CHAPTER- 1

INTRODUCTION

The banking industry in India has undergone a sea change after independence. More recently, liberalization, the opening up of the economy in the 90s and the government’s decision to privatise banks by reduction in state ownership culminated in the banking reforms based on the recommendations of the Narasimham Committee\(^1\). From the socialist thrust of the 70s and 80s when the nationalized banks operated with a view of giving access to organized banking to as many people as possible, in the last few years, banking as a function, has come full circle. The prime move for banks today is profit, with clear indications from the government to ‘perform or perish’. Banks have also started realizing that business depends on client service and the satisfaction of the customer and this is compelling them to improve customer service and build relationships with customers.

With the current change in the functional orientation of banks, the purpose of banking is being redefined. The main driver of this change is changing customer needs and expectation. Customers in urban India no longer want to wait

in long queues and spend hours in banking transactions\(^2\). This change in customer attitude has gone hand in hand with the development of ATMs, phone and net banking along with availability of service right at the customer’s doorstep. Further, the world class banking experience provided by private and multinational banks with their ever evolving products and services has raised the bar of customer expectations. With the emergence of universal banking, banks aim to provide all banking product and service offerings under one roof\(^3\) and their endeavour is to be customer centric\(^4\). The Indian banking industry is also embracing technology rapidly. Big players among the private and the public sector banks are reengineering and automating their core banking processes.

If banking relationship is about bonding, books are created only when the employees develop a relationship with the customers. A prerequisite for developing relationship is the satisfaction of the employees themselves\(^5\). Customers look for a relationship with the bank when they receive benefits from

its services. When the entire banking focus now moving towards profits and profitability, it is imperative that employee motivation becomes a top priority issue for the banking fraternity. When the employee is motivated and the customer served well, he does more business with bank leading to the profitability of the bank. This benefit is passed on to the deserving employees and they are motivated. This circle of excellence is of prime importance in customer centric business processes.

Customer Satisfaction in Indian Retail Banking

Customer satisfaction is an evaluation by the customer, after buying goods and services. The most time-honoured view of customer satisfaction in the academic world is that customer satisfaction is the judgment assumed out of the comparison of pre-purchase expectations with post-purchase evaluation of the product or service experience (Oliver, 1997). Customer satisfaction can result from any factor (it may or may not be quality related) and its judgments may take place from non-quality issues (e.g., needs, equity, and perceptions of ‘fairness’).

and require experience with the service or service provider (Howard and Sheth, 1969; and Taylor and Baker, 1994)\(^9\). Furthermore, a basic precept of marketing is that customer satisfaction with a product will possibly lead to repeat purchases, acceptance of product line extensions, and favourable word-of-mouth advertising (Cardozo, 1965)\(^11\). Customer satisfaction is widely recognized as a key pressure in the formation of consumers’ future purchase intentions (Taylor and Baker, 1994)\(^12\). In today’s highly competitive, increasingly consolidated world, offering personalized and differentiating services can be critical to a bank’s success.

Customer satisfaction is one of the most significant factors for the profitability of retail banking in India. It calls for the retention of customers for a long term, which is more economical than attracting new customers (Richheld and

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Kenny, 1990). In the current circumstances of retail banking in India particularly with banks becoming larger, the closure of branches and the widespread use of internet banking, the issue arises whether the customers are satisfied or not and what are the rudiments of retail banking which lead to the satisfaction or dissatisfaction of its customers. The knowledge of current levels of satisfaction and, in particular, the primary factors of satisfaction are beneficial to those in the industry, thereby allowing them to focus and further strengthen the crucial areas that lead to highly satisfied customers. Previous results have emphasized that in branch factors and, in particular, staff, branch location and convenience are the most noteworthy factors that have some bearing on customer satisfaction in retail banking.

