 2013-14 to 2015-16 respectively. Syndicate Bank saw its first branch in 2014-15 and 2 in 2015-16.

Union Bank of India and Vijaya Bank had no branches from the years 2008-09 to 2014-15. In 2015-16, there was 1 branch each for Union Bank of India and Vijaya Bank.

The banks such as Andhra Bank, Bank of Baroda, Bank of Maharashtra, Dena Bank, IDBI, Uniter Bank of India have no branch from the years 2008-09 to 2015-16.

4.2.2 Growth of branches of public sector banks in semi-urban area in Tirunelveli district

The following table 4.3 shows the details regarding the growth of number of branches in semi-urban areas of Tirunelveli district.

TABLE 4.3

GROWTH OF BRANCHES OF PUBLIC SECTOR BANKS IN SEMI URBAN AREA

Banks	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
State Bank of India	4	4	6	6	10	12	12	9
State Bank of Travancore	5	5	3	3	5	5	5	7
Allahabad Bank	1	1	1	1	1	1	1	1
Andhra Bank	0	0	0	0	0	0	1	2
Bank of Baroda	0	0	0	0	0	1	1	1
Bank of India	1	1	1	1	1	1	1	0
Bank of Maharashtra						0	0	0
Canara Bank	11	11	12	12	21	9	13	13
Central Bank of India	3	3	3	3	4	2	3	3
Corporation Bank	2	2	2	2	1	1	2	2
Deena Bank							0	0
IDBI	0	0	0	0	0	1	1	2
Indian Bank	9	9	10	10	10	9	9	10
Indian Overseas Bank	20	20	21	23	23	26	26	26
Punjab National Bank	2	2	2	2	2	2	3	3
Syndicate Bank	0	0	0	0	1	2	2	2
Union Bank of India	3	3	3	3	3	4	3	2
United Bank of India							0	0
UCO Bank	0	0	0	0	0	0	0	0
Vijaya Bank	0	0	0	0	0	1	1	1
Total	61	61	64	66	82	77	84	84

Source: Lead bank in Tirunelveli (2016) (Indian Overseas Bank)

This above-shown table deals with the number of branches each bank has started operating in the urban areas of Tirunelveli in the given years. Indian Overseas Bank, the only lead bank with highest number of branches in the district, has been operating 20 branches in the year 2008-09 and 2009-10. It added one more branch in 2010-11 and operated with 23 branches in 2011-12 and 2012-13 respectively. Adding 3 more branches, The Indian Overseas Bank has been functioning with 26 branches from the year 2013-14 to 2015-16.

Canara bank, a fast growing bank, has been adding new branches day in day out. In 2008-09 and 2009-10, it had 11 branches, and added one more branch in 2010-11 and 2011-12. With an unbelievable jump forward, the bank added 21 branches in 2012-13. As against the previous year's record, Canara Bank had only 9 branches reducing 11 branches at one go in 2013-14. However, adding 4 more branch, the continued with 13 branches for the years 2014-15 and 2015-16.

Indian bank has operated with 9 branches for the years 2008-09 and 2009-10, and 2013-14 and 2014-15. The bank had 10 branches from the year 2010-11 to 2012-13 and for the year 2015-16.

State Bank of India has been operated with 4 branches for the years 2008-09 and 2009-10. Adding 2 more branches, the bank was operated with 6 branches from 2010 to 2012. With 10 in the year 2012-13, the bank had 12 branches in 2013-14 and 2014-15. However, there was a down that the bank was operated with 9 branches in the years 2015-16.

State Bank of Travancore had 5 branches in Tirunelveli in 2008-09 and 2009-10. It had 3 branches in 2010-11 and 2011-12. The bank maintained with 5 branches from 2012-12 to 2014-15. In 2015-16, there were 7 branches for the bank.

Central Bank of India has been operated with 3 branches from the year 2008-09 to 2011-12. It had 4 and 2 branches for the years 2012-13, 2013-14 respectively. There were once again 3 branches in the years 2014-15 and 2015-16.

Union Bank of India had been maintaining with 3 branches right from the years 2008-09 to 2014-15 barring the years 2013-14 and 2015-16 in which the bank had 4 and 2 branches respectively.

Punjab National Bank had been operated with 2 branches from the years 2008-09 to 2013-14. It had 3 branches in 2014-15 and 2015-16.

Corporation Bank saw 2 branches for the years 2008-09 to 2011-12. However, there was only one branch in the year 2012-13 and 2013-14 followed by 2 branches from 2014-15 to 2015-16.

There was 1 branch each for Allahabad Bank and Bank of India from 2008-09 to 2014-15 with Allahabad Bank has 1 branch in 2015-16.

Syndicate Bank, for the years 2008-09 to 2011-12, had no branches and it started with 1 branch in 2012-13 and continued with 2 branches from 2013-14 to 2015-16.

The banks such as Andhra Bank, Bank of Baroda, IDBI and Vijaya Bank have no branch from the years 2008-09 to 2012-13. Andhra Bank had its first branch in 2014-15 and it added one more branch in 2015-16. Bank of Baroda had been operated with 1 branch from the years 2013-14 to 2015-16. IDBI and Vijaya Bank have 1 branch each for the years 2013-14 and 20114-15. The former added one more branch in 2015-16 while the latter just retained with its former status for the year 2015-16.

Bank of Maharashtra, Dena Bank, United Bank of India and UCO bank have no branch from the years 2008-09 to 2015-16.

4.2.3 Growth of branches of public sector banks in urban area in Tirunelveli district

The following table 4.4 shows the details regarding the growth of number of branches in urban areas of Tirunelveli district.

TABLE 4.4

GROWTH OF BRANCHES OF PUBLIC SECTOR BANKS IN URBAN AREA

BANKS	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
State Bank of India	7	7	7	7	8	8	8	9
State Bank of Travancore	0	0	2	2	2	2	2	2
Allahabad Bank	0	0	0	0	1	1	1	1
Andhra Bank	1	1	1	1	1	1	1	1
Bank of Baroda	2	2	2	2	4	3	3	3
Bank of India	2	2	2	2	2	2	2	2
Bank of Maharashtra						1	1	1
Canara Bank	10	10	9	9	10	10	10	10
Dena Bank						1	1	1
Central Bank of India	3	3	3	3	4	4	4	4
Corporation Bank	1	1	1	1	3	3	2	2
IDBI	1	1	1	1	1	1	1	1
Indian Bank	8	8	8	10	10	10	10	11
Indian Overseas Bank	10	10	10	12	12	13	13	13
Punjab National Bank	1	1	1	1	1	2	1	1
Oriental Bank of Commerce								1
Syndicate Bank	1	1	2	2	2	2	2	3
Union Bank of India	2	2	2	2	2	2	3	3
UCO Bank	1	1	1	1	1	1	1	1
Vijaya Bank	1	1	1	1	1	1	1	1
United Bank of India						1	1	1
Total	51	51	53	57	65	69	68	72

Source: Lead bank in Tirunelveli (2016) (Indian Overseas Bank)

The urban area in Tirunelveli has different scenario to picture with regard to public sector banks and its branches. Unlike the rural and semi-urban areas, the urban areas see branches of almost all the public sector banks.

Indian Overseas Bank, as usual, has been maintaining with 10 branches in 2008-09 to 2010-11. It had 12 branches in 2011-12 and 2012-13. There were 13 branches of Indian Overseas Banks from the years 2013-14 to 2015-16.

Canara Bank has been maintaining with 10 branches right from the year 2008-09 to 2015-16 barring the years 2010 and 2012.

Indian Bank in 2008-09 had 8 branches and continued with the same number till the year 2010-11. The bank had 10 branches from 2011-12 to 2014-15. There were 11 branches in 2015-16.

State Bank of India had 7 branches from 2008-09 to 2011-12 and 8 branches from 2012-13 to 2014-15. It had 9 branches in 2015-16.

State Bank of Travancore, barring the years 2008-09 and 2009-10, had been maintained with 2 branches from 2010-11 to 2015-16.

Bank of India and Union Bank of India represent the urban area with 2 branches each from the years 2008-09 to 2015-16 with Union Bank of India adding one more branch in the last two fiscal years.

Andhra Bank, IDBI, UCO Bank, and Vijaya Bank have 1 branch each from the years 2008-09 to 2015-16.

Bank of Baroda had 2 branches in the years 2008-09 till 2011-12. Barring the year 2012-13 in which the bank had 4 branches, there were 3 branches from the years 2013-14 till 2015-16.

Central Bank of India saw 3 branches from 2008-09 till 2011-12 and 4 branches from 2012-13 till 2015-16.

Allahabad Bank, Bank of Maharashtra, Dena Bank, United Bank of India have 1 branch from the years 2013-14 to 2015-16 with Allahabad Bank started earlier than the above mentioned banks in having a branch in 2012-13. However, there were no branches for these banks from 2008-09 till 2012-13.

Corporation Bank had 1 branch from 2008-09 till 2011-12 and 3 branches in 2012-13 and 2013-14. There were 2 branches for this bank in 2014-15 and 2015-16.

Punjab National Bank maintained with 1 branch from 2008-09 till 2015-16 excepting the year 2013-14 in which the bank had 2 branches.

Syndicate Bank had 1 branch in 2008-09 and 2009-10 followed by 2 branches till 2014-15. In 2015-16, the bank saw 3 branches.

Oriental Bank of Commerce, a new one in Tirunelveli, had only one branch in 2015-16. There were no representations from this bank since 2008-09 till 2014-15.

4.3 PROFILE OF PRIVATE SECTOR BANKS IN TIRUNELVELI DISTRICT

The private-sector banks are banks where greater parts of stake or equity are held by the private shareholders and not by government. Following are the private sector banks and their branches in Tirunelveli.

TABLE 4.5
PRIVATE SECTOR BANKS IN TIRUNELVELI DISTRICT

D. A. C. A. D. L.]	Total		
Private Sector Banks	Rural	Semi-Urban	Urban	Total
Axis Bank	2	2	1	5
City Union Bank	0	6	3	9
Federal Bank	1	3	1	5
HDFC	1	3	2	6
ICICI	6	4	1	11
Karnataka Bank	0	0	1	1
Karur Vysya Bank	1	7	1	9
Lakshmi Vilas Bank	2	2	2	6
South Indian Bank	1	1	1	3
Tamil Nadu Mercantile Bank	18	17	3	38
Total	32	45	16	93

Source: Lead bank in Tirunelveli (2016) (Indian Overseas Bank)

The private sector banks in Tirunelveli are as equal in service as the public sector banks. Tamil Nadu Mercantile Bank has 18 branches in rural areas, 17 in semi-urban and 3 in urban areas of Tirunelveli. ICICI bank has 6 branches in rural, 4 in semi-urban and 1 in urban areas of Tirunelveli. Axis Bank has 2 in rural and semi-urban and 1 in urban area. City Union Bank has no representation in rural areas. It has 6 branches in semi-urban and 3 in urban areas. Federal Bank has 1 representation each in rural and urban with 3 branches in semi-urban areas. HDFC has its presence in rural area with 1 branch. It has 3 and 2 in semi-urban and urban areas respectively.

Karnataka Bank has no representation in both rural and semi-urban areas. It has 1 branch in urban area. Karur Vysya Bank has 1 branch each in rural and urban areas. It has 7 branches in semi-urban areas. Lakshmi Vilas Bank has equal representation in rural, semi-urban and urban areas 2 branches each. South Indian Bank maintains with 1 branch in rural, semi-urban and urban areas each.

4.3.1 Growth of branches of private sector banks in rural area in Tirunelveli district

The following table 4.6 shows the details regarding the growth of number of branches in rural areas of Tirunelveli district.

TABLE 4.6

GROWTH OF BRANCHES OF PRIVATE SECTOR BANKS IN RURAL AREA

Private Sector Banks	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Axis Bank Ltd.	2	2	2	2	2	2	2	2
City Union Bank Ltd.	0	0	0	0	0	0	0	0
Federal Bank Ltd.	0	0	0	0	0	0	1	1
HDFC Bank Ltd.	0	0	0	0	0	0	1	1
ICICI Bank Ltd.	7	7	7	7	7	7	6	6
Karnataka Bank	-	-	-	-	-	-	0	0
Karur Vysya Bank Ltd.	0	0	0	0	0	0	1	1
Lakshmi Vilas Bank Ltd.	0	0	0	0	0	0	1	1
South Indian Bank Ltd.	0	0	0	0	0	0	1	1
Tamil Nadu Mercantile Bank Ltd.	8	8	8	10	10	14	20	16

Source: Lead bank in Tirunelveli (2016) (Indian Overseas Bank)

This table deals with the number of branches each private sector banks maintains in the given years. Axis Bank maintains with 2 branches from the year 2008-09 till 205-16.

ICICI bank had been maintaining with 7 branches since 2008-09 till 2013-14. It had 6 branches in 2014-15 and 2015-16.

Tamil Nadu Mercantile Bank had 8 branches in 2008-09 till 2010-11. It added two more branches in 2011-12 and 2012-13. The bank went on with 14 and 20 branches in 2013-14 and 2014-15 respectively. The bank had 16 branches in 2015-16.

City Union Bank and Karnataka Bank have no branches in the given years.

Federal Bank Ltd., HDFC Bank Ltd., Karur Vysya Bank Ltd., Lakshmi Vilas Bank Ltd. and South Indian Bank Ltd. Have no branches from 2008-09 till 2013-14. However, these banks had 1 branch each in 2014-15 and 2015-16.

4.3.2 Growth of branches of private sector banks in semi-urban area in Tirunelveli district:

The following table 4.7 shows the details regarding the growth of number of branches in semi -urban areas of Tirunelveli district.

TABLE 4.7

GROWTH OF BRANCHES OF PRIVATE SECTOR BANKS IN SEMI-URBAN AREA

Private Sector Banks	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Axis Bank Ltd.	0	0	0	0	2	2	0	0
City Union Bank Ltd.	0	0	0	1	6	5	5	5
Federal Bank Ltd.	0	0	0	3	3	3	3	3
HDFC Bank Ltd.	0	0	0	0	1	1	3	3
ICICI Bank Ltd.	2	2	2	2	2	1	2	2
Karnataka Bank						-	0	0
Karur Vysya Bank Ltd.	2	2	2	4	6	6	6	7
Lakshmi Vilas Bank Ltd.	1	1	1	1	1	1	1	1
South Indian Bank Ltd.	0	0	0	0	1	1	1	1
Tamil Nadu Mercantile Bank Ltd.	5	5	5	8	8	11	12	17

Source: Lead bank in Tirunelveli (2016) (Indian Overseas Bank)

This table deals with the number of branches each private sector banks maintains in semi-urban areas of Tirunelveli in the given years. Tamil Nadu Mercantile Bank had 5 branches from 2008-09 to 2010-11. It added 3 more branches in 2011-12 and 2012-13. There were 11 and 12 branches for this bank in 2013-14 and 2014-15. It registered 17 branches in 2015-16.

Lakshmi Vilas Bank has 1 branch from 2008-09 till 2015-16. ICICI Bank had 2 branches consistently from 2008-09 to 2015-16 barring the year 2013-14 in which the bank had 1 branch.

Karur Vysya Bank had 2 branches from 2008 to 2011. It had 4 branches in 2011-12 and 6 branches in 2012-13 till 2014-15. There were 7 branches for this bank in 2015-16.

City Union Bank had no branches till 2010-11. It had 1 branch in 2011-12 and 6 in 2012-13. This bank registered 5 branches from 2013-14 to 2015-16.

Federal Bank of India had 3 branches from 2011-12 till2015-16. However, there were no branches for this bank from 2008-09 till 2010-11.

Axis Bank had 2 branches in the years 2012-13 and 2013-14. There were no branches for this bank in 2008-09 to 2011-12 and 2014-15 to 2015-16.

HDFC bank had 1 branch in 2012-13 and 2013-14. It added two more branches in 2014-15 and 2015-16. South Indian Bank had 1 branch from the years 2012-13 till 2015-16. There were no branches for this bank from 2008-09 till 2011-12. Karnataka bank had no branch at all in the given years.

4.3.3 Growth of branches of private sector banks in urban area in Tirunelveli district

The following table 4.8 shows the details regarding the growth of number of branches in urban areas of Tirunelveli district.

TABLE 4.8

GROWTH OF BRANCHES OF PRIVATE SECTOR BANKS IN URBAN

AREA PRIVATE SECTOR BANKS' BRANCHES

AND ITS GROWTH

Private Sector Banks	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Axis Bank Ltd.	1	1	1	1	0	0	2	2
City Union Bank Ltd.	1	1	2	2	1	2	2	3
Federal Bank Ltd.	1	1	1	1	1	1	1	1
HDFC Bank Ltd.	1	1	1	1	1	1	2	2
ICICI Bank Ltd.	0	0	0	0	0	2	2	2
Karnataka Bank	-	-	-	-	-		1	1
Karur Vysya Bank Ltd.	1	1	1	1	1	1	1	1
Lakshmi Vilas Bank Ltd.	1	1	1	1	1	1	2	2
South Indian Bank Ltd.	1	1	1	1	1	1	1	1
Tamil Nadu Mercantile Bank Ltd.	1	1	1	1	1	2	1	2

Source: Lead bank in Tirunelveli (2016) (Indian Overseas Bank)

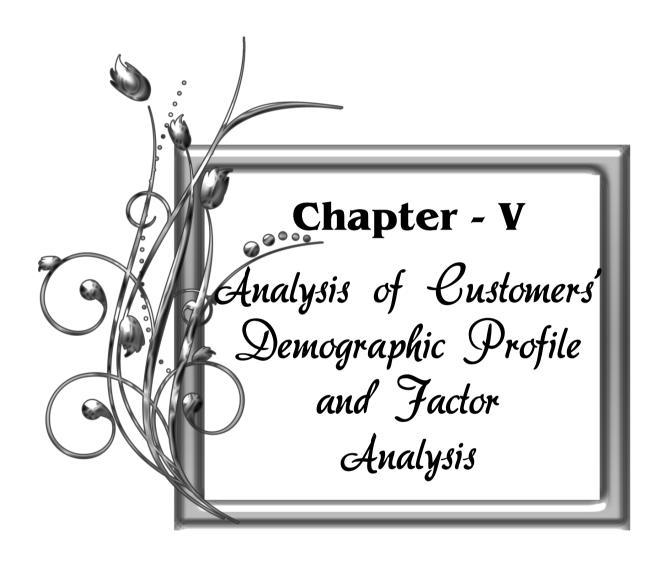
Private sector banks and its growth represented in urban areas of Tirunelveli are given in this table. Most of the banks maintained with 1 branch for many years barring some few. Axis Bank had been maintaining with 1 branch since 2008-09 till 2011-12. There were no branches for this bank in 2012-13 and 2013-14. The bank had 2 branches in 2014-15 and 2015-16.

City Union Bank had 1 branch in 2008-09, 2009-10 and 2012-13. It had 2 branches from 2010-11 till 2014-15 except the year 2012-13. The bank added one more branch in 2015-16 finishing with 3 branches. Federal Bank Ltd, Karur Vysya Bank Ltd, and South Indian Bank Ltd have 1 branch from 2008-09 till 2015-16. Tamil Nadu

Mercantile bank had 2 branches in 2013-14 and 2015-16. The remaining years i.e. from 2008-09 till 2014-15, the bank had 1 branch.

Lakshmi Vilas Bank had 1 branch from 2008-09 till 2013-14. It added one more branch in 2014-15 and 2015-16. Karnataka Bank had 1 branch in 2014-15 and 2015-16. However, there were no branches from 2008-09 till 2013-14.

ICICI bank had no representation with its branches from 2008-09 to 2012-13. However, there were 2 branches from 2013-14 till 2015-16. HDFC bank had 1 branch from the year 2008-09 till 2013-14. It added one more in 2014-15 and 2015-16.



CHAPTER V

ANALYSIS OF CUSTOMERS' DEMOGRAPHIC PROFILE AND FACTOR ANALYSIS

5.1	INTRODUCTION
5.2	GENDER OF THE RESPONDENTS
5.3	AGE OF THE RESPONDENTS
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CHAPTER V

ANALYSIS OF CUSTOMERS' DEMOGRAPHIC PROFILE AND FACTOR ANALYSIS

5.1 INTRODUCTION

This chapter makes an attempt to discuss the principal demographic characteristics such as gender, age, educational qualification, marital status, occupation, monthly income and usage of e-banking of the selected customers in the study area. All these characteristics have an important bearing upon bank customers' evaluation on e-banking services.

5.2 GENDER OF THE RESPONDENTS

Male and female customers are using e-banking in the public sector banks and private sector banks in Tirunelveli district. The following table shows the gender wise classification of the respondents in the study area:

TABLE 5.1
GENDER WISE CLASSIFICATION OF THE RESPONDENTS

Candan	Туре	Total	
Gender	Public Sector Bank	Private Sector Bank	Total
Male	117 (52.0%)	163 (69.1%)	280 (60.7%)
Female	108 (48.0%)	73 (30.9%)	181 (39.3%)
Total	225 (100.0%)	236 (100.0%)	461 (100.0%)

Source: Primary data

(Figures in parentheses indicate percentage)

From the above table 5.1, it is clear that, out of 461 respondents majority 60.7 per cent of the respondents are male and rest of the 39.3 per cent of the respondents are female respondents.

Out of 225 public sector bank's respondents majority 52 per cent of the respondents are male respondents and rest of the 48 per cent are female respondents.

Out of 236 private sector bank's respondents majority 69.1 per cent are male respondents and rest of the 30.9 per cent are female respondents.

The reason for the majority is, male respondents are independently open account in banks. But the female respondents are not financially liberated. Hence, majority of the male respondents are using e-banking.

5.3 AGE OF THE RESPONDENTS

Customers belong to different age groups use e-banking in public sector banks and private sector banks. The following table shows the age wise classification of the respondents in the study area:

TABLE 5.2

AGE WISE CLASSIFICATION OF THE RESPONDENTS

Age	Type of		
Tige .	Public Sector Bank	Private Sector Bank	Total
18 - 30 Years	103 (45.8%)	92 (39.0%)	195 (42.3%)
30 - 50 Years	80 (35.6%)	80 (33.9%)	160 (34.7%)
Above 50 Years	42 (18.7%)	64 (27.1%)	106 (23.0%)
Total	225 (100.0%)	236 (100.0%)	461 (100.0%)

Source: Primary data

(Figures in parentheses indicate percentage)

From the above table 5.2, it is clear that, out of 461 respondents majority 42.3 per cent of the respondents are belong to the age group of 18-30 years, 34.7 per cent of

the respondents are belong to the age group of 30-50 years and rest of the 23 per cent of the respondents are belong to the age group of above 50 years.

Out of 225 public sector bank's respondents majority 45.8 per cent of the respondents are belong to the age group of 18-30 years, 35.6 per cent of the respondents are belong to the age group of 30-50 years and rest of the 18.7 per cent of the respondents are belong to the age group of above 50 years.

Out of 236 private sector bank's respondents majority 39 per cent of the respondents are belong to the age group of 18-30 years, 33.9 per cent of the respondents are belong to the age group of 30-50 years and rest of the 27.1 per cent of the respondents are belong to the age group of above 50 years.

The reason for the majority of the young aged respondents using e-banking in public sector banks and private sector banks in the study area is that, young aged respondents are technologically advanced than old age respondents. Hence, majority of the young aged respondents using e-banking in public sector banks and private sector banks than old aged respondents.

5.4 EDUCATIONAL QUALIFICATION OF THE RESPONDENTS

Customers of different educational qualification use e-banking services of public sector banks and private sector banks. The following table shows the educational qualification of customers of public sector banks and private sector banks in Tirunelveli district:

TABLE 5.3
EDUCATIONAL QUALIFICATION OF THE RESPONDENTS

	Type o		
Education	Public Sector Bank	Private Sector Bank	Total
School Level	24 (10.7%)	14 (5.9%)	38 (8.2%)
U.G Level	50 (22.2%) 84 (35.6%)		134 (29.1%)
P.G Level	67 (29.8%)	67 (28.4%)	134 (29.1%)
Professional	84 (37.3%) 71 (30.1%)		155 (33.6%)
Total	225 (100.0%)	236 (100.0%)	461 (100.0%)

Source: Primary data

(Figures in parentheses indicate percentage)

From the above table 5.3, it is clear that, out of 461 respondents' majority 33.6 per cent of the respondents are completed professional courses, 29.1 per cent of the respondents are under graduates, another 29.1 per cent of the respondents are post graduates and rest of the 8.2 per cent of the respondents are completed up to school level.

Out of 225 public sector bank's respondents' majority 37.3 per cent of the respondents are completed professional courses, 29.8 per cent of the respondents are post graduates, 22.2 per cent of the respondents are under graduates and rest of the 10.7 per cent of the respondents are completed up to school level.

Out of 236 private sector bank's respondents majority 35.6 per cent of the respondents are under graduates, 30.1 per cent of the respondents are completed professional courses, 28.4 per cent of the respondents are post graduates and rest of the 5.9 per cent of the respondents are completed up to school level.

The reason for the majority is they have more awareness and high literacy about e-banking. Hence, majority of the respondents are professional and under graduate qualification using e-banking in public sector banks and private sector banks.

5.5 MARITAL STATUS OF THE RESPONDENTS

Married and unmarried customers are using e-banking in the public sector banks and private sector banks in Tirunelveli district. The following table shows the marital status of the respondents:

TABLE 5.4

MARITAL STATUS OF THE RESPONDENTS

	Type of			
Marital Status	Marital Status Public Sector Bank		Total	
Single	63 (28.0%)	42 (17.8%)	105 (22.8%)	
Married	162 (72.0%)	194 (82.2%)	356 (77.2%)	
Total	225 (100.0%)	236 (100.0%)	461 (100.0%)	

Source: Primary data

(Figures in parentheses indicate percentage)

From the above table 5.4, it is clear that, out of 461 respondents majority 77.2 per cent of the respondents are married and rest of the 22.8 per cent of the respondents are single.

Out of 225 public sector bank's respondents majority 72 per cent of the respondents are married and rest of the 28 per cent of the respondents are single.

Out of 236 private sector bank's respondents majority 82.2 per cent of the respondents are married and rest of the 17.8 per cent of the respondents are single.

The reason for the majority of the married respondents using e-banking in public sector banks and private sector banks in the study area is that, married respondents are independently operate bank transactions. But the unmarried respondents are not so independent to operate. Hence, majority of the married respondents using e-banking in public sector and private sector banks than unmarried respondents.

5.6 OCCUPATION OF THE RESPONDENTS

Customers of different occupations use e-banking services of public sector banks and private sector banks. The following table shows the occupation of customers of public sector banks and private sector banks in Tirunelveli district:

TABLE 5.5
OCCUPATION OF THE RESPONDENTS

	Туре о		
Occupation	Public Sector Private Sect Bank Bank		Total
Government Employee	43(19.1%)	34(14.4%)	77(16.7%)
Private Employee	52(23.1%)	67(28.4%)	119(25.8%)
Business	27(12.0%)	41(17.4%)	68(14.8%)
Professional	54(24.0%)	46(19.5%)	100(21.7%)
Student	24(10.7%)	26(11.0%)	50(10.8%)
Housewife	25(11.1%)	22(9.3%)	47(10.2%)
Total	225(100.0%)	236(100.0%)	461(100.0%)

Source: Primary data

(Figures in parentheses indicate percentage)

From the above table 5.5, it is reveals that, out of 461 respondents majority 25.8 per cent of the respondents are private employees, 21.7 per cent of the respondents are professional, 16.7 per cent of the respondents are government employees, 14.8 per cent of the respondents are doing business, 10.8 per cent of the respondents are students and rest of the 10.2 per cent of the respondents are housewife.

Out of 225 public sectors bank's respondents majority 24 per cent of the respondents are professional, 23.1 per cent of the respondents are private employees, 19.1 per cent of the respondents are government employees, 12 per cent of the respondents are doing business, 11.1 per cent of the respondents are housewife and rest of the 10.7 per cent of the respondents are students.

Out of 236 private sector bank's respondents majority 28.4 per cent of the respondents are private employees, 19.5 per cent of the respondents are professional, 17.4 per cent of the respondents are doing business, 14.4 per cent of the respondents are government employees, 11 per cent of the respondents are students and rest of the 9.3 per cent of the respondents are housewife.

The reason for the majority of the professionals using e-banking in public sector banks and private employees in private sector banks in the study area is that, they don't have much time to go bank branches. Hence, majority of the private employees and professionals use e-banking services in public sector banks and private sector banks than others.

5.7 MONTHLY INCOME OF THE RESPONDENTS

Customers belong to different monthly income use e-banking in public sector banks and private sector banks. The following table shows the monthly income wise classification of the respondents:

TABLE 5.6
MONTHLY INCOME OF THE RESPONDENTS

	Type of	Total	
Monthly Income	Public Sector Bank Private Sector Bank		
Less than ₹ 20,000	66(29.3%)	40(16.9%)	106(23.0%)
₹20,000 to ₹40,000	64(28.4%)	67(28.4%)	131(28.4%)
₹40,000 to ₹60,000	55(24.4%)	77(32.6%)	132(28.6%)
More than ₹60,000	40(17.8%)	52(22.0%)	92(20.0%)
Total	225(100.0%)	236(100.0%)	461(100.0%)

Source: Primary data

(Figures in parentheses indicate percentage)

From the above table 5.6, it is clear that, out of 461 respondents majority 28.6 per cent of the respondents are earn $\stackrel{?}{\sim} 40000\text{-}60000$ per month, 28.4 per cent of the respondents are earn $\stackrel{?}{\sim} 20000\text{-}40000$ per month, 23 per cent of the respondents are earn less than $\stackrel{?}{\sim} 20000$ per month and rest of the 20 per cent of the respondents are earn more than $\stackrel{?}{\sim} 60000$ per month.

Out of 225 public sector bank's respondents majority 29.3 per cent of the respondents are earn less than ₹ 20000 per month, 28.4 per cent of the respondents are earn ₹ 20000-40000 per month, 24.4 per cent of the respondents are earn less than ₹ 40000-60000 per month and rest of the 17.8 per cent of the respondents are earn more than ₹ 60000 per month.

Out of 236 private sector bank's respondents majority 32.6 per cent of the respondents are earn ₹ 40000-60000 per month, 28.4 per cent of the respondents are earn ₹ 20000-40000 per month, 22 per cent of the respondents are earn more than

₹ 60000 per month and rest of the 16.9 per cent of the respondents are earn less than ₹ 20000 per month.

The reason for the majority of the respondents belong to low monthly income has account in public sector bank is that they feel secure in public sector banks and high monthly income has account in private sector banks because they prefer to save money in the banks with high interest. Hence, majority of the respondents belong to low monthly income have account in public sector banks and high income have account in private sector banks.

5.8 NUMBER OF YEARS OF AVAILING E-BANKING SERVICES

Customers use e-banking in public sector and private sector banks for many years. The following table shows the number of years using e-banking services by the customers of public sector and private sector banks in Tirunelveli district:

TABLE 5.7

NUMBER OF YEARS OF AVAILING E-BANKING SERVICES

Status of Usage	Туре	Total	
Status of Usage	Public Sector Bank	Private Sector Bank	Totai
Less than 1 year	53(23.6%)	53(22.5%)	106(23.0%)
1 - 3 years	65(28.9%)	80(33.9%)	145(31.5%)
3 - 5 years	53(23.6%)	64(27.1%)	117(25.4%)
More than 5 years	54(24.0%)	39(16.5%)	93(20.2%)
Total	225(100.0%)	236(100.0%)	461(100.0%)

Source: Primary data

(Figures in parentheses indicate percentage)

From the above table 5.7, it is reveals that, out of 461 respondents majority 31.5 per cent of the respondents are using e-banking 1-3 years, 25.4 per cent of the respondents are using e-banking 3-5 years, 23 per cent of the respondents are using e-banking less than 1 year and rest of the 20.2 per cent of the respondents using e-banking more than 5 years.

Out of 225 public sector bank's respondents majority 28.9 per cent of the respondents are using e-banking 1-3 years, 24 per cent of the respondents are using e-banking more than 5 years, 23.6 per cent of the respondents are using e-banking less than 1 year and rest of the 23.6 per cent of the respondents using e-banking 3-5 years.

Out of 236 private sector bank's respondents majority 33.9 per cent of the respondents are using e-banking 1-3 years, 27.1 per cent of the respondents are using e-banking 3-5 years, 22.5 per cent of the respondents are using e-banking less than 1 year and rest of the 16.5 per cent of the respondents using e-banking more than 5 years.

Majority of the public sector and private sector banks respondents are using e-banking between 1-3 years.

5.9 FACTORS INDUCED FOR AVAILING E-BANKING SERVICES

There are many factors that induce the customers to use e-banking in public sector and private sector banks. The following table shows the factors induced for availing e-banking services by the customers of public sector and private sector banks in Tirunelveli district:

TABLE 5.8

FACTORS INDUCED FOR AVAILING E-BANKING SERVICES

	Type o		
Factors Induced	Public Sector Bank	Private Sector Bank	Total
Reduced time of transaction	48(21.3%)	70(29.7%)	118(25.6%)
Cost effectiveness	39(17.3%)	55(23.3%)	94(20.4%)
Ease of use	96(42.7%)	78(33.1%)	174(37.7%)
Technology savvy	42(18.7%)	33(14.0%)	75(16.3%)
Total	225(100.0%)	236(100.0%)	461(100.0%)

Source: Primary data

(Figures in parentheses indicate percentage)

From the above table 5.8, it is clear that, out of 461 respondents majority 37.7 per cent of the respondents says that ease of use is the motivating factor for availing e-banking services, 25.6 per cent of the respondents says that reduced time of transaction is the motivating factor for availing e-banking services, 20.4 per cent of the respondents says that cost effectiveness is the motivating factor for availing e-banking services and rest of the 16.3 per cent of the respondents says that technology savvy is the motivating factor for availing e-banking services.

