CHAPTER-4

RESEARCH DESIGN AND METHODOLOGY

The purpose of this study is to describe the research design and methodology used in this chapter. The chapter includes an explanation of each of the following topics:

1. The Problem.
2. Research Approach and Its Validity.
3. Scope of the Study.
4. Objectives of the Study.
5. Hypothesis
6. Instrumentation.
7. Collection of Data.

4.1 THE PROBLEM:

The subject of leadership has for a long time occupied a central role in the study of organization and administration. It all started innocently enough with psychological and sociological studies of the nature of leadership in very general terms. When simple explanations in terms for instance of inborn personality traits failed to account for the phenomenon, the subject became progressively more complex.

In accordance with the trait, behavioural and situational leadership theories discussed in the previous chapters, one can conclude three major trends in leadership studies. In the first place leadership is analyzed in terms of the person only, his behavior, ability, dynamism, perceptions, and attitudes. Later, social scientists looked at the pattern of a leader’s interaction with others. The third and most recent trend arose from the limited
success achieved by the previous perspectives which sought to confine leadership analysis to simple socio-psychological measurements. The third step requires an analysis and measurement of those environmental factors that are thought to influence leader’s behavior. Some parts of the environment are very close to the leader; for instance, the people who literally surround him. One way of measuring this influence is by studying the position in the hierarchy, that is to say, the number of tiers of people who work below and above a manager. Job function is another environmental factor. A staff job, for instance, provides a different setting from a line job, and these differences may have important effects on leadership behaviour.

A little further removed from a leader are the uncertainties and pressures resulting from changes in the technology of work, the economic climate, trade union custom and practice, social, cultural, and political circumstances, and a host of others.

It is obvious that research becomes more difficult as the study move from the simple person-centered approach to a study of patterns of interaction, and finally the environment. A major difficulty is to find suitable ways of measuring all the variables one wishes to consider. A major omission from the research literature on leadership is the detailed consideration of situational, structural and environmental circumstances which explain variations in leadership styles.

The multiplicity of environment that can exert influence on the leadership process are illustrated in Figure 4.1. Every organization has to examine its own situation and decide what constitutes the critical aspects of its own environment.

Psychologists have long realized the importance of both environmental and personality variables in the explanation of behaviour. Theorists have employed a variety of terms of describe the necessity of using both sets of concepts. Lewin (1951), for example, illustrates this dual focus in his statement that behaviour is a function of the person and of his environment: B = F (P, E). This was supported by McGregor (1967) who suggests the formula B = f (Ia,b,c,d . . . Em,n,o,p . . .), indicating that the behaviour of people in industry
is a complex function of certain characteristics of the individual (I), including his knowledge, skills and attitude, and certain aspects of the environment (E) in which he works.

Figure 4.1: A variety of Environmental Influences acting on a Leader/Manager
Political and Economic Circumstances

There has, however, been a tendency for investigators in social psychology to concentrate on one or the other of these sets of variables in their explanation of social phenomena. Some emphasize personality, conceived as the relatively enduring psychological properties of an individual, as the locus of the basic causes of behaviour, while others look to environmental variables such as group structure, communication, and
role. Few have investigated environmental and personality determinants of behaviour simultaneously.

The present study attempts to examine the interaction between situational, person-centered, and personality variables in determining the leadership style of a hitherto neglected segment of executives, the bank managers.

Before the researcher goes ahead, it would be essential at this stage to mention how the terms situational, person-centered, and personality variables have been used in this study.

Situational variables are independent variables describing business situations which are hypothesized to interact with leadership styles. Examples are position in the hierarchy, span of control, job constraints (degrees of freedom), line and staff functions, other functions, locus of decisions, types of decisions, etc. In this study, the situational variables used to interact with leadership style are position in the hierarchy, line and staff functions, and size of the organization.

