CHAPTER 1
INTRODUCTION OF THE STUDY

1.1 INTRODUCTION

The banking and financial services sector is in a position to benefit most of the people by leveraging technology and it is a sector that has absorbed the technology to a great extent. At present its condition has reached a stage in which it cannot survive without the support of Information and Communication technology. Banks all over the world are effectively deploying information and communication technology as a strategic resource to achieve speed, efficiency, cost reduction, customer service and competitive advantage. The Indian banking sector has witnessed wide range of changes under the influence of the financial sector reforms initiated during the early 1990s. All banks in India have realized in the post-liberalisation era that in order to survive in a competitive world and provide the best services to their customers, they need to have the latest technology in place. “Banking was one of the economic sectors that have begun the services automation early.

Developments in the Information Technology sector have forced banks to introduce and upgrade Self Service Banking Technologies (SSBTs). Financial services, especially commercial banking has introduced new self-service technologies (SST), in the contact with customers, which allows the customer to accede service in an autonomous and timeless form. The focus of this research is on technologies that customers independently use for banking without any interaction with or assistance from bank employees. Such services are termed as Self-Service Technologies or SSTs (Meuter, M.L et al., 2000). SSTs are increasingly changing the way customers interact with firms to
create service outcomes. The continuing proliferation of SSTs conveys the need for research on services that extend the interpersonal dynamics of service encounters to technology-oriented context.

In the past, the technology strategy was considered subordinate to business strategy in Banks. But now with much advancement in technology it has become as important as business strategy. Technology has provided an altogether new and different modern way of interacting and providing service to bank customers rather than merely replicating activities of the bank employees (Godse, 2005).

One of the most visible and client orientated technological innovations is the Self-Service Technologies (SST) that includes the automated teller machine (ATM), call centers/telephone banking (TB), internet banking (IB), Mobile banking (MB), Mobile wallet (MW) and so on. These technologies can be used by consumers in an independent way, without having interaction with an assistant or employee. Without these technologies, banks would be slow and inoperative to meet the actual demands, both in services processing and in attending client’s needs. This study examines the impact on consumer behavior resulting from the use of these SST in Indian banking services. These technology-led innovations can enhance the customer value proposition in the following ways:

- Innovative services through creation of new Internet platforms and market places.
- Increased customer ability, leading to greater trust through Internet information pull services.
- Cost-efficient Internet transactions, payments, and lending services through Internet banking and brokerage portals.
- Access to remote markets and products through Internet brokerage portals.
Persuading customers to use new technologies in service encounters is generally more challenging than employees’ use of new technologies as far as banks are concerned. In the delivery of the services, since technology can replace a firm’s employees, the use of technology is immensely beneficial to the service provider in that it can standardize service delivery, reduce labor costs and expand the options for offering services. On the other hand it could be mere wastage of resources if not widely accepted by consumers. Thus, it is essential that we find out new and easy ways to design, manage and promote new technologies in order to have the best chance of consumer acceptance.

1.2 SELF-SERVICE TECHNOLOGIES IN INDIAN BANKING INDUSTRY

In financial sector especially the banking sector there are so many new technologies are taking place in financial operations. Self-Service technologies or electronic banking technologies allow customers to use technology to produce and consume services with no direct personal contact with employee from the firm (bank) that provides the services. In other words, the customers assist in the process of service delivery aided by SST. Self-Service technologies such as automated teller machine (ATM), call centers/telephone banking, internet banking, Mobile banking and Mobile wallet were studied and customer behaviour towards these services were analysed.

1.2.1 Automated Teller machine

A machine that allows customers of a banking institution to transact banking business without any help of a bank teller. An automated teller machine is a computerized telecommunications device. Most of Automated teller machines are capable to dispense cash and also can accept deposits. Automated teller machine can also transfer funds as well provide information regarding balance in connected account. Automated Teller Machines have found its rapid popularity not only because of low in banks transactions costs but also due to customers convenience and thereby it is become need of the day in common men life.
1.2.2 Internet banking

Internet banking or online banking is a system allowing individuals to perform banking activities at home or working place via internet. Through online banking, one can perform all routine transactions such as fund transfer, balance enquiry, account statement, bills payment, stop-payment request, etc. The detailed aspects of internet banking will be discussed in the upcoming chapters.

1.2.3 Telephone/ Phone banking

Telephone banking is the process of handling bank accounts over the phone. It is also referred to as phone banking. This service is commonly offered by banks, credit unions and credit card companies. Using a telephone to check a bank account balance, transfer money or review account history is considered to be safe and convenient by some patrons. The provision of telephone banking allows customers to carry out all of these transactions without accessing a mobile application, finding a computer or visiting a branch location. Telephone banking therefore appeals to people who want immediate, spoken feedback on their bank accounts and who are concerned about the security associated with other remote banking options.

