CHAPTER III

METHODOLOGY

This chapter describes the literature reviewed on methodology adopted to measure organisational culture, organisational commitment and job involvement. The factors selected for each of the three concepts are mentioned herein. A brief profile of the units under study, the techniques used to measure and analyse each of the objectives are also explained. Information regarding construction of the questionnaire, its pre-test, particulars of the size of the sample drawn are also discussed in this chapter.

3.1 MEASURES OF ORGANISATIONAL CULTURE

The growing interest in the concept of organisational culture led to the development of different self-report questionnaires to measure it. Most of the early studies of organisational culture have relied almost exclusively on qualitative methods as is demonstrated by Glick (1985) who attempted to clarify the differences between the concepts of organisational culture and climate and reasoned that culture research is primarily ideographic, employing qualitative methods to explain dynamic processes.

Advocates of qualitative methods have provided two main justifications for their choice. The first one is based on the inaccessibility, depth or unconscious quality of culture. Further more quantitative assessment conducted through surveys reflects conceptual categories, not the respondent's own presuming unwarranted generalisation. The second point concerns the
possible uniqueness of an organisation's culture such that an outsider cannot form apriori questions or measures. Smircich (1982) conceptualised organisational culture as a particular set of meanings that provides a group with a distinctive character, which in turn leads to the formulation of a social reality unique to members of a group and makes it impossible for a standardised measure to tap cultural processes.

Though there are good reasons for bringing qualitative methods in investigating organisational culture, the data collected usually cannot be the basis for systematic comparisons. Systematic comparisons are exceedingly difficult to be made, when only qualitative data are available. Further, some qualitative data are non-parametric precluding any multivariate analysis of the data which almost require it. Rousseau (1990) argues that different research methods should be used in the organisational culture research depending on the element of culture to be examined.

There are a number of studies in organisational culture that have combined quantitative and qualitative approaches in investigating cultural phenomena. Sichl and Martin (1988) studied socialisation of new employees by using "a hybrid measure of culture". Their method consists of two phases. In the first stage, in-depth interviews, scientific description of culture, ethnographic observations and archival data help to gain an understanding of the content of a culture. In the second stage those qualitative data are used to construct a questionnaire, responses to which can be coded quantitatively.

Hofstede, Neuijen, Ohayu and Sanders (1990) examined the culture of ten organisations by conducting indepth, open-ended interviews in order to enrich an existing questionnaire which would be used for statistical comparisons over organisations and over time.
As the definitions of organisational culture focus on either values or behaviours, the available measures concentrate on the two different manifestations of culture. Rousseau (1990) integrating these approaches suggests that organisational culture has a number of layers, two of which are behavioural norms and organisational values and that these layers are characterised by a core theme. As a consequence, some of the corporate culture's best constructors have focussed on values, the others on behaviours.

Corporate values can be assessed in the Organisational Beliefs Questionnaire (OBQ) developed by Sashkin (1984). This is a 50 item questionnaire with a 5 point Likert scale (strongly agree to strongly disagree) measuring organisational values. The inventory has ten subscales. The 50 items were chosen to minimise social desirability: for each subscale one item is stated positively and the other negatively and the wording is constructed to make it difficult to determine the item's desirability. Consensual validity is demonstrated relatively low within organisation variance in responses.

The Corporate Culture Survey (CCS) by Glaser (1983) is based on the Deal and Kennedy's (1982) description of culture types and intends to measure organisational values. It consists of 20 items rated on a 5 point Likert scale, from 5 (strongly agree) to 1 (strongly disagree). The questionnaire holds four subscales and there are no reported coefficients of reliability or any known demonstrations of the questionnaire's validity.
Measures of behavioural norms include the Organisational Culture Inventory (OCI) developed by Cooke and Lafferty (1989) which focuses on behaviours that facilitate fitting into the organisation and meeting expectations of co-workers. It consists of twelve basic subscales. These subscales reflect a model based on the intersection of two dimensions which are task-people and security-satisfaction and which provide the four secondary subscales of the questionnaire. There are 120 items each one rated on a 1-5 Likert scale. The Cronbach’s alpha co-efficient of internal reliability has been reported to range from 0.67 to 0.92. As far as the validity of the measure is concerned, there have been moderately high levels of, within organisation agreement on OCI, responses and stable factor solution across samples.