Out of 225 public sector bank's respondents majority 42.7 per cent of the respondents says that ease of use is the motivating factor for availing e-banking services, 21.3 per cent of the respondents says that reduced time of transaction is the motivating factor for availing e-banking services, 18.7 per cent of the respondents says that technology savvy is the motivating factor for availing e-banking services and rest

of the 17.3 per cent of the respondents says that cost effectiveness is the motivating factor for availing e-banking services.

Out of 236 private sector bank's respondents majority 33.1 per cent of the respondents says that ease of use is the motivating factor for availing e-banking services, 29.7 per cent of the respondents says that reduced time of transaction is the motivating factor for availing e-banking services, 23.3 per cent of the respondents says that cost effectiveness is the motivating factor for availing e-banking services and rest of the 14 per cent of the respondents says that technology savvy is the motivating factor for availing e-banking services.

In Tirunelveli district, fast developments in IT and speed networks help the e-banking users to complete their transactions without any hurdles. Hence, majority of the public sector and private sector banks respondents induced by ease of use and reduced time of transactions.

5.10 RANKING THE ATTRIBUTES OF THE BANK TO DO VALUE MOST

An attempt has been made to analyze which attributes of e-banking value most.

The following table shows the details with regard to the attributes of the e-banking:

TABLE 5.9

ATTRIBUTES OF THE BANK TO DO VALUE MOST

Attribute	1	2	3	4	5	Total	Donk
Score (X)	75	60	50	40	24	Total	Rank
Problem redressed (F1)	94	127	97	89	54		137
XF1	7050	7620	4850	3560	1296	24376	IV
Technology used(F2)	123	153	91	79	15		т
XF2	9225	9180	4550	3160	360	26475	I
Trust(F3)	121	98	94	86	62	24592	111
XF3	9075	5880	4700	3440	1488	24583	III
Location(F4)	93	87	103	121	57	22552	V
XF4	6975	5220	5150	4840	1368	23553	V
Speed(F5)	111	121	103	91	35	25215	II
XF5	8325	7260	5150	3640	840	25215	11

Source: Primary data

From the above table 5.9, it is understood that the banking attributes of value creation and technology used were ranked first by the respondents with a Garrett score of 26475 points. It is followed by the speed with the Garrett score of 25215 points. The trust and problem redressed were ranked in the third and fourth place with a Garrett score of 24583 and 24376 points. The respondents' preferred fifth factor is location with the Garrett score of 23553 points. From the analysis, it is inferred that technology and speed are the prime preferred factors that are mostly used for the e-banking transactions highlighted by the respondents.

5.11 COMPUTER LITERACY OF THE RESPONDENTS

Customers having different computer literacy level use e-banking services of public sector and private sector banks in Tirunelveli district. The following table shows the level of computer literacy of the respondents:

TABLE 5.10

COMPUTER LITERACY LEVEL OF THE RESPONDENTS

	Type o		
Computer Literacy	Public Sector Bank	Private Sector Bank	Total
Low	40(17.8%)	89(37.7%)	129(28%)
Average	67(29.8%)	44(18.6%)	111(24.1%)
High	118(52.4%)	103(43.6%)	221(47.9%)
Total	225(100.0%)	236(100.0%)	461(100.0%)

Source: Primary data

(Figures in parentheses indicate percentage)

From the above table 5.10, it is clear that, out of 461 respondents majority 47.9 per cent of the respondents having high computer usage knowledge, 28 per cent of the respondents having low computer usage knowledge and rest of the 24.1 per cent of the respondents having average computer usage knowledge.

Out of 225 public sector bank's respondents majority 52.4 per cent of the respondents having high computer usage knowledge, 29.8 per cent of the respondents having average computer usage knowledge and rest of the 17.8 per cent of the respondents having low computer usage knowledge.

Out of 236 private sector bank's respondents majority 43.6 per cent of the respondents having high computer usage knowledge, 37.7 per cent of the respondents having low computer usage knowledge and rest of the 18.6 per cent of the respondents having average computer usage knowledge.

Now a days, the world without electronic gadgets is impossible. Hence, majority of the public sector and private sector banks respondents have high computer literacy level in the study area.

5.12 SOURCE OF AWARENESS ABOUT E-BANKING

Customers get awareness about e-banking from different sources. The following table shows the sources of awareness about e-banking:

TABLE 5.11
SOURCE OF AWARENESS ABOUT E- BANKING

	Туре	Total	
Source of e-banking	Public Sector Bank Private Sector Bank		
From Bank	65(28.9%)	94(39.8%)	159(34.5%)
Through advertisement	53(23.6%)	64(27.1%)	117(25.4%)
Through friends/ family members	107(47.6%)	78(33.1%)	185(40.1%)
Total	225(100.0%)	236(100.0%)	461(100.0%)

Source: Primary data

(Figures in parentheses indicate percentage)

It reveals from the above table 5.11, out of 461 respondents majority 40.1 per cent of the respondents know about e-banking through friends and family members, 34.5 per cent of the respondents know about e-banking from banks and rest of the 25.4 per cent of the respondents know about e-banking through advertisement.

Out of 225 public sector bank's respondents majority 47.6 per cent of the respondents know about e-banking through friends and family members, 28.9 per cent of the respondents know about e-banking from banks and rest of the 23.6 per cent of the respondents know about e-banking through advertisement.

Out of 236 private sector bank's respondents' majority 39.8 per cent of the respondents know about e-banking from banks, 33.1 per cent of the respondents know about e-banking through friends and family members and rest of the 27.1 per cent of the respondents know about e-banking through advertisement.

Through word of mouth promotion most of the products and services are get successful results. In every private sector banks employees are compel to advertise their banking services. Hence, majority of the public sector banks respondents are get awareness about e-banking through friends and relatives and private sector banks respondents are get awareness about e-banking from banks.

5.13 FREQUENCY OF USING E-BANKING SERVICES IN A MONTH

Customers use e-banking in public sector and private sector banks for many times in a month. The following table shows the number of times using e-banking services by the customers of public sector and private sector banks in Tirunelveli district:

TABLE 5.12
FREQUENCY OF USING E- BANKING SERVICES IN A MONTH

S.No	Banking Services	1 Time	2 – 3 Times	3 – 8 Times	More Than 8 Times
1	Branch Banking	143(31.02%)	237(51.41%)	68(14.75%)	13(2.82%)
2	ATM Centre	53(11.50%)	132(28.63%)	214(46.42%)	62(13.45%)
3	Internet Banking	214(46.42%)	121(26.25%)	92(19.96%)	34(7.38%)
4	Telephone Banking	231(50.11%)	210(45.55%)	19(4.12%)	1(0.22%)
5	Mobile Banking	212(45.99%)	124(26.90%)	85(18.44%)	40(8.68%)

Source: Primary data

(Figures in parentheses indicate percentage)

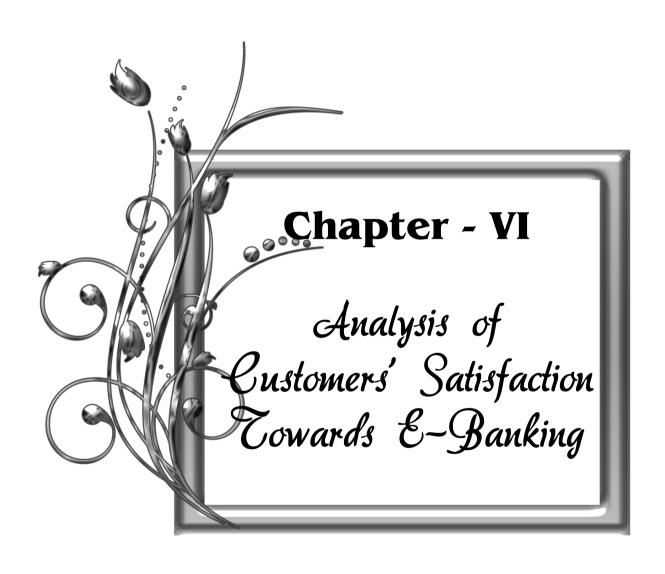
This table 5.12 deals with the customers' frequency level of using the banking services in a month. With mixed data and its consequent results, this table shows that 31.02% of people visit their bank's branch once in a month in person. While 51.41% people visit 2 to 3 times their bank branches, 14.75% frequent their respective branches around 3 to 8 times. Only a mere 2.82% visit the branches more than 8 times.

While this is the case for visiting branches in person, the number of visits to ATM has a different picture. There are 11.50% visit the ATM only once in a month. 28.63% drop in at ATM 2 to 3 times. 46.42% and 13.45% of people use ATM 3 to 8 times and more than 8 times respectively.

With the advent of internet banking, people use it more often than not. There are people who use internet banking only once in a month. These people amount to 46.42%. People who use internet banking 2 to 3 times amount to 26.25% while it is just 19.96% who use internet banking from 3 to 8 times in a month. Only a meagre 7.38% use more than 8 times.

Telephone banking has not as much successful as internet banking. A huge 50% use it once in a month while 45.55% use it 2 to 3 times. With the limited number of times in using, telephone banking is streets ahead. However, when the number of times used goes up, telephone banking sees a very poor result with a meager 04.12% and 0.22% use it 3 to 8 times and more than 8 times respectively.

Mobile banking, with the arrival of smart phones, seems to have joined the bandwagon. 45.99% use mobile banking once in a month and 26.90% use it 2 to 3 times. Using mobile banking, 3 to 8 times and more than 8 times, has 18.44% and 8.68% respectively. It is a clear picture that mobile banking will supersede all the other modes of banking in the near future.



CHAPTER VI

ANALYSIS OF CUSTOMERS' SATISFACTION TOWARDS E-BANKING

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CHAPTER VI

ANALYSIS OF CUSTOMERS' SATISFACTION TOWARDS E-BANKING

6.1 INTRODUCTION

In every business, there is a challenge to retain existing customers rather than to acquire new ones. Moreover, banks carry on business with public money and therefore, customers expect quality services from them. Hence the present chapter attempts to analyse the level of customers' satisfaction towards e-banking among the selected public and private sector banks in Tirunelveli district.

6.2 LEVEL OF SATISFACTION ON E-BANKING SERVICES

An attempt has been made to analyse the satisfaction of public sector and private sector banks customers towards e-banking services. The following table shows the details with regard to the satisfaction of public sector and private sector banks customers:

TABLE 6.1

LEVEL OF SATISFACTION ON E-BANKING SERVICES

	Types of Bank	Public sector Bank			Private sector Bank		
S.No	Satisfaction	Minimum	Maximum	Mean	Minimum	Maximum	Mean
1	ATM Services	3	5	3.76	3	5	3.78
2	Internet Banking Services	2	4	2.83	2	5	3.39
3	Telephone Banking Services	1	4	2.17	2	4	3.01
4	Mobile Banking Services	1	3	2.32	2	4	3.53

Source: Primary data

The table 6.1 reveals that; mean score of respondents on satisfaction on banking services. The mean score of 3.76 with the range of 3 and 5 for public sector banks and 3.78 with a range of 3 and 5 on ATM services reveals that the customers are equally satisfied with both type of banks. The mean score of 2.83 with the range of 2 and 4 for public sector banks and 3.39 with a range of 2 and 5 on internet banking reveals that the customers are better satisfied on internet banking in private sector than public sector banks. The mean score of 2.17 with the range of 1 and 4 for public sector banks and 3.01with the range of 2 and 4 on telephone banking reveals that the customers comparatively are satisfied in private sector banks. The mean score of 2.32 with the range of 1 and 3 for public sector banks and 3.53 with the range of 2 and 4 on Mobile banking reveals that the customers of public sector banks are less satisfied than private sector banks on mobile banking services. It is understood from the analysis that customers are satisfied with the services provided by private sector banks.

6.3 PROBLEMS FACED IN E-BANKING SERVICES

Customers are facing so many problems while availing e-banking services of public sector and private sector banks. The following table shows the details with regard to the problems of public sector and private sector banks customers towards e-banking:

TABLE 6.2
PROBLEMS IN E-BANKING SERVICES

	Types of Bank	Publi	ic sector	Bank	Private sector Bank		
S.No	Problems	Minimum	Maximum	Mean	Minimum	Maximum	Mean
1	ATM Problems	1.0	3.0	2.160	1.0	3.0	1.496
2	Internet Banking Problems	2.0	4.0	2.911	1.0	3.0	1.682
3	Telephone Banking Problems	2.0	4.0	3.160	1.0	3.0	1.534
4	Mobile Banking Problems	2.0	4.0	2.947	1.0	3.0	1.881

Source: Primary data

The table 6.2 reveals that mean score of respondents on e-banking problems. The mean score of 2.16 with the range of 1 and 3 for public sector banks and 1.49 with a range of 1 and 3 on ATM problem reveals that the customers facing many problems on ATM services in public sector banks comparatively with private sector banks. The mean score of 2.91 with the range of 2 and 4 for public sector banks and 1.68 with a range of 1 and 3 on internet banking problems reveals that the customers face more problem on internet banking in public sector than private sector banks. The mean score of 3.16 with the range of 2 and 4 for public sector banks and 1.53 with the range of 1 and 3 on telephone banking problems reveals that the customers comparatively face many problems in public sector banks. The mean score of 2.94 with the range of 2 and 4 for public sector banks and 1.88 with the range of 1 and 3 on Mobile banking problems reveals that the customers of public sector banks face problems on mobile banking services. It is understood from the analysis that customers deal with problems with the services provided by public sector banks.

6.4 CONFIRMATORY FATOR ANALYSIS

FIGURE 6.1
CONFIRMATORY FATOR ANALYSIS

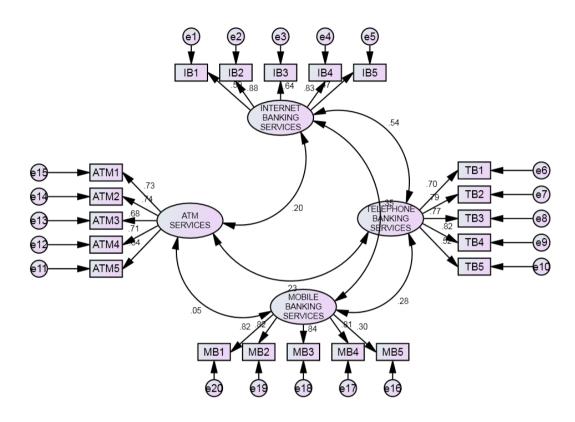


TABLE 6.3
MODEL FIT SUMMARY

Indices	Value	Suggested Value
CMIN	23.196/5 = 4.64	< 5
P Value	0.32	> 0.05 (Hair et al,1998)
GFI	0.96	> 0.95(Hair et al, 2006)
AGFI	0.904	> 0.90 (Hair et al, 2008)
CFI	0.92	> 0.90 (Hair et al,2008)
RMSEA	0.043	< 0.05 (Hair et al,2006)

Source: Computed data

A confirmatory factor analysis has been performed, based on data from 461 e-banking users in Tirunelveli. Maximum likelihood estimation was chosen because data were normally distributed. Normality and linearity were checked to evaluate the assumptions of multivariate. Cutoff Criteria for Several Fit Indexes Shorthand General rule for acceptable fit if data are continuous.

The parameters are estimated by maximum likelihood (ML) methods rather than by ordinary least squares (OLS) methods. OLS methods minimize the squared deviations between values of the criterion variable and those predicted by the model. ML (an iterative procedure) attempts to maximize the likelihood that obtained values of the criterion variable will be correctly predicted.

GFI, the goodness of fit index, indicates the proportion of the variance in the sample variance-covariance matrix is accounted for by the model. This should exceed .9 for a good model. For the saturated model it will be a perfect 1. AGFI (adjusted GFI) is an alternate GFI index in which the value of the index is adjusted for the number of parameters in the model. The fewer the number of parameters in the model relative to the number of data points (variances and covariance's in the sample variance-covariance matrix), the closer the AGFI will be to the GFI. The PGFI (P is for parsimony), the index is adjusted to reward simple models and penalize models in which few paths have been deleted. Note that for our data the PGFI is larger for the independence model than for our tested model.

PRATIO is the ratio of how many paths dropped to how many could have dropped. The Parsimony Normed Fit Index (PNFI), is the product of NFI and PRATIO, and PCFI is the product of the CFI and PRATIO. The PNFI and PCFI are intended to reward those whose models are parsimonious. The Root Mean Square Error of

Approximation (RMSEA) estimates lack of fit compared to the saturated model. RMSEA of .05 or less indicates good fit, and .08 or less adequate fit. PCLOSE is the p value testing the null that RMSEA is no greater than 0.05.Chi-square $\chi 2$ Ratio of 23.196 (df -5), useful for nested models/model trimming We hypothesized a two-factor model to be confirmed in the measurement portion of the model. There were no missing data. The Goodness of fit index (GFI) = .96 and the RMSEA = .043. Those values indicate a good fit between the model and the observed data.

The goodness-of-fit test statistics are displayed below. The Chi-square test statistic is significant at 0.05, which suggest that the model fitting is good fit. Root mean square error of approximation (RMSEA) is 0.043 which reveal lesser error status, it indicates a good fit. Goodness of Fit Index (.96) and Adjusted Goodness of Fit Index (.904) are larger than 0.9 which again reflect a good fit. No modifications have been done.

TABLE 6.4

FACTOR LOADING CONVERGENT VALIDITY

Table of Average Variance Extracted and Construct Reliability

			Estimate	Item reliability	Eigen value	Delta	AVE	C.R
IB1	-	Internet Banking	0.475	0.226		0.774		
IB2	-	Internet Banking	0.913	0.834		0.166	0.554	
IB3	-	Internet Banking	0.83	0.689	3.319	0.311	0.664 (66.4%)	0.878
IB4	-	Internet Banking	0.935	0.874		0.126		
IB5	-	Internet Banking	0.834	0.696				
TB1	-	Telephone banking	0.875	0.766		0.234		
TB2	-	Telephone banking	0.882	0.778		0.222	0.659	0.949
TB3	-	Telephone banking	0.977	0.955	3.296	0.045		
TB4	-	Telephone banking	0.893	0.797		0.203		
TB5	-	Telephone banking	0.812	0.659		0.341		
ATM1	-	ATM Services	0.712	0.507		0.493		0.957
ATM2	-	ATM Services	0.715	0.511		0.489	0.501	
ATM3	-	ATM Services	0.667	0.445	2.440	0.555	0.501 (50%)	
ATM4	-	ATM Services	0.723	0.523		0.477	(3070)	
ATM5	-	ATM Services	0.674	0.454		0.546		
MB1	-	Mobile Banking	0.846	0.716		0.284		
MB2	-	Mobile Banking	0.87	0.757		0.243		
MB3	-	Mobile Banking	0.839	0.704	3.726	3.726 0.296	0.745 (74.5%)	0.918
MB4	-	Mobile Banking	0.878	0.771		0.229	(74.570)	
MB5	-	Mobile Banking	0.882	0.778		0.222		

Source: Computed data

6.4.1 Average Variance Extracted

A good rule of thumb is an AVE of .5 or higher indicates adequate convergent validity. An AVE of less than .5 indicates that on average, there is more error remaining in the items than there is variance explained by the latent factor structure you have imposed on the measure.

6.4.2 Construct Reliability

The rule of thumb for a construct reliability estimate is that .7 or higher suggests good reliability. Reliability between .6 and .7 may be acceptable provided that other indicators of a model's construct validity are good. A high construct reliability indicates that internal consistency exists. This means the measures all are consistently representing something.

TABLE 6.5
DISCRIMINANT VALIDITY

CONSTRUCT	AVE	IB	ТВ	ATM	MB
IB	0.664	0.664			
ТВ	0.659	0.454	0.659		
ATM	0.501	0.035	0.043	0.501	
MB	0.745	0.053	0.045	0.000	0.745

Source: Computed data

All variance extracted (AVE) estimates in the above table are larger than the corresponding squared inter construct correlation estimates (SIC). This means the indicators have more in common with the construct they are associated with than they do with other constructs.

6.5 SATISFACTION OF CUSTOMERS TOWARDS E-BANKING AND GENDER OF THE CUSTOMERS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS

In order to find out the relationship between satisfaction of the customers towards e-banking and gender of public sector and private sector banks respondents, the null hypothesis is framed as,

H₀: There is no difference on mean score of satisfaction from different banking sectors (public and private sector bank).

- H_0 : There is no difference on mean score of satisfaction from different Gender types (Male and female).
- H_0 : There is no interaction effect between gender and banking sector on mean score of satisfaction.

The result of two way ANOVA is shown below:

TABLE 6.6

DESCRIPTIVE ANALYSIS OF SATISFACTION AND GENDER OF THE RESPONDENTS

7	Mean	Std. Deviation		
		Male	4.00	.670
	Public Sector Bank	Female	3.51	.502
ATM Services		Total	3.76	.643
ATM Services		Male	3.55	.620
	Private Sector Bank	Female	4.30	.462
		Total	3.78	.672
		Male	2.44	.498
	Public Sector Bank	Female	3.25	.435
Internet Banking		Total	2.83	.620
Services	Private Sector Bank	Male	3.34	.476
		Female	3.49	.988
		Total	3.39	.678
		Male	2.09	.572
	Public Sector Bank	Female	2.26	1.097
Telephone Banking		Total	2.17	.867
Services		Male	3.00	.588
	Private Sector Bank	Female	3.04	.824
		Total	3.01	.668
		Male	1.91	.566
	Public Sector Bank	Female	2.75	.435
Mobile Banking		Total	2.32	.657
Services		Male	3.61	.613
	Private Sector Bank	Female	3.34	.478
		Total	3.53	.587

Source: Primary data

The assumption of homogeneity of variance is tested by Levene's test of equality of error variance, which tests the hypothesis that the population error variances are equal. In this test, the Levene statistic and the corresponding level of significance is large (i.e., p > 0.05) for all constructs. Thus, the assumption of homogeneity of variance has not been violated.

TABLE 6.7

SATISFACTION TOWARDS E-BANKING AND GENDER OF THE RESPONDENTS

OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS

	Tests of Between-Subjects Effects							
Source		Type III Sum of Squares df		Mean Square	F	P value		
	ATM Services	1.149		1.149	2.185	.193		
Banking	Internet Banking Services	35.185	09:	35.185	103.057	.000		
Sector	Telephone Banking Services	75.684	1, 460	75.684	127.355	.000		
	Mobile Banking Services	138.751		138.751	470.729	.000		
	ATM Services	1.775		1.775	5.178	.023		
Gender	Internet Banking Services	24.674	1,460	24.674	72.268	.000		
Gender	Telephone Banking Services	1.131	1,4	1.131	1.903	.168		
	Mobile Banking Services	8.649		8.649	29.343	.000		
	ATM Services	40.848		40.848	119.154	.000		
Banking	Internet Banking Services	1.732	157	1.732	2.362	.197		
Sector * Gender	Telephone Banking Services	.409	1, 457	0.409	0.689	.407		
	Mobile Banking Services	32.168		32.168	109.134	.000		

Source: Primary data

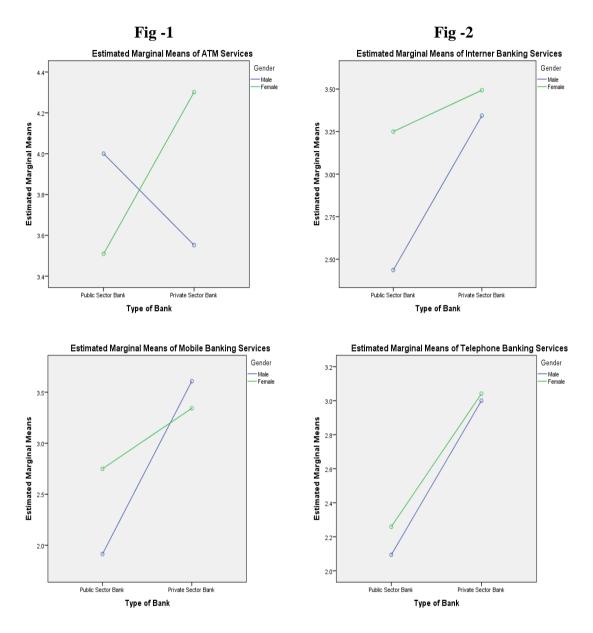
Main effect

The main effects of Banking sector and ATM services is not significant, F (1,460) = 2.185, p > 0.05. From the estimated marginal means, level of satisfaction on ATM services made by the public sector bank (M= 3.76) is not significantly different from the level of satisfaction on ATM services made by the private sector bank (M=3.78). The main effects of Banking sector and Internet banking services is significant, F (1,460) = 103.057, p < 0.05. From the estimated marginal means, it can be determined that the level of satisfaction on Internet banking services made by the private sector bank (M= 3.39) is significantly more than the level of satisfaction made by the public sector bank (M=2.83). The main effects of **Banking sector and Telephone banking services** is significant, F (1,460) = 127.355, p < 0.05. From the estimated marginal means, it can be determined that the level of satisfaction on telephone services made by the private sector bank (M= 3.01) is significantly more than the level of satisfaction made by the public sector bank (M=2.17). The main effects of **Banking sector and Mobile banking services** is significant, F (1,460) = 127.355, p < 0.05. From the estimated marginal means, it can be determined that the level of satisfaction on telephone services made by the private sector bank (M= 3.53) is significantly more than the level of satisfaction made by the public sector bank (M=2.32).

The main effects of **Gender and ATM services** is significant, F (1,460) = 5.178, p < 0.05. From the estimated marginal means, Female respondents' level of satisfaction on ATM services (3.83) is significantly more than the male respondents' level of satisfaction (M=3.74). The main effects of **Banking sector and Internet banking services** is significant, F (1,460) = 72.268, p < 0.05.from the estimated

marginal means, Female respondents' level of satisfaction on Internet banking services (M=3.35) is significantly more than the male respondents' level of satisfaction (M=2.96). The main effects of **Banking sector and Telephone banking services** is not significant, F(1,460) = 1.903, p > 0.05. From the estimated marginal means, Female respondents' level of satisfaction on ATM services (2.57) is not significantly differ from the male respondents' level of satisfaction (M=2.62). The main effects of **Banking sector and Mobile banking services** is significant, F(1,460) = 29.343, p < 0.05. from the estimated marginal means, Female respondents' level of satisfaction on ATM services (M=2.99) is significantly more than the male respondents' level of satisfaction (M=2.90).

FIGURE 6.2
INTERACTION EFFECT BETWEEN GENDER AND SATISFACTION



Interaction Effect

The **Banking Sector* Gender** interaction is not significant for Internet Banking Services and Telephone Banking Services, F (1,457) = 2.362, p > 0.05 and F (1,457) = 0.689, p > 0.05 respectively.

The **Banking Sector* Gender** interaction is significant for ATM services and Mobile Banking Services, F (1,457) = 119.154, p < 0.05 and F (1,457) = 119.154, p < 0.05 respectively. For ATM services of public sector bank, Male respondents (M=4.00) are more satisfied than Female respondents (M=3.51). But Female respondents (M=4.30) are more satisfied towards the ATM services of private sector bank than Male respondents (M=3.55). Likewise, Female respondents (M=2.75) are more satisfied towards the mobile banking services of public sector bank than male respondents (M=1.91) and Male respondents (M=3.61) are more satisfied on mobile banking services of private sector bank than female respondents (M=3.34).

6.6 SATISFACTION OF CUSTOMERS TOWARDS E-BANKING AND AGE OF THE CUSTOMERS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS

In order to find out the relationship between satisfaction of the customers towards e-banking and age of public sector and private sector banks respondents, the null hypothesis is framed as,

 H_0 : There is no difference on mean score of satisfaction from different banking sectors (public and private sector bank).

 H_0 : There is no difference on mean score of satisfaction from different age types (18-30 years, 30 – 50 years, and Above 50 years).

H₀: There is no interaction effect between age and banking sector on mean score of satisfaction.

The result of two way ANOVA is shown below:

TABLE 6.8

DESCRIPTIVE ANALYSIS OF SATISFACTION AND AGE OF THE RESPONDENTS

	Type of Bank	k	Mean	Std. Deviation	N
		18 - 30 Years	4.00	.485	103
	Public Sector	30 - 50 Years	3.34	.476	80
	Bank	Above 50 Years	4.00	.826	42
ATM Comices		Total	3.76	.643	225
ATM Services		18 - 30 Years	3.93	.738	92
	Private Sector	30 - 50 Years	3.44	.726	80
	Bank	Above 50 Years	4.00	0.000	64
		Total	3.78	.672	236
		18 - 30 Years	2.90	.603	103
	Public Sector	30 - 50 Years	2.99	.584	80
	Bank	Above 50 Years	2.33	.477	42
Internet		Total	2.83	.620	225
Banking Services	Private Sector Bank	18 - 30 Years	3.58	.497	92
		30 - 50 Years	3.18	.382	80
		Above 50 Years	3.39	1.033	64
		Total	3.39	.678	236
	Public Sector Bank	18 - 30 Years	2.65	.710	103
		30 - 50 Years	1.83	.897	80
		Above 50 Years	1.67	.477	42
Telephone Banking		Total	2.17	.867	225
Services		18 - 30 Years	3.03	.762	92
	Private Sector	30 - 50 Years	2.83	.382	80
	Bank	Above 50 Years	3.22	.745	64
		Total	3.01	.668	236
		18 - 30 Years	2.17	.785	103
Mobile Banking	Public Sector	30 - 50 Years	2.66	.476	80
	Bank	Above 50 Years	2.00	0.000	42
		Total	2.32	.657	225
Services		18 - 30 Years	3.61	.491	92
	Private Sector	30 - 50 Years	3.38	.718	80
	Bank	Above 50 Years	3.59	.495	64
		Total	3.53	.587	236

The assumption of homogeneity of variance is tested by Levene's test of equality of error variance, which tests the hypothesis that the population error variances are equal. In this test, the Levene statistic and the corresponding level of significance is large (i.e., p > 0.05) for all constructs. Thus, the assumption of homogeneity of variance has not been violated.

TABLE 6.9

SATISFACTION TOWARDS E-BANKING AND AGE OF THE RESPONDENTS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS

	Tests of Between-Subjects Effects						
	Source	Type III Sum of Squares	df	Mean Square	F	P value	
	ATM Services	.014		.014	.040	.841	
Banking	Internet Banking Services	43.271	1,460	43.271	112.761	.000	
Sector	Telephone Banking Services	101.274	1,4	101.274	205.997	.000	
	Mobile Banking Services	164.552		164.552	471.354	.000	
	ATM Services	36.348		18.174	51.303	.000	
A	Internet Banking Services	9.586	59	4.793	12.490	.000	
Age	Telephone Banking Services	25.580	2,459	12.790	26.015	.000	
	Mobile Banking Services	3.243		1.621	4.645	.010	
	ATM Services	.601		.300	.848	.429	
Banking	Internet Banking Services	12.353	56	6.177	16.096	.000	
Sector * Age	Telephone Banking Services	24.028	2,456	12.014	24.437	.000	
	Mobile Banking Services	16.067		8.034	23.012	.000	

Source: Primary data

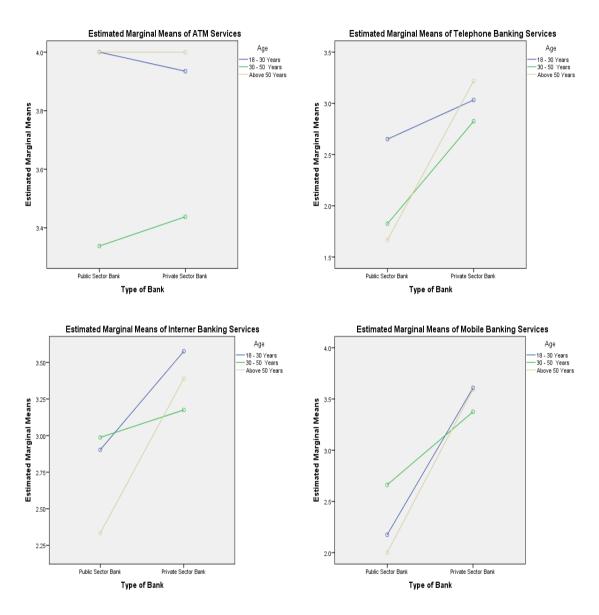
Main effect

The main effects of Banking sector and ATM services is not significant, F (1,460) = 0.040, p > 0.05. From the estimated marginal means, level of satisfaction on ATM services made by the public sector bank (M= 3.76) is not significantly different from the level of satisfaction on ATM services made by the private sector bank (M=3.78). The main effects of **Banking sector and Internet banking services** is significant, F (1,460) = 112.76, p < 0.05. From the estimated marginal means, it can be determined that the level of satisfaction on Internet banking services made by the private sector bank (M= 3.39) is significantly more than the level of satisfaction made by the public sector bank (M=2.83). The main effects of Banking sector and **Telephone banking services** is significant, F (1,460) = 101.27, p < 0.05. From the estimated marginal means, it can be determined that the level of satisfaction on telephone services made by the private sector bank (M= 3.01) is significantly more than the level of satisfaction made by the public sector bank (M=2.17). The main effects of **Banking sector and Mobile banking services** is significant, F (1,460) = 164.55, p < 0.05. From the estimated marginal means, it can be determined that the level of satisfaction on telephone services made by the private sector bank (M=3.53) is significantly more than the level of satisfaction made by the public sector bank (M=2.32).

