CHAPTER - III

METHOD AND PROCEDURE OF THE STUDY

Research is a purposive, scientific and pointed deliberation. After the selection, definition and delimitation of the problem, the adoption of suitable measures becomes very imperative. Since research is not a haphazard task, it requires one to proceed in a definite direction along with well defined lines. Collection of mere bits of information is not research. Planning and procedures for study are deemed essential for saving it from becoming a heap of jumbled ideas gathered from here and there. It goes without saying that ultimate success of a project greatly depends upon the method employed therein.

In every piece of research, different methods are used at different stages. The decision about the method to be employed depends upon the nature of problem selected and kind of data necessary for its solution. The methods and procedures adopted for the present study are explained as below:

3.1 RESEARCH METHODOLOGY

3.1.1 Research Design

The present study is mainly concerned with the evaluation of satisfaction level of bank customers in e-Banking system. The present study evaluates satisfaction of bank customers of e-banks by various parameters of e-Banking system and from the security mechanism adopted by the banks for the protection of their e-accounts. Also, the perceptions of bank employees are evaluated w.r.t. e-Banking system to know how they perceive e-Banking system to perform their duties. Further, from the banking industry only public sector banks and private sector banks have been chosen for the present study. Private sector banks are further divided into old private sector banks, new private sector banks and foreign banks and all the other banks and banking groups have been excluded from this study.

3.1.2 Sample Design

The present study consists of the major public sector banks and private sector banks in Punjab. These banks are studied in two groups as:

G-I: Public Sector Banks
G-II: Private Sector Banks which includes Old Private Sector Banks, New Private Sector Banks, Foreign Banks
From every bank group ten banks are selected for the present study. So the total size of bank sample is 20. These banks are selected on the basis of their total number of ATMs installed which includes on-site and off-site ATMs at the end of March 2011. Total number of ATMs installed is used as a selection tool for taking the sample of the banks because it is the most commonly used e-delivery channel and for most of e-bank customers' e-delivery channels means ATM card. As far as the sample of the e-bank customers is concerned, 600 e-bank customers are selected from the above said two bank groups, 300 bank customers from each bank group and their responses are evaluated about e-delivery channels provided by their bank. To know bank employees’ perception about the performance of e-delivery channels in their banking operations, 250 e-bank employees are selected from the above said two bank groups, 125 bank employees from each bank group and their responses are evaluated about their perceptions regarding various e-delivery channels of their bank. Simple Random Sampling technique is used for the collection of data. The detail of the above selected sample is given as below:

### Table 3.1: Bank-wise Classification of e-Bank Customers and Employees in G-I

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of Bank</th>
<th>e-Bank Customers Sample Size</th>
<th>e-Bank Employees Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>State Bank of India</td>
<td>30</td>
<td>13</td>
</tr>
<tr>
<td>2.</td>
<td>Punjab National Bank</td>
<td>30</td>
<td>13</td>
</tr>
<tr>
<td>3.</td>
<td>Union Bank of India</td>
<td>30</td>
<td>13</td>
</tr>
<tr>
<td>4.</td>
<td>Canara Bank</td>
<td>30</td>
<td>13</td>
</tr>
<tr>
<td>5.</td>
<td>Bank of Baroda</td>
<td>30</td>
<td>13</td>
</tr>
<tr>
<td>6.</td>
<td>Bank of India</td>
<td>30</td>
<td>12</td>
</tr>
<tr>
<td>7.</td>
<td>IDBI Bank Ltd.</td>
<td>30</td>
<td>12</td>
</tr>
<tr>
<td>8.</td>
<td>State Bank of Hyderabad</td>
<td>30</td>
<td>12</td>
</tr>
<tr>
<td>9.</td>
<td>Syndicate Bank</td>
<td>30</td>
<td>12</td>
</tr>
<tr>
<td>10.</td>
<td>Oriental Bank of Commerce</td>
<td>30</td>
<td>12</td>
</tr>
</tbody>
</table>
Table 3.2: Bank-wise Classification of e-Bank Customers and Employees in G-II