The Culture Gap Survey (CGS) by Kilman and Saxton (1983) according to Rousseau (1990) shows a fair amount of overlap in the dimensions used to assess organisational culture. The CGS was developed to measure behavioural norms.

There are 4 subscales reflecting a 2 x 2 framework. Test-retest reliabilities ranged from 0.83 to 0.94. Construct validity was demonstrated by stable four factor solution across samples.

The Organisational Culture Profile (OCP) (O'Reilly, Chatman, and Caldwell 1988) and the Norms Diagnostic Index (Allen and Meyer 1980) are two other questionnaires used to measure organisational culture. The OCP items are sorted into nine categories viz a Q sort technique while the NDI resembles a climate survey.
A study was conducted by Alhena Xenikou and Adrian Furnham (1996) which sets out to compare the above first four mentioned measures by correlational and factor analysis. These are considered by Rousseau (1990) to be among the most established measures of organisational culture. The result of the correlational analysis showed the convergent validity of the questionnaires in a number of significant correlations among the overlapping subscales intended to measure the same theoretical construct in each of the four questionnaires. The factor analysis yielded six readily interpretable factors providing a framework of the organisational culture dimensions. On the basis of this study a relatively short, multidimensional questionnaire measuring organisational culture can be devised which can be reliable and valid.

Pratap Rudra Parida, Purnima Mathur and Amulya Khurana (1990) attempted to develop an instrument which measures the culture of industrial organisations, as perceived by members belonging to those organisations. The concept of culture was the one proposed by Robbins (1984) that "culture is a relatively uniform perception held by the organisation; it is a descriptive concept and it has common and stable characteristics that make it possible to distinguish one organisation from another". The characteristics of the organisation's culture like individual autonomy, structure, support, identity, performance reward, conflict tolerance, risk tolerance, beliefs and norms were considered.

Again Redfield Margulies (1969) opined that there are two types of culture: Observable culture and inferable culture. Observable culture is "the way in which work was organised, the degree to which tasks were integrated
and interchangeable, and the resulting interaction from such arrangements. Second there are certain inferable cultural elements associated with a particular observable culture - certain values and certain attitudinal and behavioural norms. Together they comprise the cultural system of an organisation.

The final draft of the organisational culture questionnaire consisted of 35 items falling under observable culture and 18 items under inferable culture. All the items were mixed to get a clear picture of organisational culture. As a result the questionnaire consisted of 53 items of which 40 were positive and 13 were negative. The internal consistency of the questionnaire was partially demonstrated from the inter correlations of the factors comprising it. For testing reliability test-retest (after one month gap) method was applied on 30 subjects. The test-retest reliability coefficient obtained was 0.73. The questionnaire was a 5 point Likert type scale response category, ranging from very low to very high. Weights assigned were 1-5 respectively. The scoring was reversed for negative items.

Another interesting study that questions the level of analysis of organisational culture which is seldom recognised is discussed in the article, by Geert Hofstede, Michael Harris Bond, Chung - Leung Luk (1993)³. This article has analysed the perceptions of organisational cultures at the level of individuals from variety of organisations controlling for differences between these organisations. Twelve different dimensions of organisational culture were found. Six of which were individual values and six individual perceptions. The individual values represent a combination of personality differences and effects
of present and previous individual life and work experiences. The individual perceptions of practices reflect personality differences with a greater contribution of present and previous life and work experiences.

In the ecological analysis where interpreting data from the social system level as if they were data about individual conclusions drawn about levels, five personality variation dimensions were suggested and studied. The dramatic difference in results was seen depending on whether the same data was analysed at the ecological or at the individual level and careful analysis of methods used when comparing the results of different studies. Ecological analysis indicates that when research is about social systems, exposing forces operating at the system level, collectively affect all individuals within these systems. Individual analyses are indicated when the research focus is on the individuals within the systems and the ways in which they respond to social environment.