The main effects of **Age and ATM services** is significant, F (2,460) = 51.30, p < 0.05. From the estimated marginal means, the age group of 18 - 30 years and above 50 years respondents' level of satisfaction on ATM services (M=3.97and 4.00) is significantly more than the age group of 30 - 50 years respondents' level of satisfaction (M=3.34). The main effects of **Banking sector and Internet banking services** is significant, F (2,460) = 12.490, p < 0.05. From the estimated marginal means, the age

group of 18 - 30 years respondents' level of satisfaction on Internet banking services (M=3.22) is significantly more than the 30 - 50 years and above 50 years of age group respondents' level of satisfaction (M=3.08 and 2.97). The main effects of **Banking sector and Telephone banking services** is significant, F (2,460) = 26.01, p < 0.05. From the estimated marginal means, the age group of 18 - 30 years and above 50 years respondents' level of satisfaction on Telephone banking services (M=2.83 and 2.60) is significantly more than the age group of 30 - 50 years age group of respondents' level of satisfaction (M=2.33). The main effects of **Banking sector and Mobile banking services** is significant, F (2,460) = 4.645, p < 0.05. From the estimated marginal means, the age group of 30 - 50 and above 50 years respondents' level of satisfaction on Mobile banking services (M=3.02 and 2.96) is significantly more than the age group of 18 - 30 years respondents' level of satisfaction (M=2.85).

FIGURE 6.3
INTERACTION EFFECT BETWEEN AGE AND SATISFACTION



Interaction Effect

The **Banking Sector* Age** interaction is not significant for ATM Services F (2,456) = 0.848, p > 0.05 respectively.

The **Banking Sector* Age** interaction is significant for Internet banking services, Telephone banking services and Mobile Banking Services, F (2,456)=16.096, p < 0.05, F (2,456)=24.437, p < 0.05 and F (2,456)=23.012, p < 0.05 respectively. For Internet banking services, all the three age group of respondents are more satisfied

by the private sector banks than the public sector bank. But the age level of 18 - 30 years and above 50 years of respondents' level of satisfaction on Internet banking services is having huge differences than 30 - 50 years age group of respondents. For Telephone banking services, all the three age group of respondents are more satisfied by the private sector banks than the public sector bank. But the age level of above 50 years of respondents' level of satisfaction on Telephone banking services is having huge differences than 18 - 30 years and 30 - 50 years age group of respondents. For Mobile banking services, all the three age group of respondents are more satisfied by the private sector banks than the public sector bank. But the age level of 18 - 30 years and above 50 years of respondents' level of satisfaction on Mobile banking services is having huge differences than 30 - 50 years age group of respondents.

6.7 SATISFACTION OF CUSTOMERS TOWARDS E-BANKING AND EDUCATION LEVEL OF THE CUSTOMERS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS

In order to find out the relationship between satisfaction of the customers towards e-banking and education level of public sector and private sector banks respondents, the null hypothesis is framed as,

- H₀: There is no difference on mean score of satisfaction from different banking sectors (public and private sector bank).
- H_0 : There is no difference on mean score of satisfaction from different education level.
- H_0 : There is no interaction effect between education and banking sector on mean score of satisfaction.

The result of two way ANOVA is shown below:

TABLE 6.10DESCRIPTIVE ANALYSIS OF SATISFACTION AND EDUCATION LEVEL OF THE RESPONDENTS

	Descr	iptive Statistics			
	Type of Bank	_	Mean	Std. Deviation	N
		School Level	3.50	.511	24
		U.G Level	4.24	.431	50
	Public Sector Bank	P.G Level	3.42	.497	67
		Professional	3.83	.691	84
ATM		Total	3.76	.643	225
Services		School Level	3.00	0.000	14
		U.G Level	3.50	.503	84
	Private Sector Bank	P.G Level	3.58	.497	67
		Professional	4.46	.502	71
		Total	3.78	.672	236
		School Level	3.00	0.000	24
		U.G Level	2.52	.505	50
	Public Sector Bank	P.G Level	3.40	.494	67
_		Professional	2.50	.503	84
Internet		Total	2.83	.620	225
Banking Services		School Level	3.00	0.000	14
Services		U.G Level	3.67	.474	84
	Private Sector Bank	P.G Level	2.81	.398	67
		Professional	3.69	.767	71
		Total	3.39	.678	236
		School Level	2.00	0.000	24
	Public Sector Bank	U.G Level	2.24	.847	50
		P.G Level	2.61	1.029	67
		Professional	1.83	.691	84
Telephone		Total	2.17	.867	225
Banking Services		School Level	4.00	0.000	14
Services		U.G Level	2.83	.691	84
	Private Sector Bank	P.G Level	3.00	0.000	67
		Professional	3.04	.836	71
		Total	3.01	.668	236
		School Level	2.00	0.000	24
		U.G Level	1.52	.505	50
Mobile Banking	Public Sector Bank	P.G Level	3.00	0.000	67
		Professional	2.33	.474	84
		Total	2.32	.657	225
Services		School Level	4.00	0.000	14
		U.G Level	3.50	.503	84
	Private Sector Bank	P.G Level	3.81	.398	67
		Professional	3.20	.689	71
		Total	3.53	.587	236

The assumption of homogeneity of variance is tested by Levene's test of equality of error variance, which tests the hypothesis that the population error variances are equal. In this test, the Levene statistic and the corresponding level of significance is large (i.e., p > 0.05) for all constructs. Thus, the assumption of homogeneity of variance has not been violated.

TABLE 6.11

SATISFACTION TOWARDS E-BANKING AND EDUCATION LEVEL OF THE RESPONDENTS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS

	Tests of Between-Subjects Effects						
	Source	Type III Sum of Squares	df	Mean Square	F	P value	
	ATM Services	.983		.983	3.533	.061	
Banking	Internet Banking Services	15.071	1,460	15.071	56.928	.000	
Sector	Telephone Banking Services	87.426	1,4	87.426	169.802	.000	
	Mobile Banking Services	158.935		158.935	751.040	.000	
	ATM Services	42.108	3,458	14.036	50.445	.000	
Education	Internet Banking Services	.320		.107	.403	.751	
Education	Telephone Banking Services	15.722	3,4	5.241	10.178	.000	
	Mobile Banking Services	56.115		18.705	88.389	.000	
	ATM Services	35.577		11.859	42.620	.000	
Banking	Internet Banking Services	73.675	55	24.558	92.764	.000	
Sector* Education	Telephone Banking Services	25.862	3,455	8.621	16.743	.000	
	Mobile Banking Services	34.018		11.339	53.584	.000	

Source: Primary data

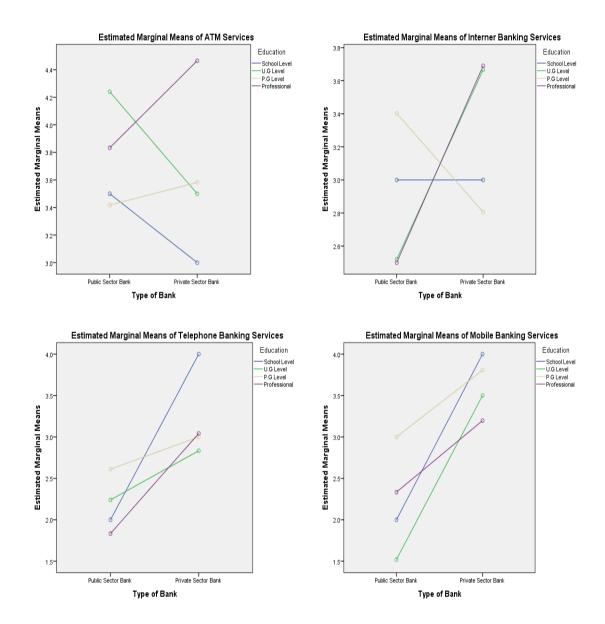
Main effect

The main effects of Banking sector and ATM services is not significant, F (1,460) = 3.533, p > 0.05. From the estimated marginal means, level of satisfaction on ATM services made by the public sector bank (M= 3.76) is not significantly different from the level of satisfaction on ATM services made by the private sector bank (M=3.78). The main effects of **Banking sector and Internet banking services** is significant, F (1,460) = 56.928, p < 0.05. From the estimated marginal means, it can be determined that the level of satisfaction on Internet banking services made by the private sector bank (M= 3.39) is significantly more than the level of satisfaction made by the public sector bank (M=2.83). The main effects of Banking sector and **Telephone banking services** is significant, F (1,460) = 169.802, p < 0.05. From the estimated marginal means, it can be determined that the level of satisfaction on telephone services made by the private sector bank (M= 3.01) is significantly more than the level of satisfaction made by the public sector bank (M=2.17). The main effects of **Banking sector and Mobile banking services** is significant, F (1,460) = 751.040, p < 0.05. From the estimated marginal means, it can be determined that the level of satisfaction on telephone services made by the private sector bank (M= 3.53) is significantly more than the level of satisfaction made by the public sector bank (M=2.32).

The main effects of **Education and ATM services** is significant, F(3,458) = 50.445, p < 0.05. From the estimated marginal means, professional qualified respondents' level of satisfaction on ATM services (M=4.12) is significantly more than the other three groups such as School, U.G and P.G level (M=3.32, 3.78 and 3.50) respectively. The main effects of **Banking sector and Internet banking services** is not

significant, F (2,460) = 0.403, p > 0.05. From the estimated marginal means, all the respondents are equally satisfied by the internet banking services irrespective of their educational background. The main effects of **Banking sector and Telephone banking services** is significant, F (3,458) = 10.1781, p < 0.05. From the estimated marginal means, professional qualified respondents' level of satisfaction on Telephone banking services (M=2.39) is significantly less than the other three groups such as School, U.G and P.G level (M=2.74, 2.61 and 2.81) respectively. The main effects of **Banking sector and Mobile banking services** is significant, F (3,458) = 88.389, p < 0.05. From the estimated marginal means, post graduate qualified respondents' level of satisfaction on mobile banking services (M=3.40) is significantly more than the other three groups such as School, U.G and Professional level (M=2.74, 2.76 and 2.73) respectively.

FIGURE 6.4
INTERACTION EFFECT BETWEEN EDUCATION LEVEL AND SATISFACTION



Interaction Effect

The **Banking Sector* Education** interaction is significant for ATM services, Internet banking services, Telephone banking services and Mobile Banking Services, F (3,455) = 42.620, p < 0.05, F (3,455) = 92.764, p < 0.05, F (3,455) = 16.743, p < 0.05 and F (3,455) = 53.584, p < 0.05 respectively. For ATM services, Post Graduate and Professional qualified respondents are more satisfied by private sector

bank than public sector bank. But School and under graduate qualified respondents are more satisfied by public sector bank than private sector bank. For Internet banking services, under graduate and professional qualified respondents are more satisfied by private sector bank than public sector bank. But post graduate qualified respondents are more satisfied by public sector bank than private sector bank. For Telephone banking services and Mobile banking services, all the four groups of respondents are more satisfied by the private sector banks than the public sector bank.

6.8 SATISFACTION OF CUSTOMERS TOWARDS E-BANKING AND OCCUPATION OF THE CUSTOMERS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS

In order to find out the relationship between satisfaction of the customers towards e-banking and occupation of public sector and private sector banks respondents, the null hypothesis is framed as,

 H_0 : There is no difference on mean score of satisfaction from different banking sectors (public and private sector bank).

 H_0 : There is no difference on mean score of satisfaction from different occupational status.

 H_0 : There is no interaction effect between occupational status and banking sector on mean score of satisfaction.

The result of two way ANOVA is shown below:

TABLE 6.12

DESCRIPTIVE ANALYSIS OF SATISFACTION AND OCCUPATION

OF THE RESPONDENTS

	Desc	criptive Statistics			
	Type of Bank		Mean	Std.	N
		Govt Employee	3.70	.513	43
		Private Employee	3.75	.437	52
		Business	3.52	.509	27
	Public Sector Bank	Professional	3.98	.714	54
	Dunk	Student	4.00	1.022	24
		Housewife	3.48	.510	25
ATM Complete		Total	3.76	.643	225
ATM Services		Govt.	3.62	.604	34
		Private Employee	3.60	.494	67
		Business	3.32	.471	41
	Private Sector Bank	Professional	4.46	.504	46
		Student	3.46	.508	26
		Housewife	4.45	.510	22
		Total	3.78	.672	236
		Govt Employee	2.72	.549	43
		Private Employee	2.73	.448	52
		Business	3.48	.509	27
	Public Sector Bank	Professional	2.52	.504	54
	Dum	Student	2.50	.511	24
		Housewife	3.48	.510	25
Internet Banking		Total	2.83	.620	225
Services		Govt Employee	3.21	.479	34
		Private Employee	3.40	.799	67
		Business	3.00	0.000	41
	Private Sector Bank	Professional	3.26	.444	46
		Student	3.46	.508	26
		Housewife	4.55	.510	22
		Total	3.39	.678	236

	Desc	criptive Statistics			
	Type of Bank		Mean	Std.	N
		Govt Employee	2.35	.997	43
		Private Employee	1.50	.505	52
		Business	2.48	.509	27
	Public Sector Bank	Professional	2.00	.727	54
	Dum	Student	2.00	0.000	24
		Housewife	3.48	.510	25
Telephone		Total	2.17	.867	225
Banking Services		Govt Employee	2.94	.343	34
		Private Employee	2.82	.757	67
		Business	3.00	0.000	41
	Private Sector Bank	Professional	3.02	.745	46
		Student	3.54	.508	26
		Housewife	3.09	1.019	22
		Total	3.01	.668	236
		Govt. Employee	1.77	.527	43
		Private Employee	2.52	.505	52
	D. I.I. G.	Business	3.00	0.000	27
	Public Sector Bank	Professional	2.26	.442	54
		Student	1.50	.511	24
		Housewife	3.00	0.000	25
Mobile Banking		Total	2.32	.657	225
Services		Government Employee	3.41	.557	34
		Private Employee	3.42	.497	67
	Private Sector	Business	4.00	0.000	41
	Bank	Professional	3.33	.818	46
		Student	4.00	0.000	26
		Housewife	3.00	0.000	22
		Total	3.53	.587	236

The assumption of homogeneity of variance is tested by Levene's test of equality of error variance, which tests the hypothesis that the population error variances are equal. In this test, the Levene statistic and the corresponding level of significance is large (i.e., p > 0.05) for all constructs. Thus, the assumption of homogeneity of variance has not been violated.

TABLE 6.13

SATISFACTION TOWARDS E-BANKING AND OCCUPATION OF THE RESPONDENTS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS

	Tests of Between-Subjects Effects						
	Source	Type III Sum of Squares	df	Mean Square	F	P value	
	ATM Services	.642		.642	1.985	.160	
Banking	Internet Banking Services	33.517	1 460	33.517	119.621	.000	
Sector	Telephone Banking Services	59.833	1,460	59.833	140.847	.000	
	Mobile Banking Services	142.759	142.759		656.292	.000	
	ATM Services	31.873		6.375	19.721	.000	
	Internet Banking Services	46.678	5 456	9.336	33.318	.000	
Occupation	Telephone Banking Services	48.167 5,456		9.633	22.677	.000	
	Mobile Banking Services	33.824		6.765	31.099	.000	
	ATM Services	21.348		4.270	13.209	.000	
Banking	Internet Banking Services	23.960	5 456	4.792	17.103	.000	
Sector* Occupation	Telephone Banking Services	34.126	5,456	6.825	16.066	.000	
	Mobile Banking Services	45.240		9.048	41.596	.000	

Source: Primary data

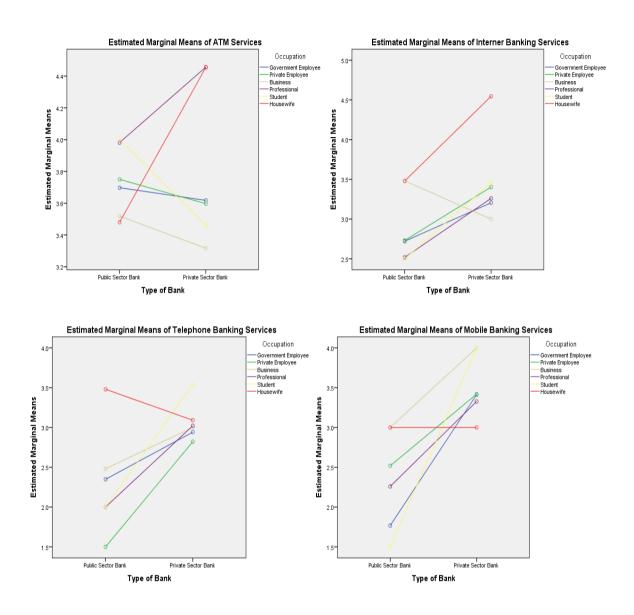
Main effect

The main effects of Banking sector and ATM services is not significant, F (1,460) = 1.985, p > 0.05. From the estimated marginal means, level of satisfaction on ATM services made by the public sector bank (M= 3.76) is not significantly different from the level of satisfaction on ATM services made by the private sector bank (M=3.78). The main effects of **Banking sector and Internet banking services** is significant, F (1,460) = 119.621, p < 0.05. From the estimated marginal means, it can be determined that the level of satisfaction on Internet banking services made by the private sector bank (M= 3.39) is significantly more than the level of satisfaction made by the public sector bank (M=2.83). The main effects of Banking sector and **Telephone banking services** is significant, F (1,460) = 140.847, p < 0.05. From the estimated marginal means, it can be determined that the level of satisfaction on telephone services made by the private sector bank (M= 3.01) is significantly more than the level of satisfaction made by the public sector bank (M=2.17). The main effects of Banking sector and Mobile banking services is significant, F (1,460) = 656.292, p < 0.05. From the estimated marginal means, it can be determined that the level of satisfaction on telephone services made by the private sector bank (M= 3.53) is significantly more than the level of satisfaction made by the public sector bank (M=2.32).

The main effects of **Occupational status and ATM services** is significant, F(5,456) = 19.721, p < 0.05. From the estimated marginal means, Professionals respondents' level of satisfaction on ATM services (4.20) is significantly more than the other five occupational status such as, Government employee, Private employee, Business man, Students and House wife respondents' level of satisfaction (M=3.66,

3.66, 3.40, 3.72 and 394). The main effects of Banking sector and Internet banking services is significant, F (5,456) = 33.318, p < 0.05. From the estimated marginal means, Business man and private employee respondents' level of satisfaction on Internet banking services (M=3.19 and 3.11) is significantly more than the other four occupational status such as, Government employee, Professional, Students and House wife respondents' level of satisfaction (M=2.94, 2.86, 3.00 and 3.98). The main effects of Banking sector and Telephone banking services is significant, F(5,456) = 22.677, p < 0.05. From the estimated marginal means, Business man, Student, Housewife respondents' level of satisfaction on telephone banking services (M= 2.79, 2.80 and 3.30) is significantly more than the other three occupational status such as, Government employee, Private employee, and Profession respondents' level of satisfaction (M=2.61, 2.24 and 2.47). The main effects of Banking sector and Mobile banking services is significant, F (5,456) = 31.099, p < 0.05. From the estimated marginal means, Private employee, Business man and House wife respondents' level of satisfaction on Mobile banking services (M=3.03, 3.60 and 3.00) is significantly more than the Government employee, Professional and Student respondents' level of satisfaction (M=2.49, 2.75 and 2.80).

FIGURE 6.5
INTERACTION EFFECT BETWEEN OCCUPATION AND SATISFACTION



Interaction Effect

The **Banking Sector* Occupation** interaction is significant for ATM services, Internet banking services, Telephone banking services and Mobile Banking Services, F (5,456) = 13.209, p < 0.05, F (5,456) = 17.103, p < 0.05, F (5,456) = 16.066, p < 0.05 and F (5,456) = 41.596, p < 0.05 respectively. For ATM services, respondents of Professionals and Housewife are more satisfied by private sector bank than public

sector bank. But Government employee, Private employee, Business man and Students are more satisfied by public sector bank than private sector bank. For Internet banking services, Business men are more satisfied by public sector bank than private sector bank. But Government employee, private employee, professionals, students and housewife are more satisfied by private sector bank than public sector bank. For Telephone banking services, respondents of housewife are more satisfied by public sector bank than private sector bank. But Government employee, private employee, business men, professionals and student are more satisfied by private sector bank than public sector bank. For Mobile banking services, all the respondents from private sector banks are more satisfied than the public sector banks.

6.9 SATISFACTION OF CUSTOMERS TOWARDS E-BANKING AND MONTHLY INCOME OF THE CUSTOMERS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS

In order to find out the relationship between satisfaction of the customers towards e-banking and monthly income of public sector and private sector banks respondents, the null hypothesis is framed as,

- H0: There is no difference on mean score of satisfaction from different banking sectors (public and private sector bank).
- H0: There is no difference on mean score of satisfaction from different monthly income.
- H0: There is no interaction effect between monthly Income and banking sector on mean score of satisfaction.

The result of two way ANOVA is shown below:

TABLE 6.14

DESCRIPTIVE ANALYSIS OF SATISFACTION AND MONTHLY INCME OF THE RESPONDENTS

		Descriptive Statistics			
	Type o	f Bank	Mean	Std. Deviation	N
		Less than ₹ 20,000	3.41	.495	66
		₹ 20,000 to ₹ 40,000	3.78	.745	64
	Public Sector Bank	₹ 40,000 to ₹ 60,000	3.75	.440	55
	Sector Bunk	More than ₹ 60,000	4.35	.483	40
ATM		Total	3.76	.643	225
Services		Less than ₹ 20,000	3.65	.483	40
		₹ 20,000 to ₹ 40,000	3.37	.487	67
	Private Sector Bank	₹ 40,000 to ₹ 60,000	3.92	.807	77
	Sector Built	More than ₹ 60,000	4.21	.412	52
		Total	3.78	.672	236
	Public Sector Bank	Less than ₹ 20,000	3.00	0.000	66
		₹ 20,000 to ₹ 40,000	2.80	.760	64
		₹ 40,000 to ₹ 60,000	3.00	.720	55
		More than ₹ 60,000	2.35	.483	40
Internet		Total	2.83	.620	225
Banking Services		Less than ₹ 20,000	3.00	0.000	40
		₹ 20,000 to ₹ 40,000	3.57	.802	67
	Private Sector Bank	₹ 40,000 to ₹ 60,000	3.34	.754	77
	DOCUMENT DWARF	More than ₹ 60,000	3.54	.503	52
		Total	3.39	.678	236
		Less than ₹ 20,000	1.61	.820	66
		₹ 20,000 to ₹ 40,000	2.41	.495	64
	Public Sector Bank	₹ 40,000 to ₹ 60,000	2.49	1.136	55
Telephone Banking Services	Z Z Z Z Z	More than ₹ 60,000	2.30	.464	40
		Total	2.17	.867	225
		Less than ₹ 20,000	3.33	.474	40
	Private Sector Bank	₹ 20,000 to ₹ 40,000	3.22	.735	67
		₹ 40,000 to ₹ 60,000	2.68	.768	77

Descriptive Statistics						
	Туре о	f Bank	Mean	Std. Deviation	N	
		More than ₹ 60,000	3.00	0.000	52	
		Total	3.01	.668	236	
		Less than ₹ 20,000	2.41	.495	66	
		₹ 20,000 to ₹ 40,000	2.44	.794	64	
	Public Sector Bank	₹ 40,000 to ₹ 60,000	2.25	.440	55	
	Sector Bunk	More than ₹ 60,000	2.05	.815	40	
Mobile		Total	2.32	.657	225	
Banking Services		Less than ₹ 20,000	3.65	.483	40	
		₹ 20,000 to ₹ 40,000	3.81	.398	67	
	Private Sector Bank	₹ 40,000 to ₹ 60,000	3.04	.572	77	
	Sector Bunk	More than ₹ 60,000	3.79	.412	52	
		Total	3.53	.587	236	

The assumption of homogeneity of variance is tested by Levene's test of equality of error variance, which tests the hypothesis that the population error variances are equal. In this test, the Levene statistic and the corresponding level of significance is large (i.e., p > 0.05) for all constructs. Thus, the assumption of homogeneity of variance has not been violated.

TABLE 6.15

SATISFACTION TOWARDS E-BANKING AND MONTHLY INCOME OF THE RESPONDENTS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS

	Tests of Between-Subjects Effects						
	Source	Type III Sum of Squares	df	Mean Square	F	P value	
	ATM Services	.114		.114	.337	.562	
Banking	Internet Banking Services	36.095	1 460	36.095	95.036	.000	
Sector	Telephone Banking Services	80.103	1,460	80.103	160.106	.000	
	Mobile Banking Services	180.286		180.286	562.561	.000	
	ATM Services	34.683	3,458	11.561	34.139	.000	
Monthly	Internet Banking Services	4.635		1.545	4.068	.007	
Income	Telephone Banking Services	7.468	3,436	2.489	4.976	.002	
	Mobile Banking Services	16.095		5.365	16.741	.000	
	ATM Services	8.125		2.708	7.997	.000	
Banking Sector*	Internet Banking Services	19.774	2.450	6.591	17.354	.000	
monthly Income	Telephone Banking Services	33.407	3,458	11.136	22.257	.000	
meome	Mobile Banking Services	12.810		4.270	13.324	.000	

Main effect

The main effects of **Banking sector and ATM services** is not significant, F(1,460) = 0.337, p > 0.05. From the estimated marginal means, level of satisfaction on ATM services made by the public sector bank (M= 3.76) is not significantly different from the level of satisfaction on ATM services made by the private sector bank (M=3.78). The main effects of **Banking sector and Internet banking services** is significant, F(1,460) = 95.036, p < 0.05. From the estimated marginal means, it can be

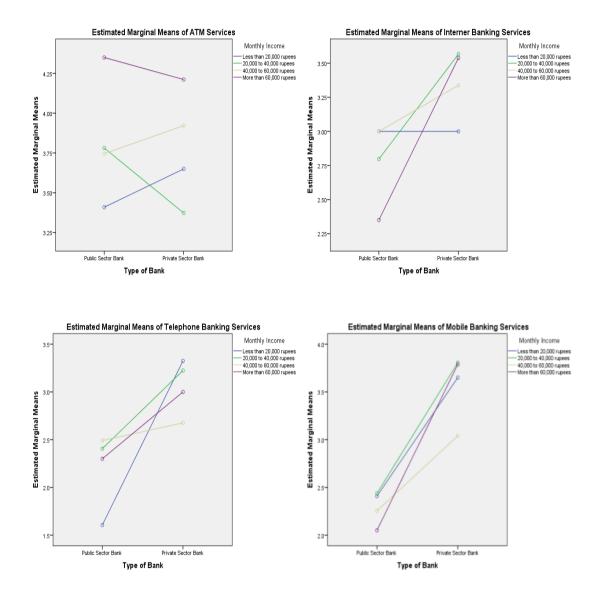
determined that the level of satisfaction on Internet banking services made by the private sector bank (M= 3.39) is significantly more than the level of satisfaction made by the public sector bank (M=2.83). The main effects of **Banking sector and Telephone banking services** is significant, F (1,460) =160.106, p < 0.05. From the estimated marginal means, it can be determined that the level of satisfaction on telephone services made by the private sector bank (M=3.01) is significantly more than the level of satisfaction made by the public sector bank (M=2.17). The main effects of **Banking sector and Mobile banking services** is significant, F (1,460) =562.561, p < 0.05. From the estimated marginal means, it can be determined that the level of satisfaction on telephone services made by the private sector bank (M= 3.53) is significantly more than the level of satisfaction made by the public sector bank (M=2.32).

The main effects of **Monthly Income and ATM services** is significant, F (3,458) = 34.139, p < 0.05. From the estimated marginal means, monthly income earned more than ₹ 60,000 respondents' level of satisfaction on ATM services (4.27) is significantly more than the other three monthly income group such as, less than ₹ 20,000, ₹ 20,000 to ₹ 40,000 and ₹ 40,000 to ₹ 60,000 of respondents' level of satisfaction (M=3.50, 3.57 and 3.85). The main effects of **Banking sector and Internet banking services** is not significant, F (3,458) = 4.068, p > 0.05. From the estimated marginal means, the monthly income group of ₹ 20,000 to ₹ 40,000 and ₹ 40,000 to ₹ 60,000 respondents' level of satisfaction on Internet banking services (M=3.20 and 3.19) is not significant more than the other two monthly income such as, less than ₹ 20,000 and more than ₹ 60,000 income respondents' level of satisfaction (M=3.00 and 3.02). The main effects of **Banking sector and Telephone banking services** is significant, F (3,458) = 4.967, p < 0.05. From the estimated marginal means, monthly

income group of ₹ 20,000 to ₹ 40,000 of respondents' level of satisfaction on telephone banking services (M=2.82) is significantly more than the other three monthly income such as, less than ₹ 20,000, ₹ 40,000 to ₹ 60,000 and more than ₹ 60,000 respondents' level of satisfaction (M=2.25, 2.60 and 2.70). The main effects of **Banking sector and Mobile banking services** is significant, F (3,458) = 16.071, p < 0.05. From the estimated marginal means, the monthly income of ₹ 20,000 to ₹ 40,000 respondents' level of satisfaction on Mobile banking services (M=3.14) is significantly more than the income level of less than ₹ 20,000, ₹ 40,000 to ₹ 60,000 and more than ₹ 60,000 respondents' level of satisfaction (M=2.88, 2.71 and 3.03).

FIGURE 6.6

INTERACTION EFFECT BETWEEN MONTHLY INCOME AND SATISFACTION



Interaction Effect

The **Banking Sector* Monthly income of respondents** interaction is significant for ATM services, Internet banking services, Telephone banking services and Mobile Banking Services, F (3,458) = 7.997, p < 0.05, F (3,458) = 17.354, p < 0.05, F (3,458) = 22.257, p < 0.05 and F (3,458) = 13.324, p < 0.05 respectively. For ATM services, respondent's monthly income of $\ref{thm2}$ 20,000 to $\ref{thm2}$ 40,000 and more

than ₹ 60,000 are more satisfied by public sector bank than private sector bank. But monthly income of less than ₹ 20,000 and ₹ 40,000 to ₹ 60,000 are more satisfied by private sector bank than public sector bank. For Internet banking services, monthly income of less than ₹ 20,000 respondents are equally satisfied by public sector bank and private sector bank. But ₹ 20,000 to ₹ 40,000, ₹ 40,000 to ₹ 60,000 and more than ₹ 60,000 are more satisfied by private sector bank than public sector bank. For Telephone banking services, monthly income respondents of less than 20,000, 20,000 to ₹ 40,000, ₹ 40,000 to ₹ 60,000 and more than ₹ 60,000 are more satisfied by private sector bank than public sector bank. For Mobile banking services, monthly income of less than ₹ 20,000, ₹ 20,000 to ₹ 40,000, ₹ 40,000 to ₹ 60,000 and more than ₹ 60,000 respondents from private sector banks are more satisfied than the public sector banks.

6.10 SATISFACTION OF CUSTOMERS TOWARDS E-BANKING AND USAGE STATUS OF THE RESPONDENTS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS

In order to find out the relationship between satisfaction of the customers towards e-banking and usage status of public sector and private sector banks respondents, the null hypothesis is framed as,

 H_0 : There is no difference on mean score of satisfaction from different banking sectors (public and private sector bank).

 H_0 : There is no difference on mean score of satisfaction from different usage status.

H₀: There is no interaction effect between usage status and banking sector on mean score of satisfaction.

The result of two way ANOVA is shown below:

TABLE 6.16 DESCRIPTIVE ANALYSIS OF SATISFACTION AND USAGE STATUS OF THE RESPONDENTS

Descriptive Statistics							
	Type of Banl	ζ.	Mean	Std. Deviation	N		
		Less than 1 year	3.77	.423	53		
		1 - 3 years	3.60	.494	65		
	Public Sector Bank	3 - 5 years	3.98	.693	53		
	Dum	More than 5 years	3.74	.851	54		
ATM Comices		Total	3.76	.643	225		
ATM Services		Less than 1 year	3.68	.803	53		
		1 - 3 years	3.83	.382	80		
	Private Sector Bank	3 - 5 years	3.69	.957	64		
	Dank	More than 5 years	4.00	0.000	39		
		Total	3.78	.672	236		
	Public Sector Bank	Less than 1 year	2.47	.504	53		
		1 - 3 years	3.00	0.000	65		
		3 - 5 years	3.28	.818	53		
	Dum	More than 5 years	2.52	.504	54		
Internet		Total	2.83	.620	225		
Banking Services		Less than 1 year	3.26	.445	53		
		1 - 3 years	4.00	.574	80		
	Private Sector Bank	3 - 5 years	3.17	.380	64		
	Bunk	More than 5 years	2.67	.478	39		
		Total	3.39	.678	236		
Talanhana		Less than 1 year	2.25	.434	53		
		1 - 3 years	2.02	.910	65		
Telephone Banking	Public Sector Bank	3 - 5 years	2.77	.847	53		
Services		More than 5 years	1.70	.816	54		
		Total	2.17	.867	225		

	Descriptive Statistics							
	Type of Bank			Std. Deviation	N			
		Less than 1 year	3.53	.504	53			
		1 - 3 years	2.83	.897	80			
	Private Sector Bank	3 - 5 years	2.83	.380	64			
		More than 5 years	3.00	0.000	39			
		Total	3.01	.668	236			
	Public Sector Bank	Less than 1 year	2.26	.445	53			
		1 - 3 years	2.62	.490	65			
		3 - 5 years	2.55	.845	53			
		More than 5 years	1.78	.420	54			
Mobile		Total	2.32	.657	225			
Banking Services		Less than 1 year	3.58	.819	53			
		1 - 3 years	3.49	.503	80			
	Private Sector Bank	3 - 5 years	3.44	.500	64			
		More than 5 years	3.67	.478	39			
		Total	3.53	.587	236			

The assumption of homogeneity of variance is tested by Levene's test of equality of error variance, which tests the hypothesis that the population error variances are equal. In this test, the Levene statistic and the corresponding level of significance is large (i.e., p > 0.05) for all constructs. Thus, the assumption of homogeneity of variance has not been violated.