The banking industry like any other financial services industries is facing a market that is rapidly changing: new technologies being introduced, fear of economic uncertainties, fierce competition and more demanding customers and the changing climate have presented an unparalleled set of challenges (Lovelock, 2001). Banking, being a customer-oriented services industry, the customer is the centre of attention and customer service has to be the distinguishing factor. The

challenge for banks is to lower costs, increase efficiency, while improving the quality of their service, and increase customer satisfaction. Attention has now turned to improving the quality of service encounter, when customers enter the bank and come into face-to-face contact with bank staff (Chakravarty, 1996)\textsuperscript{15}.

**Customer Loyalty in Retail Banking Market**

In the highly competitive, complex and dynamic environment of the banking industry, the very slight differences which exist in financial services and products together with an increasingly demanding customer have led to a great transformation in the industry. The traditional product-oriented bank is becoming increasingly customer-oriented in accordance with the basic principles of relational marketing, which focuses on customer loyalty as its main goal. In this sense, Gilmore (1997)\textsuperscript{16} considers that constant customer – oriented behaviour is a requisite for improving the implementation of quality in services marketing. Indeed, factors such as financial products and distribution have attained similar levels of development and technology and have thus been relegated to a secondary role as reference points for distinguishing between one bank and another.


In this sense, Barnes and Howlett (1998) argue that, given that many financial services are parity offerings, it can be stated that a customer is unlikely to be overly impressed by core product attributes when all companies are providing similar offerings.

Generally, loyalty has been, and continues to be, defined as repeat purchasing frequency or relative volume of same-brand purchasing. Many definitions in the literature suffer from the problem that they record what the consumer does, and none taps into the psychological meaning of loyalty (Oliver, 1999).

According to Jacoby and Kyner (1973), brand loyalty is the biased (i.e. non-random) behavioural response (i.e. purchase), expressed over time, by some decision-making unit, either on the part of an individual, family or organization, with respect of one or more alternative brands out of a set of such brands, which

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means that it is necessary to distinguish between exclusivity and loyalty and a function of psychological processes which involves the evaluation of different alternatives using specific criteria. Similarly, Dick and Basu (1994)\textsuperscript{21} define loyalty as:

\textit{….a deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behaviour.}

Jacoby and Chestnut (1978)\textsuperscript{22} have explored the psychological meaning of loyalty in an effort to distinguish it from behavioural (i.e. repeat purchase) definitions. Their analysis concludes that consistent purchasing as an indicator of loyalty could be invalid because of happenstance buying or a preference for convenience, and that inconsistent purchasing could mask loyalty if consumers were multi-brand loyal.

Therefore, loyalty is a concept that goes beyond simple purchase repetition behaviour since it is a variable which basically consists of one dimension related

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to behaviour and another related to attitude, where commitment is the essential feature, Berne, (1997)\textsuperscript{23}.

In the retail banking market, the length of relationship between bank and customer is a common feature. The tradition of the industry has been for banks and other financial service organizations to engage in long-term customer relationships. In agreement with Stewart (1998), the reasons for such relationship longevity are open to interpretation. While genuine preference and loyalty may have been instrumental, so also could ignorance, inertia and dependence.

There has been a growing in recent years in analyzing the factors influencing customer loyalty. As a result, there are numerous works in marketing which have attempted to explain the relationships between brand loyalty and the various variables regarded as antecedents, the most significant of which are customer satisfaction, and, to a lesser degree, switching costs Anderson and Sullivan, (1993)\textsuperscript{24}; Bloemer and Kasper, (1995)\textsuperscript{25} Boulding et al.,

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\end{itemize}
the banking industry, the establishment of customers, loyalty is a difficult task for the manager since the customers’ expectation and perception on the services are consistently changing.

