

## CHAPTER 8

## DESCRIPTION OF SAMPLE CHARACTERISTICS

## 8.1 INTRODUCTION

A description of the sample is presented in this chapter. The dispersion of subjects across demographic variables such as sex, language, religion, educational qualifications, formal schooling (education received) income, occupational level, age, country of origin, ethnicity and type of enterprise in which they are employed is described and summarized by way of frequency tables. The general characteristics of the sample will be evident from these frequency tables.

## 8.2 FREQUENCY DISTRIBUTION

Frequency distributions are part and parcel of descriptive statistics. Healy (1990, p 24) views frequency distributions as tables summarizing the distribution of a variable by reporting "the number of cases contained in each category". It is a form of classification and description of numbers which assists the researcher in interpreting the information obtained and to understand the important features of the data (Ferguson, 1981, p 17). Ott et al (1990, p 697) define a frequency table as "a table used to summarize how many measurements in a set fall into each of the sub-intervals (or classes)". Frequency tables presented in this chapter also contain the cumulative percentage frequencies which are obtained by successively adding the individual percentages. The primary purpose of this cumulative percentage column is

to ascertain the percentage of values falling below (or above) a given score or class interval in the distribution of what percentage of values is "greater than" or "less than" a specified value.

### 8.3 DESCRIPTION OF THE SAMPLE BY MEANS OF FREQUENCY TABLES

Frequency Tables 8.1 through 8.11 present descriptions of the sample across the demographic variables. The values are tabled against the frequency of occurrence.

Table 8.1: SEX DISTRIBUTION OF THE TOTAL GROUP.

Sex	Frequency	Percentage	Cumulative Percentage
Male	186	86,9	86,9
Female	28	13,1	100,00
Total	215	100,00	-----

Table 8.1 shows the distribution of the sample across the sexes. The acquired sample is predominantly male in its composition. Because of the huge inequality in distribution between the sexes it will not be advisable to use this variable as an independent variable in the data analysis.

The frequency distribution according to language is presented in Table 8.2.

The frequency distribution of subjects according to religion is presented in Table 8.3.

Table 8.2: FREQUENCY DISTRIBUTION OF LANGUAGES.

Language	Frequency	Percentage	Cum. Percentage
Afrikaans	107	50,2	50,2
English	24	11,3	61,5
North Sotho	35	16,4	77,9
South Sotho	19	8,9	86,9
Xhosa	9	4,2	91,1
Zulu	2	0,9	92,0
Other	17	8,0	100,00
Total	215	100,00	----

The distribution of the sample across language is predominantly White in origin, with 61,5% of the subjects belonging to this ethnic group. Furthermore, Blacks are also under-represented in the sample. Comparison between Afrikaners, Anglo-Saxons and an aggregale of Africans from various ethnic groups is possible. Also the small number of Zulu subjects (N=2) rules out any possibility of a significant comparison between them and the Xhosas. The results of such a comparison should have had important implications for organizational and political policy. Most of the subjects included under the category "other" were Tswanas (N=11). The rest were citizens of Zambia and Mozambique. With a view to comparing language groups, North and South Sothos were grouped together with the remaining black ethnic group combined, comprising 25,4% and 13,1% of the sample. This regrouping results in four groups viz, Afrikaners, Anglo-Saxons, Sothos and Other Blacks.

The frequency distribution of subjects according to religion is presented in Table 8.3.

Educational qualifications may have quite an effect on the value systems of the subjects. The distribution of educational qualification is presented in Table 8.4.



Table 8.3: FREQUENCY DISTRIBUTION ACCORDING TO  
RELIGION.

Religion	Frequency	Percentage	Cumulative Percentage
Anglican	6	2,9	2,9
NGK/DRC	53	25,2	28,1
Methodist	17	8,1	36,2
Presbyterian	9	4,3	40,5
Pentecostal	12	5,7	46,2
Catholic	9	4,3	50,5
Reformed	20	9,5	60,0
Apostolic	18	8,6	68,6
Lutheran	4	1,9	70,5
Zionist	12	5,6	76,2
DRC Mis.	11	5,2	81,4
Independent	4	1,9	83,3
Islamic	1	0,5	83,5
N.H. Church	19	9,0	92,9
Other	15	7,1	100,0
Total	215	100,0	----

According to Table 8.3 subjects belonging to the three Afrikaans churches are by far in the majority, comprising 43,7% of the sample. A recoding was done to obtain better comparability between the denominations. Anglicans and Catholics were grouped together comprising 7,2% of the total sample as were members of the two Dutch Reformed Churches (i.e. 30,4%). Members of the Reformed Church and the "Nederduits Hervormde" Church formed a group (i.e. 18,5%). The remaining religions - Lutheran, Zionist, Independent Churches, Islam and Others - were grouped together in one group (i.e. 17%). Methodists and Presbyterians were grouped (i.e. 12,4%) together as were confessors of the Pentacostal and Apostolic faiths (i.e. 14,3%).