Situational factors may, and sometimes do, override personality factors as Katz (1960) has demonstrated. Katz formed 16 groups, each composed of two Negro and two white college students who had been matched for intelligence. In half the groups both white subjects had high authoritarian (F) scores; and in half, low F scores. He found that authoritarian whites accepted more suggestions from the Negro members, showed greater trends toward compliance, and rated Negroes higher on intelligence, maturity, and dominance. Katz explains that all this was most probably because the authoritarians feared revealing anti-Negro attitudes in a potentially punitive environment.

Person-centered variables must be distinguished from personality variables. Person-centered variables are variables such as manager’s experience in his job, his age, etc. They are a natural extension of situational variables from the point of view of the business and are easily identifiable without special tests of investigations. In this study, the person-centered variables used are age, experience, and cadre of joining the bank (clerical/directly recruited).
Personality variables are needs for independence, submission, dominance, adjustment, extroversion etc. Eysenck (1972) emphasized the importance of traits in defining personality. According to him, personality is the relatively stable organization of a person’s motivational disposition, arising from the interaction between biological drives and the social and physical environment. In this study, the personality variables studied in relation to leadership style have been derived from Cattell’s 16 Personality Factor Questionnaire.

The research model that emerges from what has been discussed above appears in Figure 4.2. This research study will contribute to a widening of the theoretical framework in the investigation of leadership styles by examining the interaction between situational, person-centered, and personality variables.
The specific intention of this study is to test the validity of a number of specific Hypotheses that examine the importance of certain mediating or moderator variables relating to styles of leadership. Chief among these mediating conditions are:

1. Certain situational variable applicable to commercial banks.
2. Certain person-centered variables that are not personality variables.
3. Certain personality variables that are based on traits possessed by individuals.

The present study treats the three mediating conditions as independent variables and examines their interaction with four alternative styles of leadership (the dependent variable): Exploitive Authoritative, Benevolent Authoritative, Consultative, and Participative.

Before proceeding to the next section, it would help to clarify how the term “leadership style” was conceived in the mind of the researcher. A manager’s style of leadership consists of his/her habits, work patterns, and stable mannerisms, he/she uses to manage or to relate to others. The way a manager behaves to influence people to work toward organizational goals is his/her leadership style.

4.2 RESEARCH APPROACH AND ITS VALIDITY:

Certain disciplines within the behavioural sciences, notably psychology, have usually preferred a simple scheme of analysis with a small number of independent variables, acting on a criterion, for instance, measures of leadership related to output. Sociological research often adopts a similar scheme, but chooses more complex variables covering a large group of social phenomena, and concentrates on those aspects of social reality which have enduring relationships with each other, for instance, organization structure, ownership, and bureaucratic processes. The artificial separation between psychological and sociological variables has undoubtedly contributed to the slow and uneven progress of our understanding of what really goes on in the world (Homans, 1964; Pugh, 1969). On the other hand, researcher has to accept the specialist’s contention that the narrow subject-based single-
variable research has helped to sort out the important from the unimportant and, in the process, has created a powerful body of research instruments.

While one can justify the division of labour between subject disciplines, at least to start with, these quickly develop entrenched interests and restrictive academic practices where individuals acknowledge professional loyalties to distinct disciplines and methodologies. Thus, economists, sociologists, and psychologists usually concentrate on the analysis of circumscribed and possibly artificial closed systems of behaviour. The limitation of the subject-based, compared with the alternative problem-based research, has become critical in the study of administrative organizations (Haire, 1959; Heller, 1960; Katz & Kahn, 1966).

It becomes increasingly desirable to relate variables at the molecular level of analysis (interpersonal relations) to various levels of molar analysis, such as the structure of the organizational unit and the socio-technical systems within which social behaviour operates.

However, it must be admitted that an ecological open system approach is more easily preached than practiced. There are innumerable conceptual and methodological difficulties, some of which are now being explored (Emery, 1969; Pugh, 1969; Thorelli, 1967). These problems have, however, not deterred researchers from moving slowly towards an ecosystem analysis of multiple variables.

