CHAPTER IV

METHOD
METHOD

DESIGN

The present investigation was an exploratory study. The aim of the study was to determine the relationship of Executive Effectiveness with Personality, Self-Perception, Values and Achievement Motivation. In all, 200 government sector executives including executives of the Defence services were selected for the study.

SAMPLE

200 male, serving executives were drawn at random from 4 services, i.e., the Administrative, Police, Revenue and Defence. The technique of stratified random sampling was employed to select the officers. All of them were serving and none of them was relieved or retired during the period of data collection (1962-64). Only the direct recruits as executives into the services were included in the sample. The final form of the sample was as follows:

Total Subjects (200 males)

<table>
<thead>
<tr>
<th>IAS</th>
<th>I.P.S.</th>
<th>I.R.S.</th>
<th>Defence Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>(50)</td>
<td>(50)</td>
<td>(50)</td>
<td>(50)</td>
</tr>
</tbody>
</table>

TESTS AND TOOLS

The following well established and standardized tests were used in the present study:

...
(1) Basic Style Indicators by Reddin (1970)
(2) Eysenck Personality Questionnaire (EPQ) by Eysenck and Eysenck (1978)
(3) Activity Vector Analysis (AVA) by Clarke (1963)
(4) Study of Values by Allport, Vernon and Lindzey (1960)

A brief description of these tests is as follows:

(1) **Basic Style Indicators by Reddin (1970)**

The instrument refers to the way in which a manager behaves, as measured by the amount of task-orientation (TO) and relationship-orientation (RO), they use while they are interacting within a given situation. The manager sometimes emphasizes one and at other times the other. Both these elements of behaviour can be used in large or small amounts. A manager could be very high on task-orientation or low on it.

The instrument consists of four columns and one sub-column. In the sub-column the instrument gives 23 different situations which cover mostly all areas in which a manager is involved. In the four columns are given four alternative action choices, so as to determine a basic managerial style, in terms of interaction with a situation and eventually express the dimensions of his effectiveness. Column No.1 describes and measures separated style, a basic style with less than average (TO) and less than average (RO). Column No.2 describes and measures related style, a basic
style with less than average (TO) and more than average (RO). Column No.3 describes and measures dedicated style, a basic style with more than average (TO) and less than average (RO). Column No.4 describes and measures integrated style, a basic style with more than average (TO) and more than average (RO). Basic-style point, is a point score for both (TO) and (RO) each scaled from 0 to 4.

The effectiveness score results from the sum of the four basic styles, a manager has taken into account for managerial function for responding to 23 situations. Here, however, the overall scores on effectiveness have been taken. Basic Style Indicators was used by Jahanmori (1983).

(2) Eysenck Personality Questionnaire (EPQ) by Eysenck and Eysenck (1978)

The Eysenck Personality Questionnaire is a development of various earlier Personality questionnaires; it differs from the latest of these (the EPI or Eysenck Personality Inventory) by including an additional scale. The first questionnaire in these series was the Maudsley Medical Questionnaire (Eysenck, 1959), this was a forty item measure of N (Neuroticism or Emotionality). This was followed by M.P.I. (Maudsley Personality Inventory), which contained scales for the measurement of N and E (Extraversion-Introversion). This was followed by EPI (Eysenck and Eysenck, 1964) which added a Lie (L) scale to measure dissimulation and provided two alternative forms (A and B)
for repeated testing of the same population. It was written in simple English and provided certain psychometrically desirable improvements over the M.P.I., e.g., the dimensions of E and N were completely independent in the E.P.I., but in M.P.I. they had been slightly correlated. Its reliability too was somewhat higher. Test-retest reliability too was somewhat higher. Test-retest reliability for E.P.I. for normal subjects was found to be between .80 and .94 for one group and .84 and .97 for the other group. For the combined social scale of N and E/I split-half reliability was found by Spearman Brown's prophecy formula; which ranges between .74 to .91. E.P.I.'s cross-cultural validation was studied by Carter (1958), Vatcher (1965), Thompson (1966), Kline (1967) and Orpen (1972). Mohan and Rajinder (1973), Mohan (1974), Dhillon (1979), Charate (1980), Mohan and Narinder (1981) used E.P.I test on Indian students, athletes, urban, rural tribal subjects, army executives. The E.P.Q has been used by Tiwana (1982), Gulet (1984).

