CHAPTER - III
METHODS AND MATERIALS

The present research has been carried out to study various aspects of banking services provided by public, private and foreign banks, access of customers to their services (both transaction based and IT enabled) banking services and service quality factors affecting customer satisfaction. This chapter deals with the methodological steps and procedure followed to ensue the present investigation. The details of these steps and procedures have been presented as under:

3.1 Definitions
3.2 Selection of Banks (public, private and foreign) and the Customers
3.3 Sampling Procedure
3.4 Locale of the Research
3.5 Development of Tool for the Study
3.6 Collection of Data
3.7 Analysis and Interpretation of Data

3.1 DEFINITIONS

To ensure the development of appropriate instruments for the present investigation, certain terms have been defined as follows:

Service Quality

The definition of service quality is based on customer-led quality definition where quality is defined as satisfying customer’s requirements (Deming, Juran, Feigenbaum and Ishikawa, 2010), relying on the ability of the organization to determine customers’ requirements and then meet these requirements. Service quality is comprised of five dimensions. These are:

- Tangibility: appearance of physical facilities, equipment, personnel and written materials
- **Reliability**: ability to perform the promised service dependably and accurately.
- **Responsiveness**: willingness to help customers and provide prompt service.
- **Assurance**: employees' knowledge and courtesy and their ability to inspire trust and confidence.
- **Empathy**: caring, individualized attention given to customers.

(Zeithaml, Bitner and Gremler, 2006:116).

### 3.2 SELECTION OF BANKS

The present study was conducted in public sector, private sector and foreign banks of Delhi. Multistage random sampling was used for selection of sample.

In order to select the banks, a list of top 20 banks existing in India was made (Source: Indian Business Directory, Banking Industry, [http://business.mapsofindia.com/banks/](http://business.mapsofindia.com/banks/), last accessed on 2/01/2006). A scrutiny of this was done with respect to all the three categories *i.e.*, public sector, private sector and foreign banks. Thereafter, 10 per cent of total number of banks in each category, having the maximum number of branches was selected. Hence, three banks (State Bank of India, Punjab National Bank and Canara Bank) among public sector banks, two banks (ICICI and HDFC) among private sector banks and one bank (Standard Chartered) among foreign banks were randomly selected for the study. Thus, in total, 6 banks were selected as sample for the study. This step was done to make Inter Bank comparison.

Two branches each of the above banks were randomly selected for conducting the study. While selecting the branch, care was taken to see that branch should have provided at least 5 IT enabled services to the customers.

### 3.3 SAMPLE SELECTION

After identification of branches, the researcher visited banks under study and selected 50 customers randomly from each branch of the bank (total 12 branches and 6 banks) making a total of 600 customers as sample (Fig. 3.1). The researcher herself visited
the respective branches of banks and data was collected within the premises of the bank.

**Selection of Customers**

One of the objectives of the study was to find out the extent of adoption of both transaction based and IT enabled services by the customers. In order to fulfill this objective, an attempt was made to select customers, who made use of these services. To select the customers, care was taken that the customer should utilize at least one transaction based and one IT enabled service provided by different banks.

![Diagram of BANKS and Sample Selection](image-url)
3.4 DEVELOPMENT OF TOOLS FOR THE STUDY

Selection of appropriate instrument or technique is an important criterion in research methodology. In order to elicit detailed and accurate information, on “Banking Services and Customer Satisfaction”, various tools were developed. The tools comprised of the following:

3.4.1 Interview schedule

An Interview schedule was used for collecting base line data of customers, extent to which the customers adopt both transactions based and IT enabled banking services provided by public sector, private sector and foreign banks. A structured interview schedule, comprising of both close-ended and open–ended questions was formulated.

3.4.2 Rating scales

Rating scales were used to determine the satisfaction of customers with both the services mainly transaction based and IT enabled banking services provided by public sector, private sector and foreign banks. They were Likert type scale having statements on the basis of constituent factors such as tangibility, reliability, responsiveness, assurance and empathy. These factors were taken from SERVQUAL Model (1988) developed by Parasuraman, Zeithamal, and Berry (PZB).

3.5 PRE-TESTING OF THE TOOL

A pretest was performed to ensure the language clarity and applicability of the interview schedule. The analysis of the pre-test showed that the respondents found the interview schedule quite long. Therefore, investigator re-worked on the schedule and eliminated few repetitive and unwanted questions.

3.6 COLLECTION OF DATA

After pre-testing of interview schedule, the final format was prepared. The process of collection of data was spread over a long period of time and it took nearly one year for data collection. The subjects of study being very personal, informative and crucial, it took time to establish rapport with the respondents before interview schedule could
be administered on the subjects to collect data. This made the process of interviewing very interesting, but time consuming. The information was collected from the respondents under the following heads:

3.6.1 Profile of the customers

3.6.2 Banking Services used by the customers

3.6.3 Functioning of the bank

3.6.4 IT enabled banking services

3.6.5 Service quality and customer satisfaction for transaction based banking services

3.6.6 Service quality and customer satisfaction for IT enabled banking services

3.6.1 Profile of the customers

The first section of the interview schedule was meant to obtain the baseline data of customers. Information was collected from the respondents on the following parameters-

Age: Information related to the age of customers was collected which later on was categorized under three heads i.e., 20-40 years, 41 to 60 years and 61 to 80 years.

Gender: Information on gender of customers was collected and classified as male and female.

Occupation: Information on means of livelihood of the family was collected and classified as Service, business, student, housewife and others.

