### RESEARCH METHODOLOGY

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CHAPTER III
RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter describes the research implementation procedure of the study. The chapter focuses on the research design, criteria used in selecting the respondents, methods of collecting and analysis of data, the discussion of validity and reliability of the measures and limitations.

The following aspects are discussed in this chapter.

- Objectives of the study
- Hypotheses of the study
- Sample Selection
- Selection of Study Period
- Data and Sources of Data
- Operational Definition
- Construction of Customer Satisfaction Scale
- Tools for Analysis

3.2 OBJECTIVES OF THE STUDY

The present study has the following objectives:

- To study and analyze the impact of new developments in information technology on the banking services and its customers.
- To analyze the differences in banking services between public and private sector banks and ways to bridge the gap between them.
- To study and compare the level of satisfaction of the customers in public and private sector banks on their computerized services and
- To offer suggestions for enhancing the level of satisfaction of the customers regarding computerized banking services.
3.3 HYPOTHESES

In order to achieve the objectives of the study, the impact of computerization on the level of satisfaction of the customers and differences between public and private sector banks, the following null hypotheses have been formulated.

- There is no significant difference between the customers of public and private sector banks on their expected level of satisfaction over the products offered.
- There is no significant difference between the customers of public and private sector banks on their derived level of satisfaction over the products offered.
- There is no significant difference between the customers of public and private sector banks on their expected level of satisfaction on the various services provided.
- There is no significant difference between the customers of public and private sector banks on their derived level of satisfaction on the various services provided.

3.4 PILOT STUDY

A pilot study to assess the reliability and validity of the survey instrument was conducted prior to the final administration of the instrument. On the basis of the information gathered in this pilot study, the first draft of the questionnaire was prepared. After revising the first draft in the light of suggestions from fellow researchers, colleagues, bank officials and the supervisor, the second draft was prepared. The second draft was pre-tested with ten customers of Coimbatore district. In the light of the pre-test results, the questionnaire was modified and the final draft was prepared. The selected customers and bankers were personally contacted and interview schedule was administered by the researcher.
3.5 DATA AND SOURCES OF DATA

The validity of research depends on the systematic method of collecting the data and analyzing the same in a sequential order. The present study is based on primary and secondary data.

In order to fulfill the objectives, a sample study was undertaken by using well framed Interview schedule. The respondents were selected with various background based on the important aspects of their occupation, education, age and so forth in the study areas of Coimbatore city.

3.5.1 Primary data

Primary data has been collected from respondents having their accounts in different banks (including public and private banks in Coimbatore City) by filling up well-structured questionnaire and through personal meeting with respondents.

3.5.2 Interview Schedule

Interview Schedule was the instrument used for collecting primary data from the respondents. It contains questions related to the reasons for selecting the branch and waiting time of customers for different banking operations before and after computerization and the level of satisfaction with different banking transactions after computerization and measuring the customer satisfaction level under different components.

The secondary data was collected from leading journals such as, Indian Journal of Marketing, Southern Economist, Journal of Indian Management, IBA Bulletin, RBI Bulletin, Finance India and Professional Banker. A number of standard text books were referred to obtain pertinent literature on Banking Industries.

The secondary data was also collected from institutions like the Institute of Financial Management and Research (IFMR), Staff Training College of the Reserve Bank of India and Staff Training College of the State Bank of India.
3.6 PERIOD COVERED FOR THE STUDY

The study covered the period of four years from 2002-2003 to 2005-2006.

3.7 SAMPLING DESIGN

The study was based on convenience sampling method, the customer having account in various banks in coimbatore city were selected for the sample and is presented in Table 3.1.

Table 3.1
Selected Public and Private Sector Banks in Coimbatore City

<table>
<thead>
<tr>
<th>Public Sector Banks</th>
<th>Private Sector Banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of the Bank</td>
<td>No. of Respondents</td>
</tr>
<tr>
<td>BANK OF BARODA</td>
<td>12</td>
</tr>
<tr>
<td>BANK OF INDIA</td>
<td>20</td>
</tr>
<tr>
<td>CANARA BANK</td>
<td>28</td>
</tr>
<tr>
<td>CENTRAL BANK OF INDIA</td>
<td>10</td>
</tr>
<tr>
<td>CORPRATION BANK</td>
<td>10</td>
</tr>
<tr>
<td>INDIAN BANK</td>
<td>30</td>
</tr>
<tr>
<td>INDIAN OVERSEAS BANK</td>
<td>30</td>
</tr>
<tr>
<td>STATE BANK OF INDIA</td>
<td>39</td>
</tr>
<tr>
<td>SYNDICATE BANK</td>
<td>11</td>
</tr>
<tr>
<td>UNION BANK OF INDIA</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>200</strong></td>
</tr>
</tbody>
</table>
The customers of public sector and private sector banks were large in number and hence a comprehensive list of customers could not be prepared. Moreover the list of customers of each branch of the public sector banks and private sector banks could not be obtained from the branch manager, since they did not want to divulge the names of customers due to their obligation to maintain the confidentiality of customers’ accounts.