The E.P.Q has a main advantage - the introduction of a new variable P for Psychoticism. The word "Psychoticism" as explained by Eysenck and Eysenck (1978) simply refers to an underlying personality trait present in varying degrees in all persons; if present in marked degree, it predisposes a person to the development of psychiatric abnormalities. However, only a very small proportion of people with high P-scores are likely to develop psychosis.
Nature of Psychoticism

The P, E and N scales used in this questionnaire were developed through a lengthy series of about twenty factorial studies, using in each case slightly different items selected partly on the basis of the results obtained in previous analysis and partly on the basis of theoretical considerations. At various stages, questionnaires were partially finalised in order to carry out series of validating and experimental studies, the two main inventories which have quite widely used and which are in most aspects quite similar to the EPQ were the P.I. (Personality Inventory) and the P.E.N. (Psychoticism Extraversion Neuroticism) Questionnaire. The scales were constructed for use with adults and children.

Validation of the P-Scales

Two methods were used. The first involved testing of criterion groups. Eysenck and Eysenck (1978) had hypothesized that certain groups, e.g., psychotics, should have particularly high scores on the P scale and if this were not so then the scale could not be assumed to measure P.

They found psychotics, both males and females, to have higher scores than normal or neurotic subjects. Further, extensive statistical analysis, including factor analysis reported high correlation of P scores with ratings and objective tests of performance deterioration.

The second method of validation employed by
Eysenck and Eysenck (1978) consisted of correlating P-scores with variables which theoretically showed positive or negative correlations with questionnaire responses, if they were in truth a measure of Psychoticism.

The "Lie" (Social Desirability) Scale

A series of factorial and experimental studies have been carried out to investigate the nature of this scale in some detail (Eysenck and Eysenck, 1970a; Michaelis and Eysenck, 1971). This scale was first incorporated in E.P.I. The "Lie" scale attempts to measure a tendency on the part of some subjects to "fake good". The scale possesses a considerable degree of factorial unity with individual items having high loadings on this factor. In addition to measuring dissimulation the L-scale also measures some stable Personality factor which may possibly denote some degree of social naivete (Eysenck and Eysenck, 1968). The L-scale does measure dissimulation (Michaelis and Eysenck, 1971).

It has been seen that there is no lowering of reliability of the L-scale under conditions of little dissimulation, and no increase in reliability under conditions of high dissimulation. Therefore the scale must measure some stable Personality function.

The L-scale score decreases with age in children and increases with age in adults. Studies have indicated that the Lie Scale of EPI is useful in detecting faking (Braun and Gomez, 1966; Gomez and Braun, 1967; Gorman, 1968; Eysenck and Eysenck, 1968).
An exhaustive review of literature on the L-scale (Verma, 1977) seeks to support the view that this is a powerful independent factor of Personality which warrants study in its own right.

The Test-Retest Reliability for N, E, P, and L were .86, .89, .78 and .84 respectively. Thus it can be seen that the EPQ is not inferior to any other published Personality test. These scales were also found to have adequate internal consistency, reliability, as reported in the manual (Eysenck and Eysenck, 1978).

The EPQ then has P, E and N scales in which changes have been made for various psychometric reasons viz.,

(i) to eliminate or reduce correlations between factors;
(ii) to eliminate items having loadings on more than one factor; and
(iii) to increase the reliabilities of scales in question.

An attempt was made to make the three dimensions of Personality independent of intelligence and this aim was apparently achieved without much difficulty.

(Activity Vector Analysis (AVA) (Clarke, 1963)

This is a special form of the AVA used to measure self-concept (Clarke, 1956). It is a self-concept personality assessment instrument. It is an open-ended adjective
checklist consisting of 81 words which are descriptive of human behaviour and temperament. It indicates how a person typically acts and feels and determines the types of activities he likes (Wallace, Kissinger and Reynolds, 1966). Personality theory by Clarke (1956) proves that all human behaviour can mainly be described in terms of five areas — Aggressiveness, Sociability, Emotional Stability, Social Adaptability and Social Intelligence. Clarke (1956, 1963) classified these factors as indicating tendencies to act differently:

\( V_1 \) (Aggressiveness) Measures increased energy output towards a situation perceived as antagonistic in terms of dominance and mastery of people, objects or things. Related to this vector are characteristics like willingness to take a chance.