**Service Quality and its Application in the Banking Sector**

Zeithaml and Bitner (2000)⁷ have identified that customers do not perceive quality as a uni-dimensional concept. Rather, their assessment of quality includes perceptions of multiple factors. Bahia and Nantel (2000)⁸ have suggested six important dimensions of banking service quality namely effectiveness and assurance, access, price, tangibles, service portfolio and reliability. Johnson (1997)⁹ identified eighteen service quality variables in retail banking namely commitment, attention, friendliness, care, courtesy, responsiveness, flexibility, competence, comfort, communication, availability, access, cleanliness, security,
reliability, functionality, integrity and aesthetics. Abdullah and Francis (2002)\textsuperscript{30} extracted the Groonroos (1979)\textsuperscript{31} model to measure the service quality of commercial banks. They identified functional and technical service quality. The functional service quality includes accessibility, behaviour of staff, attitude of the management, inter-relationships, customer conduct, appearance of staff and service mindedness whereas the technical service quality includes technical solution to customers, knowledge of the management, automation, technical ability of the employees and computerized systems.

Niki et al., (2006)\textsuperscript{32} identified 31 items of service quality relevant to banking sector. In the Indian context, Jhamma and Mehta (2004). Bhat (2005)\textsuperscript{33} and Rahman (2005)\textsuperscript{34} used five important service quality dimensions namely tangibles, reliability, responsiveness, assurance and empathy. Elango and Gudep

\begin{itemize}
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(2006) have identified ten service quality dimensions of Indian commercial banks namely tangibility, reliability, responsiveness, competition, courtesy, credibility, security, access, communication and understanding the customers. Joshua and Koshi (2005) measured the service quality gap in the Indian commercial banks with the help of six service quality dimension namely tangibility, reliability, responsiveness, assurance, empathy and price. In the present study, the service quality of commercial banks is measured with the help of fifty two variables at the different scale namely SERVPERF and SERVQUAL. The impact of both SERVPERF and SERVQUAL scale of service quality on customer satisfaction and loyalty at various customer segments have been measured to identify the important service quality factors in the Indian banking industry.

**NEED FOR THE STUDY**

A key existing problem facing the banking industry is the determination of a clear and precise definition of quality. (Bowen and Hedges, 1993). Bowen and Hedges stated that most conceptualizations of service quality focus on the means as opposed to the ends. Building on this belief, they offered several suggestions for banks seeking to distinguish themselves from the competition. Among those


suggestions are that banks need to understand what service quality is (and what it is not), and to develop customer-focused quality standards.

Bowern and Hedges also advocated the first Manhala Consulting Group’s series of steps for achieving service quality. The first step requires “selecting the most important customers to satisfy”. More specially, Bowern and Hedges (1993) noted that the importance of various service quality improvements differ in different segments. It is particularly important to focus first on those customers who are most valuable to the bank. One possible method of determining those valuable customers and their level of expectation and perception on service quality is by utilizing customers demographics aspect.

Next comes the concept of how the perception on service quality factors influences the customer satisfaction. Is it unique or different in degree at different customer segments (Jamal, 2002). The customer retention is the important weapon to enrich the performance of the commercial bank services. The cost of retaining existing customers is lesser than the cost of acquiring new customers (Woodside et al., 198937; Nauyen and Le Blanc, 1998)38. Thirdly, the linkage between service quality, customer satisfaction and loyalty. It is very important to understand the


pathway to achieve the brand Loyalty in banking sector (Kamal and Luiz, 1997). Finally, the estimation of service quality factors from the commercial banks in near feature is essential to design the future marketing strategy of the commercial banks (Thomson and Kaminski, 1997). Hence the present study has made an attempt to focus on these four aspects.

**STATEMENT OF THE PROBLEM**

The commercial banks like many other financial service industries are facing a rapidly changing market, new technologies, economic uncertainties, fierce competition, and more demanding customers. The changing climate has presented an unpresented set of challenges. (Lovelock, 2001). In the circumstances a question arises whether customers are satisfied or not and what are the factors of retail banking which lead to satisfaction or dissatisfaction among the customers. The ultimate goal of any bank is creating the customer loyalty (Gilmore 1997) since the cost of retaining existing customers is lesser than the cost of acquiring


new customers (Barnes and Howleft, 1998). The relationship between the service quality, customer satisfaction and Loyalty is the difficult task for manager since the level of expectation and perception on the service quality is ever changing in the competitive world (Angur et al., 1999; Hallowell 1996). Since the banking is a customer oriented services industry, the customer is the focus and customer service is the differentiating factor. The changes in customer’s mind have to be assessed properly and continuously for the success of commercial banking. Hence, it is a difficult task for any decision maker in the banking industry.