TABLE 6.17

SATISFACTION TOWARDS E-BANKING AND USAGE STATUS OF THE RESPONDENTS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS

Tests of Between-Subjects Effects						
Source		Type III Sum of Squares	df	Mean Square	F	P value
Banking Sector	ATM Services	.064	1,460	.064	.152	.696
	Internet Banking Services	23.198		23.198	90.969	.000
	Telephone Banking Services	82.188		82.188	168.310	.000
	Mobile Banking Services	171.353		171.353	512.621	.000
Usage Status	ATM Services	2.038	3,458	.679	1.611	.186
	Internet Banking Services	53.860		17.953	70.401	.000
	Telephone Banking Services	23.548		7.849	16.074	.000
	Mobile Banking Services	6.419		2.140	6.402	.000
Banking sector* Usage status	ATM Services	5.998	3,458	1.999	4.740	.003
	Internet Banking Services	24.864		8.288	32.500	.000
	Telephone Banking Services	27.807		9.269	18.982	.000
	Mobile Banking Services	17.736		5.912	17.686	.000

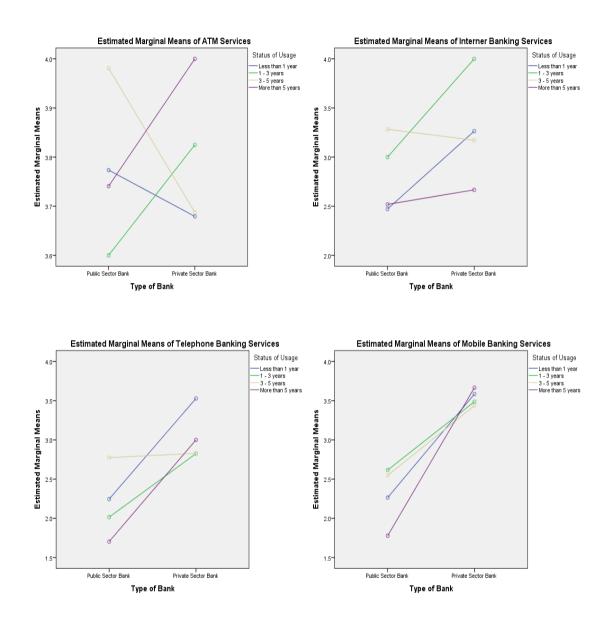
Main effect

The main effects of **Banking sector and ATM services** is not significant, F (1,460) 0.152, p > 0.05 from the estimated marginal means, level of satisfaction on ATM services made by the public sector bank (M= 3.76) is not significantly different from the level of satisfaction on ATM services made by the private sector bank (M=3.78). The main effects of **Banking sector and Internet banking services** is significant, F (1,460) = 90.969, p < 0.05. From the estimated marginal means, it can be

determined that the level of satisfaction on Internet banking services made by the private sector bank (M=3.39) is significantly more than the level of satisfaction made by the public sector bank (M=2.83). The main effects of **Banking sector and Telephone banking services** is significant, F (1,460) =168.310, p < 0.05. From the estimated marginal means, it can be determined that the level of satisfaction on telephone services made by the private sector bank (M=3.01) is significantly more than the level of satisfaction made by the public sector bank (M=2.17). The main effects of **Banking sector and Mobile banking services** is significant, F (1,460) =512.621, p < 0.05. From the estimated marginal means, it can be determined that the level of satisfaction on telephone services made by the private sector bank (M=3.53) is significantly more than the level of satisfaction made by the public sector bank (M=2.32).

The main effects of **Usage Status and ATM services** is not significant, F(3,458) = 1.611, p > 0.05. From the estimated marginal means, respondents' level of satisfaction on ATM services is not significantly differ according to their usage level. The main effects of **Banking sector and other banking services** such as internet banking services, telephone banking services and Mobile banking services are significant, F(3,458) = 70.40, 16.074 and 6.402 p < 0.05. From the estimated marginal means, 1-3 years and 3 – 5 years of users are more satisfied by internet banking services than others, likewise less than 1 years and 3-5 years of users are more satisfied by telephone banking services than others and more than 5 years users are less satisfied by Mobile banking services than others.

FIGURE 6.7
INTERACTION EFFECT BETWEEN USAGE STATUS AND SATISFACTION



Interaction Effect

The **Banking Sector* usage level of respondents** interaction is significant for ATM services, Internet banking services, Telephone banking services and Mobile Banking Services. Mostly less than 2 years, 1-3 years and more than 5 years are having more level of satisfaction on private sector banks services than public sector bank.

Reciprocally 3-5 years of experienced respondents are slightly having less level of satisfaction than private sector banks.

6.11 PROBLEMS FACED BY THE CUSTOMERS WHILE USING E-BANKING AND GENDER OF THE RESPONDENTS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS

In order to find out the relationship between problems faced by the customers while using e-banking and gender of public sector and private sector banks respondents, the null hypothesis is framed as,

 H_0 : There is no difference on mean score of services problems from different banking sectors (public and private sector bank).

 H_0 : There is no difference on mean score of services problems of different gender types (Male and female).

 H_0 : There is no interaction effect between gender and banking sector on mean score of services problems.

The result of two way ANOVA is shown below:

TABLE 6.18

DESCRIPTIVE ANALYSIS OF PROBLEMS AND GENDER OF THE RESPONDENTS

	Descrip	tive Statisti	cs		
	Type of Bank		Mean	Std. Deviation	N
		Male	1.966	.6687	117
	Public Sector Bank	Female	2.370	.4852	108
ATM		Total	2.160	.6205	225
Problems		Male	1.417	.4946	163
	Private Sector Bank	Female	1.671	.7648	73
		Total	1.496	.6014	236
		Male	2.966	.6687	117
	Public Sector Bank	Female	2.852	.7832	108
Internet		Total	2.911	.7265	225
Banking Problems		Male	1.687	.6238	163
	Private Sector Bank	Female	1.671	.4730	73
		Total	1.682	.5804	236
		Male	3.085	.5659	117
	Public Sector Bank	Female	3.241	.4295	108
Telephone		Total	3.160	.5099	225
Banking Problems		Male	1.417	.4946	163
	Private Sector Bank	Female	1.795	.6864	73
		Total	1.534	.5861	236
		Male	3.009	.6630	117
Mobile	Public Sector Bank	Female	2.880	.6071	108
		Total	2.947	.6386	225
Banking Problems		Male	1.902	.7553	163
	Private Sector Bank	Female	1.836	.7074	73
		Total	1.881	.7400	236

This above shown table 6.18 gives the data about the various customer related problems/grievances of both public and private sector banks. The ATM is one among the various problems for both the public and private sector bank customers. The male customers of public sector banks undergo hurdles with regard to ATM. Their mean score with regard to this problem is 1.966. As against this, the female customers of the same category bank feel much difficulty with ATM. Their mean score is 2.370. Altogether, the mean score of public sector bank customers' ATM related problem is 2.160. The private sector bank customers too have some problems regarding ATM. Here, the male customers' mean score for ATM related problem is 1.417 as against the female customers whose mean score is 1.671. The total mean score of private sector bank customers' ATM related problem is 1.496.

Problems regarding internet banking in both public and private sector banks are plenty. However, public sector banks take the lion's share in posing problems. The male and the female customers of the public sector banks have run into internet banking problems and their mean score is 2.966 and 2.852 respectively. In total, their mean score is 2.911. The private sector bank has for its customers fewer problems in internet banking as against its rival public sector banks. The mean scores 1.687 and 1.671 are for its male and female customers respectively. The total mean score in this regard for private sector bank is 1.682.

Telephone banking and its subsequent problems chase public sector bank customers much more than that of private sector bank customers. The public sector telephone banking has problems aplenty. The male and female customers' mean score in this regard is 3.085 and 3.241 respectively. The total mean score in telephone banking problems in public sector bank is 3.160. The private sector poses less

problematic for its customers in telephone banking. The mean scores for its male and female customers are 1.417 and 1.795 respectively and whose total mean score is 1.543.

With the advent of smart phones, mobile banking is thronging among the common man. Banking through mobile phone is offered by both public and private sector banks. However, the quality factor differs between the two. The public sector banks' male and female customers' mean scores are 3.009 and 2.880. Their total mean score is 2.947. The private sector, on the other hand, thrives on with the help of providing quality service to its customers. As against the public sectors', the male and female customers of private sector banks' mean scores are 1.902 and 1.863. Their total mean score is 1.881. Both the different sector banks' mean score reflect on the quality.

TABLE 6.19

PROBLEMS FACED BY THE CUSTOMERS WHILE USING E-BANKING
AND GENDER OF THE RESPONDENTS OF PUBLIC SECTOR AND
PRIVATE SECTOR BANKS

	Tests of Betwe	een-Subjects	s Effect	S		
	Source	Type III Sum of Squares	df	Mean Square	F	P value
	ATM Problems	41.364		41.364	119.046	.000
Banking	Internet Banking Problems	160.687	1, 460	160.687	373.433	.000
Sector	Telephone Banking Problems	257.710	1,	257.710	902.925	.000
	Mobile Banking Problems	122.891		122.891	256.580	.000
	ATM Problems	11.524		11.524	33.167	.000
Gender	Internet Banking Problems	.448	1, 460	.448	1.041	.308
Gender	Telephone Banking Problems	7.537	1,4	7.537	26.406	.000
	Mobile Banking Problems	1.012		1.012	2.112	.147
	ATM Problems	.602		.602	1.732	.189
Banking	Internet Banking Problems	.256	157	.256	.594	.441
Sector* Gender	Telephone Banking Problems	.256 1.310		1.310	4.590	.033
	Mobile Banking Problems	.104		.104	.218	.641

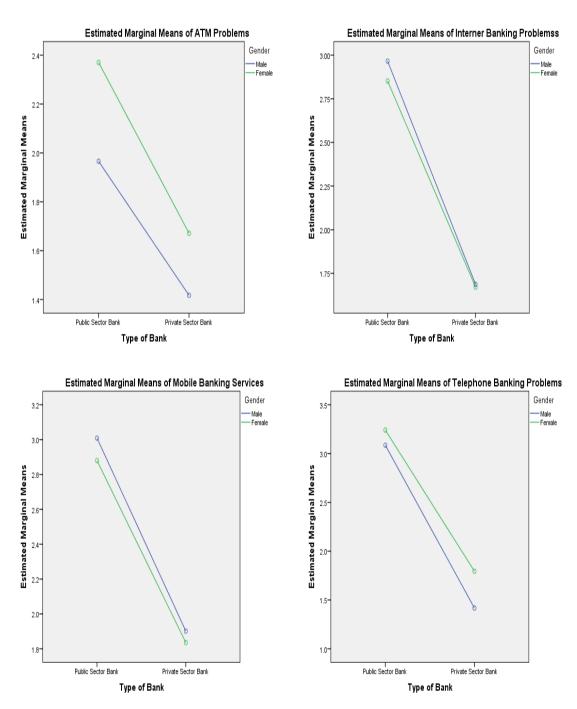
Main effect

The main effects of Banking sector with ATM services, Internet banking services, Telephone banking services and Mobile banking services are significant. Hence, there is a significant mean difference between private and public sector banks' services.

The main effects of Gender with ATM services and Telephone banking services are significant but Internet banking services and Mobile banking services are not significant. Hence, it can be concluded that there is a significant mean score difference

between gender of the respondents and the score of problems in services of both public and private sector banks.

FIGURE 6.8
INTERACTION EFFECT BETWEEN GENDER AND PROBLEM



Interaction Effect

The **Banking Sector* Gender** interaction is not significant for ATM problem, Internet Banking problem and Mobile Banking Problems, F (1,457) = 1.732, p > 0.05, F (1,457) = .594, p > 0.05 and F (1,457) = .218, P > 0.05 respectively. Hence, there is no interaction effect between type of banks and gender of the respondents.

6.12 PROBLEMS FACED BY THE CUSTOMERS WHILE USING E-BANKING AND AGE OF THE RESPONDENTS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS

In order to find out the relationship between problems faced by the customers while using e-banking and age of public sector and private sector banks respondents, the null hypothesis is framed as,

H₀: There is no difference on mean score of services problems from different banking sectors (public and private sector bank).

 H_0 : There is no difference on mean score of services problems of different age groups.

 H_0 : There is no interaction effect between age group of the respondents and banking sector on mean score of services problems.

The result of two way ANOVA is shown below:

TABLE 6.20

DESCRIPTIVE ANALYSIS OF PROBLEMS AND AGE OF THE RESPONDENTS

]	Descriptive Statistic	S		
	Type of Bank		Mean	Std. Deviation	N
		18 - 30 Years	2.369	.4849	103
	Public Sector	30 - 50 Years	2.150	.6954	80
	Bank	Above 50 Years	1.667	.4771	42
ATM Problems		Total	2.160	.6205	225
ATM Problems		18 - 30 Years	1.424	.4969	92
	Private Sector	30 - 50 Years	1.338	.4758	80
	Bank	Above 50 Years	1.797	.7597	64
		Total	1.496	.6014	236
		18 - 30 Years	2.961	.7129	103
	Public Sector	30 - 50 Years	3.150	.6954	80
	Bank	Above 50 Years	2.333	.4771	42
Internet		Total	2.911	.7265	225
Banking Problems	Private Sector Bank	18 - 30 Years	1.880	.6435	92
		30 - 50 Years	1.525	.5025	80
		Above 50 Years	1.594	.4950	64
		Total	1.682	.5804	236
		18 - 30 Years	3.233	.4248	103
	Public Sector	30 - 50 Years	3.325	.4713	80
	Bank	Above 50 Years	2.667	.4771	42
Telephone Banking		Total	3.160	.5099	225
Problems		18 - 30 Years	1.815	.6277	92
	Private Sector	30 - 50 Years	1.163	.3712	80
	Bank	Above 50 Years	1.594	.4950	64
		Total	1.534	.5861	236
		18 - 30 Years	2.874	.7881	103
Mobile	Public Sector	30 - 50 Years	2.838	.3712	80
	Bank	Above 50 Years	3.333	.4771	42
		Total	2.947	.6386	225
Banking Problems		18 - 30 Years	1.696	.7223	92
	Private Sector	30 - 50 Years	2.313	.4664	80
	Bank	Above 50 Years	1.609	.8090	64
		Total	1.881	.7400	236

The assumption of homogeneity of variance is tested by Levene's test of equality of error variance, which tests the hypothesis that the population error variances are equal. In this test, the Levene statistic and the corresponding level of significance is large (i.e., p > 0.05) for all constructs. Thus, the assumption of homogeneity of variance has not been violated.

TABLE 6.21

PROBLEMS FACED BY THE CUSTOMERS WHILE USING E-BANKING AND AGE OF THE RESPONDENTS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS

	Tests of Between-Subjects Effects					
	Source	Type III Sum of Squares	df	Mean Square	F	P value
	ATM Problems	31.150		31.150	95.617	.000
Banking	Internet Banking Problems	139.628	1460	139.628	368.401	.000
Sector	Telephone Banking Problems	254.695	14	254.695	1078.265	.000
	Mobile Banking Problems	138.155		138.155	331.753	.000
	ATM Problems	2.768		1.384	4.249	.015
A = =	Internet Banking Problems	14.497	29	7.248	19.125	.000
Age	Telephone Banking Problems	12.534	2459	6.267	26.531	.000
	Mobile Banking Problems	7.639		3.819	9.171	.000
	ATM Problems	20.712		10.356	31.789	.000
Banking	Internet Banking Problems	13.290	3.290		17.532	.000
Sector * Age	Telephone Banking Problems	21.314	2456	10.657	45.117	.000
	Mobile Banking Problems	23.294		11.647	27.968	.000

Source: Primary data

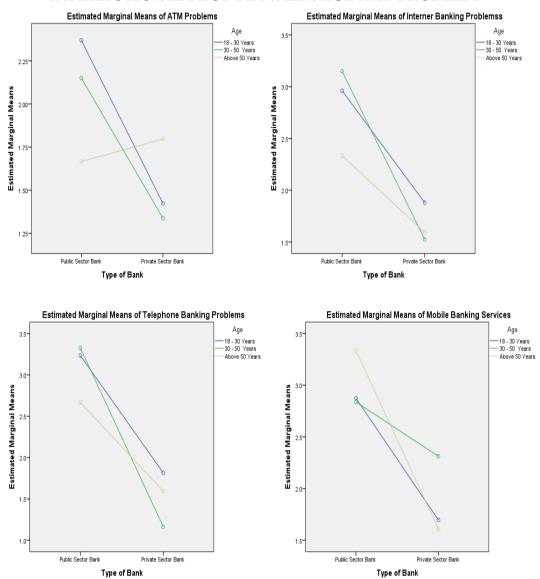
Main effect

The main effects of Banking sector and ATM problems is significant, F (1,460) = 95.617, p < 0.05. From the estimated marginal means, level of misery on ATM services made by the public sector bank (M=3.76) is significantly different from the level of misery on ATM services made by the private sector bank (M=3.78). The main effects of **Banking sector and Internet banking problems** is significant, F (1,460) = 368.401, p < 0.05. From the estimated marginal means, it can be determined that the level of misery on Internet banking services made by the private sector bank (M=3.39) is significantly more than the level of misery made by the public sector bank (M=2.83). The main effects of Banking sector and Telephone banking problem is significant, F (1,460) = 1078.265, p < 0.05. From the estimated marginal means, it can be determined that the level of misery on telephone services made by the private sector bank (M=3.01) is significantly more than the level of misery made by the public sector bank (M=2.17). The main effects of **Banking sector and Mobile banking services** is significant, F (1,460) = 331.753, p < 0.05. From the estimated marginal means, it can be determined that the level of misery on telephone services made by the private sector bank (M= 3.53) is significantly more than the level of misery made by the public sector bank (M=2.32).

The main effects of **Age and ATM Problem** is significant, F (2,460) = 4.249, p < 0.05. From the estimated marginal means, the age group of 18 - 30 years and above 50 years respondents' level of misery on ATM services (M=3.97 and 4.00) is significantly more than the age group of 30 - 50 years respondents' level of misery (M=3.34). The main effects of **Age and Internet banking problem** is significant, F (2,460) = 19.125, p < 0.05. From the estimated marginal means, the age group of

18 - 30 years respondents' level of misery on Internet banking services (M=3.22) is significantly more than the 30 - 50 years and above 50 years of age group respondents' level of misery (M=3.08 and 2.97). The main effects of **Age and Telephone banking Problem** is significant, F (2,460) = 26.531, p < 0.05. From the estimated marginal means, the age group of 18 - 30 years and above 50 years respondents' level of misery on Telephone banking services (M=2.83 and 2.60) is significantly more than the age group of 30 - 50 years age group of respondents' level of misery (M=2.33). The main effects of **Age and Mobile banking services** is significant, F (2,460) = 9.171, p < 0.05. From the estimated marginal means, the age group of 30 - 50 and above 50 years respondents' level of misery on Mobile banking services (M=3.02 and 2.96) is significantly more than the age group of 18 - 30 years respondents' level of misery (M=2.85).

FIGURE 6.9
INTERACTION EFFECT BETWEEN AGE AND PROBLEM



Interaction Effect

The **Banking Sector* Age** interaction is significant for ATM Problem, Internet banking problem, Telephone banking problem and Mobile Banking Services, F(2,456) = 31.789, p < 0.05, F(2,456) = 17.532, p < 0.05, F(2,456) = 45.117, p < 0.05 and F(2,456) = 27.968, p < 0.05 respectively. For Internet banking services, all the three age group of respondents are faced less problems by the private sector banks than the public sector bank. But the age level of 18 - 30 years and above 50 years of

respondents' level of misery on Internet banking services is having huge differences than 30 - 50 years age group of respondents. For Telephone banking services, all the three age groups of respondents are faced lesser problems by the private sector banks than the public sector bank. But the age level of above 50 years of respondents' level of misery on Telephone banking services is having huge differences than 18 - 30 years and 30 - 50 years age group of respondents. For Mobile banking services, all the three age group of respondents are faced less problems by the private sector banks than the public sector bank. But the age level of 18 - 30 years and above 50 years of respondents' level of misery on Mobile banking services is having huge differences than 30 - 50 years age group of respondents.

6.13 PROBLEMS FACED BY THE CUSTOMERS WHILE USING E-BANKING AND EDUCATIONAL LEVEL OF THE RESPONDENTS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS

In order to find out the relationship between problems faced by the customers while using e-banking and educational level of public sector and private sector banks respondents, the null hypothesis is framed as,

- H0: There is no difference on mean score of services problems from different banking sectors (public and private sector bank).
- H0: There is no difference on mean score of services problems of different educational levels.
- H0: There is no interaction effect between age group of the respondents and banking sector on mean score of services problems.

The result of two way ANOVA is shown below:

TABLE 6.22

DESCRIPTIVE ANALYSIS OF PROBLEMS AND EDUCATIONAL
LEVEL OF THE RESPONDENTS

	De	escriptive Statistic	s		
	Type of Bank		Mean	Std. Deviation	N
		School Level	2.000	0.0000	24
		U.G Level	2.480	.5047	50
	Public Sector Bank	P.G Level	2.597	.4942	67
		Professional	1.667	.4742	84
ATM Problems		Total	2.160	.6205	225
ATM Problems		School Level	2.000	0.0000	14
		U.G Level	1.167	.3749	84
	Private Sector Bank	P.G Level	1.597	.4942	67
	Bunk	Professional	1.690	.7670	71
		Total	1.496	.6014	236
	Public Sector Bank	School Level	3.000	0.0000	24
		U.G Level	3.480	.5047	50
		P.G Level	3.179	.7573	67
		Professional	2.333	.4742	84
Internet		Total	2.911	.7265	225
Banking Problems		School Level	2.000	0.0000	14
		U.G Level	2.000	.5808	84
	Private Sector Bank	P.G Level	1.209	.4096	67
		Professional	1.690	.4657	71
		Total	1.682	.5804	236
		School Level	3.000	0.0000	24
Talanharra		U.G Level	3.480	.5047	50
Telephone Banking	Public Sector Bank	P.G Level	3.388	.4910	67
Problems		Professional	2.833	.3749	84
		Total	3.160	.5099	225

	Descriptive Statistics							
	Type of Bank		Mean	Std. Deviation	N			
		School Level	2.000	0.0000	14			
		U.G Level	1.333	.4742	84			
	Private Sector Bank	P.G Level	1.582	.4969	67			
		Professional	1.634	.7414	71			
		Total	1.534	.5861	236			
	Public Sector Bank	School Level	3.000	0.0000	24			
		U.G Level	2.480	.8628	50			
		P.G Level	3.209	.4096	67			
		Professional	3.000	.5808	84			
Mobile Banking		Total	2.947	.6386	225			
Problems		School Level	3.000	0.0000	14			
		U.G Level	1.500	.5030	84			
	Private Sector Bank	P.G Level	1.821	.7573	67			
		Professional	2.169	.6966	71			
		Total	1.881	.7400	236			

The assumption of homogeneity of variance is tested by Levene's test of equality of error variance, which tests the hypothesis that the population error variances are equal. In this test, the Levene statistic and the corresponding level of significance is large (i.e., p > 0.05) for all constructs. Thus, the assumption of homogeneity of variance has not been violated.

TABLE 6.23

PROBLEMS FACED BY THE CUSTOMERS WHILE USING E-BANKING
AND EDUCATIONAL LEVEL OF THE RESPONDENTS OF PUBLIC
SECTOR AND PRIVATE SECTOR BANKS

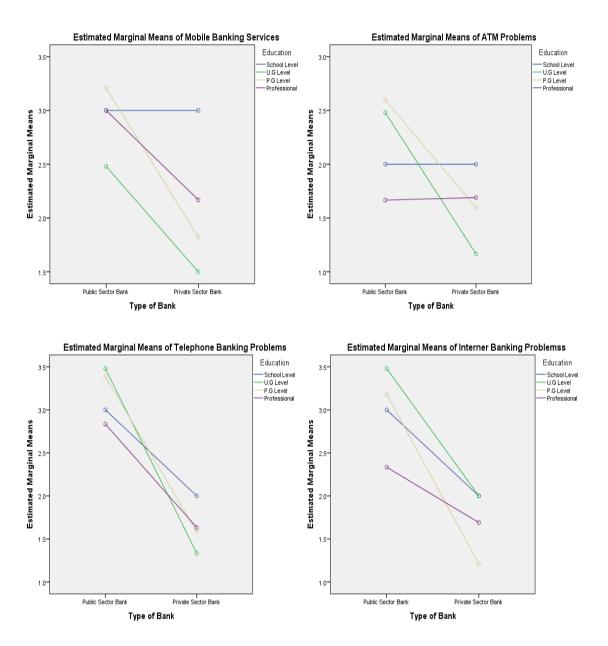
	Source	Type III Sum of Squares	df	Mean Square	F	P value
	ATM Problems	26.108		26.108	101.748	.000
Banking	Internet Banking Problems	129.168	1,460	129.168	474.732	.000
Sector	Telephone Banking Problems	188.454	1,4	188.454	752.149	.000
	Mobile Banking Problems	50.955		50.955	137.090	.000
	ATM Problems	13.426 39.951 5.376 5,27		4.475	17.442	.000
Education	Internet Banking Problems			13.317	48.944	.000
Education	Telephone Banking Problems			1.792	7.153	.000
	Mobile Banking Problems	40.404		13.468	36.234	.000
	ATM Problems	39.077		13.026	50.764	.000
Banking Sector * Education	Internet Banking Problems	33.455	2,456	11.152	40.986	.000
	Telephone Banking Problems	20.044	2,4	6.681	26.666	.000
	Mobile Banking Problems	14.920		4.973	13.380	.000

Main effect

The main effects of **Banking sector and ATM problems** is significant, F(1,460) = 101.768, p < 0.05. From the estimated marginal means, level of misery on ATM services made by the public sector bank (M= 2.16) is significantly different from the level of misery on ATM services made by the private sector bank (M=1.496). The main effects of **Banking sector and Internet banking problems** is significant, F(1,460) = 368.401, p < 0.05. From the estimated marginal means, it can be

determined that the level of misery on Internet banking services made by the private sector bank (M=1.682) is significantly lesser than the level of misery made by the public sector bank (M=2.99). The main effects of **Banking sector and Telephone banking problem is** significant, F (1,460) = 1078.265, p < 0.05. From the estimated marginal means, it can be determined that the level of misery on telephone services made by the private sector bank is significantly lesser than the level of misery made by the public sector bank. The main effects of **Banking sector and Mobile banking services** is significant, F (1,460) = 331.753, p < 0.05. From the estimated marginal means, it can be determined that the level of misery on telephone services made by the private sector bank is significantly lesser than the level of misery made by the public sector bank.

FIGURE 6.10
INTERACTION EFFECT BETWEEN EDUCATIONAL LEVEL AND PROBLEM



Interaction Effect

The **Banking Sector* Educational qualification** interaction is significant for ATM Problem, Internet banking problem, Telephone banking problem and Mobile Banking Services, F (2,456) = 31.789, p < 0.05, F (2,456) = 17.532, p < 0.05, F (2,456) = 45.117, p < 0.05 and F (2,456) = 27.968, p < 0.05 respectively. Hence, there is an interaction effect between type of banks and educational level of the respondents.

6.14 PROBLEMS FACED BY THE CUSTOMERS WHILE USING E-BANKING AND OCCUPATION OF THE RESPONDENTS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS

In order to find out the relationship between problems faced by the customers while using e-banking and occupation of public sector and private sector banks respondents, the null hypothesis is framed as,

 H_0 : There is no difference on mean score of services problems from different banking sectors (public and private sector bank).

 H_0 : There is no difference on mean score of services problems of different occupation status.

 H_0 : There is no interaction effect between occupation status of the respondents and banking sector on mean score of services problems.

The result of two way ANOVA is shown below:

TABLE 6.24

DESCRIPTIVE ANALYSIS OF PROBLEMS AND OCCUPATION OF THE RESPONDENTS

	Type of Bank			Std. Deviation	N
		Government Employee	2.302	.5134	43
		Private Employee	1.731	.4479	52
		Business	2.481	.5092	27
	Public Sector Bank	Professional	1.759	.4315	54
ATM		Student	2.500	.5108	24
Problems		Housewife	3.000	0.0000	25
		Total	2.160	.6205	225
		Government Employee	1.412	.4996	34
	Private Sector Bank	Private Employee	1.209	.4096	67
		Business	1.659	.4801	41

	Type of I	Bank	Mean	Std. Deviation	N
		Professional	1.826	.8513	46
		Student	1.538	.5084	26
		Housewife	1.455	.5096	22
		Total	1.496	.6014	236
		Government Employee	2.930	.7987	43
		Private Employee	3.250	.4372	52
		Business	2.481	.5092	27
	Public Sector Bank	Professional	2.241	.4315	54
		Student	3.500	.5108	24
		Housewife	3.520	.5099	25
Internet		Total	2.911	.7265	225
Banking Problems		Government Employee	1.618	.5513	34
	Private Sector Bank	Private Employee	2.000	.6276	67
		Business	1.341	.4801	41
		Professional	1.543	.5036	46
		Student	1.462	.5084	26
		Housewife	2.000	0.0000	22
		Total	1.682	.5804	236
		Government Employee	3.256	.4925	43
		Private Employee	3.000	0.0000	52
		Business	3.481	.5092	27
	Public Sector Bank	Professional	2.759	.4315	54
	Build	Student	3.500	.5108	24
		Housewife	3.520	.5099	25
Telephone		Total	3.160	.5099	225
Banking Problems		Government Employee	1.500	.5641	34
		Private Employee	1.403	.4942	67
		Business	1.317	.4711	41
	Private Sector Bank	Professional	1.500	.5055	46
	24111	Student	2.000	0.0000	26
		Housewife	1.909	1.0193	22
		Total	1.534	.5861	236

	Type of Bank			Std. Deviation	N
		Government Employee	3.349	.9228	43
		Private Employee	2.750	.4372	52
		Business	3.000	0.0000	27
	Public Sector Bank	Professional	2.741	.4423	54
	Bank	Student	2.500	.5108	24
		Housewife	3.480	.5099	25
Mobile		Total	2.947	.6386	225
Banking Problems		Government Employee	1.941	.3430	34
		Private Employee	1.612	.8157	67
		Business	2.024	.8212	41
	Private Sector Bank	Professional	2.239	.8481	46
		Student	1.538	.5084	26
		Housewife	2.000	0.0000	22
		Total	1.881	.7400	236

The assumption of homogeneity of variance is tested by Levene's test of equality of error variance, which tests the hypothesis that the population error variances are equal. In this test, the Levene statistic and the corresponding level of significance is large (i.e., p > 0.05) for all constructs. Thus, the assumption of homogeneity of variance has not been violated.

TABLE 6.25

PROBLEMS FACED BY THE CUSTOMERS WHILE USING E-BANKING AND OCCUPATION OF THE RESPONDENTS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS

	Source		df	Mean Square	F	P value
	ATM Problems	61.736		61.736	236.987	.000
Banking	Internet Banking Problems	178.866	1 460	178.866	624.913	.000
Sector	Telephone Banking Problems	276.089	1,460	276.089	1149.382	.000
	Mobile Banking Problems	118.019		118.019	291.593	.000
	ATM Problems	28.309		5.662	21.734	.000
Occumation	Internet Banking Problems	50.316	5 156	10.063	35.159	.000
Occupation	Telephone Banking Problems	21.812	5,456	4.362	18.161	.000
	Mobile Banking Problems	24.367		4.873	12.041	.000
	ATM Problems	25.425		5.085	19.520	.000
Banking Sector* Occupation	Internet Banking Problems	16.456	5 456	3.291	11.499	.000
	Telephone Banking Problems	8.603	5,456	1.721	7.163	.000
	Mobile Banking Problems	12.457		2.491	6.155	.000

Main effect

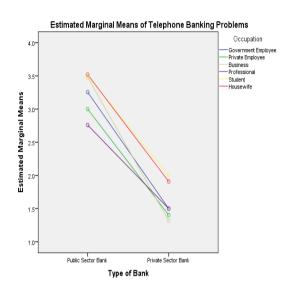
The main effects of **Banking sector and ATM problems** is significant, F(1,460) = 236.987, p < 0.05. From the estimated marginal means, level of misery on ATM services made by the public sector bank (M=2.160) is significantly different from the level of misery on ATM services made by the private sector bank (M=1.496). The main effects of **Banking sector and Internet banking problems** is significant, F(1,460) = 624.913, p < 0.05. From the estimated marginal means, it can be determined

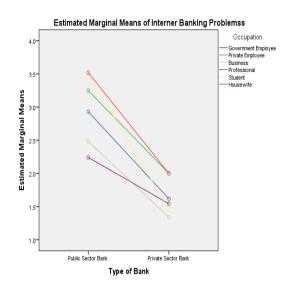
that the level of misery on Internet banking services made by the private sector bank (M=1.682) is significantly lesser than the level of misery made by the public sector bank (M=2.911). The main effects of **Banking sector and Telephone banking problem is** significant, F (1,460) = 114, p < 0.05. From the estimated marginal means, it can be determined that the level of misery on telephone services made by the private sector bank (M=1.53) is significantly lesser than the level of misery made by the public sector bank (M=3.160). The main effects of **Banking sector and Mobile banking services** is significant, F (1,460) = 291.593, p < 0.05. From the estimated marginal means, it can be determined that the level of misery on telephone services made by the private sector bank (M=1.881) is significantly more than the level of misery made by the public sector bank (M=2.947).