\( V_2 \) (Sociability) Measures increased energy output towards situations perceived as friendly in terms of social participation and leadership.

Characteristics like Gregariousness, Charm, Poise Persuasiveness etc. are related to this vector.

\( V_3 \) (Emotional Control) Measures reduced energy output in situations like friendly, in terms of peace of mind and security. Easy-goingness, Relaxation, Stability and Love of Home and Family are characteristics related to this vector.

\( V_4 \) (Social Adaptability) Measures reduced energy output in a situation perceived as antagonistic in terms
of Avoidance, Dependency and Conformity. Related to this vector are characteristics of Acquiescence, Submission and Apprehension.

\( V_5 \) (Social Intelligence) Measures intelligence of behaviour (display of foresight and planning ability), differentiates between persons of high and low intelligence.

**The Construction of Activity Vector Analysis (Clarke, 1956)**

An original score list was prepared containing 183 words commonly used in describing Personality. Subsequently all derogatory words and those unsuitable for self-description were eliminated, leaving a list of 81 adjectives. This experimental form with 81 adjectives was then administered to all applicants for jobs at a large manufacturing Company, employing up to 3,000 persons in Rhode Island. The individuals were asked to check those words which (i) anyone has used in describing them, and (ii) believed to be truly descriptive of them.

A random sample of 100 was drawn from over 300 preliminary testing, conducted in 1943-44. The percentage of responses was determined for each word checked under instructions (i) and (ii). Two words responded to by less than 5% of the sample of 100 were eliminated. Those were replaced and the list was administered to independent sample of 1,067. The percentage responses to each word obtained from this sample revealed no words checked by less than 5%.
or more than 95% of the sample.

A random sample of 100 cases was drawn from the 1,067 persons and tetrachoric correlations were calculated among the 3,240 pairs of word responses. A cluster of these data revealed four basic clusters which were suggestive of aggressive, sociable, stable and avoidant behaviour.

From the 1,067 sample 500 cases were selected at random and norms were established. Ordinary standard score scales were derived for each of the raw score scale (number of words checked) obtained for each of the four vectors. The raw scores resulting from the four scoring keys (one for each cluster) were transformed to a standard scale having a mean of 50 and a standard deviation of 10. These scales were used to provide a profile, which is interpreted ipsatively in terms of factor integrations. Profile analysis is drawn by joining the standard scores of the vectors for the four factors. These four factor profiles were loaded on a nine-point scale. Scale value of one is given to a very low ipsative score. The reference point is five. Profile analysis is drawn by joining standard scores of the vectors for the four factors. The coding scheme requires that for any profile, there be at least one factor coded with a one or a nine and that the sum of the four coded be 20. This restriction limits the number of profiles to 258. In the normal processing of AVA results, the vertical line patterns are not interpreted (only the much less extended and more extended profile is compared).
Reliability of the Vectors

Split half reliability for each of the vectors and activity level (total number of responses) was computed separately for 100 cases selected at random from 5,000 tests available in 1948. These split half reliability coefficients, corrected by the Spearman Brown Formula are reported in Table I.

TABLE I
Split-half Reliability Coefficients

<table>
<thead>
<tr>
<th>Activity</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.97</td>
</tr>
<tr>
<td>V1</td>
<td>.95</td>
</tr>
<tr>
<td>V2</td>
<td>.94</td>
</tr>
<tr>
<td>V3</td>
<td>.92</td>
</tr>
<tr>
<td>V4</td>
<td>.95</td>
</tr>
</tbody>
</table>

Test-retest reliability was determined for 323 varied occupational cases with a mean retest interval of one year (minimum one month) contributed by a large number of business and industrial concerns located in various geographical areas in the United States. These data are presented in Table II.