**OBJECTIVE OF THE STUDY**

The present study is confined to the following objectives:

(i) To reveal the socio-economic profile of the customers;

(ii) To identify the important service quality factors in retail banking;

(iii) To measure the service quality factor with the help of SERVPERF and SERVQUAL scale;

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(iv) To analyse the impact of perception on service quality factors on customer satisfaction and loyalty at various customer segments;

(v) To examine the direct and indirect effect of service quality factors on customer loyalty; and

(vi) To identify the important expected service quality from commercial banks in near future.

METHODOLOGY

Research methodology is the way of systematically and scientifically solving a research problem. It is a blueprint of the way in which the research is going to be conducted. Research methodology enlightens the methods to be followed in research activities starting from problem identification to presentation of research report. It includes research design, locale of research, sampling framework, sources of data, collection of data, framework of analysis and limitation.

RESEARCH DESIGN OF THE STUDY

A research design is the overall plan or programme of research. It includes an outline of what the investigator will do from writing the hypotheses and their operational implications to the final analysis of data. The research design of the present study is descriptive in nature.

Since the present study describes the characteristics of the customers in commercial banks, service quality in commercial banks, the level of expectation and perception on service quality factor in commercial banks, the customers’
satisfaction towards the banks, the impact of service quality in commercial banks on the customers’ satisfaction and customer loyalties at various customer segments and their expected service quality in near future, it is descriptive in nature. Apart from this, the present study is confined to pre-determined objectives and also depends upon pre-planned methodology to fulfill the objectives of the study, and so it is descriptive in nature.

**LOCALE OF RESEARCH**

While studying the service quality in commercial banks, it is imperative to select bank branches and customers in banks. In the present study, it was decided to include the commercial banks at various rural areas (Blocks in the district and city in Madurai district.

**SELECTION OF THE STUDY AREA**

The researcher selected Madurai district as the study area for the following reasons:

1. There was no recent exclusive study on the service quality in the commercial banks in Madurai district.

2. The Madurai district consists of urban, semi-urban and rural areas. Hence, the customers belonging to these areas may reveal their opinions on service quality which are versatile in nature.
3. The researcher is very familiar with the culture, local dialect and infrastructure facilities of the district. The researcher has a good rapport with the customers which is highly essential for the response on the questionnaire / schedule.

4. Madurai city in Madurai district is an ancient city. It consists of various economic classes.

**Number of Bank branches in Madurai district**

The commercial banks in the present study are confined to Public Sector Banks, (PSBs) and Private Sector Banks (PrSBs). The branches in the district are classified into branches of urban, and rural areas. The number of public and private sector banks in the above said areas are presented in Table 1.1.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Banks</th>
<th>Number of Branches in Urban Areas</th>
<th>Number of Branches in Rural Areas</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Public Sector Banks</td>
<td>75</td>
<td>87</td>
<td>162</td>
</tr>
<tr>
<td>2</td>
<td>Private Sector Banks</td>
<td>28</td>
<td>16</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>103</td>
<td>103</td>
<td>206</td>
</tr>
</tbody>
</table>

Source: Annual Credit Plan, 2005-06, Lead Bank, Madurai.
The total number of branches of the commercial banks in the district is 206. Out of the 206 branches 162 branches belong to the public sector banks and 44 branches belong to private sector banks. Out of the total, a maximum of 87 public sector banks and 16 private sector banks are in rural areas. The numbers of public sector banks and private sector banks in the urban areas are 75 and 28 respectively.

**Sampling Procedure**

The total sample of the present study are selected from 5 customers from each branch in the district. Hence the sample size came to 1030 customers. The applied sampling procedure in the present study is purposive sampling. The distribution of samples is shown in Table 1.2.