1.2.4 Mobile banking

Mobile Banking as activities performing balance checks, account transactions, payments and credit applications via a mobile device. It includes provision of banking and financial services with the help of mobile telecommunication devices. Mobile banking until 2010 often been performed via SMS or the Mobile Web. After the penetration of smart phones banks are providing this service with the help of software application. Almost all the services performing in internet banking now became available in the mobile banking.
1.2.5 **Mobile wallet/ Digital wallet**

A digital wallet is a service allowing the wallet holder to securely access, manage and use identification and payment instruments in order to initiate payments. This service may reside on a device owned by the holder e.g., a mobile phone (Mobile Wallet) or a PC or may be remotely hosted on a server but is anyway under the control of the holder. The remote digital wallet has the advantage that it can be accessed anywhere from any device.

**1.3 CONSUMER BEHAVIOUR**

Consumer behaviour is the study of how individual customer, groups or organizations select, buy, use and dispose ideas, goods and services to satisfy their needs and wants. It refers to the actions of the consumers in the market place and the underlying motives for those actions. According to Engel, Blackwell and Mansard, ‘Consumer behaviour is the actions and decision processes of people who purchase goods and services for personal consumptions’.

The various factors that influence the consumer behaviour are as follows:

- Marketing factors such as product design, price, promotion, packaging and distribution.
- Personal factors such as age, gender, education and income level.
- Psychological factors such as motivation, perception and attitudes towards the product or service.
- Situational factors such as physical surroundings at the time of purchase or using the service, social surrounding and time factor.
- Social factors such as social status, reference groups and family.
- Cultural factors such as religion, social class—caste and sub-castes.
As the present study focuses on consumer behaviour towards Self-Service Technologies in banks, it is important to shed light on consumer behaviour in the context of the financial services industry. In this study consumer behaviour towards SSTs was identified with the help of Technology Acceptance Model (TAM) Davis et al. (1989) state that ‘the goal of TAM is to provide an explanation of the determinants of computer acceptance that is general, capable of explaining user behaviour across a broad range of end-user computing technologies and user populations, while at the same time being both parsimonious and theoretically justified’ (p. 985). They claim that the purpose of the TAM is to provide a basis for tracing the impact of external factors on internal beliefs, attitudes and intention.

1.4 STATEMENT OF THE PROBLEM

In the International context, the way in which banks deliver services has undergone a paradigm shift with the banks increasingly going in for electronic and assisted services in the self service mode through various electronic channels. In India too this trend is visible. Tough competition and increasing customer expectations have forced all major commercial banks, irrespective of the sectors, to adopt the provision of banking services through ATMs, internet banking, telephone banking and mobile banking.

The services through these channels offer tremendous advantage both to the banks and to their customers. For the banks the advantages, are reduced transaction costs and lesser crowding in their branches. For the customers, these channels offer the convenience of doing bank transactions from the places of their choice, even homes and conducting them at any time of the day they want.

Customers are the lifeblood of any business regardless of its nature, type and size. Marketing has its focus primarily on the identification of the customers’ need and fulfillment
of the same. Banks are not an exception to this rule. Though Self-service banking technologies have great potential in bettering banking services in India, this potential is not fully utilized. Information about these services is not widely disseminated so that consumers can effectively benefit from the services. Knowledge of the information on behavior of self-service banking consumers is therefore critical for the banks to better tailor the information products that would assist users in utilizing the services. Bank customers also benefit because they get information products that best meet their information needs. Yet not much is known about the information behavior of self-service banking consumers. The absence of information on self-service banking technologies affects the way customers use the services as they are not well informed.

Customers from the metro centered areas are almost aware of all these self-service banking technologies because of their surrounding factors, but people from the semi urban and rural areas are lagging behind in adopting these services. It is necessary to create an awareness among the rural banking customers and before that it is essential to find out from the customers whether they really look for these Self-service technologies or they are satisfied with the branch banking itself. On one side bank branches are expanding and on the other side technologies are also fashioned to minimise the banks operation so it is important to check and verify whether both really correlate with each other.
1.5 RESEARCH OBJECTIVES

1) To analyse the effect of demographic factors on the adoption levels of Self-Service Technologies by bank customers.

2) To develop a framework to understand the influence of customer behaviour variables on the usage of self-service technologies.

3) To uncover the relationships among the beliefs, attitudes and the usage intentions about them, and relate them to the usage of Self-Service Banking Technologies.

