CHAPTER-1

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1.1 Introduction

Service quality has emerged as a critical consideration for the firms across the globe to ensure long term sustainable competitive advantage over competitors in a relationship dominated marketing environment. The dyadic relationship between the buyer and the seller has gone through the migratory route and has evolved as the most delicate reciprocative interaction. The gradual shift from a transactional set up of marketing process to a transactional pattern has influenced the perception level of the customers with regard to service quality. This migration has been stimulated by revolutionary technology which has virtually reduced the gap between the service provider and the recipient through disintermediation. The significance and returns of ‘Relationship Marketing’ for the service dominated firms have been highlighted by the researchers (Bagozzi, 1995; Cannon et al., 1999; Dwyer et al., 1987; Peterson, 1995; Sheth et al., 1995). Retaining customers, having high net worth to the firms, has become survival and sustaining strategy. In saturated markets firms are banking on retaining customers to ensure profitability (Ahmad and Buttle, 2002). Customer retention in highly intangible service firms throws a challenge to the service providers. Creating and nurturing symbiotic relationships which are mutually value generating both for the service providers and service recipients are of tremendous importance. Retention of customers is again dependent on the behavioural consequences of perceived service quality offered by the firms. Zeithaml, Parasuraman and Berry (1996) showed that behavioural intentions are predictors of customer retention. Adams (1991) was of the opinion that a high percentage of customers (almost 91%) stop repatronization and advocacy leading to degeneration of revenue and profitability.

Customer Relationship Management (CRM) is a spin-off concept from relationship marketing practice which is grounded on retaining customers after identifying the value of the customers to the firm. Concept of Life Time Value (LTV) approach has been implemented to realize the value proposition of the customers to the firm. In a mutually beneficial relationship, the service providers try and maximize the value of offers. CRM is a relatively new concept to the Indian service sector and still is in the embryonic stage of
implementation. The banking sector in India is embracing the philosophy of CRM by
effective integration and synchronization of people, process and technology. The State Bank
of India, the largest nationalized public sector bank in India, has adopted the CRM practice
along with its modernization and automation process. The Indian customers, by virtue of
opening of the market, are now exposed to technology-driven superior services and
customized products and services from the foreign and private banks. Therefore quality
perception of the customers has undergone a sea change. This has been a challenging
situation for the nationalized banks of India as they strive hard to match up with the rising
level of expected service quality of the customers and thereby retaining them at a cost which
will not encroach in their zone of profitability.

1.2 Objectives of the study

The study primarily focuses on exploring the relationship between service quality customer
retention and profitability in the context of State bank of India. The study aims to nourish the
academic domain which deals with measuring and estimating service quality in intangible
and heterogeneity dominant financial service sector namely banking. Further to this the study
also delves into the deployment of Customer Relationship Management, which still according
to the researcher, is at the neo-natal stage of corporate application. The broad objectives of
the study can be presented as:

➢ Objective-I
The first objective of the study was to explore the relationship between the perceived (P)
service quality and expected (E) service quality level of the customers and to identify gaps
between the two levels, if any.

➢ Objective-II
The second objective of the study was to examine the relationship between service quality
and customer retention in the context of selected branches of State Bank of India in the
metropolitan cities.

➢ Objective-III
The third objective was to explore the relationship between customer retention done by the
State bank of India and profitability thereof. Further to this the researcher tried to understand
whether retained customers are instrumental in endorsing SBI products and services to new
customers.
Objective-IV
The fourth objective of the study is to explore the relationship between service quality perceived by the customers of the State Bank of India and the profitability of the bank.

Objective-V
The fifth objective of the study was to assess the impact of demographic variables on service quality expectation and service quality perception with regard to the services provided by the State Bank of India across the four metros of India under study and to identify the specific demographic cross-factor ranges specifically sharing relationship with the service quality dimensions.

Objective-VI
The sixth objective of the study was to find out the relationship between CRM-enabled service-performance of the State Bank of India across the four metros of India and the CRM-driven Perceived service Quality (PSQ) of the customers of the bank.

Objective-VII
The seventh objective of the study was to assess the awareness level of the bankers of State bank of India across the four metros with regard to the customer retention policy of the bank.

Objective-VIII
The eighth objective was to explore the customers’ likelihood to remain associate with SBI on the basis of their existing level of perceived service quality.

Objective-IX
The ninth objective of the study was to understand whether the customers’ likelihood to remain associate with the State Bank of India will be affected by their present level of association with their bank.