TABLE II
Coefficients of Stability (Clarke, 1956)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.75</td>
</tr>
<tr>
<td>V1</td>
<td>.73</td>
</tr>
<tr>
<td>V2</td>
<td>.72</td>
</tr>
<tr>
<td>V3</td>
<td>.62</td>
</tr>
<tr>
<td>V4</td>
<td>.71</td>
</tr>
</tbody>
</table>
Vector Criteria Inter-correlations

The Activity Vector Analysis was constructed, with the use of the vector criterion technique of item validation and selection in accordance with which the matrix of tetrachoric correlations among the response pairs was used for cluster analysis. Intercorrelations among the Resultant Vector scores were calculated for an unselected sample of 200 cases. These data are indicative of the separation among the vectors.

Measurement of Social Intelligence \( (V_F) \)

In 1952, after the AVA had been operational for several years, an attempt was made to obtain a measure of intelligent behaviour (display of foresight and planning ability). An item analysis revealed a group of words which discriminated between persons of high and low intelligence as measured by the Otis test of Mental Ability. A new scoring stencil and norms based on a random sample of 609 cases drawn from the 15,000 sample were constructed, and a fifth vector \( (V_F) \) emerged.

Merenda and Clarke (1965) writing about construct validity of AVA described an experiment in which a sample of 28 advanced graduate students was asked to write a one page narrative on the theme "Who Am I?" They were then administered a self-concept adjective check list (AVA) from which personality descriptions in terms of the basic
self-concept could be made. Comparisons were made between the subject's narrative and interpersonal behavioural descriptions published for 14 standard AVA patterns. A blind analysis was also attempted utilizing the narrative only and requiring the judge to predict the basic self personality profile on the basis of the self-referent personality descriptions contained in the narrative. Results indicated a high degree of congruence between personality descriptions of the subjects and those of the standard AVA pattern which correlated highest with the basic self profile of each subject. Also the mean validity coefficient arising from blind analysis was .74, attesting to the descriptive validity of AVA in organizing the unconstructed self descriptions. Whiteley (1966) also attested to the construct validity of AVA. The AVA was also used by Charate (1980) and Tiwana (1982).

Study of Values (Allport, Vernon and Lindzey, 1960)

The Study of Values is a scale for measuring the dominant interest in Personality. It aims to measure the relative prominence of six basic Values propounded by Spranger (1928) and, elaborated by Allport et al. (1960) in the test 'Study of Values'.

The Study of Values aims to measure the relative programme of six basic interests or motives in Personality, the Theoretical, Economic, Aesthetic, Social, Political and Religious. This classification is based directly upon Edward Spranger's. 'Types of Men' (1928), a work which defends
the view that the personalities of men are best known through a study of their values or evaluative attitudes. The scale is designed primarily for use with college students, or with adults who have some college or equivalent education.

In selecting his six types Spränger may be said to hold a somewhat flattering view of human nature. He does not allow for formless or valueless personalities, nor for those who follow an expedient or hedonistic philosophy of life.

(i) Theoretical Value

The dominant interest of the Theoretical man is the discovery of truth. He is the one who looks for identities and differences, one who divests himself of judgements regarding the beauty or utility of objects and seeks only to observe and to reason. Since the interests of the theoretical man are empirical, critical, and rational, he is necessarily an intellectualist, frequently a scientist or philosopher. His chief aim in life is to observe and systematize his knowledge.

(ii) Economic Value

The Economic man is characteristically interested in what is useful. This type is thoroughly 'practical' and this economic attitude frequently comes into conflict with other Values. The economic man wants education to be practical and regards unapplied knowledge as waste. In his personal
life the economic man is likely to confuse luxury with beauty. In his relations with people, he is more likely to be interested in surpassing them in wealth than in dominating them (political attitude) or in serving them (social attitude).

(iii) **Aesthetic Value**

The Aesthetic man sees his highest Value in form and harmony. Each single experience is judged from the standpoint of grace symmetry or fitness. This type of man need not be creative artist, but he finds his chief interest in the artistic episodes of life. The Aesthetic attitude is in a sense diametrically opposed to the Theoretic. The former is concerned with the diversity and the latter with identities of experience. In social affairs, he may be said to be interested in persons but not in the welfare of persons, and tends towards individualism and self sufficiency.