The Organisational Culture Profile (OCP) was developed and used by Caldwell and O’Rielly (1990) to measure person - organisation and person - culture fit. The OCP contains 54 value statements that can generically capture individual and organisational values. Following the common procedure for generating Q-sort profiles, respondents sort the 54 items into 9 categories ranging for instance from most to least desirable or from most to least characteristic and put a specified number of statements in each category; the required item category pattern being 2-4-6-9-12-9-6-4-2. Fewer items are required at the extremes than in the central for more neutral categories. The question respondents were asked to keep in mind while sorting the deck,
varied according to whether they were describing their own preferences or the value system or culture of a focal organisation. The degree to which the organisation's values are consistently shared can be investigated by the intercorrelation among raters using a variation of the Spearman Brown general prophecy formula.

From a scree test that was conducted eight interpretable factors with eigen values greater than 1 and defined by at least three items emerged. This pattern showed that an organisation’s culture can be characterised by (i) Innovation and Risk taking (2) Attention to Detail (3) Orientation towards outcomes or results (4) Aggressiveness and competitiveness (5) Supportiveness (6) Emphasis on growth and rewards (7) A collaborative and team orientation (8) Decisiveness. These in general approximate many of the dimensions to which the qualitative literature on culture has often been referred e.g. (Deal & Kennedy 1982 and Peters and Waterman 1982). The instrument which provides multiple measures of the strength of motives such as affiliation, aggression and achievement has demonstrated substantial reliability and validity with a median scale alpha of 0.76.

3.2 SELECTION OF ORGANISATIONAL CULTURE FACTORS

Several studies have considered different factors that help determine the culture of an organisation. The factors selected for the purpose of this study are:
1. **Action Orientation**

This factor helps to determine the approach or attitude towards work. The manner and process in which jobs and tasks are performed in an organisation are studied here.

2. **People Orientation**

Organisations have realised that one of its important assets is its human force. Hence the extent to which an organisation values employees as individuals and shows concern for their growth and development is included here.

3. **Customer Orientation**

Organisations compete with one another to retain customers and preferably acquire prospective ones. Therefore steps undertaken or attention given to this factor are important for an organisation.

4. **Attention to detail and discipline**

This factor emphasises detail and precision in work and time consciousness involved in execution of jobs.
5. **Risk tolerance and innovation**

Organisations vary in the extent of dealings with conflicts, failures of employees being overlooked and encouragement of new ideas. It therefore becomes a key factor to be selected for this study.

6. **Management Support and Direction**

Is necessary to channelise the work or performance of employees. This factor however may vary amongst organisations.

7. **Reward and Growth Systems**

Organisation's attitude to allow its employees to share in its profits and rewarding them in accordance to their performance is reflected in this factor.

8. **Achievement Orientation**

This factor explicitly shows that employees have to work hard to reach targets and in the process have a competitive spirit to win and perform well.

3.3 **EXISTING SCALES USED TO MEASURE ORGANISATIONAL COMMITMENT**

The most widely used scale of Organisational Commitment is one by Porter, Mowday et al (1979). Instances of its use can be found in Porter et al (1974), Stone and Porter (1975), Dubin et al (1975) and Steers (1977). Other authors employing the concept of organisational commitment such as Brown (1969), Hal et al (1970) Patchen (1970), Lee (1971), Sheldon (1971) and Hrebinjak & Alutto (1972) have used scales of their own devised for specific populations of limited use and for purposes of comparison. Other authors have
compiled organisational commitment scales as composites of other available scales eg. Buchanan (1974) Schiwyhart and Smith (1972) to study organisational commitment. John Cook and Toby Wall (1980), measured Organisational Commitment as comprising of three components, the distinctions given by Buchanan (1974) i.e. identification, involvement and loyalty. The involvement component is now defined as the willingness to invest personal effort as a member of the organisation for the sake of the organisation.

There have been several contradiction and validation studies conducted on the concept put forth initially by Becker (1960). It is only recently in the early 1990s that this concept has been accepted as one of the components of the construct brought forth by John P. Meyer & Natalie J. Allen as 'Continuance Commitment'. The term 'Side-bet' has been used by Becker to refer to anything of value the individual has invested in respect of time, effort and money. This perceived cost to the individual would be worthless if he were to leave the organisation. Lack of alternatives also commits a person to stay in the organisation. Becker is of the view that continuance commitment increases with the accumulation of side bets or investments. He has used Ritzer-Trice and Hrebinia and Alutto scales to measure commitment and side bet indexes through age and tenure.