Several recent attempts fit in with certain aspects of the work reported in this study. Woodward (1965) measured the relationship between structural variables such as span of control, numbers of managerial levels, line-staff, etc., and the technology of the production process. In successful firms, the span of control of chief executives, for instance, varied from 4 to 10 as technology increased in complexity from unit to process production. But technology alone is not an adequate predictor, and recently Woodward (1970) has reanalyzed her earlier sample of 100 (firms in relation to new explanatory concepts (chiefly, control systems) and she finds that these organizational variables provide a useful link with technology.
Pugh and his co-workers have produced a carefully though-out scheme for measuring organizational variables (Pugh, Hickson, Hinings, & Turner, 1968) and then proceeded to measure the relationship of various dimensions of organizational context (origin and history, ownership of control, size, etc.) to dimensions of organization structure. It seems that knowledge of context variables might enable one to predict structural aspects of organization.

Hage and Aitkin (1967) used two measures of the distribution of power between people in 16 health and welfare organizations and related these variables to a number of job structural measures such as the degree of rule observation, and degrees of job complexity. They report that organizations using participatory leadership styles are also likely to use less rule observation, less job codification, and more professional training.

Lawrence and Lorsch (1967) measured the relationship between the effect of environment (stable, semi-dynamic, turbulent), work roles (integration, differentiation), and styles of solving conflict (confrontation, smoothing, forcing). The authors show by means of a series of case examples and simple measurements that in successful firms, different environmental conditions correlate with certain work roles and styles of solving conflict. Turbulent environmental conditions, for instance, go with role differentiation, as well as with role-integrating procedures and confrontation techniques of solving conflict.

Likert (1961) was willing to admit that his theories necessarily dealt with broad generalizations to which there are many specific exceptions. In particular, the relation of productivity to worker attitudes varied with the kind of work performed (p. 77). Likert, while differentiating between varied and repetitive work, stated that assembly-line operations may be disliked but still produce high levels of output, and went on to observe that under conditions of varied work, managements normally do not adopt highly controlled “scientific management methods”. Furthermore, continuous-process industries, where neither varied nor repetitive work applies, have developed their own styles of management which seem to be adjusted to the technologies involved (pp. 79-83). One method of supervision may be suitable for railroad maintenance crews, but a different pattern would
have to apply in an office full of young women. Likert accepted that size of the unit of work may affect morale, absence, sickness, and accidents and those situational requirements such as deadlines or minimum financial conditions of earnings or reserves may impose limitations on the styles of leadership.

In this study, the leadership styles of managers have been described as exploitive authoritative, benevolent authoritative, consultative, and participative. The personality profiles of managers have been drawn up. It has then been attempted to ascertain whether there is a significant correlation between certain personality traits and the leadership style attributed to a manager. Similarly, the effects of certain person-centered and situational variables on leadership style have been studied. The present research has adopted an interdisciplinary approach, using management and psychology in a multivariate framework. The organizational setting is nationalized commercial banks in India. Two assumptions provide the guiding framework for this research. One, based on situational leadership theory, assumes that a person’s style of leadership is influenced by, or interacts with a variety of ecological variables. The term “ecological” is used to describe a part of a system’s environment. The studies call an environmental variable ecological if it is thought to be relevant to, or to interact with, the system. Situational variables are considered to be ecological and, from all the environmental variables given in Figure 4.1, are the only ones considered in this study. Three Hypotheses tested this assumption. The second assumption states that there is a relation between the individual’s personality and his goal-directed behaviour in groups. This assumption is tested by the Hypothesis based on personality variables.

The research approach used was exploratory in nature. According to Isaac and Michael (1974), this research approach aims first at collecting detailed, factual information that characterizes the phenomena under study; second, identifies problems, conditions, and practices in association with the study; and third, makes comparisons and evaluations.