Therefore a Sample of 400 (200 from public and 200 from private sector banks) customers representing various categories such as agriculturists, salaried, businessmen, professionals and others (students and house wives) were selected by applying convenient sampling method.

3.8 FRAMEWORK OF ANALYSIS

The data collected have been analyzed by applying appropriate statistical tools. The researcher used the following tools while analyzing,

- Descriptive analysis
- Four point scaling technique - Average score analysis
- t-test
- Regression analysis and
- Simple and Multiple regression analysis with step reduction method.

3.8.1 Average Score Analysis of Components

The average score analysis is performed to identify the level of satisfaction of the different category of respondents on the various components which comprises different aspects. In converting the qualitative information into a quantitative value a four point scaling similar to likert scaling is used. Score 1 is used for highly satisfied, score 2 for satisfied, score 3 for dissatisfied and score 4 for highly dissatisfied.

After converting the qualitative information into quantitative values, the average score is computed for each aspect of various components for the different category of the
respondents and presented in the form of tables. The criteria used to measure the level of satisfaction is lower the average score is the more level of satisfaction.

3.8.2 ‘t’ Test

In this section, a comparison is made using t-test between the public sector banks and private sector banks on their expected and derived level of satisfaction for each of the products and services considered. All the tests are carried out at 5% level of significance.

3.8.3 Multiple Regression Analysis

The multiple regression analysis is performed for public sector and private sector banks, mainly to identify the percentage of influence of each of the components over the satisfaction of the respondents.

3.9 MEASUREMENT OF VARIABLES AND CONSTRUCTION OF SCALE

The researcher has identified fifteen components to measure the impact of computerization on customer satisfaction towards computerized banking services. As there is no readymade scale to measure the satisfaction of customers towards computerized banking services, a scale named “customer satisfaction scale” has been developed on the basis of the scores awarded to fifteen components. With the help of this scale the impact of computerization on customer satisfaction level has been measured.

The fifteen components are,

- Convenience,
- Courteous service,
- Employee competence,
- Responsiveness,
- Assurance,
- Security,
• Bank premises,
• Handling complaints,
• Retail banking,
• Corporate banking,
• Computerization,
• Single window services
• Automatic Teller Machine (ATM),
• On-line banking and
• Overall impact of computerization.

Satisfaction of customers towards the computerized services rendered by public sector and private sector banks selected for the study has been measured with the help of the Customer Satisfaction Scale. Out of fifteen components, five statements have been developed for first eight components and ten statements have been developed for the remaining seven components.

Responses of the sample customers for each statement have been elicited with the help of a four-point scaling such as, Highly satisfied, Satisfied, Dissatisfied and Highly dissatisfied. The purpose of this Customer satisfaction scale is to analyze and compare the customers’ feedback on the computerized services rendered by the public sector and private sector banks in Coimbatore city.

3.10 OPERATIONAL DEFINITION
3.10.1 Bank

A bank is an institution whose debts (bank deposits) are widely accepted in settlement of other people’s debts to each other. - R.S Sayers
A bank is an establishment which makes to individuals such advances of money as may be required and safely made, and to which individuals entrust money when not required by them for use.  

- Prof. Hart

3.10.2 Banker

A banker is one who in the ordinary course of his business, receives money which he repays by honoring cheques of persons from whom or on whose account he receives it.

- Prof. Kinley

3.10.3 Banking

Banking is defined as accepting for the purpose of lending or investment of deposits of money from the public, repayable on demand or otherwise and withdrawable by cheque, draft, order, order or otherwise.  

- The Banking Regulation Act, 1949

3.10.4 Customer

According to John Paget, “A customer constitutes a person who has an account with a bank, whether fixed or savings, and has dealings of banking nature”

3.10.5 Services

Services are those separately identifiable, essentially intangible activities that provide satisfaction and that are not necessarily tied to the sale of product or another service. So service means service of any description which is made available to potential users, but does not include the rendering of any service free of charge or under control of personal service.

3.10.6 Service Quality

Service Quality is a judgmental issue relating to an individual’s perceived expectation of service and the actual service performance. Many definitions are applied to the concept of service quality. Phrases such as ‘Meeting Customer Expectations’ or
“Providing Customers what they want, when they want it and at an acceptable cost” are well-known explanations of the meaning of quality.

3.10.7 Customer Satisfaction

Satisfaction is the level of a person’s felt state resulting from comparing a product’s perceived performance in relation to the person’s expectation. Therefore “Satisfaction Level” is a function of the difference between performance and expectations.