John P.Meyer & N.J. Allen (1984) feel that the instrument and indexes used to measure commitment and the side bet indexes were inappropriate for that purpose. The earlier measurement scales correlated significantly with the measures of affective commitment but not with the continuance commitment
scale. Age and tenure correlated with the scales and with affective commitment measures but not with the continuance commitment scale. The measures used to test Becker's side-bet theory of commitment is saturated with affective commitment. To examine the concept of continuance commitment an individual's perceptions regarding the number and magnitude of the side bets they have made should be assessed.

Aaron Cohen and Gcola Lourenberg (1990) made an attempt to resolve the argument about the utility of the theory to explain the concept of organisational commitment since contradictory research findings make it impossible to arrive at generalised conclusions about the side-bet theory despite the amount of attention this theory has received. The study reviews the research conducted since Becker developed the theory in 1960. Several studies were carried out during 1970s and 1980s. Yet no one had systematically summarised all of this research. Limited attempts were made by Griffin and Bateman (1986) Morrow (1983), Mowday et al (1982) and Reichers (1985) but only as part of the general literature on the reviews of organisational commitment. They concluded meaningful relationships between side-bet indexes and organisational commitment supporting the side-bet theory. However their conclusions were based on the traditional narrative review procedure with its inherent limitations. Recent developments in meta-analysis (Hunter et al 1982) enable the re-examination of the studies using quantitative review methods. These methods permit the statistical aggregation of research findings and the systematic assessment of inter-study moderators. The correlates of organisational commitment selected for the study include eleven side bet variables. These are age, tenure, education, gender, marital status number of children, level in the organisation, number of jobs in the organisation, skill level, perceived job alternatives and pay.
Though the meta-analysis results in general do not reveal a strong relationship between any of the side bet variables and organisational commitment, yet certain meaningful relationships can be drawn for four of the side-bet variables of martial status, number of children, number of jobs in the organisation and skill level based on corrected mean correlations.

It is worth noting however that results of the moderator analysis showed that two moderators (type of occupation and rank) have effects on the relationships between most of the side-bet variables and organisational commitment and are stronger than other moderators used like size of organisation and type of industry.

A question can be raised concerning the utility of combining studies using different measures of commitment. The results of the meta-analysis contradict conclusions reached by researchers using narrative methods most of whom tend to support the side bet theory. This conclusion was examined earlier and put forth by Cooper and Rosenthal (1980) who reviewed that there is likelihood of obtaining contradictory results from traditional vs statistical procedures. It is however useful to re-examine empirical studies already reviewed by traditional methods. Three possible conclusions were arrived at which will help future research regarding the side-bet theory.

The first conclusion would be to accept Meyer and Allen’s construction of continuance commitment scale which they claimed to measure more accurately what Becker had intended than what other researchers had used.
A second possible conclusion would be to accept the other Meyer and Allen (1984) argument that the strategy used to examine the side-bet theory was inappropriate. It is not side-bet indexes such as age and tenure which are meaningful but rather the individual's perceptions regarding the number and the magnitude of the side bets that they have made.

A third conclusion was to accept the argument of Ritzer and Trice that the side-bet theory of commitment be rejected. This being in support of the present results of the meta-analysis. To accept this conclusion would mean that attention be transferred from the side-bet variables to the psychological and situational variables which have a strong potential for explaining the formation of organisational commitment.

The concept of Organisational Commitment selected as an outcome variable for the study has been put forth by J.P. Meyer & N.J. Allen (1990). These are:

1. **Affective Commitment**

   Referring to an employee’s emotional attachment and identification with and involvement in the organisation. Items included in the questionnaire to measure this component were identity with the organisation and a sense of belonging, attachment and involvement are included in the statement numbers 1, 4 & 7 in Section III of the questionnaire.
2. **Continuance Commitment**

Explains the concept based on the costs that the employee associates with leaving the organisation. Items used to measure this component were lack of alternatives, cost of leaving the organisation and personal sacrifice that can be found in statement numbers 2, 5 and 8.

3. **Normative commitment**

Are the feelings of obligation to stay with the organisation. Personal values, loyalty and moral obligation towards the organisation are included in statement numbers 3, 6 and 9.