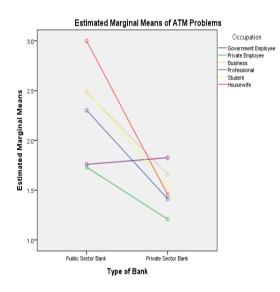
The main effects of **Occupation and ATM Problem** is significant, F(5,456) = 21.734, p < 0.05. From the estimated marginal means, the housewives are facing many problems than working people on ATM services. The main effects of **Occupation and Internet banking problem** is significant, F(5,456) = 35.159, p < 0.05. From the estimated marginal means, the students and housewives are facing many problems than working people on internet banking services. The main effects of **Occupation and Telephone banking Problem** is significant, F(5,456) = 18.161, p < 0.05. From the estimated marginal means, the students and housewives are facing many problems than working people on telephone banking services. The main effects of **Occupation and Mobile banking services** is significant, F(5,456) = 12.041, p < 0.05. From the estimated marginal means, the students and housewives are facing many problems than working people on telephone banking services.

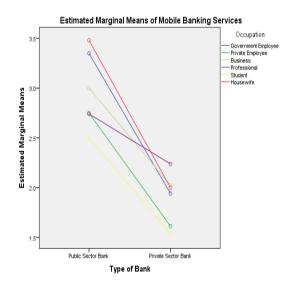
FIGURE 6.11

INTERACTION EFFECT BETWEEN OCCUPATION AND PROBLEM









Interaction Effect

The **Banking Sector* Occupation Status** interaction is significant for ATM Problem, Internet banking problem, Telephone banking problem and Mobile Banking Services, F (5,456) = 19.520, p < 0.05, F (5,456) = 11.499, p < 0.05, F (5,456) = 7.163, p < 0.05 and F (5,456) = 6.155, p < 0.05 respectively. Hence, there is an interaction effect between type of banks and occupation status of the respondents. House wives and students are facing more problems than others in public sector banks.

6.15 PROBLEMS FACED BY THE CUSTOMERS WHILE USING E-BANKING AND MONTHLY INCOME OF THE RESPONDENTS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS

In order to find out the relationship between problems faced by the customers while using e-banking and monthly income of public sector and private sector banks respondents, the null hypothesis is framed as,

H₀: There is no difference on mean score of services problems from different banking sectors (public and private sector bank).

 H_0 : There is no difference on mean score of services problems of different income group.

 H_0 : There is no interaction effect between Income group of the respondents and banking sector on mean score of services problems.

The result of two way ANOVA is shown below:

TABLE 6.26 DESCRIPTIVE ANALYSIS OF PROBLEMS AND MONTHLY INCOME OF THE RESPONDENTS

	Type of Ban	K	Mean	Std. Deviation	N
		Less than ₹ 20,000	2.000	0.0000	66
		₹ 20,000 to ₹ 40,000	2.375	.8262	64
Public Se	ctor Bank	₹ 40,000 to ₹ 60,000	2.000	.7201	55
		More than ₹ 60,000	2.300	.4641	40
ATM		Total	2.160	.6205	225
Problems		Less than ₹ 20,000	1.975	.8317	40
		₹ 20,000 to ₹ 40,000	1.597	.4942	67
Private Se	ector Bank	₹ 40,000 to ₹ 60,000	1.325	.4713	77
		More than ₹ 60,000	1.250	.4372	52
		Total	1.496	.6014	236
		Less than ₹ 20,000	2.773	.7605	66
	Public Sector Bank	₹ 20,000 to ₹ 40,000	3.391	.4917	64
Public Se		₹ 40,000 to ₹ 60,000	2.745	.4396	55
		More than ₹ 60,000	2.600	.9282	40
Internet		Total	2.911	.7265	225
Banking Problems	Private Sector Bank	Less than ₹ 20,000	1.675	.4743	40
		₹ 20,000 to ₹ 40,000	1.791	.4096	67
Private Se		₹ 40,000 to ₹ 60,000	1.688	.7654	77
		More than ₹ 60,000	1.538	.5034	52
		Total	1.682	.5804	236
		Less than ₹ 20,000	3.000	0.0000	66
		₹ 20,000 to ₹ 40,000	3.594	.4950	64
Public Se	ctor Bank	₹ 40,000 to ₹ 60,000	3.000	0.0000	55
		More than ₹ 60,000	2.950	.8149	40
Telephone Banking		Total	3.160	.5099	225
Problems		Less than ₹ 20,000	1.325	.4743	40
		₹ 20,000 to ₹ 40,000	1.388	.4910	67
Private Se	ector Bank	₹ 40,000 to ₹ 60,000	1.636	.7238	77
		More than ₹ 60,000	1.731	.4479	52
		Total	1.534	.5861	236

Type of Bank			Mean	Std. Deviation	N
Mobile	Public Sector Bank	Less than ₹ 20,000	2.591	.4954	66
		₹ 20,000 to ₹ 40,000	2.813	.3934	64
		₹ 40,000 to ₹ 60,000	3.273	.8267	55
		More than ₹ 60,000	3.300	.4641	40
		Total	2.947	.6386	225
Banking Problems	Private Sector Bank	Less than ₹ 20,000	2.325	.4743	40
		₹ 20,000 to ₹ 40,000	2.239	.7404	67
		₹ 40,000 to ₹ 60,000	1.792	.6755	77
		More than ₹ 60,000	1.212	.4124	52
		Total	1.881	.7400	236

The assumption of homogeneity of variance is tested by Levene's test of equality of error variance, which tests the hypothesis that the population error variances are equal. In this test, the Levene statistic and the corresponding level of significance is large (i.e., p > 0.05) for all constructs. Thus, the assumption of homogeneity of variance has not been violated.

TABLE 6.27

PROBLEMS FACED BY THE CUSTOMERS WHILE USING E-BANKING
AND MONTHLY INCOME OF THE RESPONDENTS OF PUBLIC SECTOR
AND PRIVATE SECTOR BANKS

Source		Type III Sum of Squares	df	Mean Square	F	P value
Banking Sector	ATM Problems	43.753		43.753	132.907	.000
	Internet Banking Problems	158.751	1 460	158.751	412.935	.000
	Telephone Banking Problems	285.949	1,460	285.949	1115.988	.000
	Mobile Banking Problems	133.028		133.028	378.253	.000
	ATM Problems	9.333		3.111	9.450	.000
Monthly	Internet Banking Problems	17.353	2 150	5.784	15.045	.000
Income	Telephone Banking Problems	6.180	3,458	2.060	8.040	.000
	Mobile Banking Problems	5.009		1.670	4.748	.003
Banking Sector* Monthly Income	ATM Problems	13.882		4.627	14.057	.000
	Internet Banking Problems	6.504	3,458	2.168	5.640	.001
	Telephone Banking Problems	16.949 53.024		5.650	22.050	.000
	Mobile Banking Problems			17.675	50.256	.000

Main effect

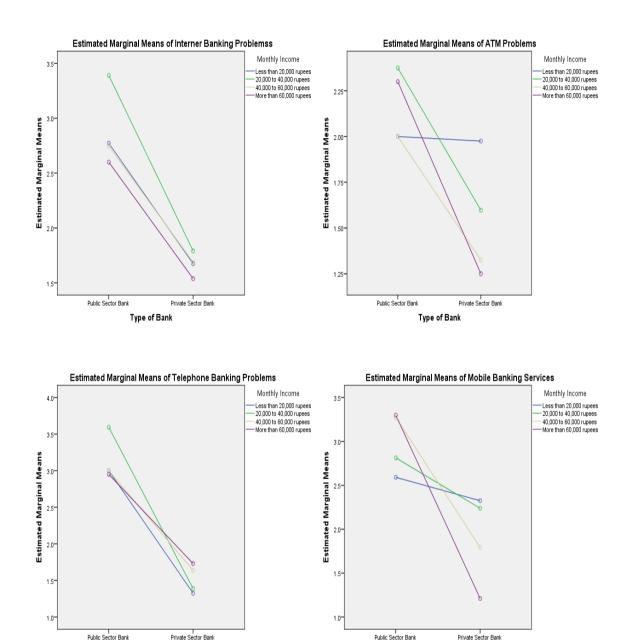
The main effects of **Banking sector and ATM problems** is significant, F (1,460), p < 0.05. From the estimated marginal means, level of misery on ATM services made by the public sector bank (M=2.160) is significantly different from the level of misery on ATM services made by the private sector bank (M=1.496). The main effects of **Banking sector and Internet banking problems** is significant, F (1,460), p < 0.05. From the estimated marginal means, it can be determined that the level of

misery on Internet banking services made by the private sector bank (M=1.682) is significantly lesser than the level of misery made by the public sector bank (M=2.911). The main effects of **Banking sector and Telephone banking problem is** significant, F (1,460), p < 0.05. From the estimated marginal means, it can be determined that the level of misery on telephone services made by the private sector bank (M=1.53) is significantly lesser than the level of misery made by the public sector bank (M=3.160). The main effects of **Banking sector and Mobile banking services** is significant, F (1,460), p < 0.05. From the estimated marginal means, it can be determined that the level of misery on telephone services made by the private sector bank (M=1.881) is significantly more than the level of misery made by the public sector bank (M=2.947).

The main effects of **Income level and ATM Problem** is significant, F(3,458) = 132.907, p < 0.05. From the estimated marginal means, income level of getting below \mathfrak{T} 40,000 are facing many problems than above \mathfrak{T} 40,000 on ATM services. The main effects of **Income level and Internet banking problem** is significant, F(3,458) = 412.935, p < 0.05. From the estimated marginal means, income level of getting below \mathfrak{T} 40,000 are facing many problems than above \mathfrak{T} 40,000 The main effects of **Income level and Telephone banking Problem** is significant, F(3,458) = 1115.988, p < 0.05. From the estimated marginal means, income level of getting above \mathfrak{T} 40,000 are facing many problems than below \mathfrak{T} 40,000. The main effects of **Income level and Mobile banking services** is significant, F(3,458) = 378.253, p < 0.05. From the estimated marginal means, income level of getting above \mathfrak{T} 40,000 are facing many problems than below \mathfrak{T} 40,000.

FIGURE 6.12

INTERACTION EFFECT BETWEEN MONTHLY INCOME AND PROBLEM



Type of Bank

Type of Bank

Interaction Effect

The **Banking Sector* income level** interaction is significant for ATM Problem, Internet banking problem, Telephone banking problem and Mobile Banking Services, F (3,458) = 14.057, p < 0.05, F (3,458) = 5.640, p < 0.05, F (3,458) = 22.050, p < 0.05 and F (3,458) = 50.256, p < 0.05 respectively. Hence, there is an interaction effect between type of banks and income level of the respondents.

6.16 PROBLEMS FACED BY THE CUSTOMERS WHILE USING E-BANKING AND FREQUENCY OF USING E-BANKING BY THE RESPONDENTS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS

In order to find out the relationship between problems faced by the customers while using e-banking and frequency of using e-banking by the public sector and private sector banks respondents, the null hypothesis is framed as,

H₀: There is no difference on mean score of services problems from different banking sectors (public and private sector bank).

 H_0 : There is no difference on mean score of services problems of different usage level.

H₀: There is no interaction effect between usage level of the respondents and banking sector on mean score of services problems.

The result of two way ANOVA is shown below:

TABLE 6.28

DESCRIPTIVE ANALYSIS OF PROBLEMS AND REQUENCY OF USING
E-BANKING BY THE RESPONDENTS

Type of Bank			Mean	Std. Deviation	N
		Less than 1 year	1.472	.5040	53
		1 - 3 years	2.200	.4031	65
	Public Sector Bank	3 - 5 years	2.736	.4451	53
		More than 5 years	2.222	.4196	54
ATM		Total	2.160	.6205	225
Problems		Less than 1 year	1.528	.5040	53
		1 - 3 years	1.475	.7627	80
	Private Sector Bank	3 - 5 years	1.391	.4917	64
	Bunk	More than 5 years	1.667	.4776	39
		Total	1.496	.6014	236
	Public Sector Bank	Less than 1 year	3.000	0.0000	53
		1 - 3 years	3.185	.7684	65
		3 - 5 years	2.962	.7061	53
		More than 5 years	2.444	.8393	54
Internet		Total	2.911	.7265	225
Banking Problems	Private Sector Bank	Less than 1 year	1.528	.5040	53
		1 - 3 years	2.175	.3824	80
		3 - 5 years	1.609	.4917	64
		More than 5 years	1.000	0.0000	39
		Total	1.682	.5804	236
		Less than 1 year	3.000	0.0000	53
		1 - 3 years	3.200	.4031	65
Telephone Banking Problems	Public Sector Bank	3 - 5 years	3.472	.5040	53
		More than 5 years	2.963	.6994	54
		Total	3.160	.5099	225

Type of Bank		Mean	Std. Deviation	N	
		Less than 1 year	1.792	.4094	53
	Private Sector Bank	1 - 3 years	1.150	.3593	80
		3 - 5 years	1.516	.7765	64
		More than 5 years	2.000	0.0000	39
		Total	1.534	.5861	236
	Public Sector Bank	Less than 1 year	2.755	.4344	53
		1 - 3 years	2.585	.4966	65
		3 - 5 years	3.038	.7061	53
		More than 5 years	3.481	.5043	54
Mobile		Total	2.947	.6386	225
Banking Problems	Private Sector Bank	Less than 1 year	2.208	.8403	53
		1 - 3 years	1.663	.7453	80
		3 - 5 years	2.219	.4167	64
		More than 5 years	1.333	.4776	39
		Total	1.881	.7400	236

The assumption of homogeneity of variance is tested by Levene's test of equality of error variance, which tests the hypothesis that the population error variances are equal. In this test, the Levene statistic and the corresponding level of significance is large (i.e., p > 0.05) for all constructs. Thus, the assumption of homogeneity of variance has not been violated.

TABLE 6.29

PROBLEMS FACED BY THE CUSTOMERS WHILE USING E-BANKING
AND FREQUENCY OF USING E-BANKING BY THE RESPONDENTS OF
PUBLIC SECTOR AND PRIVATE SECTOR BANKS

Source		Type III Sum of Squares	df	Mean Square	F	P value
Banking Sector	ATM Problems	45.751		45.751	164.094	.000
	Internet Banking Problems	193.135	1 460	193.135	620.345	.000
	Telephone Banking Problems	264.431	1,460	264.431	1125.450	.000
	Mobile Banking Problems	136.421		136.421	374.059	.000
	ATM Problems	19.019		6.340	22.739	.000
Usage	Internet Banking Problems	51.067	2 150	17.022	54.675	.000
Status	Telephone Banking Problems	8.425	3,458	2.808	11.953	.000
	Mobile Banking Problems	17.673		5.891	16.153	.000
Banking Sector * Usage Status	ATM Problems	27.613		9.204	33.013	.000
	Internet Banking Problems	4.349	2.450	1.450	4.656	.003
	Telephone Banking Problems	24.186	3,458	8.062	34.312	.000
	Mobile Banking Problems	36.142		12.047	33.033	.000

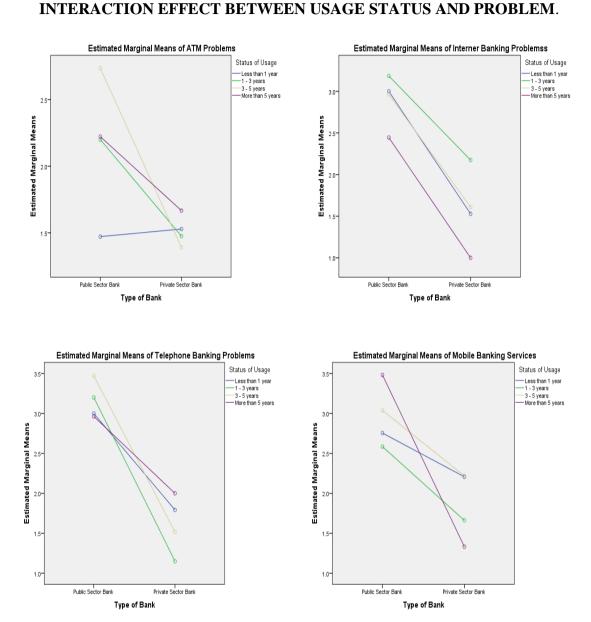
Main effect

The main effects of **Banking sector and ATM problems** is significant, F (1,460), p < 0.05. From the estimated marginal means, level of misery on ATM services made by the public sector bank (M=2.160) is significantly different from the level of misery on ATM services made by the private sector bank (M=1.496). The main effects of **Banking sector and Internet banking problems** is significant, F (1,460), p < 0.05. From the estimated marginal means, it can be determined that the level of

misery on Internet banking services made by the private sector bank (M=1.682) is significantly lesser than the level of misery made by the public sector bank (M=2.911). The main effects of **Banking sector and Telephone banking problem is** significant, F(1,460), p < 0.05. From the estimated marginal means, it can be determined that the level of misery on telephone services made by the private sector bank (M=1.53) is significantly lesser than the level of misery made by the public sector bank (M=3.160). The main effects of **Banking sector and Mobile banking services** is significant, F(1,460), p < 0.05. From the estimated marginal means, it can be determined that the level of misery on telephone services made by the private sector bank (M=1.881) is significantly more than the level of misery made by the public sector bank (M=2.947).

The main effects of **Usage level and ATM Problem** is significant, F(3,458) = 22.739, p < 0.05. From the estimated marginal means, usage level of more than 3 years respondents are facing more problems than less than 3 years usage level respondents on ATM services. The main effects of **Usage level and Internet banking problem** is significant, F(3,458) = 54.675, p < 0.05. From the estimated marginal means, usage level of more than 3 years respondents are facing lesser problems than less than 3 years usage level respondents. The main effects of **Usage level and Telephone banking Problem** is significant, F(3,458) = 11.953, p < 0.05. From the estimated marginal means, usage level of more than 3 years respondents are facing less problems than less than 3 years usage level respondents. The main effects of **Usage level and Mobile banking services** is significant, F(3,458) = 16.153, p < 0.05. From the estimated marginal means usage level of more than 3 years respondents are facing more problems than less than 3 years usage level respondents.

FIGURE 6.13



Interaction Effect

The **Banking Sector* usage level** interaction is significant for ATM Problem, Internet banking problem, Telephone banking problem and Mobile Banking Services, F (3,458) = 3.01, p < 0.05, F (3,458) = 4.656, p < 0.05, F (3,458) = 34.312, p < 0.05 and F (3,458) = 3.033, p < 0.05 respectively. Hence, there is an interaction effect between type of banks and usage level of the respondents.

6.17 RANKING BASED ON PREFERENCE OF E-BANKING FEATURES BETWEEN PUBLIC SECTOR AND PRIVATE SECTOR BANKS CUSTOMERS

An attempt has been made to analyse the preference of e-banking features of public sector and private sector banks customers. The following table shows the details with regard to the preference of customers:

TABLE 6.30

RANKING TABLE BASED ON PREFERENCE OF E-BANKING FEATURES
BETWEEN PUBLIC SECTORAND PRIVATE SECTOR BANKS
CUSTOMERS

	Public Sector Bank			Pri	Private Sector Bank		
	Mean	Std. Deviation	Rank	Mean	Std. Deviation	Rank	
Check balances	4.173	.7015	2	4.199	.7980	2	
View Account Statements / Transaction History	3.702	.5711	3	3.915	.6533	5	
Fund Transfer	3.591	.4927	5	4.068	.7053	4	
Mobile Recharging	3.338	.9022	8	3.614	.5758	7	
Pay Taxes	1.533	.5000	6	1.237	.4263	12	
Booking for Train / Bus / Flight / Movie Tickets	3.596	.4919	4	4.258	.7416	3	
Payment of utility bills (insurance premium, rent)	3.529	.5003	7	3.898	.7425	6	
New Banking information collection	1.982	.5973	10	2.034	.6248	9	
Apply online for loan or Fixed/Recurring Deposits	1.644	.6865	11	1.568	.6901	11	
Request for cheque book, pass book etc	1.293	.4563	14	1.169	.3760	14	
Request for issuing ATM/Debit card	2.587	.7808	9	2.784	.7085	8	
Request for Cheque book, pass book etc	1.631	.5839	12	1.602	.5927	10	
Enquiry about Cheque book, pass book etc	1.387	.5877	13	1.178	.3833	13	
Request for pre-closure of Loans/deposit etc	1.240	.4280	15	1.000	0.0000	15	
Online shopping	4.471	.5003	1	4.331	.4714	1	

Source: Primary data

The above table 6.30 clearly explained the preference level of e-banking features of public and private sector banks' customer. The respondents preference on usage level of e-banking features have not vary for public and private sectors banks. Hence to identify the similarity of both bank respondents' rank, researcher conducts the spearman's rho correlation below:

6.18 RELATIONSHIP BETWEEN PREFERENCE OF E-BANKING FEATURES OF CUSTOMERS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS RESPONDENTS

In order to find out the relationship between customers preference of e-banking features of public sector and private sector banks, the null hypothesis is framed as, "There is no significant relationship between the respondents preference on usage level of e-banking features of public and private sectors banks". The result is given in the following table:

TABLE 6.31

SPEARMAN'S CORRELATIONS OF PREFERENCE OF CUSTOMERS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS

			Public sector Bank Rank	Private sector Bank Rank
	Public sector	Correlation Coefficient		.911**
	Bank Rank	P value (2-tailed)	•	.000
Spearman's		N	15	15
Rho	Private sector	Correlation Coefficient	.911**	1.000
	Bank Rank	P value (2-tailed)	.000	•
		N	15	15
**.	Correlation is s	significant at the 0	.01 level (2-tail	ed).

Source: Computed Data

The obtained spearman rank- order coefficient (Rho = 0.911, p < 0.001) is highly similar in magnitude and direction. Thus, the spearman coefficient indicates that ranks given by public sector banks respondents is similar to ranks given by private sector bank's respondents for their usage level of e-banking features. It is clear on the ranking results that the first five ranks (Online shopping, Checking balances, booking for Train / Bus / Flight / Movie Tickets, Fund Transfer, View Account Statements/ Transaction History) are occupied by the same features in public and private sector banks. In the same way, similar features on the 6 to 14 ranks, there is a difference in the pay tax rank preference in public sectors banks customer rank is 6 for pay tax whereas for private sector banks, customer choose 12. That indicates the customer preference on e-banking system varies between public and private sector banks for tax payer usage. It is understood from the analysis that customer usage pattern do not change on private and public sector banks.

6.19 RANKING BASED ON THE FACTORS INFLUENCING THE ADOPTION OF E-BANKING OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS

An attempt has been made to analyse the factors influencing the adoption of e-banking by the customers of public sector and private sector banks. The following table shows the details with regard to the factors influenced by customers of public sector and private sector banks:

TABLE 6.32

RANKING BASED ON THE FACTORS INFLUENCING THE ADOPTION OF E-BANKING

Influencing factors		e Sector ank	Private Sector Bank	
	Mean	Rank	Mean	Rank
E-banking easy to use	3.22	4	3.74	4
E-banking saves time	3.79	3	4.01	2
E-banking is available at any time (24X7)	4.01	2	4.36	1
E-banking is accessible from anywhere	4.37	1	3.99	3
E-banking is less expensive	3.08	5	3.21	5

What thrusts the customers in choosing e-banking is dealt with in this table. One of the reasons why customers from both public and private sector banks choose the respective bank's e-banking facility is because of its user friendliness. The mean score, in this regard, of the former is 3.22 while the latter's 3.74. This study shows that the private sector banks are slightly ahead than their competitor in this cause.

One of the other reasons why customers choose e-banking is that it saves their time. The mean score of the private sector banks, with this reason, is 4.01 while the mean score of the public sector banks is 3.79.

The availability of the websites round the clock is another reason for selecting e-banking. The mean scores 4.36 and 4.01 are of the private sector and public sector banks respectively.

Despite being ubiquitous, by and large, websites, sometimes, are not available throughout. In this case, the private sector banks lag behind with the mean score 3.99 that their rival banks whose mean score is 4.37.

With regard to the expenditure of using the e-banking, the satisfaction level of the private sector banks' customers is higher than that of the public sector banks. The former has gained 3.21 as their mean score while the latter has scored 3.08 the mean score.

Thus, this table shows the ups and downs in mean scores between the private and public sector banks. However, the former is streets ahead than the latter.

6.20 EXPLORATORY FACTOR ANALYSIS FOR THE PRECAUTIONS AGAINST RISK WHILE USING E-BANKING

Factor analysis is a data reduction technique that can reduce the number of items by grouping them and by examining the content of the items in each group one can determine the structure or composition of each group thereby giving a better explanation of the data. It is important to note that factor analysis is not used in prediction or explaining the relationship between different sets of variables, nor is it used to determine group differences. The goal is to explain the underlying structure or composition of the data; therefore we are dealing only with one set of variables.

TABLE 6.33
KMO AND BARTLETT'S TEST

Kaiser-Meyer-Olkin Adeq	.848	
	Approx. Chi-Square	2428.418
Bartlett's Test of Sphericity	df	55
_ ,	P value	0.000

Source: Computed Data

The KMO and Bartlett's Test displays the results for interpreting the adequacy of data for factor analysis. Kaiser-Meyer-Olkin (KMO) is a measure of sampling adequacy and its value should be greater than 0, 6 for the sample to be adequate for undertaking factor analysis. Also, the p-value of Bartlett's test is .000 (less than .005), thus, the hypothesis that the correlation matrix is an identity matrix can be rejected, that is, the correlation matrix has significant correlations among at least some of the variables. Hence factor analysis can be undertaken using this dataset.

TABLE 6.34

ROTATED COMPONENT MATRIX FOR THE PRECAUTIONS AGAINST
RISK WHILE USING E-BANKING

	Compo	Communalities	
	1	2	(Extraction)
p4	.801	.138	.660
р3	.757	.140	.592
p5	.753		.569
p2	.735	.117	.554
p10	.722		.531
p11	.708		.508
p1	.669	.232	.501
p8	.100	.859	.747
p7	.163	.850	.749
рб	.154	.849	.745
p9	.124	.836	.715
Eigenvalues	4.603	2.270	
Cronbach's Alpha	.837	0.791	
% of Variance	41.843	20.637	
Total variance explained	62.4	80	

Source: Primary Data

The communalities column presents the communality of each variable (i.e, the proportion of variance in each variable accounted for by the common factors). In using the principal component method for factor extraction, it is possible to compute as many factors as there are variables. When all factors are included in the solution, all of the variance of each variable is accounted for by the common factors, thus, the proportion of variance accounted for by the common factors, or the communality of a variable, is 1 for all the variables.

The Total Variance Explained rows present the number of column factors extracted, the eigenvalues associated with these factors, the percentage of total variance accounted for by each factors, and the cumulative percentage of total variance accounted by the factors. Using the criterion of retaining only factors with eigenvalues of 1 or greater, two factors were retained for rotation. These two factors accounted for 41.843%, and 20.637of the total variance, respectively, for a total of 62.480%.

In the Rotated Components Matrix, each number represents the partial correlation coefficient between variable and the rotated component. These coefficients help in identifying the components. All the variables that have large factor loadings for a given component define the component.

The variables constituting components 1 are:

- I access e-banking using the website address received through e-mails
- I access e-banking by copy pasting the website address of bank from other websites.
- I do not disclose my password to any
- I do not reply to e-mails that ask for my user ID and passwords
- I don't access e-banking from networked computers

• I read the tips for safe use of e-banking account on the bank's website.

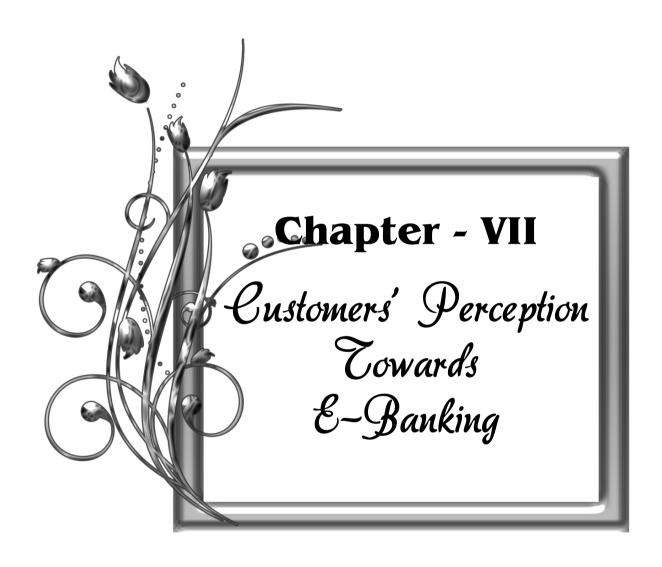
The variables constituting component 2 are:

- I change my passwords frequently
- I log off from the bank's website after e-banking use
- I verify the last date and time of log on given in the online account
- I verify periodically all my e-banking transaction

The results of principal Component Analysis reveals that main factors of precautions against risk while using internet with following factors:

- 1. Precaution steps
- 2. Periodical verification

Thus, e-banking users may focus on these factors for increasing safety and reduce risk while using e-banking services.



CHAPTER VII

CUSTOMERS' PERCEPTION TOWARDS E-BANKING

- 7.1 INTRODUCTION
- 7.2 PERCEPTION OF CUSTOMERS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS TOWARDS E-BANKING BASED UPON THEIR EXPERIENCE
- 7.3 RANKING BASED ON PREFERRED CHANNEL OF E-BANKING BY THE RESPONDENTS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS
- 7.4 SERVICE QUALITY GAP IN PUBLIC SECTOR BANKS IN TIRUNELVELI DISTRICT
- 7.5 SERVICE QUALITY GAP IN PRIVATE SECTOR BANKS IN TIRUNELVELI DISTRICT
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CHAPTER VII

CUSTOMERS' PERCEPTION TOWARDS E-BANKING

7.1 INTRODUCTION

This chapter is discussing about the perception and preference of customers of public sector and private sector banks towards e-banking and also the service quality gap in public sector and private sector banks.

7.2 PERCEPTION OF CUSTOMERS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS TOWARDS E-BANKING BASED UPON THEIR EXPERIENCE

An attempt has been made to analyse the perception of customers of public sector and private sector banks towards e-banking based upon their experience 't' test is attempted with the null hypothesis as, "there is no difference on mean scores of opinion of respondents towards services of public and private sector bank". The following table shows the details with regard to the perception of public sector and private sector banks customers:

TABLE 7.1

PERCEPTION OF RESPONDENTS BASED ON THEIR EXPERIENCE
FROM THEIR BANKS

	Public Ba	Sector nk		e Sector ank		e 1)
Variable	Mean	Std. Deviation	Mean	Std. Deviation	t	P value (2-tailed)
The website has helping facilities	3.320	.6579	3.805	.6812	-7.771	.000
website design is attractive	3.031	.7699	4.106	.6727	-15.982	.000
I trust e-banking services presented on the bank's website	3.356	.4797	3.568	.4964	-4.664	.000
The bank delivers e-banking services as promised	3.200	.7071	3.792	.8426	-8.157	.000
The website is updated continuously	2.702	.5788	3.979	.7406	-20.554	.000
Bank takes care of e-banking complaints quickly	2.347	.5937	3.318	.6753	-16.367	.000
There is quick response from my bank to customer queries	2.707	.4563	3.555	.4980	-19.045	.000
Web page load promptly	2.644	.5960	2.619	.5967	.464	.643
Log in to e-banking website is fast	2.831	.3755	3.042	.7073	-3.977	.000
The sites provides a confirmation of the service requested quickly	2.800	.6196	3.114	.7378	-4.943	.000
Logout speed of my account is fast	3.467	.5000	3.496	.5010	624	.533
Finding what I need is easy and simple	3.004	.6911	3.576	.7427	-8.548	.000
Easy options for cancelling transactions are provided	3.520	.5007	3.559	.4975	846	.398
E-banking website of my bank always satisfy all my service needs	3.133	.5901	4.169	.6880	-17.320	.000
My personal information is secured and protected	3.529	.5003	3.792	.6352	-4.932	.000

Source: Computed data

The table 7.1 shown above presents with the details of various features of both public and private sector banks. Both the categories of banks give different mean scores in many factors. The mean score of public sector bank, with regard to the availability of information in the websites, is 3.320 as against the private sector banks' mean score i.e. 3.805. Here, the private sector bank is slightly ahead of that of the public sector bank.