Objective-X
The tenth objective of the study was to propose a model on the basis of the findings of the study and by taking four constructs into consideration namely:

(a) Construct-1: Service quality dimensions and Service Quality (perceived)
(b) Construct-2: Service Quality (perceived) and Customer retention
(c) Construct-3: Customer retention and Profitability
(d) Construct-4: Service quality (perceived) and Profitability
1.3 Scope of the study

The scope and dimensions of the study has been limited by the researcher with reference to the topical scope – breadth and depth, geographical areas covered, reference period, the type of institutions/respondents studied and the issues to be analysed. The basic purpose identified by the researcher for this demarcation is to make the study manageable in terms of the researcher’s aim, competence, available techniques, time, finance and facilities.

In the study undertaken, the researcher aims to analyse the Customer Relationship Management (CRM) deployment in the State bank of India and its possible impact on Service Quality, Customer retention and Profitability of the bank. CRM is a relatively novel strategic initiative in the Indian banking sector and it requires a generous degree of technology integration with the core service and allied service offers. In view of this, the researcher has identified the reference period of the research as the post-modernization and automation period of State bank of India on and from 2005 onwards. It is worthwhile to mention here that the modernization process of State Bank of India was initiated during the fag end of the 1990s (1999 to be precise) under the supervision and guidance of KPMG and TCS and continued till 2009. The researcher has selected four metros of India namely Kolkata, Chennai, Mumbai and New Delhi for the study since the diffusion of technology-enabled SBI services among the customers was already considerable. In addition to this, the customers of the metropolitan areas are well aware of and considerably exposed to the modern banking procedures. The targeted respondents were the customers and the bankers of State Bank of India limited to the selected bank branches of the four metros of India.

1.4 Justification of the study

Customer retention has emerged as a critical marketing strategy that companies attempt to implement in their businesses, as it is less expensive to retain existing customers than to acquire new customers (Reichheld & Sasser, 1990). Research suggests that customer retention is a focus on the behavioral intention to repeat-purchase behavior (Hennig-Thurau & Klee, 1997), and the improvement of service quality and customer relationship (Hanson et al., 1996) and customer retention and profitability. However, dearth of research work has been observed by considering all the three parameters namely service quality, customer retention and profitability in a relatively new business philosophy adopted by the Indian banking sector – CRM. Therefore, the study is justified by considering its significance and has the potential to contribute and enrich the present body of knowledge on the intricate
relationship that may exist between service quality, retention of customers and profitability in CRM environment of Indian banking sector, more precisely in the State Bank of India. The study also attempts to throw light on the areas which were not attempted earlier as has been revealed by the review of literature namely identifying the specific range of customer retention responsible for a particular type and level of profit inducing investment and the specific range of demographic cross-factors having an inclination towards investing in similar kind of products/services.

This study is researchable as it sets specific objectives and has variables that can be measured. This study is feasible because it can be implemented in a reasonable amount of time, subjects are available, and concepts in the theoretical frameworks can be measured. Banking customers at the four metropolitan cities in India are accessible for participation in this study. All variables can be analyzed by statistical analyses to address the research objectives and hypothesis in this study.

1.5 Methodology

The researcher framed the research design on the basis of the objectives identified and scope visualized. For the initial phase of the study, the researcher conducted a thorough review of literatures by using secondary data sources. Extensive study of research journals, periodicals, books, databases were taken up in addition to access the soft resources over the internet. Review of literatures allowed the researcher to understand the level of contemporary research works carried out by other researchers and helped the researcher to identify the dearth of study in the area pertaining to exploration of relationship between service quality, customer retention and profitability in Customer Relationship Management (CRM) environment in the Indian banking sector.

1.5.1 Research Design

While laying out the research design for the current study, the researcher concentrated on the following perspectives:

- the degree of formulation of the problem
- the topical scope of the study (breadth and depth)
- the research environment
- the time dimension (one-time)
- the mode of data collection (survey)
- the nature of relationship among variables
- proposal of a model based on constructs

The researcher has followed the observations of Cooper and Schindler (2006) in identifying the purpose of the research undertaken and the subsequent categorization of research purposes namely exploratory, descriptive and explanatory (Cooper and Schindler, 2006; Saunders, Lewis and Thornhill, 2003; Yin, 1994, 2003).