3.10.8 Courteous Service

Courtesies means receiving the customers with a smile and receiving them with courteous words, like, Hallo, Welcome, Thank you, Please, May I help you, Excuse me, Good Morning, Good bye and answering their queries promptly.

3.10.9 Assurance

Assurance is the knowledge and courtesy of employees and their ability to inspire trust and confidence.

3.10.10 Security

Security is nothing but freedom from risk in their transactions.

3.10.11 Employee Competence

Generally knowledge means” the skill or intelligence or expertise of a person.” Organizational knowledge means the stock of knowledge that all members of an organization collectively posses. It includes technical skill, human skill and political skill.

3.10.12 Quality Circle

“Quality Circle” is a simple voluntary group of people working in the same work area who meet regularly to identify, analyze and solve problems of their work area. This leads to improvement in their work effectiveness and enrichment of their work life.
3.10.13 e-Banking

Where banking operations are carried out through electronic means, it take the form of ‘e-banking’. Electronic means of banking include electronically operated devices such as computers, ATMs, etc.

3.10.14 Internet Banking

Banking transaction that takes place in a virtual ambience on the website of a banking company or a financial institution is termed as ‘Internet banking’. The essence of Internet banking lies in on-line access by customers of banking and financial services.

3.10.15 Mobile Banking

Mobile banking refers to the banking activities that are carried out on mobile (cell) phone. That is, banking is enabled, even while a person is on the move.

3.10.16 Telephone Banking

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 of ATM card, order a cheque book, draft, etc., is known as ‘telephone banking’.

3.10.17 On-Line Banking

The on-line banking service allows customers to manage their money from any type of browser device including mobile phones, internet-enabled TV and even small hand electronic organizers. Using a PC to access your accounts, transfer funds, pay creditors and check if payments have been made, etc, is called on-line banking. It allows customer to have constant access to accounts at any time of day or night.

3.10.18 Electronic Money

According to the European Central Bank, “e-money is an electronic store of monetary value on a technical device used for making payments to undertakings other
than the issuer without necessarily involving bank accounts in the transaction, but acting as a prepaid bearer instrument”.

3.10.19 Electronic Fund Transfer System

A method of fund transfer mechanism, which facilitates transfer of funds between banks and users, is called ‘Electronic Funds Transfer’ (EFT). The scheme of EFT was introduced by the RBI with a view to helping banks offer their customers money transfer service from account-to-account of any bank branch to any other bank branch, both inter-city and intra-city. (Money transfer between the branches of the same bank).

3.10.20 Electronic Clearing Service

Companies who have to make bulk payments to a large number of beneficiaries prepare credit instructions on the magnetic Medias and submit the same to the RBI through their bankers. RBI processes the data, arrives at inter bank settlement and provides bank and branch wise reports containing the details of payments to facilitate fast payment to the beneficiaries.

3.10.21 Automated Teller Machines (ATM)

To attract customers, many banks advertise ATMs as Any Time Money. The customer is provided with plastic card which is bearing account number and the credit limit are encoded on the card. The customer has to insert the card and the terminal reads, transmits the data to a CPU which activates the account. This is attached to a device which can dispense currency notes. The customer can draw money and deposit cash or cheque. The account is credited after verification. ATM network is connected to credit card network. For example, a master card holder can use HDFC bank’s ATM.
3.10.22 Shared Payment Network System

It is large network of ATMs spread in the city of Mumbai, Vashi and Thana. It is capable of offering various services:

- Cash transactions, extended hours of service, across the bank payments.
- Utility payments, balance inquiry, printing of statement of accounts.
- Cheque deposit, request for cheque book, point of sale facilities.

3.10.23 Electronic Data Interchange (EDI)

EDI typically denotes paperless financial transactions across the locations. EDI is fast becoming the norm for inter-company transactions and also for procurement of bought out items from the suppliers. The companies can now operate their bank accounts through corporate banking terminals in their own offices, which are linked to the bank computers. Companies can thus carry out transactions like transferring funds, managing its cash flow, opening letters of credit, etc. without any paper work.

3.10.24 Personal Computer Banking

Personal Computer (PC) banking is also a fast growing area in banking. This lets customers’ access information on their accounts through a dial-up connection with their bank. Customers can perform basically all the transactions that are available with telebanking. They also have the ability, in some cases, to download information and process it in their own financial management.

3.10.25 Electronic Fund Transfer At Point Of Sale (EFTPS)

It is intended to speed up payment at the point of sale in order to avoid queues and to reduce the handling of cash and the delays that are caused by the customer normally writing out a cheque. The bank has issued a card which serves as an ATM card. The card holder is identified by checking personal identification number and the fund are transferred.