The website design of private sector banks has attracted many than that of the public sector banks. 4.106 is the mean score for the private sector banks as against the 3.031 for public sector banks. It is a glaring difference between both the public and private sector banks in this regard.

The electronic banking services, once again, has helped the private sector banks with the mean score 3.568 as against the public sector banks' mean score 3.356. However, it is only a little difference in this case.

The mean score 3.792 is for the promised services of the electronic banking of private sector bank as against the 3.200 mean score for that of public sector bank.

The continuous update of websites has gained 3.979 mean score for private sector bank whereas it is only a mere 2.702 mean score for public sector bank.

Electronic banking complaints are responded quickly in private sector banks while it is not up to the mark for public sector banks. The former has scored 3.318 mean score while the latter has gained only 2.237.

The private sector banks respond as quickly as possible for its customers' queries, whose mean score is 3.555. However, the mean score 2.707 of public sector in this regard shows clearly its customer service.

All the four factors mentioned above clearly show that the private sector bank has no competition in its service and other facilities, features etc. However, as a slight relief to public sector banks, it has scored the mean score 2.644 for the prompt in loading of its web page. Here, the private sector bank's mean score, in this regard, is 2.619.

Many of private sector bank customers could log in to electronic banking promptly when compared to that of public sector banks. The former's mean score is 3.042 while the latter's mean score is 2.831.

The customers in private sector banks are relieved to get a confirmation message quickly as against that of public sector banks. The mean score 3.114 is for private sector while the mean score 2.800 is for public sector banks.

Customers from both the private and public sector banks have opinioned positively about the logout speed of their respective bank's websites. The private sector is slightly ahead with 3.496 mean score than that of the public sector bank whose mean score is 3.467.

In private sector banks' websites, the customers could get the information very easily whereas it is neither easy nor simple in public sector bank websites. The former's mean score is 3.576 while the latter's 3.004. It shows that the private sector banks' websites are kept abreast of.

The private sector banks have provided its customers with various and simple options to cancel the transactions whose mean score is 3.559. The public sector banks, however, follow, in this case, closely its rivals with the mean score 3.520.

The websites of private sector banks cater to the need of its customers with the mean score 4.169. However, there is a huge gab in the mean score i.e. 3.133 of public sector banks in this case.

Customers' privacy in private sector banks is safe and secured when compared to that of its rival sector banks. The former's mean score is 3.792 and the latter's 3.529.

Thus, this table informs of the customers' mixed feelings towards using the respective websites.

7.3 RANKING BASED ON PREFERRED CHANNEL OF E-BANKING BY THE RESPONDENTS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS

An attempt has been made to analyse the preferred channel of e-banking by the customers of public sector and private sector banks. Table 7.2 shows the details with regard to the preferred channel by the customers of public sector and private sector banks.

TABLE 7.2

RANKING BASED ON PREFERRED CHANNEL OF E-BANKING
BY THE RESPONDENTS

Attribute	1	2	3	4	5	Total	Rank
Score (X)	75	60	50	40	24	10tai	Kank
ATM/ Debit card (F1)	190	210	31	22	8	29472	I
XF1	14250	12600	1550	880	192	29472	1
Online Banking(F2)	200	124	85	40	12	28578	II
XF2	15000	7440	4250	1600	288	28378	11
Mobile Banking (F3)	194	120	92	30	25	28150	III
XF3	14550	7200	4600	1200	600	28130	111
Branch banking (F4)	53	100	214	62	32	23923	V
XF4	3975	6000	10700	2480	768	23923	V
Telephone Banking (F5)	100	237	68	13	43	26672	IV
XF5	7500	14220	3400	520	1032	20072	1 V

Source: Primary data

It could be observed from the above table 7.2 that, the respondents preferred channel to conduct banking transactions and services ATM / Debit card services were ranked first by the respondents with a Garrett score of 29472 points. It is followed by the preferred service of "online banking" with the Garrett score of 28578 points. The mobile banking and telephone banking were ranked in the third and fourth place with a Garrett score of 28150 and 23923 points. The respondents preferred fifth factor is branch banking with the Garrett score of 26672 points. From the analysis, it is inferred that ATM / Debit card services online banking are the prime preferred factors that are mostly used for the banking transactions highlighted by the respondents.

7.4 SERVICE QUALITY GAP IN PUBLIC SECTOR BANKS IN TIRUNELVELI DISTRICT

An attempt has been made to analyse the service quality gap of public sector banks towards e-banking 't' test is attempted with the null hypothesis as, "there is no difference between mean scores of respondents' expectation and satisfaction towards public sector banks' services quality ". The following table shows the details with regard to the service quality gap of public sector banks customers:

TABLE 7.3
SERVICES- QUALITY GAP IN PUBLIC SECTOR BANKS

]	Public bank		Efficiency % = (P/E)*100	Service Quality Gap	t	P value (2-tailed)
Pair 1	E_Tangibility	3.458	91.75%	-8.25%	5.116	0.000
raii i	S_Tangibility	3.173	91./3%	-0.23%	3.110	0.000
Pair 2	E_Reliability	4.062	89.70%	-10.3%	8.995	0.000
Fall 2	S_Reliability	3.644	69.70%	-10.570	0.773	0.000
Pair 3	E_Responsiveness	<u>+</u>		-33.14%	24.386	0.000
raii 3	S_Responsiveness	2.351	66.86%	-33.1470	24.360	0.000
Pair 4	E_Assurance	4.196	88.75%	-11.25%	0.001	0.000
Fall 4	S_Assurance	3.724	00.73%	-11.23%	9.001	0.000
Pair 5	E_Empathy	3.996	64.73%	-35.27%	24.821	0.000
rail 3	S_Empathy	2.587	04./3%	-33.21%	24.021	0.000

Source: Computed data

The above shown table 7.3 deals with the public sector banks' service and its short comings in quality. Customers of the public sector bank have different satisfaction level. Their satisfaction level is grouped under four levels namely tangibility, reliability, responsiveness, assurance and empathy. The expectation of the customers in the tangibility is 3.458 mean value as against the satisfied level 3.173. This results in a service gap, which is valued as -8.25.

As far as, with regard to the table, reliability is concerned, the expectation of the customers is 4.062 mean values whereas the satisfied customers' given mean value is 3.644. This accounts for a service gap mean value 3.644.

The expected mean score of 3.516, in responsiveness, is very much contrasted with that of the satisfied level mean score 2.351. This makes up for a huge -33.14 service gap.

The mean score for the expectation in assurance is 4.196 as against the mean score 3.724 for the satisfied level. This sees a service gap of -11.25.

Of the entire table, empathy registers for a very huge percentage difference in service gap with -35.27. The expectation here is 3.996 in contrast to the satisfied mean score 2.587.

Of all the levels, responsiveness and empathy are with the highest service gap with -33.14 and -35.27 respectively.

7.5 SERVICE QUALITY GAP IN PRIVATE SECTOR BANKS IN TIRUNELVELI DISTRICT

An attempt has been made to analyse the service quality gap of private sector banks towards e-banking 't' test is attempted with the null hypothesis as, "there is no difference between mean scores of respondents' expectation and satisfaction towards private sector banks' services quality". The following table shows the details with regard to the service quality gap of public sector banks customers:

TABLE 7.4
SERVICES- QUALITY GAP IN PRIVATE SECTOR BANKS

Private bank		Mean	Efficiency = (P/E)*100	GAP	t	P value (2-tailed)	
Pair 1	E_Tangibility	3.712	95.42%	-4.58%	6.925	0.000	
raii 1	S_Tangibility	3.542	93.42%	-4.36%	0.923	0.000	
Pair 2	E_Reliability	4.369	94.94%	-5.06%	5.337	0.000	
Pair 2	S_Reliability	4.148	94.94%	-3.00%		0.000	
Pair 3	E_Responsiveness	4.449	04.760/	-5.24%	3.617	0.000	
Pair 3	S_Responsiveness	4.216	94.76%	-3.24%	3.017	0.000	
Pair 4	E_Assurance	3.962	1000/	00/	0.00	1.000	
Pair 4	S_Assurance	3.962	100%	0%		1.000	
Pair 5	E_Empathy	4.284	102.26%	2.26%	1 (70	0.004	
Pair 3	S_Empathy	4.381	102.20%	2.20%	-1.679	0.094	

Source: Computed data

The table 7.4, as of the previous one, throws light on the private sector banks' service and its quality etc. Here, with the private sector, as against the public sector, the overall satisfactory level of the customers is streets ahead. Their satisfaction level, as that of the private sector, is grouped under four levels namely tangibility, reliability, responsiveness, assurance and empathy. The expectation of the customers in the tangibility is 3.712 mean value as against the satisfied level 3.542. A service gap mean value -4.58 is the result..

Reliability, one of the levels of the 5 levels, scores 4.369 in the expectation of the customers while the satisfaction level of the customers is 4.148. This accounts for a service gap mean value -5.06.

The expected mean score of responsiveness is 4.449 as against the mean score 4.216 for the satisfied level mean score. The service gap level is -5.24.

3.962 is the mean value of expectation and satisfaction level of assurance, the fourth level in the table. Surprisingly, there is no room for service gap in assurance.

Empathy, whose expectation level is 4.284 as against the satisfaction level 4.381, is the last in the table. The service gap level is 2.26.

7.6 MULTIPLE REGRESSIONS FOR SATISFACTION OF E-BANKING SERVICES OF PUBLIC SECTOR BANKS

Multiple Regression analysis between Independent variables of ATM services (X1), Internet banking services (X2), Telephone banking services (X3) and Mobile banking services (X4) and dependent variable of E-banking services satisfaction (Y) of public sector banks attempted with the null hypothesis as, "independent variables (services) have no effect on respondents' e-banking services satisfaction of public sector banks". The following table shows the multiple regressions for satisfaction of e-banking services of public sector banks:

TABLE 7.5

MODEL SUMMARY FOR E-BANKING SERVICES AND SATISFACTION
OF PUBLIC SECTOR BANKS

Model Summary ^a							
Model R R Square		R Square	Adjusted R Square	Std. Error of the Estimate			
1	.457 ^b	.209	.194	1.436			

Source: Computed data

Here the above table 7.5 focuses only on the R and R square value. For an R square of 0.209, it can be said that the model explains 20.9% of the variations and so the model is a good model.

TABLE 7.6

ANOVA FOR E-BANKING SERVICES AND SATISFACTION OF PUBLIC SECTOR BANKS

	Model Sum of Squares		df	Mean Square	F	P value
	Regression	119.781	4	29.945	14.515	.021
1	Residual	453.881	220	2.063		
	Total	573.662	224			

Source: Computed data

This table 7.6 shows the ANOVA results of four independent variables – ATM services (X1), Internet banking services (X2), Telephone banking services (X3) and Mobile banking services (X4). Remember that the initial null hypothesis of ANOVA tells us that independent variables have no effect on e-banking services satisfaction of public sector banks and the alternate hypothesis tells us that independent variables have an effect on e-banking services satisfaction of public sector banks.

In this table, F and the Sig are referred to infer the result. A high value of F means that there are more chance of the Null Hypothesis being rejected and alternate accepted, Here the Sig is < 0.05, which means that 95% confident that the alternate hypothesis is accepted, which means that X1, X2, X3 and X4 are different. Here it is 14.515, which means that the value is pretty high and that X1, X2, X3 and X4 will be different. On the other hand, the significant tells us the confidence level (5%-Sig) of accepting the alternate hypothesis. Here the Sig is 0.021, which means that you are

(1-0.021=0.979) 97.9% confident that the alternate hypothesis is accepted, and that X1, X2, X3 and X4 are different so researcher can says from both the F value and the Sig value that the four variables are indeed different from each other and that they affect the E-banking services satisfaction (Y) in a different manner.

TABLE 7.7

CO-EFFICIENT FOR E-BANKING SERVICES AND SATISFACTION OF PUBLIC SECTOR BANKS

	M. J.l		ndardized ficients	Standardized Coefficients		P
	Model	В	Std. Error	Beta	t	value
	(Constant)	7.984	1.134		7.038	.000
	ATM Services	1.425	.200	.572	7.119	.000
1	Internet Banking Services	1.311	.223	.508	5.882	.000
	Telephone Banking Services	.580	.131	.314	4.434	.000
	Mobile Banking Services	.105	.177	.043	.593	.554

Source: Computed data

The important things in the coefficients denote the structure of the model. The constant is the C, and then independent variables ATM services (X1), Internet banking services (X2), Telephone banking services (X3) and Mobile banking services (X4) so it can be understood:

Y = 1.425 (X1) + 1.311 (X2) + 0.580 (X3) + 0.105 (X4) + 7.984 or

Y = 1.425 (ATM services) + 1.311 (Internet banking services) + 0.580 (Telephone banking services) + 0.015 (Mobile banking services) + 7.984

So all the four independent variables have a positive relationship with e-banking services satisfaction and that ATM services quality increase in 1 unit leads to an increase in service satisfaction by 1.425, Internet banking services quality increase in 1 unit leads to an increase in service satisfaction by 1.311 unit, Telephone banking services quality increase in 1 unit leads to an increase in service satisfaction by 0.580 unit and Mobile banking services quality increase in 1 unit leads to an increase in service satisfaction by 0.015 unit.

7.7 MULTIPLE REGRESSIONS FOR SATISFACTION OF E-BANKING SERVICES OF PRIVATE SECTOR BANKS

Multiple Regression analysis between Independent variables of ATM services (X1), Internet banking services (X2), Telephone banking services (X3) and Mobile banking services (X4) and dependent variable of E-banking services satisfaction (Y) of private sector banks attempted with the null hypothesis as, "independent variables (services) have no effect on respondents' e-banking services satisfaction of private sector banks". The following table shows the multiple regressions for satisfaction of e-banking services of private sector banks:

TABLE 7.8

MODEL SUMMARY FOR E-BANKING SERVICES AND SATISFACTION OF
PRIVATE SECTOR BANKS

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.449 ^b	.202	.188	1.365

Source: Computed data

Here the above table 7.8 focuses only on the R and R square value. For an R square of 0.202, it can be said that the model explains 20.2% of the variations and so the model is a good model.

TABLE 7.9

ANOVA FOR E-BANKING SERVICES AND SATISFACTION OF PRIVATE SECTOR BANKS

	Model	Sum of Squares	df	Mean Square	F	P value
	Regression	107.490	4	26.872	14.422	0.023
1	Residual	424.819	228	1.863		
	Total	532.309	232			

Source: Computed data

This table 7.9 shows the ANOVA results of four independent variables – ATM services (X1), Internet banking services (X2), Telephone banking services (X3) and Mobile banking services (X4). Remember that the initial null hypothesis of ANOVA tells us that independent variables have no effect on e-banking services satisfaction of private sector banks and the alternate hypothesis tells us that independent variables have an effect on e-banking services satisfaction of private sector banks.

In this table, F and the Sig are referred to infer the result. A high value of F means that there are more chance of the Null Hypothesis being rejected and alternate accepted, Here the Sig is < 0.05, which means that 95% confident that the alternate hypothesis is accepted, which means that X1, X2, X3 and X4 are different. Here it is 14.422, which means that the value is pretty high and that X1, X2, X3 and X4 will be different. On the other hand, the significant tells us the confidence level (5%-Sig) of accepting the alternate hypothesis. Here the Sig is 0.023, which means that you are

(1-0.023=0.977) 97.7% confident that the alternate hypothesis is accepted, and that X1, X2, X3 and X4 are different. So researcher can says from both the F value and the Sig value that the four variables are indeed different from each other and that they affect the E-banking services satisfaction (Y) in a different manner.

TABLE 7.10

CO-EFFICIENT FOR E-BANKING SERVICES AND SATISFACTION OF PRIVATE SECTOR BANKS

	M. I.I	Unstandardized Coefficients		Standardized Coefficients		P
	Model	В	Std. Error	Beta	t	value
	(Constant)	15.293	1.150		13.297	.000
1	ATM Services	1.114	.150	.495	7.440	.000
	Internet Banking Services	.199	.136	.090	1.460	.146
	Telephone Banking Services	.089	.145	.039	.610	.542
	Mobile Banking Services	.462	.174	.179	2.653	.009

Source: Computed data

The important things in the coefficients denote the structure of the model. The constant is the C, and then independent variables ATM services (X1), Internet banking services (X2), Telephone banking services (X3) and Mobile banking services (X4) so it can be understood:

$$Y = 1.114 (X1) + 0.199 (X2) + 0.089 (X3) + 0.462 (X4) + 15.293 or$$

Y = 1.114 (ATM services) + 0.199 (Internet banking services) + 0.089 (Telephone banking services) + 0.462 (Mobile banking services) + 15.293

So all the four independent variables have a positive relationship with e-banking services satisfaction of private sector E-banking services and that ATM services quality increase in 1 unit leads to an increase in service satisfaction by 1.114 unit, Internet banking services quality increase in 1 unit leads to an increase in service satisfaction by 0.199 unit, Telephone banking services quality increase in 1 unit leads to an increase in service satisfaction by 0.089 unit and Mobile banking services quality increase in 1 unit leads to an increase in service satisfaction by 0.462 unit.

7.8 MULTIPLE REGRESSIONS FOR SATISFACTION AND PROBLEMS OF E-BANKING SERVICES OF PUBLIC SECTOR BANKS

Multiple Regression analysis between Independent variables of problems in ATM services (X1), Internet banking services (X2), Telephone banking services (X3) and Mobile banking services (X4) and dependent variable of E-banking services satisfaction (Y) of public sector banks attempted with the null hypothesis as, "Independent variables (problems) have no effect on respondents' e-banking satisfaction of public sector banks". The following table shows the multiple regressions for satisfaction and problems of e-banking services of public sector banks:

TABLE 7.11

MODEL SUMMARY FOR SATISFACTION AND PROBLEMS OF
E-BANKING OF PUBLIC SECTOR BANKS

			Model Summary ^a	
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.578 ^b	.334	.322	1.318

Source: Computed data

Here the above table 7.11 focuses only on the R and R square value. For an R square of 0.334, it can be said that the model explains 33.4% of the variations and so the model is a good model.

TABLE 7.12

ANOVA FOR SATISFACTION AND PROBLEMS OF E-BANKING OF PUBLIC SECTOR BANKS

	Model	Sum of Squares	df	Mean Square	F	P value
	Regression	191.767	4	47.942		
1	Residual	381.895	220	1.736	27.618	.011
	Total	573.662	224			

Source: Computed data

This table 7.12 shows the ANOVA results of four independent variables – problems in ATM services (X1), Internet banking services (X2), Telephone banking services (X3) and Mobile banking services (X4). Remember that the initial null hypothesis of ANOVA tells us that independent variables have no effect on e-banking services satisfaction of public sector banks and the alternate hypothesis tells us that independent variables have an effect on e-banking services satisfaction of public sector banks.

In this table, F and the Sig are referred to infer the result. A high value of F means that there are more chance of the Null Hypothesis being rejected and alternate accepted, Here the Sig is < 0.05, which means that 95% confident that the alternate hypothesis is accepted, which means that X1, X2, X3 and X4 are different. Here it is 27.618, which means that the value is pretty high and that X1, X2, X3 and X4 will be different. On the other hand, the significant tells us the confidence level (5%- Sig) of

accepting the alternate hypothesis. Here the Sig is 0.011, which means that you are (1-0.011=0.989) 97.9% confident that the alternate hypothesis is accepted, and that X1, X2, X3 and X4 are different. So researcher can says from both the F value and the Sig value that the four variables are indeed different from each other and that they affect the E-banking services satisfaction (Y) in a different manner.

TABLE 7.13

COEFFICIENTS FOR SATISFACTION AND PROBLEMS OF E-BANKING OF PUBLIC SECTOR BANKS

	Model	Unstandardized Coefficients		Standardized Coefficients	t	P
		В	Std. Error	Beta		value
	(Constant)	21.429	.690		31.077	.000
	ATM Problems	-1.452	.186	292	-4.052	.000
1	Internet Banking Problems	656	.160	298	-4.094	.000
	Telephone Banking Problems	741	.268	459	-5.366	.000
	Mobile Banking Problems	354	.141	141	-2.506	.013

Source: Computed data

The important things in the coefficients denote the structure of the model. The constant is the C, and then independent variables ATM services (X1), Internet banking services (X2), Telephone banking services (X3) and Mobile banking services (X4) so it can be understood:

$$Y = 21.429 - 1.452 (X1) - 0.656 (X2) - 0.741 (X3) - 0.354 (X4)$$
 or

Y = 21.429 - 1.452 (problems in ATM services) - 0.656 (problems in Internet banking services) - 0.741 (problems in Telephone banking services) - 0.354 (problems in Mobile banking services)

So all the four independent variables have a negative relationship with e-banking services satisfaction and that ATM problems increase in 1 unit leads to decrease in service satisfaction by 1.452, Internet banking problems increase in 1 unit leads to decrease in service satisfaction by 0.656 unit, Telephone banking problems increase in 1 unit leads to decrease in service satisfaction by 0.741 unit and Mobile banking problems increase in 1 unit leads to an decrease in service satisfaction by 0.354 unit.

7.9 MULTIPLE REGRESSIONS FOR SATISFACTION AND PROBLEMS OF E-BANKING SERVICES OF PRIVATE SECTOR BANKS

Multiple Regression analysis between Independent variables of problems in ATM services (X1), Internet banking services (X2), Telephone banking services (X3) and Mobile banking services (X4) and dependent variable of E-banking services satisfaction (Y) of private sector banks attempted with the null hypothesis as, "independent variables (problems) have no effect on respondents' e-banking satisfaction of private sector banks". The following table shows the multiple regressions for satisfaction and problems of e-banking services of private sector banks:

TABLE 7.14

MODEL SUMMARY FOR SATISFACTION AND PROBLEMS OF
E-BANKING OF PRIVATE SECTOR BANKS

			Model Summary ^a	
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.456 ^b	.208	.198	1.357

Source: Computed data

Here the above table 7.14 focuses only on the R and R square value. For an R square of 0.456, it can be said that the model explains 19.8% of the variations and so the model is a good model.

TABLE 7.15

ANOVA FOR SATISFACTION AND PROBLEMS OF E-BANKING OF PRIVATE SECTOR BANKS

	Model	Sum of Squares	df	Mean Square	F	P value
	Regression	110.791	3	36.930		
1	Residual	421.518	229	1.841	20.063	.009
	Total	532.309	232			

Source: Computed data

This table 7.15 shows the ANOVA results of four independent variables – problems in ATM services (X1), Internet banking services (X2), Telephone banking services (X3) and Mobile banking services (X4). Remember that the initial null hypothesis of ANOVA tells us that independent variables have no effect on e-banking services satisfaction of private sector banks and the alternate hypothesis tells us that independent variables have an effect on e-banking services satisfaction of private sector banks.

In this table, F and the Sig are referred to infer the result. A high value of F means that there are more chance of the Null Hypothesis being rejected and alternate accepted, Here the Sig is < 0.05, which means that 95% confident that the alternate hypothesis is accepted, which means that X1, X2, X3 and X4 are different. Here it is 27.618, which means that the value is pretty high and that X1, X2, X3 and X4 will be different. On the other hand, the significant tells us the confidence level (5%- Sig) of

accepting the alternate hypothesis. Here the Sig is 0.011, which means that you are (1-0.009=0.) 99% confident that the alternate hypothesis is accepted, and that X1, X2, X3 and X4 are different. So researcher can says from both the F value and the Sig value that the four variables are indeed different from each other and that they affect the E-banking services satisfaction (Y) in a different manner.

TABLE 7.16

COEFFICIENTFOR SATISFACTION AND PROBLEMS OF E-BANKING OF PRIVATE SECTOR BANKS

	Coefficients ^{a,b}							
	Model	Unstandardized Coefficients		Standardized Coefficients	t	P		
		В	Std. Error	Beta		value		
	(Constant)	19.715	.547		36.019	.000		
1	ATM Problems	-1.102	.186	204	-3.022	.000		
	Internet Banking Problems	372	.163	143	-2.281	.023		
	Telephone Banking Problems	.947	.165	.367	5.743	.000		
	Mobile Banking Problems187		.125	091	-1.497	.136		

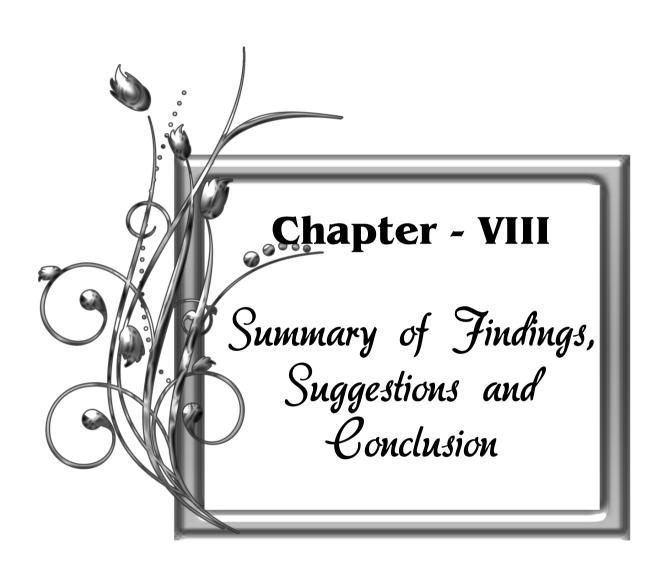
Source: Computed data

The important things in the coefficients denote the structure of the model. The constant is the C, and then independent variables of problems in ATM services (X1), Internet banking services (X2), Telephone banking services (X3) and Mobile banking services (X4) so it can be understood:

Y = 19.715 - 1.102 (X1) - 0.372 (X2) - 0.947 (X3) - 0.187 (X4) or

 $Y=19.715\text{-}\ 1.102\ (problems\ in\ ATM\ services)}\ \text{-}\ 0.372\ (problems\ in\ Internet}$ banking services) - 0.947 (problems in Telephone banking services) - 0.187 (problems in Mobile banking services)

So, all the four independent variables have a negative relationship with e-banking services satisfaction and that ATM problems increase in 1 unit leads to decrease in service satisfaction by 1.102, Internet banking problems increase in 1 unit leads to decrease in service satisfaction by 0.372 unit, Telephone banking problems increase in 1 unit leads to decrease in service satisfaction by 0.947 unit and Mobile banking problems increase in 1 unit leads to an decrease in service satisfaction by 0.187 unit.



CHAPTER VIII

SUMMARY OF FINDINGS, SUGGESTIONS AND CONCLUSION

6.1 INTRODUCTION	8.1	INTRODUCTION
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- 8.2 FINDINGS OF THE STUDY
- 8.3 SUGGESTIONS
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CHAPTER VIII

SUMMARY OF FINDINGS, SUGGESTIONS AND CONCLUSION

8.1 INTRODUCTION

The researcher presents the summary of the findings of the study in this chapter. The study is empirical and exploratory in nature. The main thrust of the study is analysing the perception and preference of customers of public sector and private sector banks towards e-banking in Tirunelveli district. The historical background and development of e-banking, the socio demographic profile of the customers use e-banking, the factors induced to use e-banking, satisfaction of the customers towards e-banking, problems faced by the customers while using e-banking, service quality gap in e-banking services of public sector and private sector banks in the district are also analysed in the study and the results are presented in this chapter. This chapter also presents the suggestions given by the researcher on the basis of the findings of the study to improve the e-banking services and overcome the problems faced by the customers of public sector and private sector banks in Tirunelveli district. The chapter also contains the areas for further research which may immensely contribute to both theory and practice of electronic Banking.

8.2 FINDINGS OF THE STUDY

❖ It is found that majority 60.7 per cent of the respondents are male and the remaining 39.3 per cent are female. In public sector banks, majority 52 per cent of the respondents are male and in private sector banks, majority 69.1 per cent of the respondents are male. Because male respondents are more independent to open an account than female respondents.

- ❖ It is found that majority 35.3 per cent of the respondents are in the age group of 20-30 years and the next majority 23.8 per cent are in the age group of 31-40 years. In public sector banks, majority 32.6 per cent of the respondents are in the age group of 20 30 years and in private sector banks, majority 45.1 per cent of the respondents are in the age group of 20 to 30 years. The reason for the majority of the young aged respondents using e-banking in public sector banks and private sector banks in the study area is that young aged respondents are technologically advanced than old age respondents. Hence, majority of the young aged respondents using e-banking in public sector banks and private sector banks than old aged respondents.
- ❖ It is observed that majority 33.6 percent of the respondents are completed professional courses and the next majority 29.1 percent of the respondents are graduates. In public sector banks majority 37.3 percent of the respondents are completed professional courses and in private sector banks majority 35.6 percent of the respondents are under graduates. The reason for the majority is they have more awareness and high literacy about e-banking. Hence, majority of the respondents are professional and under graduate qualification using e-banking in public sector banks and private sector banks.
- ❖ It is witnessed that majority 77.2 percent of the respondents are married and rest of the 22.8 percent of the respondents are single. In public sector banks majority 72 percent of the respondents are married and in private sector banks majority 82.2 percent of the respondents are married. The reason for the majority of the married respondents using e-banking in public sector banks and private sector banks in the study area is that, married respondents are independently operate

bank transactions. But the unmarried respondents are not so independent to operate. Hence, majority of the married respondents using e-banking in public sector and private sector banks than unmarried respondents

- the is found that majority 25.8 per cent of the respondents are private employees and the next majority 21.7 per cent of the respondents are professional. In public sector banks majority 24 per cent of the respondents are professional and in private sector banks majority 28.4 per cent of the respondents are private employees. The reason for the majority of the professionals using e-banking in public sector banks and private employees in private sector banks in the study area is that, they don't have much time to go bank branches. Hence, majority of the private employees and professionals use e-banking services in public sector banks and private sector banks than others.
- It is perceived that majority 28.6 per cent of the respondents are earn ₹ 40000-60000 per month and the next majority 28.4 per cent of the respondents are earn ₹ 20000-40000 per month. In public sector banks majority 29.3 per cent of the respondents are earn less than ₹ 20000 per month and in private sector banks majority 32.6 per cent of the respondents are earn ₹ 40000-60000 per month. The reason for the majority of the respondents belong to low monthly income has account in public sector bank is that they feel secure in public sector banks and high monthly income has account in private sector banks because they prefer to save money in the banks with high interest. Hence, majority of the respondents belong to low monthly income have account in public sector banks and high income have account in private sector banks.

- ❖ It is found that majority 31.5 per cent of the respondents are using e-banking 1-3 years and the next majority 25.4 per cent of the respondents are using e-banking 3-5 years. In public sector banks majority 28.9 per cent of the respondents are using e-banking 1-3 years and in private sector banks majority 33.9 per cent of the respondents are using e-banking 1-3 years.
- ❖ It is observed that majority 37.7 per cent of the respondents says that ease of use is the motivating factor for availing e-banking services and the next majority 25.6 per cent of the respondents says that reduced time of transaction is the motivating factor for availing e-banking services. In public sector banks majority 42.7 per cent of the respondents says that ease of use is the motivating factor for availing e-banking services and in private sector banks majority 33.1 per cent of the respondents says that ease of use is the motivating factor for availing e-banking services. In Tirunelveli district fast developments in IT and speed networks help the e-banking users to complete their transactions without any hurdles. Hence, majority of the public sector and private sector banks respondents induced by ease of use and reduced time of transactions.
- ❖ Banking attributes of value creation and Technology used were ranked first followed by the speed. Trust and problem redressed were ranked in the third and fourth place. The respondents' preferred fifth factor is location. From the analysis, it is inferred that technology and speed are the prime preferred factors that are mostly used for the e-banking transactions highlighted by the respondents.
- ❖ It is found that majority 47.9 per cent of the respondents having high computer usage knowledge and the next majority 28 per cent of the respondents having low computer usage knowledge. In public sector banks majority 52.4 per cent of the

respondents having high computer usage knowledge and in private sector banks majority 43.6 per cent of the respondents having high computer usage knowledge. Now a day the world without electronic gadgets is impossible. Hence, majority of the public sector and private sector banks respondents have high computer literacy level in the study area.

- It is observed that majority 40.1 per cent of the respondents know about e-banking through friends and family members and the next majority 34.5 per cent of the respondents know about e-banking from banks. In public sector banks majority 47.6 per cent of the respondents know about e-banking through friends and family members and in private sector banks majority 39.8 per cent of the respondents know about e-banking from banks. Through word of mouth promotion most of the products and services are get successful results. In every private sector banks employees are compel to advertise their banking services. Hence, majority of the public sector banks respondents are get awareness about e-banking through friends and relatives and private sector banks respondents are get awareness about e-banking from banks.
- ❖ It is witnessed that 51.41 per cent of people visit their bank's branch 2-3 times in a month in person, 46.42 per cent visit the ATM 3-8 times in a month,46.42 per cent visit the Internet banking once in a month, 50.11 per cent visit the Telephone banking once in a month and 45.99 per cent visit the Telephone banking once in a month.
- The public sector banks respondents are satisfy with ATM services followed by Internet banking services and their respective mean scores are 3.76 and 2.83 and among the customers of private sector banks, they are satisfied with ATM

services followed by Internet banking services and their respective mean scores are 3.78 and 3.39.