(iv) **Social Value**

The highest Value for this type is love of people. The Social man prizes other persons as ends and is, therefore, himself friendly, sympathetic and unselfish. He is likely to find the Theoretical, Economic and Aesthetic attitudes cold and inhuman. The Social man regards love as itself the only suitable form of human relationship. In the Study of Values it is the altruistic or philanthropic aspect of love that is measured. Spranger adds then that, in its present form the social interest is selfless and tends to approach very closely the religious attitude.
(v) Political Value

The Political man is interested in power. These activities are not necessarily within the narrow field of politics. Since competition and struggle play a large part in our lives, many philosophers have seen power as the most universal and most fundamental of motives. There are however, certain personalities in whom the desire for a direct expression of this motive is uppermost, who wish above all else for personal power and influence.

(vi) Religious Value

The highest Value of the Religious man may be called unity. He is mystical and seeks to comprehend the cosmos as a whole, to relate himself to its embracing totality. Spranger defines the Religious man as one whose mental structure is permanently directed to the creation of the highest and absolutely satisfying value experience. Some men of this type are "immanent mystics", i.e. they find their religious experience in the affirmation of life and inactive participation therein. In many individuals, the negation, and the affirmation of life alternate to yield the greatest satisfaction.

The test consists of a number of questions based upon a variety of similar situations to which the alternative answers in Part I and four alternative answers in Part II are provided. In all there are 120 answers, 20 of which
refer to each of the six Values. The subject records his preferences numerically by the side of each alternative answer. The scores on each page are then added and the total transcribed onto the score sheet. The page totals belonging to each of the six Values are then summed up. After applying certain simple corrections these six total scores are plotted on a profile, so that the subject may see the significance of his standing on all the Values simultaneously.

The following reliabilities obtained by various methods seem satisfactory - especially in view of the fact that each Value is measured by only 20 questions. All reliability studies reported below are for 1951 revision of the Study of Values.

**INTERNAL CONSISTENCY FOR HOMOGENEITY OF THE SCALE IS DETERMINED BY THE METHODS:**

(A) **Split-half Reliability**

The items measuring each Value were divided into two sub-scales. (The sub-scales were composed so that there would be approximately the same number of pairings between the Value under study and all remaining Values). For sample group the product-moment correlations (Spearman-Brown) are as follows:
The mean reliability coefficient, using a transformation was .90.

(B) Item Analysis

Successive revisions of the test have shown that each Theoretical item is positively associated with the total score derived from all the Theoretical items, and, that the items for each of the other Values likewise hang together consistently. The final item analysis — carried out on a group of 780 subjects of both sexes from six different colleges shows a positive correlation for each item with the total score for its value, significant at the .01 level of confidence.

Reliability (Stability)

This measure has been determined for two populations, one after an interval of one month, the other after an interval of two months.

<table>
<thead>
<tr>
<th></th>
<th>One month 1951</th>
<th>Two months 1957</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(N=53)</td>
<td>(N=53)</td>
</tr>
<tr>
<td>Theoretical</td>
<td>.87</td>
<td>.85</td>
</tr>
<tr>
<td>Economic</td>
<td>.92</td>
<td>.84</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>.90</td>
<td>.87</td>
</tr>
<tr>
<td>Social</td>
<td>.77</td>
<td>.88</td>
</tr>
<tr>
<td>Political</td>
<td>.90</td>
<td>.88</td>
</tr>
<tr>
<td>Religious</td>
<td>.91</td>
<td>.93</td>
</tr>
</tbody>
</table>
The mean repeat reliability coefficient, using the two transformations was .89 for the one month study and .88 for the two months interval.

External Validation

The next and most convincing evidence for the validity of the scale comes from examining the scores of groups whose characteristics are known. Thus one expects students of engineering to stand relatively high in Theoretical and Economic Values (Allport et al. 1960).

The old form of the test also had extensive external validation, surveys of which were published by Cantril and Allport (1933) and by Duffy (1940). Using the Old Form, Mowardi (1952) discovered that the test given in college was highly predictive of occupational careers followed by Wellesley students life to fifteen years graduation from college.