Hyman (1955) noted that because of the amount of work usually involved in exploratory studies, economizing the efforts deployed in the research project is of utmost
importance. Emphasis was, therefore, placed on securing relevant data with minimal investment of effort, time, and money. A design was needed that would reduce bias and enhance the reliability of the information collected. An attempt was made to increase reliability and diminish bias at every phase of the research: formulating the research problem, designing the procedures of data collection, choosing the sample, collecting, studying and analyzing the data, and reporting the results.

Coming to the research methodology adopted in this study, following Ackoff (1955) in his report on the design of the social research project, emphasis was laid on the collection of detailed and factual data, the identification of problems, comparisons and evaluations.

The data for the research could have been gathered by use of either an interview or a questionnaire. This study relied mainly on the questionnaire technique because, according to Clover and Balsley (1974), in this method, no interviewer is present to bias the responses or to make mistakes in recording information. Also, certain replies pertaining to personal data may be given more completely and accurately in an unsigned questionnaire. It was attempted to minimize bias by an invariable questionnaire style and content, while still straying to secure as such information as possible. Standard questionnaires were used and each of them contained a large number of questions on each variable covered, thus minimizing the chance of a respondent faking a reply.

Current research in the areas of leadership and management has relied almost exclusively on questionnaires to measure leader behaviour. This predominant use of one measurement technique implies that extreme difficulty is present in more direct observational measures (Rush, Thomas, & Lord, 1977). On the other hand, since leadership is closely associated with behaviour, a great amount of criticism has been levied in relation to the external validity and psychometric properties of the leadership questionnaire technique. Another fundamental criticism relates to the internal validity of the questionnaire technique. Nevertheless, the questionnaire method remains the most popular technique employed by researchers when large samples are involved.
Keeping in focus the exploratory nature of the research approach employed in this study, and the use of interdisciplinary approach, it was decided to use standard questionnaires (16 PF and Likert’s Profile of Organizational Characteristics) whose (internal and external validities have been established over time. Since no effort was, required to be expended in conducting test validation, more concentration could, therefore, be given to analysis of the data obtained from the questionnaires.

4.3. SCOPE OF THE STUDY:

The scope of this study will be limited to influence of Leadership behaviour and Leadership styles of bank managers of nationalized commercial banks in India towards the achievement of organizational effectiveness. The researcher will focus mainly on Leader-follower relations only. The Researcher need to research this topic because competition increasing among the organizations day by day so managers need to be more competent, more committed and high performers to stay in the competitive market. The role of leadership is the most important determinant of banking sector. This concept needs to study the relationship of Leadership styles of bank managers of nationalized commercial banks in India.

On the basis of the definitions, the nature and scope of leadership can be explained as follows: Leadership is an influencing process. It is an important element of directing process. To get things done by subordinates, the managers have to lead and guide their activities. Leadership is an activity of influencing the behaviour of subordinates. By influencing the working behaviour of subordinates the manager directs them towards the accomplishment of organizational goals.

Leadership is required in every organizational, the success or failure of an organization to the great extent depends on the quality of leadership particularly on the part of top management. It is because by using leadership qualities the manager develops vision about organizational and directs the activities of members in that direction. Thus leadership
is the study of leader’s influenced over the thoughts, feelings, opinions, beliefs, attitudes and action of the followers.

4.4 OBJECTIVES OF THE STUDY:

The major objective of the study is to go through various Leadership styles in nationalized commercial banks and their relationship between Personality Traits, Behaviour and other Attributes of Bank Managers.

In order to achieve the objectives, researcher further needs to study the following sub-objectives. The sub-objectives of the study may be given as follows:

(i) To study pattern of relationship among four Leadership styles (Exploitative Authoritative, Benevolent. Authoritative, Consultative & Participative) with different Strategies of Control, need-Satisfaction and Commitment with the organization.
(ii) To study relationship between Managerial positions in the hierarchy and their Leadership styles.
(iii) To test that Leadership styles depends on the size of the Organization.
(iv) To study that greater the experience of the manager, the more Consultative will be his Leadership style.
(v) To test Leadership styles and joining of Bank Manager’s (Cadre of Joining are correlated).
(vi) To study that Personality Traits of bank managers affect the Leadership styles followed.
(vii) To establish relationship between Leadership styles and their personality profiles.