The study undertaken was exploratory in nature which satisfies the guidelines laid down by Emory and Cooper:

(i) Study of literature
(ii) Talking to the experts
(iii) Conducting Focus Group interviews

1.5.1.1 The Research Process ‘Onion’

As an integral part of the research design, the researcher incorporated the concept of ‘Onion’ deducted by Saunders et al (2003). The research process ‘onion’ can be understood from the figure below:

![Figure 1: The Research Process ‘Onion’ © Mark Saunders, Philip Lewis and Adrian Thornhill (2003)](image-url)
The study taken up by the researcher has both the elements interpretivism and positivism as identified by Saunders et al (2003) as the research philosophy. ‘Positivism’ aims to construct general theories which express relationships between phenomena and ‘Interpretivism’ aims to analyse the rationality behind the human actions. As the second layer of the ‘onion’ which states the research approach, the researcher has focused on ‘Deductive’ approach which tests a hypotheses formulated the explore the theoretical relationship between variables (Trochim, 1998-2000). As far as research strategy is concerned the researcher has used a combination of ‘Case Study’ and ‘Survey’ method. The case study method has been followed according to the observations made by Yin (1994) and the subsequent formulation of the case-study component:

**a. research question related to study** – the current study taken up by the researcher formulates the research questions namely (i) how service quality, customer retention and profitability are related in the context of perceived service quality of customers of State Bank of India, (ii) what are the gaps in service quality provided by State Bank of India (iii) what is the impact of variations in demographic variables on the perceived service quality, (iv) what is the impact of CRM deployment on perceived service quality of the customer of State Bank of India etc.

b. its propositions if any

c. its unit of analysis

d. the logic linking the data to the proposition

e. the criteria for interpreting the findings.

The time horizon fixed up by the researcher is cross-sectional i.e. measurement of all variables had been taken up in a narrow span of time (18 months to be precise) so that the measurements may be viewed as contemporaneous (Baltes, Reese, Nesslroade, 1988, Cresswell, 1994). At the core of the ‘onion’ is the data collection method. The researcher adopted the following methods regarding collection of data:

(i) Sampling

(ii) Structured questionnaires to obtain primary data
(iii) Secondary data

(iv) Interviews.

Therefore the research process ‘onion’ of the current study undertaken by the researcher assumes the following depiction:

![Image of the Research Process 'Onion' used by the researcher]

**Figure 2: The Research Process ‘Onion’ used by the researcher**

1.5.1.2 Triangulation

Triangulation of research refers to the combination of multiple theories, data sources and methods in a specific study to converge on a single construct. To increase the reliability and validity of the data collected, the researcher used *data triangulation*- since three different types of data were used: primary, secondary and tertiary, *space triangulation*- since the data has been collected from four different metros in India and *person triangulation*- since data was collected from more than one level of respondents (demographic discrimination was there). Use of triangulation imparts confirmation and completeness to the study as mentioned by Hilton, (2005, online) that triangulation can ‘capture a more complete, holistic and
contextual portrayal and revealed the varied dimensions of the given phenomenon. The thematic representation of the Research Plan adopted by the researcher can be depicted with the help of a flow diagram:

1.5.2 Conceptual model for the study

The researcher formulates a conceptual model based on the structural relationship between the variables under study. The researcher aims to examine the logical connection between the variables and the assumptions and propositions used to develop the explanatory framework.
Figure 3: Conceptual Model-1

**Legends description:**

Figure 4: Conceptual Model-2
1.5.3 Formulation of Hypotheses

The formulation of the hypotheses or propositions that may be possible answers to the research questions is a critical and significant step in the process of formulating the research problem. The study draws upon the following hypotheses to understand the research problem and to explore the possible solutions:

1. Hypothesis to explore relationship between Service Quality and Customer retention

Review of literatures did not reveal an adequate and comprehensive coverage of studies conducted on the State bank of India to explore the relationship between service quality and customer retention. Therefore the first null hypothesis of the study is proposed as:

\( H_0^1 : \text{Customer Retention is independent of Service quality.} \)

Accordingly, our alternative hypothesis will be:

\( H_1^1 : \text{Customer Retention is dependent on Service Quality} \)

2. Hypothesis to explore relationship between Customer retention and Profitability

To fulfill the gap that exist in the academic research domain with regard to exploring relationship between Customer Retention and Profitability in the context of the State bank of India, the null hypothesis is proposed as:

\( H_0^2 : \text{Profitability is independent of Customer Retention.} \)

Accordingly, our alternative hypothesis will be:

\( H_1^2 : \text{Profitability is dependent on Customer Retention.} \)

3. Hypothesis to explore relationship between Service Quality and Profitability

To justify the relationship between Service Quality, Customer Retention and Profitability in the context of the State Bank of India from all three possible relationships between the variables, the study proposes the third null hypothesis as:

\( H_0^3 : \text{Profitability is independent of Service Quality.} \)

Accordingly, our alternative hypothesis will be:
H₃ : Profitability is dependent on Service Quality.

4. Hypothesis to explore whether differences in demographic variables have impact on service quality expectation and perception of the customers.