- The public sector banks respondents are facing problems with Telephone banking followed by Mobile banking services and their respective mean scores are 3.160 and 2.947 and among the customers of private sector banks, they are facing problems with Mobile banking services followed by Internet banking services and their respective mean scores are 1.881 and 1.682.
- The Banking Sector and Gender interaction is not significant for Internet Banking Services and Telephone Banking Services, F (1,457) =2.362, p > 0.05 and F (1,457) =0.689, p > 0.05 respectively. The Banking Sector and Gender interaction is significant for ATM services and Mobile Banking Services, F (1,457) =119.154, p < 0.05 and F (1,457) =119.154, p < 0.05 respectively. For ATM services of public sector bank, Male respondents (M=4.00) are more satisfied than Female respondents (M=3.51). But Female respondents (M=4.30) are more satisfied towards the ATM services of private sector bank than Male respondents (M=3.55). Likewise, Female respondents (M=2.75) are more satisfied towards the mobile banking services of public sector bank than male respondents (M=1.91) and Male respondents (M=3.61) are more satisfied on mobile banking services of private sector bank than female respondents (M=3.34).
- ❖ The Banking Sector and Age interaction is not significant for ATM Services F (2,456) =0.848, p > 0.05 respectively. The Banking Sector and Age interaction is significant for Internet banking services, Telephone banking services and Mobile Banking Services, F (2,456) =16.096, p < 0.05, F (2,456) =24.437, p < 0.05 and F (2,456) =23.012, p < 0.05 respectively. For Internet banking services, all the three</p>

age group of respondents are more satisfied by the private sector banks than the public sector bank. But the age level of 18 - 30 years and above 50 years of respondents' level of satisfaction on Internet banking services is having huge differences than 30 - 50 years age group of respondents. For Telephone banking services, all the three age group of respondents are more satisfied by the private sector banks than the public sector bank. But the age level of above 50 years of respondents' level of satisfaction on Telephone banking services is having huge differences than 18 - 30 years and 30 - 50 years age group of respondents. For Mobile banking services, all the three age group of respondents are more satisfied by the private sector banks than the public sector bank. But the age level of 18 - 30 years and above 50 years of respondents' level of satisfaction on Mobile banking services is having huge differences than 30 - 50 years age group of respondents.

The Banking Sector and Education interaction is significant for ATM services, Internet banking services, Telephone banking services and Mobile Banking Services, F (3,455) = 42.620, p < 0.05, F (3,455) = 92.764, p < 0.05, F (3,455) = 16.743, p < 0.05 and F (3,455) = 53.584, p < 0.05 respectively. For ATM services, Post Graduate and Professional qualified respondents are more satisfied by private sector bank than public sector bank. But School and under graduate qualified respondents are more satisfied by public sector bank than private sector bank. For Internet banking services, under graduate and professional qualified respondents are more satisfied by private sector bank than public sector bank. But post graduate qualified respondents are more satisfied by public sector bank than private sector bank. For Telephone banking services and Mobile banking services,

all the four groups of respondents are more satisfied by the private sector banks than the public sector bank.

- * The Banking Sector and Occupation interaction is significant for ATM services, Internet banking services, Telephone banking services and Mobile Banking Services, F (5,456) = 13.209, p < 0.05, F (5,456) = 17.103, p < 0.05, F (5,456) =16.066, p < 0.05 and F (5,456) = 41.596, p < 0.05 respectively. For ATM services, respondents of Professionals and Housewife are more satisfied by private sector bank than public sector bank. But Government employee, Private employee, Business man and Students are more satisfied by public sector bank than private sector bank. For Internet banking services, Business men are more satisfied by public sector bank than private sector bank. But Government employee, private employee, professionals, students and housewife are more satisfied by private sector bank than public sector bank. For Telephone banking services, respondents of housewife are more satisfied by public sector bank than private sector bank. But Government employee, private employee, business men, professionals and student are more satisfied by private sector bank than public sector bank. For Mobile banking services, all the respondents from private sector banks are more satisfied than the public sector banks.
- The Banking Sector and Monthly income of respondents interaction is significant for ATM services, Internet banking services, Telephone banking services and Mobile Banking Services, F (3,458) = 7.997, p < 0.05, F (3,458) = 17.354, p < 0.05, F (3,458) = 22.257, p < 0.05 and F (3,458) = 13.324, p < 0.05 respectively. For ATM services, respondent's monthly income of ₹ 20,000 to ₹ 40,000 and more than ₹ 60,000 are more satisfied by public sector bank than

private sector bank. But monthly income of less than ₹20,000 and ₹ 40,000 to ₹ 60,000 are more satisfied by private sector bank than public sector bank. For Internet banking services, monthly income of less than ₹ 20,000 respondents are equally satisfied by public sector bank and private sector bank. But 20,000 to ₹ 40,000, ₹ 40,000 to ₹ 60,000 and more than ₹ 60,000 are more satisfied by private sector bank than public sector bank. For Telephone banking services, monthly income respondents of less than ₹ 20,000, ₹ 20,000 to ₹ 40,000, ₹ 40,000 to ₹ 60,000 and more than ₹ 60,000 are more satisfied by private sector bank than public sector bank. For Mobile banking services, monthly income of less than ₹ 20,000, ₹ 20,000 to ₹ 40,000, ₹ 40,000 to ₹ 60,000 and more than ₹ 60,000 respondents from private sector banks are more satisfied than the public sector banks.

- The Banking Sector and usage level of respondents interaction is significant for ATM services, Internet banking services, Telephone banking services and Mobile Banking Services. Mostly less than 2 years, 1-3 years and more than 5 years are having more level of satisfaction on private sector banks services than public sector bank. Reciprocally 3-5 years of experienced respondents are slightly having less level of satisfaction than private sector banks.
- ♣ The Banking Sector and Gender interaction is not significant for ATM problem, Internet Banking problem and Mobile Banking Problems, F (1,457) =1.732, p > 0.05, F (1,457) =.594, p > 0.05 and F (1,457) = .218, P > 0.05 respectively. Hence, there is no interaction effect between type of banks and gender of the respondents.

- * The Banking Sector and Age interaction is significant for ATM Problem, Internet banking problem, Telephone banking problem and Mobile Banking Services, F(2,456) = 31.789, p < 0.05, F(2,456) = 17.532, p < 0.05, F(2,456) = 45.117, p < 0.05 and F (2,456) =27.968, p < 0.05 respectively. For Internet banking services, all the three age group of respondents are faced less problems by the private sector banks than the public sector bank. But the age level of 18 - 30 years and above 50 years of respondents' level of misery on Internet banking services is having huge differences than 30 - 50 years age group of respondents. For Telephone banking services, all the three age groups of respondents are faced lesser problems by the private sector banks than the public sector bank. But the age level of above 50 years of respondents' level of misery on Telephone banking services is having huge differences than 18 - 30 years and 30 - 50 years age group of respondents. For Mobile banking services, all the three age group of respondents are faced less problems by the private sector banks than the public sector bank. But the age level of 18 – 30 years and above 50 years of respondents' level of misery on Mobile banking services is having huge differences than 30 - 50 years age group of respondents.
- The Banking Sector and Educational qualification interaction is significant for ATM Problem, Internet banking problem, Telephone banking problem and Mobile Banking Services, F (2,456) =31.789, p < 0.05, F (2,456) =17.532, p < 0.05, F (2,456) =45.117, p < 0.05 and F (2,456) =27.968, p < 0.05 respectively. Hence, there is an interaction effect between type of banks and educational level of the respondents.

- The Banking Sector and Occupation status interaction is significant for ATM Problem, Internet banking problem, Telephone banking problem and Mobile Banking Services, F (5,456) =19.520, p < 0.05, F (5,456) =11.499, p < 0.05, F (5,456) =7.163, p < 0.05 and F (5,456) =6.155, p < 0.05 respectively. Hence, there is an interaction effect between type of banks and occupation status of the respondents. House wives and students are facing more problems than others in public sector banks.
- ❖ The Banking Sector and income level interaction is significant for ATM Problem, Internet banking problem, Telephone banking problem and Mobile Banking Services, F (3,458) =14.057, p < 0.05, F (3,458) = 5.640, p < 0.05, F(3,458) = 22.050, p < 0.05 and F (3,458) =50.256, p < 0.05 respectively. Hence, there is an interaction effect between type of banks and income level of the respondents.</p>
- ❖ The Banking Sector and usage level interaction is significant for ATM Problem, Internet banking problem, Telephone banking problem and Mobile Banking Services, F (3,458) =3.01, p < 0.05, F (3,458) =4.656, p < 0.05, F (3,458) = 34.312, p < 0.05 and F (3,458) =3.033, p < 0.05 respectively. Hence, there is an interaction effect between type of banks and usage level of the respondents.</p>
- ❖ It is found from the ranking results that the first five ranks (Online shopping, Checking balances, booking for Train/Bus/Flight/Movie Tickets, Fund Transfer, View Account Statements/Transaction History) are occupied by the same features in public and private sector banks. In the same way, similar features on the 6 to 14 ranks, there is a difference in the pay tax rank preference in public sectors banks customer rank is 6 for pay tax whereas for private sector banks, customer choose 12. That indicates the customer preference on e-banking system varies between

public and private sector banks for tax payer usage. It is understood from the analysis that customer usage pattern do not change on private and public sector banks.

- * "E-banking is accessible from anywhere" has been ranked as the first factor to influence for the adoption of e-banking by the customers of public sector banks, e-banking available at any time has been ranked as second, e-banking saves time in third position, e-banking is easy to use is ranked as fourth followed by e-banking is less expensive ranked as fifth position.
- * "E-banking is available at any time" has been ranked as the first factor to influence for the adoption of e-banking by the customers of private sector banks, e-banking saves time has been ranked as second, e-banking is accessible from anywhere in third position, e-banking is easy to use is ranked as fourth followed by e-banking is less expensive ranked as fifth position. Thus, this table shows the ups and downs in mean scores between the private and public sector banks. However, the former is streets ahead than the latter.
- ❖ Both the categories of banks give different mean scores in many factors. The mean score of public sector bank, with regard to the availability of information in the websites, is 3.320 as against the private sector banks' mean score i.e. 3.805. Here, the private sector bank is slightly ahead of that of the public sector bank. The website design of private sector banks has attracted many than that of the public sector banks. 4.106 are the mean score for the private sector banks as against the 3.031 for public sector banks. It is a glaring difference between both the public and private sector banks in this regard. The electronic banking services, once again, has helped the private sector banks with the mean score 3.568 as

against the public sector banks' mean score 3.356. However, it is only a little difference in this case. The mean score 3.792 is for the promised services of the electronic banking of private sector bank as against the 3.200 mean score for that of public sector bank. The continuous update of websites has gained 3.979 mean score for private sector bank whereas it is only a mere 2.702 mean score for public sector bank. Electronic banking complaints are responded quickly in private sector banks while it is not up to the mark for public sector banks. The former has scored 3.318 mean score while the latter has gained only 2.237. The private sector banks respond as quickly as possible for its customers' queries, whose mean score is 3.555. However, the mean score 2.707 of public sector in this regard shows clearly its customer service. All the four factors mentioned above clearly show that the private sector bank has no competition in its service and other facilities, features etc. However, as a slight relief to public sector banks, it has scored the mean score 2.644 for the prompt in loading of its web page. Here, the private sector bank's mean score, in this regard, is 2.619. Many of private sector bank customers could log in to electronic banking promptly when compared to that of public sector banks. The former's mean score is 3.042 while the latter's mean score is 2.831. The customers in private sector banks are relieved to get a confirmation message quickly as against that of public sector banks. The mean score 3.114 is for private sector while the mean score 2.800 is for public sector banks. Customers from both the private and public sector banks have rated positively about the logout speed of their respective bank's websites. The private sector is slightly ahead with 3.496 mean score than that of the public sector bank whose mean score is 3.467. In private sector banks' websites, the customers could get the information very easily whereas it is neither easy nor

simple in public sector bank websites. The former's mean score is 3.576 while the latter's 3.004. It shows that the private sector banks' websites are kept abreast of. The private sector banks have provided its customers with various and simple options to cancel the transactions whose mean score is 3.559. The public sector banks, however, follow, in this case, closely its rivals with the mean score 3.520. The websites of private sector banks cater to the need of its customers with the mean score 4.169. However, there is a huge gab in the mean score i.e. 3.133 of public sector banks in this case. Customers' privacy in private sector banks is safe and secured when compared to that of its rival sector banks. The former's mean score is 3.792 and the latter's 3.529. Thus, this table informs of the customers' mixed feelings towards using the respective websites.

❖ ATM has been ranked as the first preferable e-banking channel by the customers of public sector and private sector banks, Internet banking has been ranked as second, Mobile banking in third position, Telephone banking is ranked as fourth followed by Branch banking ranked as fifth position.

SERVICES- QUALITY GAP IN PUBLIC SECTOR BANKS

❖ Customers of the public sector bank have different satisfaction level. Their satisfaction level is grouped under four levels namely tangibility, reliability, responsiveness, assurance and empathy. The expectation of the customers in the tangibility is 3.458 mean values as against the satisfied level 3.173. This results in a service gap, which is valued as -8.25.As far as, with regard to the table, reliability is concerned, the expectation of the customers is 4.062 mean values whereas the satisfied customers' given mean value is 3.644. This accounts for a service gap mean value 3.644. The expected mean score of 3.516, in responsiveness, is very

much contrasted with that of the satisfied level mean score 2.351. This makes up for a huge -33.14 service gap. The mean score for the expectation in assurance is 4.196 as against the mean score 3.724 for the satisfied level. This sees a service gap of -11.25.Of the entire table, empathy registers for a very huge percentage difference in service gap with -35.27. The expectation here is 3.996 in contrast to the satisfied mean score 2.587.Of all the levels, responsiveness and empathy are with the highest service gap with -33.14 and -35.27 respectively.

SERVICES- QUALITY GAP IN PRIVATE SECTOR BANKS

- ❖ Customers of the private sector, is grouped under four levels namely tangibility, reliability, responsiveness, assurance and empathy. The expectation of the customers in the tangibility is 3.712 mean values as against the satisfied level 3.542. A service gap mean values -4.58 is the result. Reliability, one of the levels of the 5 levels, scores 4.369 in the expectation of the customers while the satisfaction level of the customers is 4.148. This accounts for a service gap mean value -5.06. The expected mean score of responsiveness is 4.449 as against the mean score 4.216 for the satisfied level mean score. The service gap level is −5.24. 3.962 is the mean value of expectation and satisfaction level of assurance, the fourth level in the table. Surprisingly, there is no room for service gap in assurance. Empathy, whose expectation level is 4.284 as against the satisfaction level 4.381, is the last in the table. The service gap level is 2.26.
- ❖ In public sector banks ,the four independent variables (ATM services, Internet banking services, Telephone banking services and Mobile banking services) have a positive relationship with e-banking services satisfaction and that ATM services quality increase in 1 unit leads to an increase in service satisfaction by 1.425,

Internet banking services quality increase in 1 unit leads to an increase in service satisfaction by 1.311 unit, Telephone banking services quality increase in 1 unit leads to an increase in service satisfaction by 0.580 unit and Mobile banking services quality increase in 1 unit leads to an increase in service satisfaction by 0.015 unit.

- ❖ In private sector banks, the four independent variables(ATM services, Internet banking services, Telephone banking services and Mobile banking services) have a positive relationship with e-banking services satisfaction of private sector E-banking services and that ATM services quality increase in 1 unit leads to an increase in service satisfaction by 1.114 unit, Internet banking services quality increase in 1 unit leads to an increase in service satisfaction by 0.199 unit, Telephone banking services quality increase in 1 unit leads to an increase in service satisfaction by 0.089 unit and Mobile banking services quality increase in 1 unit leads to an increase in 1 unit leads to an increase in service satisfaction by 0.462 unit.
- ❖ In public sector banks, the four independent variables (ATM services, Internet banking services, Telephone banking services and Mobile banking services) have a negative relationship with e-banking services satisfaction and that ATM problems increase in 1 unit leads to decrease in service satisfaction by 1.452, Internet banking problems increase in 1 unit leads to decrease in service satisfaction by 0.656 unit, Telephone banking problems increase in 1 unit leads to decrease in service satisfaction by 0.741 unit and Mobile banking problems increase in 1 unit leads to an decrease in service satisfaction by 0.354 unit.
- ❖ In private sector banks, the four independent variables (ATM services, Internet banking services, Telephone banking services and Mobile banking services) have

a negative relationship with e-banking services satisfaction and that ATM problems increase in 1 unit leads to decrease in service satisfaction by 1.102, Internet banking problems increase in 1 unit leads to decrease in service satisfaction by 0.372 unit, Telephone banking problems increase in 1 unit leads to decrease in service satisfaction by 0.947 unit and Mobile banking problems increase in 1 unit leads to an decrease in service satisfaction by 0.187 unit.

8.3 SUGGESTIONS

As a result of careful scrutiny of the finding of the study, the following suggestions are made in order to help the public sector and private sector banks to expand their e-banking services in a planned and well framed strategy for the long run to ensure customers satisfaction and to increase profitability:

- ➤ Public sector banks should give awareness about their e-banking services to their customers so that they can compete with private sector banks.
- ➤ Public Sector banks may give individual attention and proper response to customers in providing information whereas the level of responsiveness is high in the private sector banks. This will help many customers to rely on public sector banks for their banking needs.
- ➤ Banks should ensure to their customers that their service is competitive. Many customers feel that the privacy and security features are to be enriched. So banks must concentrate further on security and withhold their customers and improve them more.

- Ease of use is the major factor to induce the customers to adopt e-banking.

 Therefore banks can maintain its applications more user friendly and up to date.
- ➤ ATMs receive the higher attraction among the e-banking channels. Banks may pay attention and plan to make the ATMs as the key distribution channel for all kinds of banking transactions.
- ➤ Both public and private sector banks need to concentrate and improve telephone banking and mobile banking.
- ➤ Banks need to give proper training to their employees about the modern developments in the field of banking. Then only they can deal with updated electronic soft wares.
- ➤ Banks could also consider providing practical training sessions for customers at their branches on how to use the interface of e-banking.
- Presently banks are under pressure to cut down its operational cost to safeguard their bottom line. To retain their customers and add more services they should improve the speed process to endure in the contest.
- ➤ Banks may give importance to their servers as sometimes the customers use the e-banking services in an emergency situation to access their account. If the server works fast then the time may be given or used to do other works.
- ➤ Banks may make customers feel that there are a lot of advantages in using e-banking. So it must improve their appearance of websites and its navigations, making it an ease of use and strengthen website security.

- ➤ In banking disaster management is gaining importance in order to safeguard essential data entries. The situation like, losing connectivity during business hours, development of technical snag in the computers or servers, virus attack, hardware breakdown, software complaints, fire accidents, frauds, etc. are various forms of disasters with varied degree of risk. Banks should train the personnel to manage the situation without creating panic or pandemonium in the branch premises.
- In most of the private sector banks, their infrastructure facilities are very good and comfortable compare to public sector banks. These facilities may be provided by public sector banks also so as to enrich its customer's base.
- In public sector banks, Customer Relationship Management is poor compared to that of private sector banks. The public sector banks should follow the Customer Relationship Management in a friendly manner.

8.4 CONCLUSION

In the modern world of technology, internet rules the roost. It is not exaggeration that the world moves with the aid of internet. The very term internet has become ubiquitous and every Tom, Dick and Harry speaks about internet. Internet parlance such as e-mail, browsing, surfing, website, online shopping, download, upload are quite familiar even with illiterate people. This is because the impact of internet has reached its pinnacle. The world of internet, of course, has its pros and cons. However, the advantage of internet supersede over its disadvantage.

Internet banking, one of the boons of the modern world, is quite familiar and famous with developed and developing nations. Internet banking, which the rich Kings

and Emperors did not know of, is used very casually by almost everybody in the world. This innovation has really made life easy and pleasant not only for the rich but also for the poor. In developing countries like India, the advent of internet banking has been gradually rising to the occasion. The world is moving towards a condition in which the internet banking calls the shot.

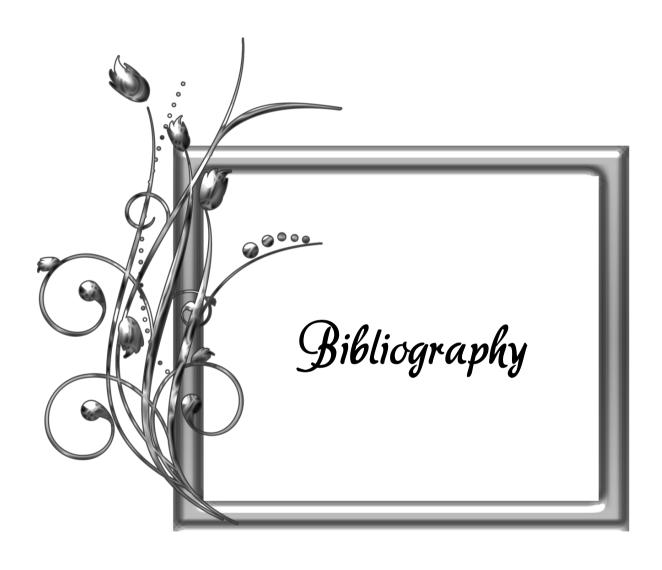
Banking sector either public sector or private sector these days solely depend on internet banking. A minor fault in internet halts the entire banking sector throughout the world. The enthusiastic people thrive on a world in which they do window shopping at home. The emergence of internet banking has brought the entire world within four walls. Internet banking is considered a panacea for the typical developing nations' problems such as long queue, unwanted waste of quality time, energy etc. Internet banking has been helping the nation conserve on energy. It reduces pollution so as to meet the requirements of the developed nations' conditions in fighting global warming.

Adoption of Internet among Indians has been increasing over the last two decades. Indian banks have also risen to the occasion by offering new channels of delivery to their customers. E-banking is a new delivery channel which has become available to customers of India. Private Sector banks are quite successful in satisfying the needs of their customers. But the public sector banks are still need to give more efforts to make this sector survive and succeed in the present world of e-banking competition. They must improve their market research, fee based activities, customer relationship management, etc.

8.5 SCOPE FOR FURTHER RESEARCH

The present study has made an attempt to study the perception and preference of customers, to assess the comparative e-banking services provided by public and private sector banks in Tirunelveli district. There still remains a viable prospect for future research.

- The e-banking services of Indian banking sector has been evaluated in Tirunelveli district. So the perception and preference of e-banking services could be assessed for all other districts of Tamil Nadu to enable the quality in banking industry.
- ➤ The research may be focused only on comparative performance of public and private sector banks.
- ➤ A Study may be made on the Customers' Attitude towards the Performance Evaluation of Public and Private Sector Banks.
- The research also recommends that a deep study should be carried out to establish the challenges encountered by the customers in the process of using the public and private banks services
- ➤ A Study on Role of e-banking /Internet Banking in cost reduction and Cost Control.
- A study on impact of e-banking services adopted by Indian customers.
- ➤ A comparative study on Indian and foreign customers perspective towards e-banking services.



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A COMPARATIVE STUDY ON PERCEPTION AND PREFERENCE OF CUSTOMERS OF PUBLIC AND PRIVATE SECTOR BANKS TOWARDS E-BANKING IN TIRUNELVELI DISTRICT

QUESTIONNAIRE

General Questions

1.	Name:		
2.	Name of the Bank an	nd Branch:	
3.	Gender		
	A. Male	B. Female	
4.	Age		
	A. 18-30 years	B. 30-50 years	C. Above 50 years
5.	Education		
	A. High School	B. Under Graduate	
	C. Post Graduate	D. Professional	
6.	Marital Status		
	A. Single	B. Married	
7.	Occupation		
	A. Govt. Employee	B. Private Employee	C. Business D. Professional
	E. Student	F. House Wife	
	G. Others (please spe	ecify)	
8.	Monthly Income		
	A. Up to ₹ 20,000	B. ₹ 20,001- ₹ 40,00	0 C. ₹ 40,001-₹ 60,000
	D. More than ₹ 60,00	00	
9.	Status of Usage		
	A. Less than 1 year	B. $1-3$ years	C. $3-5$ years
	D. More than 5 years	;	

Specific Questions:

10.	Which category of the bank do you have your account?

A. Public sector bank

B. Private sector bank

11. Rank the following attribute of the bank you value the most.

Attribute	Rank
A. Problem Redressed	
B. Technology Used	
C. Trust	
D. Location	
E. Speed	

12.	Which factor promotes you to use the new techniques in banking? ((Tick all
	that are applicable)	

A. Reduced time of transactions

B. Cost effectiveness

C. Ease of use

D. Technology savvy

13. How familiar are you with computer usage level of your bank?

A. Low

B. Average

C. High

14. How did you come to know about E-Banking services?

A. From bank officials

B. Through Advertisement

C. From family members / Friends

15. How frequently do you use the following banking services per month?

		1 time	2 to 3 times	3 to 8 times	Over 8 times
A	Branch Banking				
В	ATM				
С	Internet Banking				
D	Telephone Banking				
Е	Mobile Banking				

16. Satisfaction on E-Banking Services

	A. ATM SERVICES	Extremely Satisfied	Satisfied	Neutral	Dissatisfied	Extremely Dissatisfied
1	Network Speed					
2	Availability of Cash					
3	The Quality of Notes (currency)					
4	Convenient ATM location					
5	Easy Accessibility					
	B. Internet Banking Services					
6	Account Information and Balance Enquiry					
7	E-Payments					
8	Account to Account Transfer					
9	Due Installment Enquiry					
10	Statement Request (by mail, fax, email)					
	C. Telephone Banking Services					
11	Pleasant musical background					
12	Reasonable number of voice prompts					
13	Clear instructions					
14	Voice directions/ on line directions for new users					
15	Provide additional options					
	D. Mobile Banking Services					
16	Reward point status					
17	Mobile recharge and bill payments					
18	SMS alerts about specific information to the bank services/ new products					
19	Transaction status					
20	Less expensive					

17. Problems in Using E-Banking Services

	A. ATM Problems	Always	Often	Sometimes	Rarely	Never
1	Cards get blocked					
2	Machine out of cash					
3	Non printing of statement					
4	Machine out of order					
5	Long waiting time in queue					
	B. Internet Banking Problems					
6	Not providing enough information					
7	Not being able to maintain security					
8	Not giving fast response					
9	Leaving the operation unfinished					
10	Internet banking can be tampered with by others					
11	Waiting for a long time to conduct transactions					
12	Too many steps in processing transaction					
	C. Telephone Banking Problems					
13	Lack of knowledge of customer service representative					
14	Absence of immediate connection to the service					
15	Lack of prompt service					
16	Lack of clear guidelines					
	D. Mobile Banking Problems					
17	Login/ Logout are not easy					
18	Lack of security in transaction					
19	Lack of appropriate application					

- 18. After using e-banking you consider yourself as a person:
 - a. Most accepting the use of e-banking
 - b. Most rejecting the use of e-banking
 - c. In between these two
- 19. State the extent of awareness and use of the following services

		Aware & Use					
	Types of e-banking Services		Often	Sometimes	Rarely	Never	
1.	Check balances						
2.	View account statements/Transaction history						
3.	Fund transfer from one account to another						
4.	Mobile recharging						
5	Pay direct and indirect taxes						
6	Booking for train/bus/flight or movie tickets						
7	Payment of utility bills (insurance premium, rent, phone, mobiles etc.)						
8	Collect information related to new services from your bank's website						
9	Apply online for loan or for fixed/recurring deposits						
10	Request for issuing ATM/Debit Card						
11	Request for cheque book, pass book etc						
12	Enquiry about cheque book, pass book etc.						
13	Request for pre-closure of loan/deposit etc.						
14	Online shopping						

20. Factors Influencing the Adoption of Internet

Sl. No.	Factors	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
1	I find e-banking easy to use					
2	E-banking saves time					
3	E-banking is available at any time (24x7)					
4	E-banking is accessible from anywhere					
5	E-banking is less expensive					

21. Precautions Against Risk while Using E-Banking

Please tick (\checkmark) your degree of agreement/disagreement pertaining to the following statements as

1.	Strongl	y di	sagree

- 2. Disagree
- 3. Neither agree nor disagree

4. Agree

5. Strongly agree

Sl. No.	Factors	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1	I access e-banking using the website address received through e-mails					
2	I access e-banking by copy-pasting the website address of bank from other websites					
3	I change my passwords frequently					
4	I do not disclose my password to anyone					
5	I do not reply to e-mails that ask for my user ID and passwords					
6	I access to e-banking from networked computers (cyber cafés, public libraries, airports etc.)					
7	I do not download any free software from internet on my computer that access e-banking					

Sl. No.	Factors	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
8	I log off from the bank's website after e- banking use					
9	I read the tips for safe use of e-banking account on the bank's website					
10	I verify the last date and time of log on given in the online account					
11	I verify periodically all my e-banking transactions					

22. Please tick your degree of agreement/disagreement (based on your experience with your bank) pertaining to the following Statements

Sl. No.	Factors	Strongly	disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1	The web site is user friendly						
2	Website design is attractive						
3	I trust e-banking services presented on the bank's website						
4	The bank delivers e-banking services as promised						
5	The website is updated continuously						
6	Bank takes care of e-banking complaints quickly						
7	There is quick response from my bank to customer queries						
8	Web pages load promptly						
9	Log in to e-banking website is fast						
10	The site provides a confirmation of the service requested quickly						

Sl. No.	Factors	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
11	Logout speed of my account is fast					
12	Finding what I need is easy and simple					
13	Easy options for canceling transactions are provided					
14	E-banking website of my bank always satisfies all my service needs					
15	My personal information is secured and protected in my bank's site					

23. Your preferred channel to conduct banking transactions (Please rank your Preference)

Preferred Channel	Rank
1. Branch Banking	
2. ATM/ Debit Card	
3. Internet Banking	
4. Mobile Banking	
5. Telephone Banking	

24. Service quality of banking services. Rank the given variables at 5 point scale on the basis of your expectation and perception.

[HE - Highly Expected, E - Expected, M- Moderate, NE - Not Expected,

NAE - Not at all Expected]

[HS - Highly Satisfied, S - Satisfied, M- Moderate, DS- Dissatisfied, HDS-Highly Dissatisfied]

[Please Tick Mark in the Appropriate Boxes]

Sl.	Statements	Y	Your expectation			ion	Your Perception				
No.	Statements	HE	E	M	NE	NAE	HS	S	M	DS	HDS
	Tangibility										
1	Adequate infrastructural facilities										
2	Physical appearance of the staff is professional										
3	Visually appealing features										
4	Location is easily accessible										
5	Location is free from pollution										
6	Banking companies uses latest technologies in providing services										
7	Vehicle parking facility is available										
8	Information is easily available										
9	Company is having a memorable advertisement										
10	Beautiful elevation of the office building										
	Reliability										
11	Get things right at the first time										
12	Provide services at time promises to do so it										
13	Insists on error free records								_		
14	Company has competitive pricing compared to others										

Sl.	Statements	Y	our	exp	ectat	ion	Your Perception				
No.	Statements	HE	E	M	NE	NAE	HS	S	M	DS	HDS
15	Provision of documentary evidences for banking services										
	Responsiveness										
16	Bank personnel tells exactly when the services will be performed										
17	Staff are prompt in responding to questions and queries										
18	Front office staff responding to phone calls instantaneously										
19	Staff is willing to help anytime										
20	Organizational time table										
	Assurance										
21	Employees are trustworthy and honest										
22	Employees in company have knowledge and competence to solve customer's problem										
23	Company is widely known										
24	Company is well liked										
25	Company is unique compared to that of others										
26	Bank agents and advisers give assurance as to deliverance of the services										
27	Data revealed by customers are kept confidential										
28	Office staff give assurance with regard to their efficient service										
	Empathy										
29	Customers get individual attention										

Sl.	G4-4	Your expectation Your Percepti				rcepti	on				
No.	Statements		E	M	NE	NAE	HS	S	M	DS	HDS
30	Company has its customer's best interest in heart										
31	Client friendly service hours										
32	Office staff have concern and they understand customer problems										
33	Seeks to understand customers' needs and problems.										



ISSN- 2350-0530(O), ISSN- 2394-3629(P) IF: 4.321 (CosmosImpactFactor), 2.532 (I2OR) InfoBase Index IBI Factor 3.86



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Management

A COMPARATIVE STUDY ON SATISFACTION OF CUSTOMERS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS TOWARDS E BANKING IN TIRUNELVELI DISTRICT

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DOI: https://doi.org/10.5281/zenodo.574863

Abstract

The last two decades in the banking industry has seen many developments to face the competition among its competitors. Technology is one field that banking industry focuses on for this competition. Nowadays e-banking is the popular technology used by banks. E-banking is the outcome of technological innovations and competition. The customers' satisfaction is also very important to face the challenges for the banks to cope up with other banks. Hence this paper focuses on the satisfaction level of customers towards e-banking services provided by Public and Private Sector banks in Tirunelveli District. This study is limited to Tirunelveli area only, Tamil Nadu. The objectives of this study are to find out the factors influencing in the adoption of E-banking provided by public and private sector banks, identify the level of satisfaction of customers of public and private sector banks towards their usage of E-banking. Convenience sampling method have adopted for this study. The primary data were collected from questionnaire method. From the analysis, it is found that with regard to satisfaction in ATM services, the customers of both sectors of banks are equally satisfied.