4.5 HYPOTHESIS:

4.5.1 Hypothesis Relating to Situational Variables and Their Relation to Leadership Styles
Hypothesis 1: Managers lower in the hierarchy will use authoritarian styles of leadership, while those higher in the hierarchy will adopt more consultative leadership styles.

This Hypothesis is based on the assumption that a manager’s job undergoes a qualitative change, in terms of degrees of freedom on the job, as he moves up in the hierarchy. Thus, while a junior manager’s work involves more of routine accounting, the job of a senior manager combines more general management functions. The former job would give the manager less freedom to experiment, as compared to the latter. It was, therefore, expected that junior managers would have a more centralized leadership style, while the senior managers would adopt decentralized styles of management.

Most research studies dealing with leadership/decision-making styles use the term “span of control” instated of “position in the hierarchy”, because while examining management styles of executives in different companies it is observed that it is difficult to find companies with identical organizational structures. Hence, describing a managerial position in terms of its position in the hierarchy is confusing, and it is more convenient to compare managerial positions in terms of their span of control. However, in the case of nationalized banks, the situation is reversed. Banks have more or less identical structures and defining a managerial position in terms of its position in the hierarchy is more definitive than stating its span of control.

4.5.2 Hypothesis 2: Managers holding line positions will use more authoritarian styles of leadership than managers occupying staff positions.

This Hypothesis is based on the assumption that the line function of management has a smaller degree of freedom than the staff function and will; therefore, use more centralized methods of leadership.

4.5.3 Hypothesis 3: The leadership style of managers in different nationalized commercial banks varies. Managers working in small banks will have an authoritarian style of
leadership, as compared to those working in larger banks, which will have a more participative style.

This Hypothesis is based on the assumption that with the total size of the assets of the small bank being limited, emphasis is placed on judicious use of resources, which is sought to be achieved by a centralized system of decision making, assured by an authoritarian management style.

Furthermore, small commercial banks have their business operations restricted to particular states of the country. These banks restrict intake of directly recruited officers, most of the managers being promoted from the clerical cadre, which has a majority of its personnel hailing from the home states. All this tends to promote a paternalistic work environment, where authority is not questioned. This encourages authoritarian styles of management.

Hypothesis Relating to Person-Centered Variables and Their Relation to Leadership Styles

4.5.4 Hypothesis 4: The greater the experience of the manager, the more consultative will be his leadership style. Two indices of experience were available for this study: age and length of time in the bank.

It is interesting to note that person-centered variables have received very little attention in research studies. It is, however, very widely believed that older people are more authoritarian and less flexible. But the hypothesis of this study differs from this belief, and is based on the assumption that comes with experience, the maturity that the “human factor” in organizations is all important. Hence, the closer the leadership behaviour is to the participative style, the more motivated and involved will be the work force and the greater will be the human resources utilization.
Hypothesis 5: The leadership style of managers who had joined the banks as clerks would be more authoritarian than that of managers who were directly recruited into banks as officers.

This Hypothesis is based on the assumption that managers promoted from the clerical cadre would consciously tend to distance themselves from their subordinates, and employ authoritarian styles of leadership, for fear of otherwise not being able to manage these subordinates, with whom they were once at peer level. And over a period of time, this becomes their style of management.

On the other hand, directly recruited officers, who are generally fresh graduates from colleges, join the banks with open minds and with the hope of being able to implement the participative techniques of management they have learnt so much about. Further, they realize that utilization of human resource skills at all levels is good for the organization. They feel secure and confident about consulting their subordinates and adopt a participative leadership style.