**TABLE 1.2**

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Banks</th>
<th>Number of Customers in Bank Branches in</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Urban Areas</td>
<td>Rural Areas</td>
</tr>
<tr>
<td>1</td>
<td>Public Sector Banks</td>
<td>375</td>
<td>435</td>
</tr>
<tr>
<td>2</td>
<td>Private Sector Banks</td>
<td>140</td>
<td>80</td>
</tr>
<tr>
<td>3</td>
<td>Total</td>
<td>515</td>
<td>515</td>
</tr>
</tbody>
</table>

Figures in parentheses are the responded customers.
The determined sample size of the study is 1030. Out of the 1030 customers, the initial response for the questionnaire was only 21.94 per cent to the total. After the reminder with fresh questionnaire, the response rate was 31.17 per cent to the total of 1030 customers. Hence the responded sample size came to 547 customers. Out of the 547 customers, 66.18 per cent of the customers belong to the branches in Madurai city whereas the remaining 33.82 per cent belong to the branches in the areas of district. The customers who belong to public sector banks constitute 77.69 per cent to the total whereas the remaining 22.31 per cent belong to private sector banks.

Collection of Data

The data required for the fulfillment of the objectives of this research work were collected from secondary and primary sources. The secondary sources are related journals, records, research papers and credit plan in the district. The primary data were collected with the help of structured questionnaire.

Constructs Development

The general procedure followed (adopted from Churchill, 1979, Parasuraman et al., 1988) in developing the customer service quality instrument is summarized below:

1. Define construct
2. Identify domain (dimensions)
3. General items on dimensions
4. Collect data
5. Purify instrument
6. Collect fresh data from a new sample on a set of items to emerge from the previous step.
7. Further purify instrument and
8. Evaluate reliability, dimensionality and validity of instrument.

The 52 item instrument was customized for the bank and further refinement attempted. Findings from a qualitative study commissioned to establish quality service standards (Daugar Research Group, 1991)[47] were used in reviewing the suitability of the original SERVQUAL items to the host bank’s branches. The outcome of the perception on service quality factors are classified into customer satisfaction and loyalty. The customer satisfaction is measured with the help of nine variables which are measured at five point scale from highly satisfied to highly dissatisfied. The customer loyalty is measured with the help of six statements which is also measured at five point scale from highly agree to highly disagree. The instrument was pre-tested at three discernible stages, namely retting

of the questionnaire by fellow researchers, self administering of questionnaire items by 50 customers, and further qualitative assessment of the questionnaire items by the consultative panel formed within the host bank, and other practitioners. The instrument was piloted in 5 branches at each urban and rural areas through exit interviews. A total of 32 completed questionnaires were collected. Suitable modifications were carried out on the basis of the filled in questionnaires. The final draft was used to collect the primary data.

**FRAME WORK OF ANALYSIS**

In order to analyse the data collected from the customers, the appropriate statistical tools have been selected on the basis of the objectives of the study and the nature of data. The included statistical analyses are given below

1. **Exploratory Factor Analysis**

   Exploratory factor analysis identifies common dimensions of factors from the observed variables that link together the seemingly unrelated variables and provides insight into the underlying structure of the data. Varimax rotation is one of the most popular methods used in the study to simplify the factor structure by maximizing the variance of a column of the pattern matrix. The common factors
themselves are expressed as linear combinations of the observed variables. (Nalini, 2006)\textsuperscript{48}.

Factor Model

\[
\text{Factor Score} = W_{i1}X_1 + W_{i2}X_2 + \ldots + W_{ik}X_k
\]

Whereas

\begin{align*}
F_i &= \text{Estimate of the } i^{\text{th}} \text{ factor} \\
W_i &= \text{Weight of factor score co-efficient} \\
X_i &= \text{Variables included} \\
K &= \text{No. of variables included}
\end{align*}

In the study, factor analysis have been applied to narrate the service quality variables into service quality factors and also the expected service quality factors from commercial banks in near future.