4) To examine the awareness level of self-service technologies among the customers of nationalised banks.

5) To find the satisfaction level and quality perception of bank customers who are using these services.

6) To examine the factors that assists and hampers the adoption of these services.

7) To find out the challenges faced by the banking customers in practicing these self-service technologies.

1.6 RESEARCH QUESTIONS

This study is intended to answer the following research questions:

- What are the factors that directly influence consumers’ behaviour towards the use of Self-Service Banking Technologies?

- What is the relationship between consumer perception of usefulness, ease of use and security of Self-Service Banking Technologies?

- How do these perceptions affect customers’ intention to adopt Self-Service Banking Technologies?
1.7 HYPOTHESES OF THE STUDY

The major hypotheses which are linked to the objectives of the study are proposed:

1) $H_{10}$: The adoption levels of the Self-Services Technologies (SST) by bank customers do not vary significantly with the variation in their demographic factors such as gender ($H_{1a0}$), age ($H_{1b0}$), income ($H_{1c0}$) and occupation ($H_{1d0}$).

2) $H_{20}$: The adoption levels of Self-Services Technologies (SST) by bank customers do not vary with the place of residence.

3) $H_{30}$: There is no significant difference between the users and non-users of Self-Services Technologies (SST) and branch visit frequency.

4) $H_{40}$: There is no significant difference between the users and non-users of Self-Services Technologies (SST) and hours of computer usage per day.

5) $H_{50}$: There is no significant difference between the users and non-users of Self-Services Technologies (SST) and hours of internet browsing per day.

1.8 SIGNIFICANCE OF THE STUDY

The current study focuses exclusively on the retail banking segment of the nationalised banks in Sivaganga district. The main aim of this study is to find out the customers’ behaviour and intention towards the usage of Self-Service Technologies of nationalised banks in Sivaganga district. The results of this study are important in providing service providers such as banks a better understanding of the information needs of the users. It is also important to understand the information needs of the users of self-service banking technologies so that commercial banks may tailor their services in such a way to meet the information needs of its users. The findings of the study will be of great use to the commercial banks to better the way of self-service banking technologies.
Likewise finding from the non-users will help the bank to attract the customers by rectifying their demerits. This study will help the banks to fill the gap between the service provided by them and the customer’s expectations. The study may assist in the provision of information services using more information accessible formats, channels and sources. Results of the study may improve policies on self-service banking information services and give these policies a firm empirical verification. Further, this study will be a contribution to empirical research on self-service banking information services. Besides these, this study finds out the potential problem areas by way of factors inhibiting the adoption of these services, the understanding of which can help banks plan and implement measures to overcome them and increase the number of users of these services.

1.9 METHODOLOGY OF THE STUDY

1.9.1 Methodology

Research in common parlance refers to a search for knowledge through objective and systematic method of finding solution to a problem. According to Clifford Woody, a research comprises defining and redefining the problem, formulating hypothesis or suggested solution; collecting, organising and evaluating data; making deductions and reaching conclusions to determine whether they fit the formulating hypothesis.

1.9.2 Research Design

The type of research design used in this study is descriptive research. The main purpose of this type of research is to finds out the proportion of the population having certain characteristics and to discover association among variables. The current study, using a survey method, employing a structured questionnaire which was administered through personal contact method, tries to identify the characteristics of the users and non-
users of Self-Service Banking Technologies such as ATM services, Internet banking, Telephone banking, Mobile banking and Mobile wallet. Further, an attempt is made to estimate their usage patterns pertaining to Self-Service Banking Technologies and their relationships with demographic, attitudinal and perceptual factors of bank customers.

1.9.3 Sampling Design

A multi-phase sampling design has been done for the study in which the geographical location was first fixed, followed by the banks from which the respondents were sampled.

1.9.4 Geographical extent of the study

The study requires the inputs from users of the Self-Service Banking Technologies along with those from non-users; the various parameters explored in this study like customer satisfaction, usage patterns, adoption levels (extent of usage) and so on could be had only from the users of these services. Hence when selecting the geographical locations care was taken so that the locations selected have an adequate representation of the users of internet banking, telephone banking, mobile banking and mobile wallet.

Sivaganga District is an administrative district of Tamil Nadu state in southern India. It is bounded by Pudukottai district on the North East, Tiruchirapalli district on the North, Ramanathapuram district on South East, Virudhunagar district on South West and Madurai District on the West.