Numerous studies can be considered indirect validations: for example, Newcomb's (1943) finding that college education of a special type changes value profiles in the expected direction, Postman-Bruner-McGinnies (1948) discovery that high personal values as measured by the scale correlate with the rapid perception of value-related words; Schooley's (1936) finding that the profiles of married couples are similar. The study of Values was used by Tiwana (1982).
Ray's Achievement Motivation Questionnaire

A 14 item short form of the ray's (1970, 1974, 1975), 'Achievement Motivation Scale' was developed. When tested on seven samples from Sydney, London, Glasgow and Johannesburg it showed reliabilities of over .70 when applied to English speaking population. It is also balanced against acquiescent response set and has validities well compatible within other longer scales. This scale was standardized on an English speaking sample. Its validity has been tested extensively in Australia, South Africa, and London. The validity data available was of four types, peer ratings, self ratings, information on occupation and scores on other achievement motivation scales.

According to Ray (1974, 1975) this new 14-item scale has the following advantages:

(i) Brevity - it can be easily administered as the time taken to fill it takes 5 to 10 minutes.

(ii) It has a fairly consistent reliability, at the international level. This can be particularly useful in cross-cultural research, involving other English speaking cultures.

(iii) It has a superior validity.

Population norms for this scale, countrywise are as follows:
Means and SDs separately for sexes in different countries are:

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th></th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glasgow</td>
<td>32.61</td>
<td>S.D.s 5.66</td>
<td>29.93</td>
</tr>
<tr>
<td>London</td>
<td>33.49</td>
<td>S.D.s 5.51</td>
<td>31.27</td>
</tr>
<tr>
<td>Sydney</td>
<td>32.17</td>
<td>S.D.s 5.32</td>
<td>30.55</td>
</tr>
</tbody>
</table>

Overall means for males was 32.75 and for females was 30.58.

For the present study the model of Achievement Motivation developed by McClelland and the questionnaire developed by Ray have been used. This Questionnaire was used by Giani (1982).

PROCEDURE

All the subjects were contacted personally and they were assured that the information would be kept strictly confidential. Each subject was required to fill in the following questionnaires:

1. Basic Style Indicators.
2. Eysenck Personality Questionnaire.
(3) Activity Vector Analysis for Self Perception.
(4) Study of Values.
(5) Achievement Motivation Questionnaire

Each subject was tested in one sitting.

Instructions

The following instructions were given for:

(I) Basic Style Indicators by Reddin (1970).

"Assume you are involved in each of the following 23 questions. Kindly place a tick (✓) mark in the cell of your choice that you think would most clearly describe your behaviour in the situation presented".

(II) Eysenck Personality Questionnaire by Eysenck and Eysenck (1978).

The standard instructions for the EPQ were printed on the questionnaire.

"Please answer each question by putting a circle around the "Yes" or the "No" following the questions. Work quickly and do not think too long about the exact meaning of the questions. Please remember to answer each question."

(III) Self Perception (Activity Vector Analysis) (Clarke, 1963).

"Please tick every word which you honestly believe is descriptive of you. Be honest with yourself - remember no one is perfect."
(IV) Study of Values (Allport et al., 1960)

The standard instructions for the Study of Values were printed on the booklet itself. These were read out to the subjects, separately for Parts I and II and explained with standard examples.

(V) Achievement Motivation Questionnaire (Ray, 1975)

The subjects were explained that this was a set of 14 questions designed to test their Achievement Motivation with 3 alternative ways of answering viz - "Yes", "Undecided" and "No". They were asked to encircle one alternative that they agreed with. These instructions were explained verbally to the subjects.

SCORING

The scoring of Basic Style Indicators, Eysenck Personality Questionnaire, AVA Scale, Study of Values, Ray's Achievement Motivation Questionnaire was done according to the procedures given in their respective manuals.

The raw data consisted of scores on Executive Effectiveness, Extraversion, Neuroticism, Psychoticism, Social Desirability, five vectors of AVA, six Values and Achievement Motivation, for each of the 200 subjects.