Educational qualifications may have quite an effect on the value systems of the subjects. The distribution of educational qualification is presented in Table 8.4.

distribution of subjects across years of formal school education received.

Table 8.4: FREQUENCY DISTRIBUTION ACCORDING TO YEARS OF EDUCATIONAL QUALIFICATIONS.

Qualification	Frequency	Percentage	Cumulative Percentage
Illiterate	13	6,0	6,0
Std 5 or lower	11	5,1	11,2
Std 6	7	3,3	14,4
Std 8	40	18,6	33,0
Std 10	112	52,1	85,1
B - degree	20	9,3	94,4
Honours	8	3,7	98,1
Masters	4	1,9	100,0
Total	215	100,0	----

An analysis of Table 8.4 reveals that subjects with a matric qualification were by far in the majority. Table 8.4 reflects the diversity and inequality in educational standards in South Africa. However, because of a preponderance of white subjects, the intervals Std 8 and matric which comprises 70,7% of the total sample, are predominant. A recoding of categories was done to enable the researcher to do an analysis of variance. All the categories of Std 8 and lower were grouped together as were all subjects with degrees. This recoding resulted in three groups, viz those with educational qualifications of Std 8 and lower including illiterates which comprises 33% of the total sample, subjects with matric (i.e. 52,1%) and graduates (i.e. 14,9%).

Educational qualifications are closely related to number of years schooling received. The number of years schooling received actually points to the number of years of formal school education which was completed. Only the number of years a course should officially take, should have been taken into consideration. Table 8.5 presents the frequency distribution of subjects across years of formal school education received.



Table 8.5: FREQUENCY DISTRIBUTION ACCORDING TO YEARS OF FORMAL SCHOOL EDUCATION RECEIVED.

No of years	Frequency	Percentage	Cumulative Percentage
10 years or less	44	21,1	21,1
11 years	18	8,6	29,7
12 years	77	36,8	66,5
13 years	16	7,7	74,2
14 years	21	10,0	84,2
15 years	11	5,3	89,5
16 years	9	4,3	93,8
17 years	6	2,9	96,7
18 years	7	3,3	100,0
Total	215	100,0	----

The diversity and inequality in the educational system in the Republic of South Africa are also evident from Table 8.5. By far the minority of subjects (15,8%) have completed formal school education up to university level. The highest frequency of subjects namely 77 (36,8% of the total sample) completed the full 12 years of schooling. The average number of years of formal schooling is 12 - the number of years it usually takes to complete matric. Again, it has to be taken into consideration that subjects are predominantly white. A recoding of categories was done resulting in three groups, viz those with 11 years or less of formal schooling received (i.e. 29,7% of the sample), those with 12 years of formal schooling (schooling up to matric level) which comprises 36,8% of the sample and then a group with some tertiary education (i.e. 33,5%). The distribution of subjects across income is presented in Table 8.6.

Table 8.6: FREQUENCY DISTRIBUTION ACCORDING TO INCOME  
IN RAND PER ANNUM.

Income categories	Frequency	Percentage	Cumulative Percentage
1 000 or less	11	5,2	5,2
1 001 - 3 000	12	5,7	10,8
3 001 - 5 000	6	2,8	13,7
5 001 - 10 000	24	11,3	25,0
10 001 - 15 000	9	4,2	29,2
15 001 - 18 000	7	3,3	32,5
18 001 - 24 000	18	8,5	41,0
24 001 - 30 000	25	11,8	52,8
30 001 - 45 000	34	16,0	68,9
45 001 - 60 000	50	23,6	92,5
60 001 - 80 000	12	5,7	98,1
80 001 -120 000	4	1,9	100,0
Total	215	100,0	----

Table 8.6 reveals quite an unequal income between subjects which is indicative of the social inequality in South African society and the poverty prevailing among certain substrata of this society. The primary causes of this social inequality and poverty may be traced back to the historical development of South Africa, religious and cultural views holding the Blacks as an inferior and subjugated people, the poor and inferior education system and a labour relations system barring Blacks from advanced, higher paid job categories and the necessary training to be promoted to these categories. The possible influence of locus of control must also not be underrated.