To examine the impact of differences in demographic variables on the perceived and expected service quality level of the customers of State bank of India across the four metros, the following null hypothesis is proposed:

H₀₄ : Differences in Demographic Variables do not have an impact on service quality perception and service quality expectations of the customers.

Accordingly, our alternative hypothesis will be:

H₄ : Differences in Demographic Variables have an impact on service quality perception and service quality expectations of the customers.

5. Hypothesis to explore the impact of CRM deployment in the State bank of India on the perceived service quality of the customers with regard to the services offered by the same.

To find out the relationship between CRM initiatives of the State Bank of India and the resulting perceived service quality of the customers, the following null hypothesis is proposed:

H₀₅ : The CRM initiatives taken up by the bank does not have impact on Perceived Service Quality of the customers.

Accordingly, our alternative hypothesis will be:

H₅ : The CRM initiatives taken up by the bank has impact on Perceived Service Quality of the customers.

6. Hypothesis to understand the awareness level of the bankers with respect to customer retention policy adopted by their bank namely State bank of India.

To understand whether the bankers are aware about the customer retention policy adopted by the State bank of India, the following null hypothesis is proposed:
H06 : Awareness level of the bankers is not significant enough (P<0.75) with respect to Customer Retention Policy of their bank.

Accordingly, our alternative hypothesis will be:

H6 : Awareness level of the bankers is significant enough (P> 0.75) with respect to Customer Retention Policy of their bank.

7. **Hypothesis to understand the relationship between perceived service quality of the customers with respect to the service provider and their likelihood to remain associate with the service provider.**

To explore the possibilities of predicting customers’ likelihood to stay with the State Bank of India on the basis of present perceived service quality of the customers, the null hypothesis is proposed as:

H07 : Customers’ likelihood to remain associate with SBI is independent of Perceived Service Quality.

Accordingly, our alternative hypothesis will be:

H7 : Customers’ likelihood to remain associate with SBI is dependent of Perceived Service Quality.

8. **Hypothesis to understand the relationship between present customer retention (in terms of years) by the service provider and their likelihood to remain associate with the service provider.**

To explore the possibilities of predicting customers’ likelihood to stay with the State Bank of India on the basis of their present retention status in terms of years, the null hypothesis is proposed as:

H08 : Customers’ likelihood to remain associate with SBI will not be significantly affected by their current association with the bank.

Accordingly, our alternative hypothesis will be:

H8 : Customers’ likelihood to remain associate with SBI will be significantly affected by their current association with the bank.
Flow Diagram for Testing Hypotheses

State $H_0$ as well as $H_a$

Specify the level of significance (or the $\alpha$ value)

Decide the correct sampling distribution

Take random sample(s) and work out an appropriate value from sample data

Calculate the probability that the sample result would diverge as widely as it has from expectations, if $H_0$ were true

Yes \rightarrow Reject $H_0$

In this, probability equal to or smaller than $\alpha$ value in case of one-tailed test and $\alpha/2$ in case of two-tailed test

No \rightarrow Accepted $H_0$

Thereby run some risk of committing Type-II error

1.5.4 Establishing the Sampling Plan

The study deploys sampling plan for obtaining sample from three populations:

(a) Customers
(b) Bankers
(c) Bank branches

*Simple Random Sampling Technique* was adopted to obtain sample for all the three categories of population stated above.

(a) **Customer selection**: The researcher personally visited each and every SBI branch premise (under study) and with due permission of the branch manager, customers
were identified for the study. Every third customer leaving the bank premise after
their interaction with the bank was considered for the study.

(b) **Banker selection:** A complete list of the bankers was obtained from the branch
managers. A sub-list was prepared on the basis on the bankers’ job profile. The
bankers who were involved with customer interaction and thereby were considered as
critical touch-points of customer interaction by the researcher, featured in the list.
Every odd banker from the sub list was considered for the study.

(c) **Bank branches selection:** A complete list of the SBI bank branches for the four
metros namely Kolkata, Chennai, Mumbai and New Delhi, was obtained from the
website (http://www.sbi.co.in, accessed on 12-09-2007). The branches thus obtained
were arranged alphabetically. The primary filter that was applied to screen branches
was the mandatory presence of three service features: (i) already installed CBS, (ii)
already offered ATM services and (iii) activated and already offered Internet enabled
banking services (i-banking). Every odd branch was picked up for the study from the
sublist (which was also arranged alphabetically) thus prepared by applying the
filtration technique.