2. Confirmatory Factor Analysis (CFA)

The Confirmatory Factor Analysis has been used to analyse the reliability and validity of the variables included in each factor. The convergent validity of the factor was assessed by three measures: item reliability, construct (composite) reliability and Average Variance Extracted (AVE) (Fornell and Larcker, 1981).\textsuperscript{49}


Item validity was evaluated by the size of the standardized factor loading of the variables on their corresponding factors. The loading should be at least 0.60 and ideally at 0.7 or above (Chin, 1998)\(^50\). Composite reliability was assessed on the basis of internal consistency. It is similar to Cronbach’s alpha. The minimum acceptable level of composite reliability is 0.5 (Gerbing and Anderson, 1988)\(^51\). The convergent validity was assessed with the help of AVE which is atleast 0.50. (Fornell and Larcher, 1981).

In the present study, the CFA has been used to analyse the validity and reliability of variables included in each service quality factor.

3. Two Group Discriminant Analysis

Discriminant analysis is a technique for analyzing data when the dependent variable is categorical and the Independent are interval in nature. When the dependent variable has two categories, the technique is known as two-group discriminant analysis. When three or more categories are involved, the technique


is referred to as multiple discriminant analysis (Malhotra, 2003). The discriminant analysis model involves linear combinations of the following form:

\[ Z = b_0 + b_1x_1 + b_2x_2 + \ldots + b_nX_n \]

Whereas

- \( Z \) = Discriminant score
- \( b_n \) = Discriminant co-efficient on weight
- \( X \) = Discriminant variables
- \( b_0 \) = Constant

The Wilk’s Lambda was calculated as a multi variant measure of group difference over discriminating variables. (Shajahan, 2005). The relative discriminating power of the variables were calculated by

\[ I_j = K_j(X_{j1} - X_{j2}) \]

Whereas

- \( I_j \) = The important value of the \( j \)th variable
- \( K_j \) = Unstandardized discriminant co-efficient for the \( j \)th variable
- \( X_{jk} \) = Mean of the \( j \)th variable for the \( k \)th group

The relative importance of a variable \( R_j \) is given by

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\[ R_j = \frac{I_j}{\sum_{j=1}^{n} I_j} \]

In the study, two group discriminant analysis was used to find out important discriminant service quality variables between the satisfied and dissatisfied customers and the loyal and disloyal customers.

### 4. Multiple Regression Analysis

When a variable is dependent on more than one independent variables, one analysis will not reveal the relationship. For this purpose, the multiple regression analysis was administered. The cause and effect relationship between dependent and independent variables are carried out by the multiple regression analysis. The general form of the regression model is:

\[ Y = a + b_1X_1 + b_2X_2 + \ldots + b_nX_n + e \]

Whereas

- \( Y \) = Dependent variable
- \( X_1, X_2, \ldots, X_n \) = Independent variable
- \( b_1, b_2, \ldots, b_n \) = Regression co-efficient of independent variables
- \( a \) = Constant and
- \( e \) = Error term

In the study the multiple regression analysis has been used to find out.

i) The impact of perception on service quality factors on the customers loyalty among the various customer segments and
ii) The impact of perception service quality factors on the customer satisfaction at various customer segments.

5. T-Test

The ‘t’ test is used to find out the significant difference among the two group of samples regarding any intention variable which is internal scale. The ‘t’ statistics is calculated by

\[
t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2} \times \frac{1}{n_1} + \frac{1}{n_2}}}
\]

Degree of freedom of \((n_1+n_2-2)\)

Whereas

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(t)</td>
<td>‘t’ statistics</td>
</tr>
<tr>
<td>(X_1)</td>
<td>Mean of the first sample</td>
</tr>
<tr>
<td>(X_2)</td>
<td>Mean of the second sample</td>
</tr>
<tr>
<td>(\sigma_1^2)</td>
<td>Variance in the first sample</td>
</tr>
<tr>
<td>(\sigma_2^2)</td>
<td>Variance in the second sample</td>
</tr>
<tr>
<td>(n_1)</td>
<td>Number of samples in first group</td>
</tr>
<tr>
<td>(n_2)</td>
<td>Number of samples in second group</td>
</tr>
</tbody>
</table>