3.4 **MEASUREMENT OF JOB INVOLVEMENT**

The questionnaire was designed using Rabindra N Kanungo’s (1982) measures as the basis to study Job Involvement. A few statements considered to be suitable under Indian conditions were selected, modified and certain others framed for the purpose.

Job involvement is an individual’s psychological identification with a job which in turn depends on his needs (extrinsic and intrinsic and potentials of the job). Hence through factors which affect an Executive’s involvement in the job were identified and the perceptions to responses for the fourteen statements in Section II of the questionnaire were obtained.
The factors are involvement in job, monetary factor, personal interests, life goals, (esteem) emotional need and nature of the job, involvement in work, importance of work in one's life, value system, identity, value for work and life satisfaction.

3.5 SAMPLE

The nature of research objectives being such that it permits a wide scope in the selection of units for the study. However, certain factors were considered important in their selection. These are homogeneity in the size of organisations in terms of work force and financial performance to an extent and a minimum corporate life of ten years in the industry. These units belong to and are controlled by large corporate group owned companies engaged in economic activities for a commercial purpose.

The sample size maintained in every unit was approximately 10% of the number of Executives in the three different categories of Junior, Middle and Senior Levels.

The total number of questionnaires distributed to several units were approximately 565 of which 316 (60%) were received from the respondents. However 231 questionnaires (41%) were found to be complete and also satisfied the minimum condition of covering at least 10% of the Executives in each level, from the five different organisations.
3.6 PROFILE OF UNITS UNDER STUDY

The units that were selected for the purpose of study are those which have firm established backgrounds and history capturing a large share of the market in their respective areas, showing increasing turnover and consistent profits in almost all the units.

The several departments in each organisation were classified into six common categories across the units to facilitate easy comparability. These are

1. Production, Manufacturing, Purchases and R & D - to be the Production Department (F1).
2. Finance Department - Finance, Accounts (F2)
3. Systems Department, Systems EDP (F3)
4. Projects Department (F4)
5. HRD Department - HRD, Administration and Personnel (F5).
6. Marketing Department (F6)

The Departmentation in almost all the units were classified in a manner to render easy understandability.

The levels examined to study the research question are the Junior, Middle and Senior levels of Executives falling in the following categories.

1. The Junior level Executives - comprising of Junior Officers, Assistant Officers and Officers.
2. Middle level Executives - in almost all the departments and units are the Assistant Managers, Managers and Senior Managers.

3. Senior Level Executives comprise of Deputy General Managers, General Managers and Vice Presidents.

This classification was found to be common in the units examined.

The first unit is a Sugar Factory established in 1961 and since then having diversified in several activities. In 1993 it established a distillery unit attached to the sugar plant to manufacture industrial alcohol. This converts molasses into industrial alcohol which finds extensive application in the Chemical Industry.

The second unit was established in 1969 and its products range from agro-inputs, petro-chemicals, pharmaceuticals and services. It has eight major divisions with a strong work force of 3000 employees and its financial performance (turnover) for the year 1993-94 and 1994-95 was Rs.1213 crores and Rs.1277.98 crores respectively.

The third unit selected introduced tractors in India in 1960. Today it is one of the leading manufacturers of agricultural tractors having a strong management of approximately 240 Executives. Its financial performance (turnover) was Rs.450 crores with a current market share of 18.56%.

The fourth unit started manufacturing abrasives followed by a factory manufacturing bicycles. It values customer satisfaction and has catered to the requirements of the common man.
The last unit had a meteoric rise in its relatively short life. Its products range from orchards, teak trees, time shares to building of townships. Its new product concepts were accepted immediately but recently has been facing internal problems and hence the sharp decline in its performance similar to its rise.

3.7 QUESTIONNAIRE DESIGN

The questionnaire comprises of four parts to measure personal data of its executives, organisational culture, job involvement and organisational commitment. A copy of the final version of the questionnaire is attached at the end.

The first part contains eight statements on Personal data. These comprise present position that executives occupy in the company, years of experience, age, income level, educational qualification, department or division etc.

The second part Section I contains 24 statements which measure organisational culture. It is presumed that values help to measure not only the preferences of the executives for an organisational culture but the same values exhibit the existing culture of an organisation. Hence Section I is divided into two Parts A & B.