**1.5.5 Modifying the SERVQUAL Instrument**

The SERVQUAL instrument developed by Parasuraman, Zeithaml and Berry (1985) offers
the most reliable tool to measure the difference-score with regard to perception and
expectation scores of service quality. SERVQUAL examines five dimensions examining the
reliability coefficients for the perception-minus-expectation scoring of gaps. The five factors
are tangibles, reliability, responsiveness, assurance, and empathy. These five
dimensions/factors are addressed across 31 items or questions that relate to the various five
dimensions. The instrument’s design makes it to be best suited for use as a diagnostic
methodology utilized for determining large areas of service quality strengths and weaknesses
(Bexley, 2005). This study will consider some modifications in the instrument to fit the
modern banking environment being examined. The researcher aims to include items related
to changing dimensions of banking service quality namely technology, integration of cross-
selling and up-selling products or services with the core and traditional banking services. The
study will further attempt to further evaluate and refine the customer study by including such
elements as age, income, education, gender, frequency of bank visits, and items influencing
the selection of the bank. Parasuraman, et al, (1991b) suggested that items not fitting in the
five dimensions might be useful as long as they are treated separately in analyzing the survey
data since they do not fall under the conceptual domain of service quality. The researcher aims to consider the supplemental elements for evaluation to determine if they have a bearing on the conceptual domain of service quality contrary to the conclusions of Parasuraman, et al, (1991b). This study, in addition to studying customers’ expectations and perceptions with regard to services offered by their bank will also attempt to describe bankers’ alignment with customer expectations. Further to this, the study attempts to assess the link between perceived service quality of the respondents (customers) and the CRM deployment of their bank (State Bank of India). The SERVQUAL instrument, minus the perception questions will be used to model an instrument to survey the bankers.

1.5.6 Formulation of the Instruments

The primary instrument identified to obtain primary data from the customers and bankers was ‘Questionnaire’. The SERVQUAL instrument originally developed by Parasuraman et al.(1985, 1986, 1988, 1990, 1991a,1991b, 1993, 1994) and Zeithaml et al. (1990, 1991, 1992,1993,1996), a valid device for measuring service quality in banks, was used to design ‘Section A’ of the questionnaire both for the bankers and the customers apart from other sections. After the formulation of initial instruments (Questionnaires) both for the customers and bankers, pilot studies were conducted to validate the instruments.

A group of fifty (50) customers were selected randomly by visiting ten SBI bank branches selected in Kolkata for the study (5 customers per branch). Every fifth customer leaving the bank premise after their interaction with their service provider was selected for the study. The customers were introduced to the instrument with a brief elaboration on the study and its objectives. Based on the responses of the customers the SERVQUAL section of the questionnaire was modified by incorporating additional factors which the researchers understood as critical factors in perceptualizing about the service quality offered by the bank under study. The factors included were: convenience of location of bank branch, convenience business hour offered by the bank branches, integration of cross-selling and up-selling products/services with the core banking services and technology integration in banking.
services. Some factors were excluded also as they failed to generate convincing response from the customers either because of poor differentiation from the other factors or because of lack of understanding. The factors that were deleted include: flexibility of service provider to accommodate customer’s schedule, zero-fumbling services provided by the service provider, consistency of level of service provided throughout the day, skillful usage of technology and devices by the staff and consistency in the level of service and cost of service with customer’s requirements and affordability. The modified SERVQUAL instrument contained five dimensions: Tangibles, Reliability, Assurance, Empathy and Responsiveness and twenty six factors which were distributed as: (a) Tangibles (5 factors), (b) Reliability (6 factors), (c) Assurance (6 factors), (d) Empathy (5 factors) (e) Responsiveness (4 factors).

1.5.6.1 Development of Questionnaire (Primary Survey Instrument) for the Customers
Post to pilot testing, the Customers’ Questionnaire was finalised as the survey instrument. The structured, self-administered questionnaire had close-ended questions. The questionnaire was divided into five sections:

Section I and Section II dealt with the modified SERVQUAL instrument. The customers were asked to indicate their level of agreement for two sets of identical twenty-six statements included under five dimensions as stated above. One set of questions asked the customer to state their perceptions about their bank’s (State bank of India) services. Another set of questions asked the customer to state their expectations about services from a bank. A seven-point Likert scale was used to evaluate the constructs.

Section III of the survey instrument asked the customers to allocate 100 points among the five dimensions based upon the importance of each dimension to the customer. Section-IV of the survey instrument asked for customers’ response to the CRM deployment of State Bank of India. The section asked responses from the customers on three specific dimensions and factors included thereof: (i) People – Bankers (ii) Process – SWO (Single Window Offer), KYC (Know Your Customer) and MCI (Multi Channel Integration) and (iii) Technology – CBS (Core banking System), Mobile technology, ATM service and Internet. A seven (7) point Likert scale was used to evaluate the constructs. Section-V of the survey instrument asked questions to the customers to obtain data with regard to their advocacy role. Section-VI deals with questions to obtain data from the customers with regard to their behavioural intentions. Section-VII asks questions about the demographics of the customers. These were used as cross-reference data such as gender, age, income, educational qualifications,
occupation, visit frequency to bank branch, association with the bank in terms of years and investments made in cross-selling and up-selling products/services. A copy of the Customer Survey Instrument is attached as Appendix.