Also the customers are satisfied with the e-banking services provided by private sector banks. It is suggested that ease of use is the major factor to induce the customers to adopt e-banking. Therefore banks should maintain its applications more user friendly and up to date. ATMs receive the higher attraction among the e-banking channels. Banks must pay attention and plan to make the ATMs as the key distribution channel for all kinds of banking transactions.

Keywords: E-Banking; Satisfaction; ATM; Public Sector Bank; Private Sector Bank.

Cite This Article: K.Thanga Glara, and Dr. C. Eugine Franco. (2017). "A COMPARATIVE STUDY ON SATISFACTION OF CUSTOMERS OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS TOWARDS E BANKING IN TIRUNELVELI DISTRICT." *International Journal of Research - Granthaalayah*, 5(5)SE, 53-62. https://doi.org/10.5281/zenodo.574863.

1. Introduction

Banks in India need to be admired on the enclosure of technology in a large way in their day-to-day operations. The last two decade has seen many constructive developments in the Indian Banking Sector. Nowadays e-banking is the popular technology used by banks. E-Banking means any user with a personal computer and a browser can get connected to his bank's website to perform any of the virtual banking functions. E-banking is the outcome of technological innovations and competition. In fact, banks have been using electronic and telecommunication networks for delivering a wide range of value added products and services. As a part of their e-banking initiatives banks offered the following new delivery channels to customer's Automated Teller Machines (ATM)/ Cash Dispensers (CD), Phone banking, Internet banking and Mobile banking. Banks used e-banking as mechanism to fight fierce competition that existed in the market and also to retain the customers base they had customer's response to e-banking was enthusiastic and followed predicted path of Technology Adoption Life Cycle models (Shreyan at 2002).

2. Statement of the Problem

In the competitive environment of the post liberalization era, financial sector reforms have significantly relaxed the market. Banks has evolved new products and services to attract the customers through innovative technological delivery channels. There are also several special operations which give an intensive marketing push to increase the customer base and usage of technological innovative banking services. For Indian Banks, there is a wide market potential amongst e-banking. The demand for e-banking is necessitate by the growing e-commerce transactions and the paradigm shift in banking led by technology. From the perspective of both users and providers, E-Banking is cost effective, quick and convenient. Hence, it is needed to identify the reason why customer's preference e-banking.

3. Objectives of the Study

- 1) To find out the factors influencing in the adoption of E-banking provided by public and private sector banks.
- 2) To identify the level of satisfaction of customers of public and private sector banks towards their usage of E-banking.
- 3) To offer Suggestions

4. Scope of the Study

The study aims to find out the perception and preference of customers towards e-banking offered by Public and Private sector banks. This study also aims at measuring the satisfaction of the customers and offer suitable suggestions to solve the problems. This study also compares the perception and preference of customers towards e-banking services offered by public and private sector banks in Tirunelveli district.

5. Research Methodology

For this research both primary and secondary data were collected. Primary data were collected from the customers of public sector and private sector banks using e-banking and it was collected through well-defined and well-framed questionnaire. Snowball sampling method was used for selecting sample respondents. Four hundred and sixty one respondents were selected. The secondary data were collected from various websites, books, journals and magazines.

6. Analysis and Interpretation of Data

Demographic profile is one of the important variables to determine the usage and satisfaction of the respondents. The following tables clearly explain about the demographic profile of the respondents in the study area.

Gender * Type of Bank Cross Tabulation Type of Bank Total **Public Sector Bank Private Sector Bank** 117 163 280 Male 52.0% 69.1% 60.7% Gender 108 73 181 Female 48.0% 30.9% 39.3% 225 236 461 Total 100.0% 100.0% 100.0%

Table 1: Gender wise classification of the respondents

From the above table it is clear that, out of 461 respondents majority 60.7 percent are male respondents and rest of the 39.3 percent of the respondents are female respondents.

Out of 225 public sector bank's respondent's majority 52 percent are male respondents and rest of the 48 percent are female respondents.

Out of 236 private sector bank's respondent's majority 69.1 percent are male respondents and rest of the 30.9 percent are female respondents.

Table 2: Age wise classification of the respondents

Age * Type of Bank Cross Tabulation								
		Type of Bank	nk					
		Public Sector Bank	Total					
	10 20 Vaana	103	92	195				
	18 - 30 Years	45.8%	39.0%	42.3%				
1 ~~	20 50 Voors	80	80	160				
Age	30 - 50 Years	35.6%	33.9%	34.7%				
	Above 50 Years	42	64	106				
		18.7%	27.1%	23.0%				

Total	225	236	461
Total	100.0%	100.0%	100.0%

From the table, out of 461 respondents majority 42.3 percent of the respondents are belong to the age group of 18-30 years, 34.7 percent of the respondents are belong to the age group of 30-50 and rest of the 23 percent of the respondents are belong to the age group of above 50 years.

Out of 225 public sector bank's respondents majority 45.8 percent of the respondents are belong to the age group of 18-30 years, 35.6 percent of the respondents are belong to the age group of 30-50 and rest of the 18.7 percent of the respondents are belong to the age group of above 50 years.

Out of 236 private sector bank's respondents majority 39 percent of the respondents are belong to the age group of 18-30 years, 33.9 percent of the respondents are belong to the age group of 30-50 and rest of the 27.1 percent of the respondents are belong to the age group of above 50 years.

Table 3: Education wise classification of the respondents

Education *	Type of Bank Cr	oss Tabulation		
		Type of Bank	_	
		Public Sector Bank	Total	
	School Level	24	14	38
		10.7%	5.9%	8.2%
	U.G Level	50	84	134
Education		22.2%	35.6%	29.1%
Education	P.G Level	67	67	134
		29.8%	28.4%	29.1%
	D., f	84	71	155
	Professional	37.3%	30.1%	33.6%
Total		225	236	461
		100.0%	100.0%	100.0%

From the above table, it is clear that, out of 461 respondents majority 33.6 percent of the respondents are completed professional courses, 29.1 percent of the respondents are under graduates, another 29.1 percent of the respondents are post graduates and rest of the 8.2 percent of the respondents are completed up to school level.

Out of 225 public sector bank's respondents majority 37.3 percent of the respondents are completed professional courses, 29.8 percent of the respondents are post graduates, 22.2 percent of the respondents are under graduates and rest of the 10.7 percent of the respondents are completed up to school level.

Out of 236 private sector bank's respondent's majority 35.6 percent of the respondents are under graduates, 30.1 percent of the respondents are completed professional courses, 28.4 percent of

the respondents are post graduates and rest of the 5.9 percent of the respondents are completed upto school level.

Table 4: Marital status of the respondents

MARITAL STATUS *	MARITAL STATUS * Type of Bank Cross Tabulation					
		Type of Bank Public Sector Bank Private Sector Bank				
				Total		
	Single	63	42	105		
MARITAL STATUS		28.0%	17.8%	22.8%		
WIAKITAL STATUS	Married	162	194	356		
		72.0%	82.2%	77.2%		
Total		225	236	461		
		100.0%	100.0%	100.0%		

From the above table, it is clear that, out of 461 respondents majority 77.2 percent of the respondents are married and rest of the 22.8 percent of the respondents are single.

Out of 225 public sector bank's respondent's majority 72 percent of the respondents are married and rest of the 28 percent of the respondents are single.

Out of 236 private sector bank's respondent's majority 82.2 percent of the respondents are married and rest of the 17.8 percent of the respondents are single.

Table 5: Occupation of the respondents

Occupation *	* Type of Bank Cross Tab	oulation		
		Type of Bank		
		Public Sector Bank Private Sector Bank		Total
	Community Employee	43	34	77
	Government Employee	19.1%	14.4%	16.7%
	Private Employee	52	67	119
		23.1%	28.4%	25.8%
	Business	27	41	68
Occupation		12.0%	17.4%	14.8%
Occupation	Professional	54	46	100
		24.0%	19.5%	21.7%
	Student	24	26	50
	Student	10.7%	11.0%	10.8%
	Uongowifo	25	22	47
	Housewife	11.1%	9.3%	10.2%
T-4-1		225	236	461
Total		100.0%	100.0%	100.0%

From the above table, it is reveals that, out of 461 respondents majority 25.8 percent of the respondents are private employees, 21.7 percent of the respondents are professional, 16.7 percent of the respondents are government employees, 14.8 percent of the respondents are doing business, 10.8 percent of the respondents are students and rest of the 10.2 percent of the respondents are housewife.

Out of 225 public sector bank's respondents majority 24 percent of the respondents are professional, 23.1 percent of the respondents are private employees, 19.1 percent of the respondents are government employees, 12 percent of the respondents are doing business, 11.1 percent of the respondents are housewife and rest of the 10.7 percent of the respondents are students.

Out of 236 private sector bank's respondent's majority 28.4 percent of the respondents are private employees, 19.5 percent of the respondents are professional, 17.4 percent of the respondents are doing business, 14.4 percent of the respondents are government employees, 11 percent of the respondents are students and rest of the 9.3 percent of the respondents are housewife.

Table 6: Income wise classification of the respondents

Table 0. Income wise classification of the respondents				
Monthly Inco	ome * Type of Bank Cross Ta	ıbulation		
		Type of Bank		
		Public Sector Bank	Private Sector Bank	Total
	Less than 20,000	66	40	106
	rupees	29.3%	16.9%	23.0%
	20,000 to 40,000 rupees	64	67	131
Monthly		28.4%	28.4%	28.4%
Income	40,000 to 60,000 rupees	55	77	132
	40,000 to 60,000 rupees	24.4%	32.6%	28.6%
	More than 60,000	40	52	92
	rupees	17.8%	22.0%	20.0%
Total		225	236	461
		100.0%	100.0%	100.0%

From the above table, it is clear that, out of 461 respondents majority 28.6 percent of the respondents are earn Rs. 400000-60000 per month, 28.4 percent of the respondents are earn Rs. 20000-40000 per month, 23 percent of the respondents are earn less than Rs. 20000 per month and rest of the 20 percent of the respondents are earn more than Rs. 60000 per month.

Out of 225 public sector bank's respondents majority 29.3 percent of the respondents are earn less than Rs. 20000 per month, 28.4 percent of the respondents are earn Rs. 20000-40000 per month, 24.4 percent of the respondents are earn less than Rs. 40000-60000 per month and rest of the 17.8 percent of the respondents are earn more than Rs. 60000 per month.

Out of 236 private sector bank's respondents majority 32.6 percent of the respondents are earn Rs. 40000-60000 per month, 28.4 percent of the respondents are earn Rs. 20000-40000 per month, 22 percent of the respondents are earn more than Rs.60000 per month and rest of the 16.9 percent of the respondents are earn less than Rs. 20000 per month.

Table 7: Factors induced to use e-banking

Factors Induced * Type of Bank Cross Tabulation					
			Type of B	ank	
			Public Sector	Private Sector	Total
			Bank	Bank	
	Reduced time of	Count	48	70	118
	transaction	% within Type of Bank	21.3%	29.7%	25.6%
	Cost	Count	39	55	94
Factors Induced	effectiveness	% within Type of Bank	17.3%	23.3%	20.4%
ractors induced	E	Count	96	78	174
	Ease of use	% within Type of Bank	42.7%	33.1%	37.7%
	Technology	Count	42	33	75
	savvy	% within Type of Bank	18.7%	14.0%	16.3%
Total		Count	225	236	461
		% within Type of Bank	100.0%	100.0%	100.0%

From the above table, it is clear that, out of 461 respondents majority 37.7 percent of the respondents says that ease of use is the motivating factor for availing e-banking services, 25.6 percent of the respondents says that reduced time of transaction is the motivating factor for availing e-banking services, 20.4 percent of the respondents says that cost effectiveness is the motivating factor for availing e-banking services and rest of the 16.3 percent of the respondents says that technology savvy is the motivating factor for availing e-banking services.

Out of 225 public sector bank's respondents majority 42.7 percent of the respondents says that ease of use is the motivating factor for availing e-banking services, 21.3 percent of the respondents says that reduced time of transaction is the motivating factor for availing e-banking services, 18.7 percent of the respondents says that technology savvy is the motivating factor for availing e-banking services and rest of the 17.3 percent of the respondents says that cost effectiveness is the motivating factor for availing e-banking services.

Out of 236 private sector bank's respondents majority 33.1 percent of the respondents says that ease of use is the motivating factor for availing e-banking services, 29.7 percent of the respondents says that reduced time of transaction is the motivating factor for availing e-banking services, 23.3 percent of the respondents says that cost effectiveness is the motivating factor for availing e-banking services and rest of the 14 percent of the respondents says that technology savvy is the motivating factor for availing e-banking services.

Table8: Satisfaction of customers

TYPES OF BANK	Public sector Bank		Private sector Bank			
SATISFACTION	Minimum	Maximum	Mean	Minimum	Maximum	Mean
ATM Services	3	5	3.76	3	5	3.78
Internet Banking Services	2	4	2.83	2	5	3.39
Telephone Banking Services	1	4	2.17	2	4	3.01
Mobile Banking Services	1	3	2.32	2	4	3.53

The table reveals that mean score of respondents on satisfaction on banking services. The mean score of 3.76 with the range of 3 and 5 for public sector banks and 3.78 with a range of 3 and 5 on ATM services reveals that the customers are equally satisfied with both type of banks. The mean score of 2.83 with the range of 2 and 4 for public sector banks and 3.39 with a range of 2 and 5 on internet banking reveals that the customers are better satisfied on internet banking in private sector than public sector banks. The mean score of 2.17 with the range of 1 and 4 for public sector banks and 3.01with the range of 2 and 4 on telephone banking reveals that the customers comparatively are satisfied in private sector banks. The mean score of 2.32 with the range of 1 and 3 for public sector banks and 3.53 with the range of 2 and 4 on Mobile banking reveals that the customers of public sector banks are less satisfied than private sector banks on mobile banking services. It is understood from the analysis that customers are satisfied with the services provided by private sector banks.

7. Findings of the Study

- In both public and private sector banks male respondents are dominated.
- In both public and private sector banks majority of the respondents belong to the age group of 18-30 years.
- In public sector banks majority of the respondents have completed their professional courses and in private sector banks majority of the respondents are under graduates.
- In both public and private sector banks majority of the respondents are married.
- In public sector banks majority of the respondents are professional and in private sector banks majority of the respondents are private employees.
- In public sector banks majority of the respondents are earn less than Rs. 20000 per month and in private sector banks majority of the respondents are earn Rs. 40000-60000 per month.
- In both public and private sector banks majority of the respondents says that ease of use is the motivating factor for availing e-banking services .
- The customers of both public and private sector banks are equally satisfied with ATM services provided.
- On the whole customers are satisfied with the services provided by private sector banks.

8. Suggestions

- Public Sector banks must give individual attention and proper response to customers in providing information whereas the level of responsiveness is high in the private sector banks. This will help many customers to rely on public sector banks for their banking needs.
- Banks must ensure to their customers that their service is competitive. Many customers feel that the privacy and security features are to be enriched. So banks must concentrate further on security and withhold their customers and improve them more.
- Ease of use is the major factor to induce the customers to adopt e-banking. Therefore banks should maintain its applications more user friendly and up to date.
- ATMs receive the higher attraction among the e-banking channels. Banks must pay attention and plan to make the ATMs as the key distribution channel for all kinds of banking transactions.

9. Conclusion

Internet adoption among Indians has been increasing over the last two decade. Indian banks have also risen to the occasion by offering new delivery channel which has become available to Indian customers. Private sector banks are quite successful in satisfying their customer's needs. But public sector banks are still need to put more efforts to make this sector to survive in the present world of e-banking competition.

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ISSN: 2395-0463 Volume 03 Issue 06

May 2017

A Comparative Study On Satisfaction And Problems Of Customers Of Public Sector And Private Sector Bank Towards E-Banking In Tirunelveli District

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Abstract:

The banking industry has developments face many to competition among its competitors in the last few decades. Technology aids the banking industry. Today Banks use Ebanking as a tool to attract the customers. E-banking is the outcome of technological innovations and competition. customers' satisfaction and the problems faced by the customersare the challenges before the banks to survivewith other banks. Hence this paper focuses on the satisfaction level and the problems faced by the customers towards e-banking services provided by Public and Private Sector banks in Tirunelveli District. This study is limited to Tirunelveli area only, Tamil Nadu. The objectives of this study are to find out the factors influencing in the adoption of E-banking provided by public and private sector banks, identify the level of satisfaction of customers of public and private sector banks towards their usage of E-banking and to identify the problems of customers in using Ebanking services provided by public and private sector banks.. Convenience sampling method have adopted for this study. The primary data were collected from questionnaire method. From the analysis, it is found that with regard to satisfaction in ATM services, the customers of both sectors of banks are equally satisfied. Also the customers are satisfied with the e-banking services provided by private sector banks. It is suggested that ease of use is the major factor to induce the customers to adopt ebanking. Therefore banks should maintain its applications more user friendly and up to date. ATMs receive the higher attraction among the e-banking channels. Banks must pay attention and plan to make the ATMs as the key distribution channel for all kinds of banking transactions.

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Available at

http://edupediapublications.org/journals/index.php/JSMaP/

ISSN: 2395-0463 Volume 03 Issue 06

May 2017

Keywords: e-banking, satisfaction, ATM, Public sector bank, Private sector bank.

INTRODUCTION:

Banking sector is the backbone of financial system and economy. Commercial banks play an important role in the development of underdeveloped and developing economics by mobilization of resources and their better allocation. The banking industries are mostly customer driven and their survival in competitive environment largely depends on new technological services provided by them. Technology plays a vital role in improving the quality of services provided by the banking sector. E-banking is the outcome technological innovations In fact, banks have been competition. using electronic and telecommunication networks for delivering a wide range of value added products and services. Ebanking means any user with personal computer and a browser can get connected to his bank's website to perform any of the virtual banking functions. The term "electronic baking" or "e-banking" covers both computer and telephone banking. In other words it said that, it is updated 'online real time'. The increasing volumes of transactions in India may be viewed as an indication that banking customers, particularly the young have almost tasted

the benefits of E- banking services, through it is a highly cost effective delivery channel, the risk associated with this kind of banking should not be overlooked.

STATEMENT OF THE PROBLEM:

In the competitive environment of the post liberalization era, financial sector reforms have significantly relaxed the market. Banks has evolved new products and services to attract the customers through innovative technological delivery channels. There are also several special operations which give an intensive marketing push to increase the customer base and usage of technological innovative banking services. For Indian Banks, there is a wide market potential amongst ebanking. The demand for e-banking is necessitate by the growing e-commerce transactions and the paradigm shift in banking led by technology. From the perspective of both users and providers, E-Banking is cost effective, quick and convenient. Hence, it is needed to identify the reason why customer's preference ebanking.

OBJECTIVES OF THE STUDY:

1. To find out the factors influencing in the adoption of E-banking provided by public and private sector banks.

ISSN: 2395-0463

- 2. To identify the level of satisfaction of customers of public and private sector banks towards their usage of E-banking.
- 3. To identify the problems of customers in using E-banking services provided by public and private sector banks

SCOPE OF THE STUDY:

The study aims to find out the perception and preference of customers towards e-banking offered by Public and Private sector banks. This study also aims at measuring the satisfaction of the customers and offer suitable suggestions to solve the problems. This study also compares the perception and preference of customers towards e-banking services offered by public and private sector banks in Tirunelveli district.

RESEARCH METHODOLOGY:

For this research both primary and secondary data were collected. Primary data were collected from the customers of public sector and private sector banks using e-banking and it was collected through well-defined and well-framed questionnaire. Snowball sampling method was used for selecting sample respondents. Four hundred and sixty one respondents were selected. The secondary data were collected from various websites, books, journals and magazines.

ANALYSIS AND INTERPRETATION OF DATA:

Demographic profile is one of the important variables to determine the usage and satisfaction of the respondents. The following tables clearly explain about the demographic profile of the respondents in the study area.

TABLE 1- GENDER WISE CLASSIFICATION OF THE RESPONDENTS

Gender *	Type of Bar	nk Cross Tabulation				
		Type of Bank		Total		
		Public Sector Bank	Public Sector Bank Private Sector Bank			
	Male	117	163	280		
Condon	Male	52.0%	69.1%	60.7%		
Gender	Female	108	73	181		
		48.0%	30.9%	39.3%		
Total		225	236	461		
		100.0%	100.0%	100.0%		

From the above table it is clear that, out of 461 respondents majority 60.7 percent are male respondents and rest of the 39.3 percent of the respondents are female respondents.

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Volume 03 Issue 06

ISSN: 2395-0463

May 2017

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Age		35.6%	33.9%	34.7%		
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	Above 50 Years	18.7%	27.1%	23.0%		
Total		225	236	461		
Total		100.0%	100.0%	100.0%		

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Out of 225 public sector bank's respondents majority 45.8 percent of the respondents are belong to the age group of 18-30 years, 35.6 percent of the respondents are belong to the age group of 30-50 and rest of the 18.7 percent of the

respondents are belong to the age group of above 50 years.

Out of 236 private sector bank's respondents majority 39 percent of the respondents are belong to the age group of 18-30 years, 33.9 percent of the respondents are belong to the age group of 30-50 and rest of the27.1 percent of the respondents are belong to the age group of above 50 years.

TABLE 3- EDUCATION WISE CLASSIFICATION OF THE RESPONDENTS

Education	* Type of Bank C	rosstabulation		
		Type of Bank		<u> </u>
		Public Sector Bank	Private Sector Bank	Total
	School Level	24	14	38
	School Level	10.7%	5.9%	8.2%
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ISSN: 2395-0463 Volume 03 Issue 06

May 2017

From the above table, it is clear that, out of 461 respondents majority 33.6 percent of the respondents are completed professional courses, 29.1 percent of the respondents are under graduates, another 29.1 percent of the respondents are post graduates and rest of the 8.2 percent of the respondents are completed up to school level.

Out of 225public sector bank's respondents majority 37.3 percent of the respondents are completed professional courses, 29.8 percent of the respondents

are post graduates, 22.2 percent of the respondents are under graduates and rest of the 10.7 percent of the respondents are completed up to school level.

Out of 236private sector bank's respondents majority 35.6 percent of the respondents are under graduates, 30.1 percent of the respondents are completed professional courses, 28.4 percent of the respondents are post graduates and rest of the 5.9 percent of the respondents are completed upto school level.

TABLE 4- MARITAL STATUS OF THE RESPONDENTS

MARITAL STA	TUS * Type of I	Bank Crosstabulation		
		Type of Bank Public Sector Bank Private Sector Bank		
				Total
	Single	63	42	105
MARITAL	Single	28.0%	17.8%	22.8%
STATUS	Manniad	162	194	356
	Married	72.0%	82.2%	77.2%
Total		225	236	461
		100.0%	100.0%	100.0%

From the above table, it is clear that, out of 461 respondents majority 77.2 percent of the respondents are married and rest of the 22.8 percent of the respondents are single.

Out of 225 public sector bank's respondents majority 72 percent of the

respondents are married and rest of the 28 percent of the respondents are single.

Out of 236 private sector bank's respondents majority 82.2 percent of the respondents are married and rest of the 17.8 percent of the respondents are single.

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TABLE 5 - OCCUPATION OF THE RESPONDENTS

Occupa	tion * Type of Bank Crossta	bulation		
		Type of Bank		
		Public Sector Bank	Private Sector Bank	Total
	Cavarnment Employee	43	34	77
	Government Employee	19.1%	14.4%	16.7%
	Private Employee	52	67	119
		23.1%	28.4%	25.8%
	Duainaga	27	41	68
	Business	12.0%	17.4%	14.8%
	Professional	54	46	100
	Professional	24.0%	19.5%	21.7%
ion	C4mdom4	24	26	50
pati	Student	10.7%	11.0%	10.8%
Occupation	Housewife	25	22	47
Ŏ	Housewife	11.1%	9.3%	10.2%
Total		225	236	461
Total		100.0%	100.0%	100.0%

From the above table, it is reveals that, out of 461 respondents majority 25.8 percent of the respondents are private employees, 21.7 percent of the respondents are professional, 16.7 percent of the respondents are government employees, 14.8 percent of the respondents are doing business, 10.8 percent of the respondents are students and rest of the 10.2 percent of the respondents are housewife.

Out of 225 public sector bank's respondents majority 24 percent of the respondents are professional, 23.1 percent of the respondents are private employees, 19.1 percent of the respondents are

government employees, 12 percent of the respondents are doing business, 11.1 percent of the respondents are housewife and rest of the 10.7 percent of the respondents are students.

Out of 236 private sector bank's respondents majority 28.4 percent of the respondents are private employees, 19.5 of respondents percent the are professional, 17.4 percent the respondents are doing business, percent of the respondents are government employees, 11 percent of the respondents are students and rest of the 9.3 percent of the respondents are housewife.

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TABLE 6- INCOME WISE CLASSIFICATION OF THE RESPONDENTS

Monthly	y Income * Type of Bank Cross	stabulation		
		Type of Bank		
		Public Sector	Private Sector	Total
		Bank	Bank	
	Logg than 20 000 munoog	66	40	106
	Less than 20,000 rupees	29.3%	16.9%	23.0%
	20,000 to 40,000 rupees	64	67	131
4)		28.4%	28.4%	28.4%
come	40,000 to 60,000 rupees	55	77	132
y Inc		24.4%	32.6%	28.6%
Monthly Income	More than 60 000 wanger	40	52	92
\mathbf{M}_{0}	More than 60,000 rupees	17.8%	22.0%	20.0%
T		225	236	461
Total		100.0%	100.0%	100.0%

From the above table, it is clear that, out of 461 respondents majority 28.6 percent of the respondents are earn Rs. 400000-60000 per month, 28.4 percent of the respondents are earn Rs. 20000-40000 per month, 23 percent of the respondents are earn less than Rs. 20000 per month and rest of the 20 percent of the respondents are earn more than Rs. 60000 per month.

Out of 225 public sector bank's respondents majority 29.3 percent of the respondents are earn less than Rs. 20000 per month, 28.4 percent of the respondents are earn Rs. 20000-40000 per month, 24.4 percent of the respondents are earn less

than Rs. 40000-60000 per month and rest of the 17.8 percent of the respondents are earn more than Rs. 60000 per month.

Out of 236 private sector bank's respondents majority 32.6 percent of the respondents are earn Rs. 40000-60000 per month, 28.4 percent of the respondents are earn Rs. 20000-40000 per month, 22 percent of the respondents are earn more than Rs.60000 per month and rest of the 16.9 percent of the respondents are earn less than Rs. 20000 per month.

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TABLE 7- FACTORS INDUCED TO USE E-BANKING

Factors Induced * Type of Bank Crosstabulation							
			Type of Bank				
				Public Sector Bank	Private Sector Bank	Total	
Factors Induced	Reduced time of transaction	Count		48	70	118	
		% within T	ype of	21.3%	29.7%	25.6%	
	Cost effectiveness	Count		39	55	94	
		% within T	ype of	17.3%	23.3%	20.4%	
	Ease of use	Count		96	78	174	
		% within T	ype of	42.7%	33.1%	37.7%	
	Technology savvy	Count		42	33	75	
		% within T	ype of	18.7%	14.0%	16.3%	
		Count		225	236	461	
Total		% within Ty Bank	ype of	100.0%	100.0%	100.0%	

From the above table, it is clear that, out of 461 respondents majority 37.7 percent of the respondents says that ease of use is the motivating factor for availing e-banking services, 25.6 percent of the respondents says that reduced time of transaction is the motivating factor for availing e-banking services, 20.4 percent of the respondents says that cost effectiveness is the motivating factor for availing e-banking services and rest of the 16.3 percent of the respondents says that technology savvy is the motivating factor for availing e-banking services.

Out of 225 public sector bank's respondents majority 42.7 percent of the respondents says that ease of use is the motivating factor for availing e-banking services, 21.3 percent of the respondents says that reduced time of transaction is the motivating factor for availing e-banking services,18.7 percent of the respondents says that technology savvy is the motivating factor for availing e-banking services and rest of the 17.3 percent of the respondents says that cost effectiveness is the motivating factor for availing ebanking services.

Out of 236 private sector bank's respondents majority 33.1 percent of the



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respondents says that ease of use is the motivating factor for availing e-banking services, 29.7 percent of the respondents says that reduced time of transaction is the motivating factor for availing e-banking services, 23.3 percent of the respondents

says that cost effectiveness is the motivating factor for availing e-banking services and rest of the 14 percent of the respondents says that technology savvy is the motivating factor for availing e-banking services.

TABLE 8- LEVEL OF SATISFACTION OF CUSTOMERS

TYPES OF BANK	Public sector Bank			Private sector Bank			
SATISFACTION	Minimum	Maximum	Mean	Minimum	Maximum	Mean	
ATM Services	3	5	3.76	3	5	3.78	
Internet Banking Services	2	4	2.83	2	5	3.39	
Telephone Banking Services	1	4	2.17	2	4	3.01	
Mobile Banking Services	1	3	2.32	2	4	3.53	

The table reveals that mean score of respondents on satisfaction on banking services. The mean score of 3.76 with the range of 3 and 5 for public sector banks and 3.78 with a range of 3 and 5 on ATM services reveals that the customers are equally satisfied with both type of banks. The mean score of 2.83 with the range of 2 and 4 for public sector banks and 3.39 with a range of 2 and 5 on internet banking reveals that the customers are better satisfied on internet banking in private sector than public sector banks. The mean score of 2.17 with the range of 1 and 4 for

public sector banks and 3.01 with the range of 2 and 4 on telephone banking reveals that the customers comparatively are satisfied in private sector banks. The mean score of 2.32 with the range of 1 and 3 for public sector banks and 3.53 with the range of 2 and 4 on Mobile banking reveals that the customers of public sector banks are less satisfied than private sector banks on mobile banking services. It is understood from the analysis that customers are satisfied with the services provided by private sector banks.

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TABLE 9- PROBLEMS IN ELECTRONIC BANKING SERVICES

S.NO	TYPES OF BANK	Public sector Bank			Private sector Bank			
	PROBLEMS	Minimum	Maximum	Mean	Minimum	Maximum	Mean	
1	ATM Problems	1.0	3.0	2.160	1.0	3.0	1.496	
2	Internet Banking Problems	2.0	4.0	2.911	1.0	3.0	1.682	
3	Telephone Banking Problems	2.0	4.0	3.160	1.0	3.0	1.534	
4	Mobile Banking Services	2.0	4.0	2.947	1.0	3.0	1.881	

The table reveals that mean score of respondents on banking problems. The mean score of 2.16 with the range of 1 and 3 for public sector banks and 1.49 with a range of 1 and 3 on ATM problem reveals that the customers facing many problems on ATM services in public sector banks comparatively with private sector banks. The mean score of 2.91 with the range of 2 and 4 for public sector banks and 1.68 with a range of 1 and 3 on internet banking problems reveals that the customers face more problems on internet banking in public sector than private sector banks.

The mean score of 3.16 with the range of 2 and 4 for public sector banks and 1.54 with the range of 1 and 3 on telephone banking problems reveals that the customers comparatively face many problems in public sector banks. The mean score of 2.94 with the range of 2 and 4 for public sector banks and 1.88 with the range of 1 and 3 on Mobile banking problems reveals that the customers of public sector banks face problems on mobile banking services. It is understood from the analysis that customers deal with problems with the services provided by public sector banks.

FINDINGS OF THE STUDY:

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- ➤ In both public and private sector banks male respondents are dominated.
- ➤ In both public and private sector banks majority of the respondents belong to the age group of 18-30 years.
- In public sector banks majority of the respondents have completed their professional courses and in private sector banks majority of the respondents are under graduates.
- ➤ In both public and private sector banks majority of the respondents are married.
- ➤ In public sector banks majority of the respondents are professional and in private sector banks majority of the respondents are private employees.
- ➤ In public sector banks majority of the respondents are earn less than Rs. 20000 per month and in private sector banks majority of the respondents are earn Rs. 40000-60000 per month.
- ➤ In both public and private sector banks majority of the respondents says that ease

- of use is the motivating factor for availing e-banking services.
- The customers of both public and private sector banks are equally satisfied with ATM services provided.
- On the whole customers are satisfied with the services provided by private sector banks.
- > The customers of public sector banks face more problems in telephone banking and in case of private sector banks customers are facing more problems in mobile banking.

SUGGESTIONS:

- Public Sector banks must give individual attention and proper response to customers in providing information whereas the level of responsiveness is high in the private sector banks. This will help many customers to rely on public sector banks for their banking needs.
- ➤ Banks must ensure to their customers that their service is

Available at

ISSN: 2395-0463

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competitive. Many customers feel that the privacy and security features are to be enriched. So banks must concentrate further on withhold security and customers and improve them more.

- Ease of use is the major factor to induce the customers to adopt ebanking. Therefore banks should maintain its applications more user friendly and up to date.
- > ATMs receive the higher attraction among the e-banking channels. Banks must pay attention and plan to make the ATMs as the key distribution channel for all kinds of banking transactions.
- ➤ Both sectors of banks need to concentrate and improve telephone banking and mobile banking.

CONCLUSION:

Internet adoption among Indians has been increasing over the last two decade. Indian banks have also risen to the occasion by offering new delivery channel which has become available to Indian customers. Private sector banks are quite successful in satisfying their customer's needs. But public sector banks are still need to put more efforts to make this sector to survive in the present world of ebanking competition.

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