The mode of this income distribution is approximately R52 500 which is the income interval in which the highly trained and educated subjects are positioned. The average income is  $\pm$  R27 700. It should be taken into consideration that the subjects in the lower income intervals usually are Blacks with an inferior education and training and with limited prospects of advancement to higher paid job categories. Categories



were also regrouped to obtain a more adequate distribution of subjects enabling the researcher to do an analysis of variance. The regrouping resulted in categories R5 000 and lower forming one group (i.e. 13,7% of the sample), subjects with an income of greater or equal to R5 001 and lesser or equal to R30 000 form another group (i.e. 39,1%), subjects with an income between R30 001 and R45 000 form a third group (i.e. 16,0%) and all subjects with an income above R45 001 were grouped together (i.e. 31,2%).

Table 8.7 presents the distribution of subjects across occupational level.

Table 8.7: FREQUENCY DISTRIBUTION ACCORDING TO OCCUPATIONAL LEVEL.

Category	Frequency	Percentage	Cumulative Percentage
Executive	1	0,5	0,5
Middle Manager	44	21,0	21,4
Supervisor	56	26,7	48,1
Consultant	9	4,3	52,4
Administrative	37	17,6	70,0
Artisan	10	4,8	74,8
Semi-skilled	19	9,0	83,8
Unskilled	34	16,2	100,0
Total	215	100,0	----

Table 8.7 shows that top management is poorly represented in the sample. It is therefore impossible to investigate the work values of South African executives and other top managers. However, meaningful inferences could be drawn about the work values of middle management, professionals, general workers as well as workers of the lower levels.

In this instance a recoding was also done resulting in middle management and consultants grouped together



(i.e. 25,3% of the sample) and all the labourers (artisans, semi-skilled and unskilled) forming a group (i.e. 30%). Supervisors formed a group on their own (i.e. 26,7%) as did the administrative staff (i.e. 17,6%).

The distribution of subjects across age takes the shape of a normal curve. This distribution is presented in Table 8.8.

Table 8.8: FREQUENCY DISTRIBUTION ACCORDING TO AGE.

Age category	Frequency	Percentage	Cumulative Percentage
18 years & younger	1	0,5	0,5
19 - 21	9	4,2	4,7
22 - 25	26	12,3	17,0
26 - 30	66	31,1	48,1
31 - 45	83	39,2	87,3
46 - 55	18	8,5	98,8
Over 55	9	4,2	100,0
Total	215	100,0	----

According to Table 8.8 the subjects were evenly distributed between the young and the aged. The average age of the subjects is 27 years which is quite young. However, the mode (the value of the response category in a frequency distribution which has the largest number or percentage of cases) is 38,5 years which indicates that the sample consists mainly of adults of middle age.

In order to do an analysis of variance a recoding of categories was done. This recoding resulted in four groups, viz a group comprising subjects in the age bracket 19 years of age and older and 25 years of age and younger (i.e. 16,5% of the sample), subjects whose ages vary between 26 and 30 (i.e. 31,1%) those in the

age bracket 31 to 45 (i.e. 39,2%) and a group consisting of subjects older than 46 years of age (i.e. 12,7%).

Table 8.9 presents the distribution of subjects across country of origin.

Table 8.9: FREQUENCY DISTRIBUTION ACROSS COUNTRY OF ORIGIN.

Country	Frequency	Percentage	Cumulative Percentage
South Africa	186	87,3	87,3
Lesotho	8	3,8	91,1
Zambia	2	0,9	92,0
Namibia	1	0,5	92,5
England	6	2,8	95,3
U S A	1	0,5	95,8
Northern Europe	3	1,4	97,2
Self Governing States	6	2,8	100,0
Total	213	100,0	----

Table 8.9 shows that the vast majority of subjects hail from South Africa. As there is not a single subject from Southern Europe, Eastern Europe, Japan, Taiwan, Hong Kong, Korea, South America, Mozambique, Botswana, Zaire and insignificant numbers from Zambia and the Anglo-Saxon countries, it is impossible to investigate and compare Latin, Nordic, post-Confucian and Anglo-Saxon cultures in the South African context and to investigate the influence of latitude on the value system. A recoding was done resulting in two groups, viz those subjects who hail from South Africa comprising 87,3% of the sample and those originating from other countries (i.e. 12,7% of the sample).