1.5.6.2 Pilot Testing for Bankers' Questionnaire by Focus Group Interview

A group of 20 bankers were chosen randomly from 10 SBI branches selected for the study in Kolkata. The bankers were introduced to the instrument with a brief elaboration on the study taken up with its aims and objectives. The SERVQUAL instrument was modified as per the suggestions and responses obtained from the bankers and it was congrual with the modified SERVQUAL finalised for customers.

1.5.6.3 Development of Questionnaire (Primary Survey Instrument) for the Bankers

The bankers' questionnaire had four sections. Section-I of the questionnaire dealt with the modified SERVQUAL instrument. To evaluate the five dimensions, the twenty-six statements were modified to apply to banking. Bankers were asked to indicate their level of agreement for the twenty-six statements which were designed to obtain the bankers' perceptions concerning customers' service expectations from their bank (State Bank of India). A seven-point Likert scale was used to evaluate the constructs. Section-II of the survey instrument asked the bankers to rate the most influential factor responsible for selection of bank by the customers. A five (5) point Likert scale has been used for the purpose. Section-III of the questionnaire was designed to understand the awareness level of the bankers with regard to the policy of 'Customer Retention' adopted by their bank (State bank of India). Dichotomous response questions were framed. Section-IV of the survey instrument asked the bankers about the degree of importance placed by them on certain key issues related to customer retention. A seven (7) point Likert scale was used for evaluating the response. A copy of the Banker Survey Instrument is attached as Appendix..
1.5.7 Behavioural Intentions Battery

Behavioural Intentions Battery (1996) developed by Zeithaml et al. has been used to measure the intention of customers on a number of parameters. The original BIB instrument developed by Zeithaml et al. has been used without any modification. The five dimensions of behavioural intentions were identified by Zeithaml et al. as: (a) loyalty to company (5 items), (b) propensity to switch (2 items), (c) willing to pay more (2 items), (d) external response to a problem (3 items) and internal response to a problem (1 item). Each item in the dimension was measured with the help of a 7 point Likert scale with ‘1’ indicating not likely at all and ‘7’ indicating extremely likely.

1.5.8 Scaling Technique

The instrument with the help of which a concept is measured is called a ‘Scale’. A scale is used in all types of data collection techniques such as observation, interview, projective techniques etc. The researcher used Summated Scaling technique namely Likert Scale to obtain response from the respondents – both from the customers and the bankers. This scaling technique helps to evaluate a particular item on the basis of how well it discriminates between responses whose total scores is high and whose total score is low. For the study the researcher has used a 7 point Likert scale to obtain response via SERVQUAL instrument.

Thematic Representation of Data Collection
1.5.9 Defining the Primary Variables

1. **Service Quality**: Henceforth nomenclated as Perceived Service Quality [PSQ], it represents the mean of Perception Scores obtained from the respondents on a 7 point Likert Scale using SERVQUAL instrument.

2. **Customer Retention**: Respondents (customers) associated with their bank (State Bank of India) for more than 1 year.

3. **Profitability**: Profitability has been defined here as the investments made by the respondents (customers) in the cross-selling/up-selling products/services offered by their bank (State Bank of India) and has been estimated on the basis of number of such investments made as on the span of survey.

1.5.10 Variables identified to obtain the CRM score

Successful Customer Relationship Management (CRM) deployment focuses on integration of people, process and technology. The people factor determines the degree to which respondents are being taken into confidence by the employees and the service agents of the bank. It denotes the touch-points where human-interface is created between the service provider and the service recipient. The process factor explains the delivery mechanism of the service. Modern banking is well equipped with technology as a driver component to deliver the services to the customers. It may be in-premise process such as single window office (SWO), KYC or know your customer or integration of multiple channels of delivery. The technology factor takes into consideration augmentation of banking services with installation of core banking solution, internet enabled banking transactions, mobile banking transactions, automated teller machines and in-premise and ex-premise (in ATMs) digital security provided. Therefore the variables identified for evaluating the CRM score from the respondent are

1. **People**: The People variable consists of the employees of the bank and the service agents of the same.