In the study, the ‘t’ test has been used to find out the significant difference among the male and female customers regarding the SERVQUAL and SERVPERF scale on the service quality factors in commercial banks.
6. Analysis of Variance (ANOVA)

Analysis of Variance is used for examining the differences in the mean values of the dependent variable associated with the effect of the controlled independent variables, after taking into account the influence of the uncontrolled independent variables. One-way analysis of variance involves only one dependent variable or a single factor. The null hypothesis may be tested by the F statistic based on the ratio between these two estimates:

\[
F = \frac{\text{SS}_x / (c - 1)}{\text{SS}_{\text{error}} / (N - c)} = \frac{\text{MS}_x}{\text{MS}_{\text{error}}}
\]

Where \(\text{SS}_x = \sum_{j=1}^{c} n (\bar{Y}_j - \bar{Y})^2\)

Where \(\text{SS}_{\text{error}} = \sum_{j=1}^{c} \sum_{i=1}^{n} (Y_{ij} - \bar{Y})^2\)

\(Y_i\) = Individual observation  
\(Y_j\) = Mean for category (j)  
\(Y\) = Mean over the whole sample, or grand mean  
\(Y_{ij}\) = \(i^{th}\) observation in the \(j^{th}\) category  
\(C\) = Number of independent variables or groups  
\(N\) = Total sample size (nxc)

The ‘F’ statistics follows the F distribution, with (c-1) and (N-c) degree of freedom.

In the study the one-way analysis of variance has been administered to find out the association between the profile of the customers and their SERVQUAL and SERVPERF scale on service quality factors in commercial banks.
7. Structural Equation Modelling (SEM)

Structural equation modelling was used to test the hypothesized model by applying LISREL 8.3 (Joreskog and Sorbon, 1993) to covariance matrix. It is used to measure the direct and indirect effect of perception on service quality factors on the customer loyalty. The given figure represents the hypothetical model.

**Hypothetical Model**

![Diagram of hypothetical model](image)

By the result of SEM, the ‘t’ statistics of the path coefficients have been examined to indicate the direct and indirect effect of independent variables on service quality.
dependent variable directly and also through mediating variable (Anderson and Gerbing, 1988)\textsuperscript{55}.

**LIMITATION OF THE STUDY**

The present study has the following limitation.

1. The present study is confined only to the commercial banks in Madurai district;

2. The variables related to service quality of commercial banks and the customers satisfaction and loyalty towards banks are selected from the reviews and the views of the experts in the banking industry;

3. The sample size is determined by an unscientific way;

4. The level of expectation and perception on service quality is focused only on the service quality factors narrated by factor analysis;

5. Only SERVQUAL and SERVPERF scale on service quality factors have been measured;

6. The weightage given on service quality factor is equal;

7. Only limited demographic profile of the customers have been included and

8. The linear relationship between the dependent and independent variables is assumed in the application of multiple regression analysis.

SCHEME OF THE REPORT

For a neat and clear presentation of the report, the report is divided into six chapters.

Chapter-I includes the scenario of banking industry, service quality in banking industry, need for the study, statement of the problem, objectives of the study, methodology, limitations and scheme of the report.

Chapter-II covers the conceptual framework review of previous studies and research gap.

Chapter-III explains the demographic profile of the customers, service quality in commercial banks, its validity and reliability and also the discriminant validity of the factors.

Chapter-IV includes the measurement of service quality of commercial banks at SERVPERF and SERVQUAL scale among different group of customers segments, the customers satisfaction, loyalty and its reliability and validity.

Chapter-V consists the impact of SERVPERF and SERVQUAL scale on service quality factors on customer satisfaction and loyalty, the direct and indirect effect of service quality factors on customer loyalty and the expected service quality factors in near future.

Chapter-VI includes the summary of findings, conclusions, research implications and managerial implications.