This division of the management cadre into directly recruited and promote officers is peculiar to commercial banks and is not found in industrial organizations. As a result, it is difficult to find any work done by researchers specifically relating to this particular variable. But the outcome of this study could provide meaningful data to banks in helping them design/modify/review their recruitment/promotion/training policies.

4.5.6 Hypothesis Relating to Personality Variables and Their Relation to Leadership Styles:

Hypothesis 6: Indian bank managers do possess the personality traits of leaders. The personality pattern of an Indian bank manager is one of stability (C+) and self-regard (Q3+). A high degree of general mental capacity (B+) is anticipated. The adventurous temperature represented by H+ would seem necessary in anyone who is to deal constructively with the problems of a bank. Above average dominance (E+) and tough-mindedness (I-) characterize today’s bank managers. A sober and responsible attitude (F-) would seem to be the hallmark
of bankers and is combined with a practical (M-), staid, rule-bound (G+) approach, the kind a banker’s job demands.

This Hypothesis is based on the researcher’s experience of 15 years in the supervisory cadre of India’s largest commercial banks. While a large set of occupational profiles is available with the Institute of Personality and Ability Testing, Champaign, Illinois, there is no published profile of a bank manager. Further, it considered vital to arrive at a personality profile of Indian bank managers in the light of the 12 personality factors that are considered important in arriving at the leadership score. Details of the 12 factors and their relevance to leadership are discussed in previous chapter.

**4.5.7 Hypothesis 7.** The personality pattern of bank managers affects the leadership styles they adopt. Authoritarian, Consultative, and Participative managers will differ in their personality make-up in terms of the second order factors (16 PF) of extraversion, anxiety, tough poise, and independence.

This hypothesis had its basis in the researcher’s curiosity to ascertain whether bank managers with differing styles of management did differ in their personality profiles too. No predictions are however, made regarding these differences. The researcher expected this to be a unique attempt as no study appears to have been made linking leadership styles to personality profiles of bank managers.

Differences in leadership styles seem to revolve around differences in basic orientations to ideas, things, and people. This relationship of personality and leadership style was reflected in an editorial of Life magazine (1967) on the then United States President, Lyndon Johnson. The editorial began with the comment that President Johnson was not equally at home in each of the wide range of problems facing him. He would rather act on domestic problems than international issues and if events forced him to look beyond the United States borders, he would much prefer to deal with the new nations, the “have nots” in Asia, Africa, and Latin America, as compared with the “haves” of the established industrial societies in Europe. In brief, President Johnson appeared to be propelled by an identification with the underdog, and, if left to his own devices, would attack the problems of poverty,
disease, education, and related concerns which seem at their core to cause human suffering. The thrust of his intentions to lead invariably aimed at nurturing those for whom he felt strongly empathetic.

Similar observations are made by Chandler (1962) about differences in style in business leadership. Alfred P. Sloan, Jr., as head of General Motors, functioned quite differently from his predecessor, William C. Durant. Sloan was an organizer while Durant was an entrepreneur, and this difference in their personality make-up was reflected in their management style.

4.4.8 Instrumentation:

Most of the researcher on leadership up to now has concentrated on measuring leadership effectiveness, by using a wide variety of criterion variables, such as productivity, morale, labour turnover, job satisfaction, and absenteeism. This objective is understandable although one is aware of the enormous difficulty of finding suitable criteria of effectiveness that have validity in relation to the processes one is trying to investigate. This problem increases as one tries to investigate the behaviour of higher levels of management, since their effectiveness cannot easily be measured on an individual basis in quantifiable terms. The effectiveness of their department moreover depends on a large number of variables over which the manager may not have full control.

The present study does not face this problem, since its purpose is to investigate the extent to which participative and other leadership behaviour varies with a number of independent variables. As significant interactions between the independent and dependent variables are found, the former may eventually become predictors of leadership behaviour. At that state, the search for suitable criteria of effectiveness may become more urgent.