2. **Process**: The Process variables consist of factors namely multi-channel integration (MCI), single window office (SWO) and know your customer (KYC)
3. **Technology**: The Technology variable consist of factors namely core banking solution (CBS), automated teller machines (ATM), internet-enabled banking (i-Banking) and mobile banking (m-Banking).

The primary data was obtained during the period of 2007 to 2009

![Diagram](Image)

**Figure 5: Time Line of State Bank of India and Affiliate Banks’ Core Systems Modernization (2000-09)**

**1.4.11 Data Collection**

According to Yin (1984) preparation of data collection can be both complex and difficult. There are six sources of evidence available for use in collecting qualitative empirical documentation, archival records, interviews, direct observations, participant observation and physical artifacts. Zikmund (2000) further stated about the types of data collection procedures: (a) Primary (b) Secondary.

Primary data were collected from the customers and the bankers by the researchers with the help of survey instrument. Secondary data was collected from the websites, SBI Press-releases, SBI Annual Reports, Reports of CBS implementation at SBI released by TCS
1.5.12 Data Analysis

According to Raulin and Graziano (2004) in the process of data analysis researchers process the data to make sense. The selection of the statistical techniques to analyse the data is a function of the objective of the research. In this study, the main objectives were to assess relationships among certain primary variables namely service quality, customer retention and profitability and test specific hypotheses regarding the nature of the relationships. The SERVQUAL instrument has interrelation between the five dimensions or indices known as tangibles, reliability, responsiveness, assurance, and empathy. Based upon numerous tests of SERVQUAL, it was noted that oblique rotations were required on an interrelated basis of the five factors (Bexley, 2005). This study will seek to address the nature and causes of the interrelations as suggested by Parasuraman et al, (1991b). Exploratory Factor Analysis technique will be considered followed by Varimax rotation to reduce the data and obtain the loadings and cross-loadings of factors across the components. Confirmatory Factor Analysis will also be considered to obtain the Discriminant validity, convergent and dimensionality. GAP analysis will be taken up using the SERVQUAL Scale to obtain an estimation of Perception minus Expectation score (P-E score). The mean scores on the per item basis will be plotted on the Customer retention Indicator Grid proposed by James Bexley (2005).
To realize the gaps in service quality the researcher will be using three separate models of Service Quality Gap Model:

To test the hypotheses several data analysis techniques were used which includes both Bivariate and Multivariate analysis. Regression analysis is widely used to predict the dependent variable on the basis of independent variable/variables. Linearity of the relationship between dependent and independent variables represents the degree to which a change in the dependent variable is associated with the independent variable.

To realize the gaps in service quality the researcher will be using three separate models of Service Quality Gap Model:

(i) Parasuraman, Zeithaml and Berry (PZB, 1985) model of Service Quality Gap:

![Service Quality Gap Model Diagram]

Word of mouth communications \rightarrow Personal needs \rightarrow Past experiences

Customer

Expected Service \rightarrow Perceived Service

Service delivery (including pre and post contacts) \rightarrow External communications with customers

Translation of perceptions into service quality specifications

Firm's perception about customers' expectation

Gap I

Gap III

Gap IV

Gap II

Gap V

(iii) Luk and Layton (2002) model of service quality gap

To test the hypotheses several data analysis techniques were used which includes both Bivariate and Multivariate analysis. Regression analysis is widely used to predict the dependent variable on the basis of independent variable/variables. Linearity of the relationship between dependent and independent variables represents the degree to which a change in the dependent variable is associated with the independent variable.
1.5.13 Reliability and Validity testing

The degree to which measurements may be repeated makes up reliability (Nunnally; 1978). The reliability testing of the data will be done by obtaining the Cronbach’s $\alpha$ and it will be tested against the value of 0.70 as proposed by Nunnally (1978). In addition to Cronbach’s $\alpha$, Kaiser-Meyer-Olkin measure of sample adequacy will be used. Barlett’s test of sphericity is also proposed. Confirmatory Factor Analysis will be used to check dimensionality, convergent and discriminant validity. The researcher will also highlight the fitness statistics namely Goodness of Fitness Index, Adjusted Goodness of Fitness Index, Normed Fitness Index, Non-Normed Fitness Index, Comparative Fitness Index, Parsimony Goodness of Fitness Index, RMSEA etc. wherever applicable.

1.5.14 Proposed Stages (time-line) of the study

The researchers had drawn up a time-line for the different stages of the study. This time-line is merely an indication of approximation of time devoted to different stages of the study. The time-line proposed is kept flexible and enough buffer-time has been kept to include the relevant changes and trends which might influence the variables selected for the study. The time-line budget for the study taken up by the researcher has been proposed in Table-1 as follows:

Table 1: Time-line and time-period proposed by the researcher is indicative of time-budget for each stage in the study.