Table 8.10 presents the distribution of subjects across ethnic groups.

Table 8.10: FREQUENCY DISTRIBUTION ACROSS ETHNIC GROUPS.

ENTERPRISES.

Ethnic category	Frequency	Percentage	Cumulative Percentage
Afrikaans	105	53,0	53,0
English	20	10,1	63,1
Brown	1	0,5	63,6
Xhosa	8	4,0	67,7
Sotho	46	23,2	90,9
Tswana	16	8,1	99,0
Zulu	2	1,0	100,0
Missing	17	----	----
Total	215	100,0	----

Again a comparison between Afrikaans and English speaking whites is possible. Grouping of ethnically-related subjects is required to make any further comparisons meaningful. Note also the great inequalities in sizes of the three groups. An investigation into the value patterns of the different Black groups is also impossible because of limited as well as unequal sizes of the groups. However, an investigation to determine significant differences between the Whites and Blacks, if any, is possible. A recoding was done resulting in three groups, viz the Afrikaners comprising of 53% of the sample, the English Whites comprising 10,1% of the sample and the third group consisting of all the Africans (Xhosa, Sotho, Tswana and Zulu) comprising 36,3% of the sample).

The research was conducted at a private company and at a semi-state corporation to determine if any significant differences exist in the value systems of private enterprise and semi-state controlled corporations.

Table 8.11 presents the distribution of subjects across enterprises. In regard to income, most subjects



Table 8.11: FREQUENCY DISTRIBUTION ACCORDING TO  
ENTERPRISES.

Category	Frequency	Percentage	Cumulative Percentage
Private Enterprise	108	50,2	50,2
Semi-state	107	49,8	100,0
Total	215	100,0	----

The even distribution of subjects between the two groups, viz a freemarket enterprise and a parastatal organization, makes a comparison of these groups possible. Possible statistical techniques to do this comparison may be Hotelling's  $T^2$ -test, Anova or Discriminant analysis.

#### 8.4 SUMMARY

It is evident from the preceding discussion that the sample is predominant male, white, Afrikaans-speaking with a Calvinistic orientation. Most subjects belong either to the Dutch Reformed Church or to its two Afrikaans sister churches. English-speaking whites are fewer in number than Afrikaans subjects and apparently mostly members of the Methodist Church. Members of the High Church of England (Anglican) are by far in the minority. These religious orientations and affiliations may have an influence on subjects' value systems. Black subjects belong to different ethnic groups but are inadequately represented in the respective groups which necessitates the regrouping of these ethnically-related subjects.

Subjects predominantly have a high school qualification (Std 8 - Std 10) with approximately 12 years of formal school education. In regard to income, most subjects

are in the higher to middle-income groups with occupations ranging from middle-management to lower-level work. The vast majority of the subjects are adults of middle-age who ought to be settled and have stable work, social and family lives. Their opinions and attitudes should also be well-formed and stable. The majority of the sample by far are South African citizens.

In this chapter the results of the statistical analysis of data are presented. Descriptive statistics are used to record the numerical properties of the various distributions. The arithmetic mean is a statistic of location and the standard deviation is a statistic of dispersion among the distribution around the mean as index of locality. Correlation statistics are employed to ascertain the relationship, if any, between the dimensions of the Work Value Survey of Hofstede and the Locus of Control-scale, as refined by Levenson. The free-market and parastatal sectors of the mining industry are compared by means of a discriminant analysis and multiple analysis of variance. The main independent variables such as language, religion, etc. and where applicable, their two-way interactions are also compared and investigated by multiple analysis of variance in combination with Scheffé tests.

## 9.2 PRESENTATION OF RESULTS

The presentation of the data obtained from the survey is the major contribution towards this study of South Africans' work values. The scientific data will be discussed under headings referring to various dimensions measured by the Value Survey Module and the Activism and Powerful Others-scales. Ten independent variables have been identified and divided into two groups and analysed separately. The first table regarding the analysis of variance of a dependent variable is in regard to the four independent variables