Three questionnaires were used to collect data for this study.

2. Cattell’s 16 Personality Factor (16 PF) questionnaire.
3. Personal Opinionnaire.

These questionnaires are presented in Appendix A, B, and C of the thesis.

The biographical questionnaire is specifically designed for this study. It contained 15 questions on personal and work-related areas. It provided the data related to age, experience in banking, educational qualifications, career aspirations, etc.

Form B of the 16 PF was utilized to collect data on personality traits of bank managers. It contained 187 questions and an analysis of both primary and second order factors was done to obtain a complete picture of the personality profile of Indian bank managers.

The 16 PF is widely used and respected as a research instrument for studying personality. The factors are factorally based, rather than measuring variance from an idealized personality. A worksheet for calculating the 16 PF second order and selected criterion scores was obtained directly from the institute of Personality and Ability Testing, Inc., Champaign, Illinois. Care is taken to ensure that the female side of the worksheet is used for female respondents of the 16 PF.

A concise description of the 16 factors is given below.

A: Cool and reserved to warm and outgoing.
B: Concrete thinking and less intelligent to abstract.
C: Emotionally less stable to emotionally stable and mature.
E: Submissive and mild to dominant and assertive.
F: Sober and restrained to enthusiastic and expressive.
G: Expedient and self-indulgent to conscientious and rule-bound.
H: Shy and threat sensitive to bold and uninhibited.
I: Though-minded and realistic to tender-minded and intuitive.
L: Trusting to suspicious.
M: Practical to imaginative.
N: Native to shrewd.
O: Self-assured to apprehensive.
Q1: Conservative to experimenting
Q2: Group-oriented to self-sufficient.
Q3: Undisciplined to control.
Q4: Relaxed to tense.

According to Cattell, Eber, and Tatsuoka (1988), a high score is a sten greater than 7, an average score is a sten of 4 through 7, and a low score is given below 4.

For interpreting the four second order factors, Krug’s (1981) profile coding system was used.

The third instrument was the Personal Opinionnaire, which was similar to the Likert (1967) Profile of Organizational Characteristics. This questionnaire can be used to discover both the leadership and interactional patterns of an organization. It contained 48 questions, which measured the leadership styles of managers. Each question consisted of a series of items to which one responded on a scale from 1 to 20. The scores of all respondents were tabulated and the mean scores calculated. Likert’s formula is used for converting the means to scores on a continuum from System 1 to System 4. The formula is:

\[
\text{Score} = (\bar{M}) \frac{4}{15} + .5
\]

System 1 covers the range from 1.0 to 1.99, System 2 covers 2 to 2.99, System 3 covers 3.00 to 3.99, and System 4 covers 4.00 to 4.99 (Likert, 1967, p. 36).

The 48 questions which comprised the questionnaire covered seven vital operational variables:
Questions 1 through 5 covered leadership processes used.
Question 6 through 12 covered character of motivational forces.
Questions 13 to 26 covered character of communication forces,
Questions 27 to 32 dealt with interaction-influence processes,
Questions 33 to 40 covered character of decision-making processes, and
Questions 41 through 48 were about control and goal-setting processes.

This questionnaire was chosen because the seven operation variables it covers are the basic tests of managerial skills and leadership qualities, which have been reviewed at length in Chapter 3.

Twenty-five managers from five nationalized banks, and representing five hierarchical levels, were each given a set of the three questionnaires with a request to peruse them and offer comments and suggestions.

All the managers expressed their inability to offer written comments on the plea that they are overwhelmed with paper work at their respective offices and would prefer to have discussions with the researcher. This is considered acceptable in view of the fact that both the 16 PF and the Personal Opinionnaire are standard instruments whose reliability and validity had been established by their authors.

The following suggestions are received in regard to the Bio-data questionnaire:
1. Mention of the address is deleted.
2. Mention of the size of the family is deleted.
3. Mention of place of domicile is superfluous.