3.6.2 Transaction based Banking Services used by the customers: Further, in this section, the investigator studied various banking services used by customers. The questions aimed at gathering information on a number of aspects such as type of account used by customers, reasons to select a particular bank, details of various services provided by the banks and the use of these services by the customers.
3.6.3 **Functioning of the bank** - This section deals with satisfaction of customers with employee behavior, ambience of bank, working hours, accessibility to the bank, information displayed and facilities available. Further information was collected on complaints lodged by the customers for any insufficiency in service. Each statement was scored as follows:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Scale</th>
<th>Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Fully Satisfied</td>
<td>3</td>
</tr>
<tr>
<td>2.</td>
<td>Partially Satisfied</td>
<td>2</td>
</tr>
<tr>
<td>3.</td>
<td>Not satisfied</td>
<td>1</td>
</tr>
</tbody>
</table>

Percentage of fully satisfied customers, partially satisfied customers and dissatisfied customers was analyzed for each type of bank and Pearson chi square test was calculated to compare the satisfaction level of customers for all the three categories of banks.

3.6.4 **IT enabled banking services**: This section aimed at eliciting information related to various IT enabled services provided by the three categories of banks, extent of using these services and problems faced by customers in using these services. Analysis of data was done by calculating frequency and percentage of customers.

3.6.5 **Service quality and customer satisfaction for transaction based banking services**: Service quality may be defined as “the degree and direction of discrepancy between customers’ service perceptions and expectations” (PZ, 2006). On the basis of review of literature, investigator identified five factors of service quality in banking services and framed out four statements for each factor. For each statement, reliability was checked by calculating Cronbach’s coefficient. Customers were asked to respond on five point scale as strongly agree, somewhat agree, no option, somewhat disagree, strongly disagree. The statements were segregated as positive and negative statements.
**Positive statements** were those statements which reflect good quality of banking services. The positive statement attributes were scored as follows:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Attribute</th>
<th>Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Strongly agree</td>
<td>5</td>
</tr>
<tr>
<td>2.</td>
<td>Somewhat agree</td>
<td>4</td>
</tr>
<tr>
<td>3.</td>
<td>No option</td>
<td>3</td>
</tr>
<tr>
<td>4.</td>
<td>Somewhat disagree</td>
<td>2</td>
</tr>
<tr>
<td>5.</td>
<td>Strongly disagree</td>
<td>1</td>
</tr>
</tbody>
</table>

**Negative statements** were those statements which reflect poor quality of banking services. The negative statement attributes were scored as follows:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Attribute</th>
<th>Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Strongly agree</td>
<td>1</td>
</tr>
<tr>
<td>2.</td>
<td>Somewhat agree</td>
<td>2</td>
</tr>
<tr>
<td>3.</td>
<td>No option</td>
<td>3</td>
</tr>
<tr>
<td>4.</td>
<td>Somewhat disagree</td>
<td>4</td>
</tr>
<tr>
<td>5.</td>
<td>Strongly disagree</td>
<td>5</td>
</tr>
</tbody>
</table>

3.6.6 Service quality and customer satisfaction for IT enabled banking services

Further, five factors of service quality for IT enabled banking services were identified such as tangibility, reliability, responsiveness, assurance and empathy. Investigator framed out four statements for each factor and total twenty statements were framed out. For each statement, reliability was checked by calculating Cronbach’s coefficient. Customers were asked to respond on five point scale as strongly agree, somewhat agree, no option, somewhat disagree, strongly disagree. The statements were segregated as positive and negative statements. Positive statements were those statements which reflect good quality of banking services. Negative statements were those statements which reflect poor quality of banking services. The statements attributes were scored in the same manner as it was done for transaction based services.
3.7 RELIABILITY TEST

Reliability is synonymous to dependability, stability, consistency, predictability and accuracy. It can be defined as the "the degree to which test scores for a group of test takers are consistent over repeated applications of a measurement procedure and hence, are inferred to be dependable and repeatable for an individual test taker" (Berkowitz et al., 2000).

Cronbach’s $\alpha$ (alpha) was used to establish internal consistency. Cronbach's $\alpha$ (alpha) is a coefficient of reliability. It is commonly used as a measure of the internal consistency or reliability.

Cronbach's $\alpha$ is defined as

$$\alpha = \frac{K}{K-1} \left(1 - \frac{\sum_{i=1}^{K} \sigma_{Y_i}^2}{\sigma_X^2}\right)$$

where $K$ is the number of components (K-items or testlets), $\sigma_X^2$ the variance of the observed total test scores, and $\sigma_{Y_i}^2$ the variance of component $i$ for the current sample of persons.

**Alpha analysis for the scales**

<table>
<thead>
<tr>
<th>Cronbach's $\alpha$ (alpha) value</th>
<th>Transaction based banking service quality</th>
<th>Online Banking Service Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangibility</td>
<td>.650</td>
<td>.720</td>
</tr>
<tr>
<td>Reliability</td>
<td>.719</td>
<td>.773</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>.729</td>
<td>.644</td>
</tr>
<tr>
<td>Assurance</td>
<td>.767</td>
<td>.653</td>
</tr>
<tr>
<td>Empathy</td>
<td>.691</td>
<td>.697</td>
</tr>
</tbody>
</table>

Since, the computed alpha value were found between .60 to .80, the scales were said to be consistent considering that .70 is the cutoff value for being acceptable.
3.8 ANALYSIS AND INTERPRETATION OF DATA

The entire data of 600 respondents was coded initially. The open ended questions were made close ended by seeing the range of responses and code sheet was devised for all the questions. Coded data were transformed to the master sheets. Following this data, tabulation was done. Frequencies of responses against their codes were tabulated and their percentages were calculated. Further, data were analyzed and conclusions and inferences were made in the light of the objectives of the study.

ANOVA test was applied to find out mean difference between factors affecting service quality of banking services and three types of banks. Multiple comparisons were also made between five service quality factors in all the categories of banks. The level of significance was 1 per cent. Pearson chi square test was applied to find out significant difference between percentages of various responses.