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of Bank</th>
<th>e-Bank Customers Sample Size</th>
<th>e-Bank Employees Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>AXIS Bank Ltd.</td>
<td>30</td>
<td>13</td>
</tr>
<tr>
<td>2.</td>
<td>ICICI Bank Ltd.</td>
<td>30</td>
<td>13</td>
</tr>
<tr>
<td>3.</td>
<td>HDFC Bank Ltd.</td>
<td>30</td>
<td>13</td>
</tr>
<tr>
<td>4.</td>
<td>Federal Bank Ltd.</td>
<td>30</td>
<td>13</td>
</tr>
<tr>
<td>5.</td>
<td>Kotak Mahindra Bank Ltd.</td>
<td>30</td>
<td>13</td>
</tr>
<tr>
<td>6.</td>
<td>CITI Bank Ltd.</td>
<td>30</td>
<td>12</td>
</tr>
<tr>
<td>7.</td>
<td>IndusInd Bank Ltd.</td>
<td>30</td>
<td>12</td>
</tr>
<tr>
<td>8.</td>
<td>South Indian Bank Ltd.</td>
<td>30</td>
<td>12</td>
</tr>
<tr>
<td>9.</td>
<td>Karur Vysya Bank Ltd.</td>
<td>30</td>
<td>12</td>
</tr>
<tr>
<td>10.</td>
<td>ING Vysya Bank Ltd.</td>
<td>30</td>
<td>12</td>
</tr>
</tbody>
</table>

3.1.3 Universe of the Study

The universe of the present study consists of the public sector banks and the private sector banks which are offering e-delivery channels for providing various services to their customers for the purpose of maximizing their satisfaction in urban Punjab. We have taken only those districts of Punjab (namely Ludhiana, Jalandhar and Patiala) where maximum e-delivery channels are used by the bank customers for their banking needs.

3.1.4 Time Period

Time period for the present study is 2012-13 and a survey was conducted in the month of June-July, 2012 to know the responses of e-bank customers’ about their satisfaction from the e-delivery channels and security mechanism adopted by their respective bank and also of e-bank employees to know their perceptions about e-delivery channels.

3.1.5 Parameters

The parameters that are included in the present study that effects and determines customers' satisfaction are ATMs, Debit Card, Credit Card, Mobile Banking, Telephone Banking, RTGS System, Internet Banking etc. and security mechanism adopted for the protection of transactions through these e-delivery channels. These parameters are studied in the context of the most common dimensions of e-Banking
for the evaluation of customers’ satisfaction and to know e-bank employees’ perceptions.

### 3.2 DATA BASE

The data for the present study consists of primary data collected through well-structured and pre-tested questionnaires. The secondary data is collected from various sources such as Reserve Bank of India’s annual, monthly, quarterly or weekly publications, Indian Banking Association’s Journals and Publications, National Institute for Bank Management’s Journals and Publications etc.

### 3.3 TOOLS USED

Following tools are employed to collect the data for the present study:


#### 3.3.1 Perception Measure for the Evaluation of Customer's Satisfaction in e-Banking:

Today every bank customer is using various types of e-delivery channels for the fulfillment of his banking needs and to quickly do his banking operations. Today no one has the time to stand in long queues and wait for his turn to come. All the banking work which was earlier done manually today is done with the help of e-delivery channels. These e-delivery channels thus significantly affecting the way banking operations are done and thus affecting customers' satisfaction from his banking experience. Today each and every bank is trying to provide these e-delivery channels in an effective way in order to increase its customer's satisfaction. So, it is necessary to measure the level of customers' satisfaction from these e-delivery channels. So, this 5-point likert type scale is developed to measure bank customer's satisfaction from various e-delivery channels such as ATM, Credit Card, Debit Card, Mobile Banking, Telephone Banking, Internet Banking etc. This scale is divided into three parts. First part relates to demographic profile of the respondents, second part relates to bank customer's satisfaction from various e-delivery channels which contain 45 items and third part relates to bank customer's preference towards various functions of an e-delivery channel. This part contains 4 e-delivery channels namely ATM, Mobile Banking, Telephone Banking and Internet Banking and bank customer's preference towards various functions of these different e-delivery channels is measured.
3.3.1.1 Reliability
The internal consistency of total 600 responses is tested by computing Cronbach’s Alpha with the help of SPSS 17.00 which is based on the average correlation of items within a test if items are standardized and if items are not standardized, it is based on the average covariance of the items. SPSS output provides a standardized alpha that is the value that would be obtained if all the items were standardized. Because Cronbach’s alpha can be interpreted as a correlation coefficient, it ranges in value from 0 to 1. In this analysis, value of alpha for all the items is 0.9511. An alpha value 0.60 or above is considered to be acceptable for exhibiting reliability. Here, the value of alpha is above 0.60. Therefore, the proposed items are sound enough to measure bank customer's perception about e-Banking system and hence, can be used for further analysis.

3.3.1.2 Scoring
This scale is scored by hand. The scoring is done after the test is administered. It is done on a five point scale: Strongly disagree, Disagree, Undecided, Agree and Strongly Agree with the values 1,2,3,4,5 for the positive items & 5,4,3,2,1 for the negative items in that order.
Positive Items are as follows:
1,2,4,5,7,9,10,11,12,14,16,19,20,22,23,24,25,27,28,31,33,36,38,39,45.

Negative Items are as follows:
3,6,8,13,15,17,18,21,26,29,30,32,34,35,37,40,41,42,43,44.

3.3.2 Perception Measure for Bank Customers’ Satisfaction from Security Mechanism Adopted in e-Banking Services:
Today every bank customer is worried about the safety of his e-account as all the work is done electronically with the help of e-delivery channels which uses computers and technology as their main component. So there is always a possibility of hacking of customer's account, his password etc. Today we often hear about bank frauds done by the hackers with the use of technology. All these creates hesitation in the mind of bank customers whether to use these e-delivery channels for making their transactions or not. So, it has become the prime responsibility of the banks to provide proper safeguards to their customers regarding the use of these channels, so that they can freely use these channels for their banking needs and can take the benefits of this new technology-oriented banking. Today every bank is trying to make its banking operations safe for its customers. So, this 5-point likert type scale is developed to
measure bank customer's satisfaction from security mechanism adopted for various e-delivery channels provided by the banks. This scale is divided into two parts. First part relates to demographic profile of the respondents, second part relates to bank customer's satisfaction from security mechanism adopted for various e-delivery channels for the safety of their e-accounts and e-transactions. This scale contains 31 items.

3.3.2.1 Reliability
The internal consistency of total 600 responses is tested by computing Cronbach’s Alpha with the help of SPSS 17.00 which is based on the average correlation of items within a test if items are standardized and if items are not standardized, it is based on the average covariance of the items. SPSS output provides a standardized alpha that is the value that would be obtained if all the items were standardized. Because Cronbach’s alpha can be interpreted as a correlation coefficient, it ranges in value from 0 to 1. In this analysis, value of alpha for all the items is 0.9206. An alpha value 0.60 or above is considered to be acceptable for exhibiting reliability. Here, the value of alpha is above 0.60. Therefore, the proposed items are sound enough to measure bank customer's perception about their satisfaction from the security level adopted in e-Banking system and hence, can be used for further analysis.

3.3.2.2 Scoring
This scale is scored by hand. The scoring is done after the test is administered. It is done on a five point scale: Strongly disagree, Disagree, Undecided, Agree and Strongly Agree with the values 1,2,3,4,5 for the positive items & 5,4,3,2,1 for the negative items in that order.