According to 2011 census, Sivaganga district had a population of 1339,100 with a sex-ratio of 1,003 females for every 1,000 males. It is one of the relatively heavily banked districts having a total of 242 bank branches with most of the branches in rural and semi-urban areas. Among the 242 bank branches, nationalised banks occupy the
major contribution with nearly 130 branches whereas the rest belongs to the old and new private banks and State bank of India groups. No foreign bank is available in this district. Indian Overseas Bank, one of the leading nationalised banks in India becomes the Lead bank in Sivaganaga district. As per the report of the lead bank, the district has all the 19 nationalised banks. The RBI classifies the banking centers into metro, urban, semi-urban and rural centers based on the population in the respective banking areas. (Refer Appendix II)

1.9.5 Geographical scope of the study

Usually Self-Service banking Technologies are mostly offered in the metropolitan centers and urban centers by the banks. But now they are found everywhere because of the evolution of internet and smart phones. Here the study has planned to cover the adoption, usage and perceptions regarding Self-Service banking Technologies among rural, Semi-urban and urban customers. It is found that this district becomes the favourite destination for public sector banks to launch new products and services (Sucheta Dalal, January 2014). Only the nationalised banks in Sivaganga District have been chosen for this study that too banks which do retail operations only. Of these nationalised banks, only three banks (Indian Overseas Bank, Indian bank and Canara bank) having more number of branches has been chosen. Another reason for choosing these three banks was the availability of bank branches in all Taluks of the study area.

1.9.6 Population of the study

The population for the study can be defined as all the banking customers in the selected district who are using at least one of the Self-Service Banking Technologies and aged above eighteen years. The condition that the respondents should be using at least one of the Self-Service Banking Technology channels is followed because the domain of
the study was primarily on adoption, satisfaction levels and usage patterns of the respondents with respect to the services offered through these electronic banking channels.

### 1.9.7 Sample Size

According to the Raosoft online sample size calculator at 95 percent confidence level and 50 percent as the response distribution, the total sample of 377 has been derived from the total population since the population is unknown. The distribution of the sample respondents is given in the following table.

<table>
<thead>
<tr>
<th>S. No</th>
<th>Taluk</th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Sivaganga</td>
<td>47</td>
</tr>
<tr>
<td>2.</td>
<td>Manamadurai</td>
<td>47</td>
</tr>
<tr>
<td>3.</td>
<td>Ilayangudi</td>
<td>47</td>
</tr>
<tr>
<td>4.</td>
<td>Devakottai</td>
<td>47</td>
</tr>
<tr>
<td>5.</td>
<td>Karaikudi</td>
<td>48</td>
</tr>
<tr>
<td>6.</td>
<td>Thirupathur</td>
<td>47</td>
</tr>
<tr>
<td>7.</td>
<td>Thiruppuvanam</td>
<td>47</td>
</tr>
<tr>
<td>8.</td>
<td>Kalaiyarkoil</td>
<td>47</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>377</td>
</tr>
</tbody>
</table>

### 1.9.8 Sampling Method

The study population is infinite. The entire Sivaganga district was selected based on a stratified proportionate random sampling method followed by the convenience sampling technique. So the researcher has collected the data from 377 respondents in the study area.
1.10 DATA COLLECTION METHODS

1.10.1 Primary Data

In order to fulfill the defined objectives, a sample survey was undertaken by using a well framed questionnaire which was duly filled in by the respondents. All the questions are closed ended questions with multiple choices and Likert five point scaling techniques were adopted. The researcher has also conducted interview schedule with the managers of bank branches in Sivaganga district by means of unstructured questions for addressing the major issues of the research problem.

1.10.2 Secondary Data

The secondary data pertaining to the study was gathered from the records published by Reserve Bank of India. Further, the secondary data was collected from different leading banking journals and magazines. A number of standard text books would be used to obtain pertinent literature on the banking services. Web sources related to banks were also referred to collect the latest information about the customers’ opinion about SSTs in the study area.

1.10.3 Pilot study / Pre-Test

The developed questionnaire was subject to pretesting, during which the questions were analysed to check their readability and comprehensibility. The researcher has conducted a pilot study about the consumer behaviour towards Self-Service Technologies in the study area and collected data from 30 respondents. Both formal and informal discussions were made to tune the content of the questionnaire. In addition, the Cronbach’s Alpha test was administered on the collected samples to find out the reliability and validity of the schedule. The reliability and validity of the questionnaire is given in table 1.2
Table 1.2

Reliability and Validity analysis of Questionnaire

<table>
<thead>
<tr>
<th>Cronbach’s Alpha value</th>
<th>No of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.859</td>
<td>111</td>
</tr>
</tbody>
</table>

Cronbach alpha which is a measure of reliability based on internal consistency of the constructs used has been calculated for all the multi-item variables as recommended by (Hair et al., 1998). From the table 1.2, it is inferred that the Cronbach’s Alpha value for the 111 items are 0.859 which shows a high reliability through SPSS 16 Version.