Part A which measures culture that exists and is practiced in an organisation. The respondents reported on a 5 point Likert Scale with scores 1-5 ranging from Never practiced to Always practiced.
**Part B** helps the executives to express the extent to which they prefer the value or statement to be present in the organisation. To avoid the tendency to tick similar responses the scale ranged from less than 20% to more than 80%, the value of the response however being the same i.e. 1-5.

The third part Section II has 14 statements which measures the respondent's overall involvement in the job. A 5 point Likert Scale with scores 1-5 from strongly disagree to strongly agree was used. Negative statements were included for more reliable response and hence statement 8 alone has reversed scores.

Though there exists a demarcation in the literature between the two constructs of job involvement and work involvement, these have been considered as a single construct in the present study.

Section III - measures executive's commitment towards their organisation. It has nine statements with a 5 point Likert Scale scores being the same 1-5 for responses ranging between strongly disagree to strongly agree. Statement numbers 4 and 6 are negative and the reversal of scores was accounted for during data entry of responses.

### 3.8 PRE-TEST OF THE QUESTIONNAIRE

The questionnaire has been structured for convenience in its study and evaluation. It was pre-tested on a sample of 20 executives selected from different manufacturing organisations occupying the three levels (Junior, Middle and Senior). Ambiguous terms and instructions were identified and
eliminated to render the questionnaire simple, clear and understandable. Correlation values were calculated for all the statements measuring culture and job involvement. The statements with correlation values exceeding .60 were retained for the main study. The alpha coefficient value for Section III was .6551. Hence all the statements were retained for organisational commitment.

3.9 RELIABILITY OF THE SCALE

The questionnaire was tested for its reliability in the final study despite it being based on well established questionnaires in all the sections. The Cronbach's alpha coefficient for Section I Part A of the questionnaire which measures existing culture in the organisation was as high as .9130 while the alpha value for Section I Part B of the questionnaire which measures preferred culture was also .9010. The alpha coefficient for Section II of the questionnaire which measures Job Involvement was .8224 and the reliability alpha value for Section III which measures organisational commitment was only .4428. However, as the alpha coefficient calculated during the pilot study was as high as .6551 the same questions for organisational commitment were retained for the main study.

3.10 FRAME WORK OF ANALYSIS

Frame work of analysis that was considered appropriate to the objectives was prepared.
The culture profile of the selected units was examined by studying the Mean Values of the eight dimensions of culture factors as practiced in the organisations. Distinctive cultures emerged and terms were coined for each of them. Similarly culture profiles were also drawn based on the expectations or preferences of Executives on the Mean Values of the dimensions. The characterisation of preferred cultures in their units by the Executives was done studying the combination of factors.

In examining the assessment of person-culture fit the mean values of the factors for the practiced and preferred cultures were analysed. This was done to determine the extent of deviation or difference in the mean values for the five units. It helped to identify the units with minimum differences and maximum expectations.

Cluster analysis technique was applied to determine person-culture fit of executives. The difference scores on each factor for all the 231 respondents formed the input data or basis for cluster formation. The Hierarchical Agglomeration technique with Euclidean method to measure the distance of the pairs of individuals was found appropriate for the study.

Discriminant Analysis function, One Way Anova, Results of Correct Classification of clusters formed the reliability measures for the cluster solution.

The reliability of the pre-selected factors for organisational culture, job involvement and organisational commitment was tested using One Way Analysis of Variance. Chi-square test was applied to examine the association between person-culture fit clusters, organisational commitment levels and levels of job involvement.
A profile of the executives on the variables of person-culture fit clusters, job involvement and organisational commitment was drawn with the help of Chi-square test and Correspondence Analysis. This technique helped to determine hidden associations and to bring out more specific relationships between variables.

3.11 CHAPTER SUMMARY

Efforts were made to focus attention on the measures used in the studies for the constructs of organisational culture, job involvement and organisational commitment.

A profile of the Units under study, the levels of Executives, basis of departmentation was studied.

Information regarding questionnaire design, its pre-test, sample size, reliability of scale and a suitable framework of analysis have been discussed in detail.
REFERENCES - CHAPTER III


2. Ibid

3. Ibid

4. Ibid

5. Ibid


8. Caldwell and O'Reilly, 1990 .........