Positive Items are as follows:
1,2,4,5,8,10,12,13,14,16,18,19,20,23,24,27,30,31.

Negative Items are as follows:
3,6,7,9,11,15,17,21,22,25,26,28,29.

3.3.3 Perception Measure for Bank Employees regarding e-Banking Services:
Today with the introduction of e-delivery channels, the total working environment of the banks has changed. We see computers working in the place of manual operations and the customers are provided with a financial freedom to have an access on their accounts anytime and anywhere with the help of e-delivery channels. The success of e-Banking system depends upon the efficiency, sincerity,
receptiveness and devotion of bank employees towards these e-delivery channels. If the bank employees themselves are not satisfied with the working of these channels and consider them as an extra burden upon them, they by no means can satisfy their customers with these channels. So, it is necessary that the bank employees feel at ease while working with these e-delivery channels and are satisfy with its various aspects. So, every bank is trying to develop positive attitude in its employees regarding these channels, so that they can better serve their customers. So, it is necessary to evaluate bank employees' perceptions about these e-delivery channels. So, this 5-point likert type scale is developed to measure bank employees' perception towards various e-delivery channels of their bank. This scale is divided into two parts. First part relates to demographic profile of the respondents, second part relates to bank employees' perceptions regarding various e-delivery channels of their bank and level and method of their implementation. This scale contains 34 items related to measure their perceptions.

3.3.3.1 Reliability

The internal consistency of total 250 responses is tested by computing Cronbach's Alpha with the help of SPSS 17.00 which is based on the average correlation of items within a test if items are standardized and if items are not standardized, it is based on the average covariance of the items. SPSS output provides a standardized alpha that is the value that would be obtained if all the items were standardized. Because Cronbach's alpha can be interpreted as a correlation coefficient, it ranges in value from 0 to 1. In this analysis, value of alpha for all the items is 0.6976. An alpha value 0.60 or above is considered to be acceptable for exhibiting reliability. Here, the value of alpha is above 0.60. Therefore, the proposed items are sound enough to measure bank employees' perception about e-Banking system and hence, can be used for further analysis.

3.3.3.2 Scoring

This scale is scored by hand. The scoring is done after the test is administered. It is done on a five point scale: Strongly disagree, Disagree, Undecided, Agree and Strongly Agree with the values 1,2,3,4,5 for the positive items & 5,4,3,2,1 for the negative items in that order.

Positive Items are as follows:
1,2,3,4,5,7,9,10,11,13,14,16,19,20,21,23,25,28,30,32,34.

Negative Items are as follows:
6,8,12,15,17,18,22,24,26,27,29,31,33.

3.4 DATA COLLECTION
First of all the investigator got acquainted with the tools, their purpose, administration and procedure of scoring. Then the investigator approached the bank managers of the various banks selected for the collection of data with a request for time and date. They were taken into confidence and told about the purpose behind the study and collection of data. After seeking their permission for the collection of data on their bank’s customers and bank’s employees, the investigator approached bank customers and bank employees of the concerned banks. They were also taken into confidence and told about the purpose of the study. They were kind enough to accommodate. The investigator collected the required data from them by using the questionnaires.
First of all, the data on bank customers were collected. They were given two questionnaires at a time. One questionnaire measures their perceptions about their satisfaction from various e-delivery channels and other questionnaire measures their perception about their satisfaction from the security mechanism adopted in e-Banking services by their respective bank. The bank employees were given only one questionnaire to measure their perceptions about e-Banking services of their bank. Test items were made clear to them. They were guided to fill up the responses correctly. After administration of the test, scoring was done separately for all the three questionnaires.

3.5 TECHNIQUES FOR STATISTICAL ANALYSIS
Weighted Average Score, Arithmetic Mean, Standard Deviation, Coefficient of Variation, Percentage, Chi-Square Value, Coefficient of Contingency, t-Value, F-Value were used for the analysis of data for the present study.