The questionnaire is accordingly amended.

For the other two instruments, the general opinion was that while they were lengthy and time-consuming, the questions are interesting, though-provoking, and acceptable. No material is therefore, required to be amended after this preliminary effort.

### 4.4.9 Collection of Data:

The population of this study included 178 middle and senior level managers from nine nationalized commercial banks from NCR Region (10 Branch of each Bank). The goal is to gather information from persons holding managerial positions in the five specific levels of the hierarchy in banks, specified in Table 4.2. Care is taken to ensure that each level of
the hierarchy is well represented. The nine banks were selected from the group of 20 nationalized banks on the basis of their size (total assets), so as to have a representation of small, medium, and large sized banks. The list of banks whose managers responded to the questionnaires appears in the table.

In light of what has been stated above, the stratified random sampling approach to data collection is used and the samples are selected by four criteria:

1. The subjects are managers working in nationalized commercial banks in the area of study.

Table 4.1: Number of Managers in the Five Specific Levels of the Hierarchy in Banks

<table>
<thead>
<tr>
<th>Level of Hierarchy</th>
<th>Number of Managers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle Management Grade Scale II</td>
<td>33</td>
</tr>
<tr>
<td>Middle Management Grade Scale III</td>
<td>38</td>
</tr>
<tr>
<td>Senior Management Grade Scale IV</td>
<td>47</td>
</tr>
<tr>
<td>Senior Management Grade Scale V</td>
<td>36</td>
</tr>
<tr>
<td>Senior Management Grade Scale VI</td>
<td>24</td>
</tr>
<tr>
<td>Total</td>
<td>178</td>
</tr>
</tbody>
</table>

Source: Questionnaire and Interviews.

4.4.10 Sample Size and Selection:

The sample size for the present study has been taken from 200 middle and senior level managers from ten nationalized commercial banks in Delhi and NCF region. It includes information about nationalized commercial banks in Delhi and NCR region i.e. S.B.I. Bank of India, Bank of Baroda, P.N.B., Canara Bank, Central Bank of India, Indian Bank, Indian Overseas Bank, Bank of Maharashtra, Dena Bank.

Basis of selection of sample – Variables: Independent Variables- Situational Variables (Manager’s position, line and staff functions, and size of the organization), Person-Centered Variables (Manager’s experience in his job and his age), and Personality Variables (dominance, adjustment, submission, independence and extroversion).
Dependent Variables (Leadership Styles): Exploitative Authoritative, Benevolent Authoritative, Consultative, and Participative.

4.4.11 Period of the Study:

The enquiry covers a total period of 5 years, starting from 1\textsuperscript{st} April 2009 to 31\textsuperscript{st} March 2014 or till the submission of the thesis.

4.4.12 Statistical tools applied for interpretation of data:

(i) Correlation Techniques.
(ii) Mean and Standard Deviation.
(iii) F-Test and t-Test
(iv) Analysis of variance.

4.4.13 Limitations of the Study:

The study is concerned about the Leadership styles of managers of nationalized commercial banks in India. For the purpose of collection of data I have to visit number of banks and taken Interview of bank managers, so many times these people are not providing correct data and cannot spare time due to busy schedule. The study depends on the sample taken in the area of Delhi and N.C.R. region that may not apply for the whole universe. Although researcher has made all possible efforts to contact different banks, but due to lack of information, and non availability of relevant data, could not be collected.

4.5 CONCLUSION:

This chapter is concerned with the research design and methodology. The study has taken- the statement of problem, scope of the study, objectives of the study, Hypothesis, statistical tools and methods of collection of primary and secondary data. The study has taken an acute problem of bank management, with the help of a sample of 178 middle and
senior level managers, which details are given in Table 4.2. The hypotheses were tested with the help of F-Test, t-test, analysis of variance, correlation techniques conclusions were drawn in chapter VI of the study.