1.11 FRAME WORK OF ANALYSIS

1.11.1 Analysis of data

The present study is divided into six major parts namely demographic profile of the respondents, usage patterns of respondents, adoption level measurements, purpose of using individual Self-Service technologies, satisfaction of the users of the different Self-Service technologies, relationships among antecedent beliefs, attitudes, intentions of usage and actual usage of ATMs and internet banking.

1.11.2 Statistical Tools Applied

The primary data collected from the respondents were tabulated and analysed using the Statistical Package for Social Sciences (SPSS. 16). The researcher has applied certain statistical tools to analyse the primary data collected from the respondents.
They are as follows:

- Independent sample t-test
- One way ANOVA
- Henry Garrett Ranking
- Correlation
- Chi square Test
- Factor Analysis
- Likert Scaling Techniques
- Friedman Test
- Structural Equation Model (SEM)

Descriptive statistics were used to know about the characteristics of the respondents. The statistical tools such as the weighted means, independent sample t-test and one way ANOVA test were used to test the differences in adoption levels of the Self-Service banking Technologies among various demographic categories. The same tools were used to find the differences in the satisfaction levels and perception levels pertaining to the Self-Service banking Technology channels among these groups. Garrett ranking techniques were used to find the predominant reasons for selecting the prime bank. Factor Analysis was applied to know the opinion towards the various determinants of Self-Service Technologies adoption level.

Chi square test was used to find the level of satisfaction among the demographic factor gender and place of residence. Correlation tests were used to find out the pair wise relationships among various determinants of Self-Service Technologies adoption level. Structural Equation Modeling (SEM) using AMOS.16 package was employed to find the relationship among antecedent beliefs, attitudes, intention to use and usage in case of
ATMs and internet banking. The reasons for non-usage of internet banking, telephone banking and mobile banking were analysed using Friedman test. Likert scaling techniques was used to find the drivers of mobile banking and mobile wallet services.

1.12 LIMITATIONS OF THE STUDY

- The study is limited to the Self-Service banking technologies such as Automated Teller Machine (ATM) services, Internet banking services, Tele banking services and Mobile banking services. These services are deemed to be self services as customer himself/herself performs the service without the direct involvement of bank employees. No other electronic services provided by banks are considered in this study.

- In recent times, more number of technologies is used in branch banking itself and this study does not focus on any of them since branch banking is not considered for the study.

- The study is confined to retail banking customers of selected nationalised banks and not the wholesale customers.

- The secondary data was collected only from the few sources due to non-transparency of data.
1.13 CHAPTER SCHEME

The present study is divided into seven chapters.

**Chapter one** deals with the introduction to the study, gives a brief account of its background, Statement of problem, Objectives of the study, Research questions, Research hypotheses, Significance of the study, Limitations of the study. The chapter also delineates the principles underlying the research design and the research methodology used. The details regarding sampling design, data collection methods, research instruments, framework of the analysis and the statistical tools used are clearly brought out here.

**Chapter two** covers the review of the related literature including aspects of similar studies.

**Chapter three** discusses the overview of Indian banking sector in general and the technological development that has taken place in this sector and its level of performance in recent years.

**Chapter four** deals with the concept of Consumer behaviour in general, factors affecting consumer behaviour, Consumer behaviour in the context of financial service and various Self-Service Banking Technologies like ATM, Internet banking, Telephone banking, Mobile banking and Mobile wallet with its current status.

**Chapter five** has the data analysis and interpretation. This chapter is divided into six parts:

**Part A** presents the demographic profile of the respondents and findings pertaining to overall aspects regarding the banks.

**Part B** explains the usage patterns of respondents, which includes their computer and internet usage, awareness levels about electronic banking services, frequency and
duration of using Self-Service technologies. It also represents the usage pattern of individual Self-Service technologies like ATM, Internet banking, Telephone banking, Mobile banking and Mobile wallet.

Part C discusses the adoption level measurements, the effect of demographic factors on the adoption levels and examines the perceptual and attitudinal determinants of adoption levels.

Part D deals with the satisfaction level of the users of different Self-Service technologies, the relationship between customer satisfaction and service quality of the individuals Self-Service technologies options and its influence on adoption levels.

Part E examines the relationships among antecedent beliefs, attitudes, intentions of usage and actual usage of ATMs and internet banking of the respondents through the means of structural equation modeling.

Chapter six gives the summary of the findings and suggestions, conclusion of the study and recommendations for future research.
REFERENCES