<table>
<thead>
<tr>
<th>Stages</th>
<th>Time-Line **</th>
<th>Time period**</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Initial review of literatures and selection of the research problem</td>
<td>2004 (January) - 2006 (July)</td>
<td>18 months</td>
</tr>
<tr>
<td>2. Formulation of the selected problem and preparation of the research plan</td>
<td>2006 gust-November</td>
<td>4 months</td>
</tr>
<tr>
<td>3. Construction of tools/instrument and Pre-testing/Pilot testing the same</td>
<td>2006 (December) – 2007 (June)</td>
<td>6 months</td>
</tr>
<tr>
<td>4. Field work: collection of primary data from the respondents – customers &amp; bankers across the 4 metros (Kolkata, Chennai, Mumbai and New Delhi) in India</td>
<td>2007 (July) – 2009 (January)</td>
<td>18 months</td>
</tr>
<tr>
<td>5. Processing and analysis of the data by using statistical softwares and other relevant techniques</td>
<td>2009 (February-July)</td>
<td>6 months</td>
</tr>
<tr>
<td>6. Planning to write report</td>
<td>2009 (August-November)</td>
<td>4 months</td>
</tr>
<tr>
<td>7. Drafting and finalizing the report</td>
<td>2009 (December) – 2010 (March)</td>
<td>4 months</td>
</tr>
</tbody>
</table>
1.6 Statistical tools

The statistical tools are of extreme importance to analyse the data and therefore the selection of the same is a major task in the proposed study. The primary data collected via customer
survey and banker survey are put to analysis keeping in mind the objectives of the study and the subsequent hypotheses formulated. The statistical tools and techniques that the researcher proposed to use are as follows:

a) Multivariate analysis:
   (i) Exploratory Factor Analysis for data reduction followed by Varimax Rotation to obtain the rotated component matrix.
   (ii) Confirmatory Factor Analysis for dimensionality, convergent of data and discriminant validity.
   (iii) Multiple Regression Analysis for predictability of dependent variable on multiple independent variables.
   (iv) Simple Regression analysis to assess the strength of a relationship between one dependent variable from one or more independent variables.

b) Bivariate correlation to assess the strength of the relationship between two variables.

c) ANOVA to test whether multiple groups are significantly different.

d) Post-Hoc ANOVA (Bonferroni and Tamhane) to assess the significance of impact range-wise.

e) Chi-Square analysis to test whether two variables are significantly associated.

f) Crosstab to analyse multiple response set

g) Frequency analysis – analysis of Central tendency of demographic variables.

h) Runs test (non-parametric)

Further to this the researchers proposed to use the following statistical softwares and programming softwares for data analysis:

(i) SPSS 16 for Windows

(ii) MINITAB 15

(iii) LISREL 8.80

(iv) Microsoft Equation 3.0

(v) R 2.11.1

(vi) Microsoft Excel 2007
1.7 Limitations of the Research

There are few limitations associated with this study.

(i) the study is restricted to a specific geographic area namely four major metropolitans of India namely Kolkata, Chennai, Mumbai and New Delhi, as opposed to the entire country (India). However this limitation is mitigated on the basis that the customers of metros are substantially well exposed to and aware of the modern banking processes related to transactions and investments.

(ii) the study also had cost and time constraints which did not allow for a more extensive data collection. A larger and more representative sample may give broader representation to the measurement of the constructs taken up for study.

(iii) the study took into consideration only one nationalized public sector bank in India. Therefore the findings may differ when laterally applied for other banks.

1.8 Organization and Presentation of the thesis

The entire thesis has been organized and presented in the following manner:

Chapter One: Introduction.

Chapter Two: Review of Literature

Chapter Three: The Indian Banking Environment – A brief assessment.

Chapter Four: Data Analysis and Interpretation.

Chapter Five: Findings, Conclusions and Recommendations.

1.9 Conclusion

This chapter represents the description of the procedures used to measure the constructs and collect the data. The service organization selected for the study was one of the public sector banks in India namely State Bank of India. SERVQUAL instrument was selected as the most reliable device to measure the difference-score conceptualization and evaluate gaps between expectations and perceptions in service quality. Required modifications were made on the SERVQUAL instrument to make it specific to banking, and additional items were incorporated. The research instrument, questionnaire has been finalised after pilot testing.
both for the bankers and the customers. The researcher has spelt out the research objectives and formulated the hypotheses to be tested. The researcher has further elaborated the research design which included the research process to be followed and the research plan. A conceptual model considering all the constructs has been proposed by the researcher. The sampling plan has been laid down.

The researcher has also incorporated the data collection and data analysis procedures adopted.

References


