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**QUALITY OF WORKLIFE AND ORGANISATIONAL COMMITMENT: A
STUDY OF NON-SUPERVISORY EMPLOYEES IN MALAYSIAN
ORGANISATIONS**

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for the degree of Doctor of Philosophy

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ABSTRACT

Organisational commitment has been suggested as a function of the degree of integration and congruence of individual and organisational goals and values. The more employees can satisfy their needs through work, the more they will be committed to an organisation. The organisational conditions that influence such need satisfaction are generally known as quality of worklife (QWL).

The purpose of the study was to examine the relative importance and perceived presence of factors associated with QWL, their relationships with organisational commitment (OC), and demographic patterns of their relationships for non-supervisory employees in Malaysia. Underlying questions explored were the cross-cultural universality of theories of QWL and OC and their utility for management policy and action.

The research instrument employed was a survey questionnaire in the Malaysian language based on Western models of QWL and OC and using Likert scaling. Usable responses were obtained from 672 employees in 671 organisations. Statistical analysis was carried out using factor analysis, t-test, analysis of variance and multiple regressions.

The Western model and measures of affective, normative and continuance commitment were generally supported, but two sub-factors emerged for continuance

commitment relating to cost of leaving and lack of alternatives. The collectivist nature of Malaysian culture emerged as an important determinant of QWL and, in turn, OC. The most important QWL factors were workplace integration, work environment and supervision. The first two of these were perceived as those most present. Different demographic relationships emerged between affective, normative and continuance commitment and QWL.

Indicators for changing management policies and action to improve QWL and hence OC among non-supervisory employees in Malaysia concern work environment, workplace integration and the social relevance of work. The equity of pay and benefits, though itself an unimportant QWL factor, was also related to affective commitment.

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TABLE OF CONTENTS

Abstract	i
Acknowledgement	iii
Table of Contents	v
List of Tables	xi
List of Figures	xix
	Page
CHAPTER ONE INTRODUCTION	
1.1 The Setting of the Study	1
1.2 The Present Study	8
1.3 Organisation of the Thesis	10
CHAPTER TWO CULTURAL RELATIVITY OF MANAGEMENT	
2.0 Introduction	13
2.1 Culture	14
2.1.1 Definition of Culture	14
2.1.2 Empirical Model of Culture	16
2.2 Culture and Management	20
2.2.1 Interaction Between Culture and Organisation	21
2.2.2 Culture and Participative Management	27
2.2.3 Culture and Organisation Development	29
2.2.4 Culture and Motivation	31
2.3 Malaysian Cultural Characteristics	32
2.3.1 The Malays	35
2.3.2 The Chinese	36
2.3.3 The Indian	38
2.4 Malaysian Management Values : Findings from Past Research	38
2.5 Summary and Conclusions	44
CHAPTER THREE QUALITY OF WORKLIFE	
3.0 Introduction	46
3.1 Definitions and Review of QWL and Related Management Techniques	47
3.1.1 QWL as a Variable	49
3.1.2 QWL as an Approach	57
3.1.2.1 Job Enrichment	57
3.1.2.2 Participative Management	60
3.1.2.3 Quality Circles	63
3.1.2.4 Autonomous Work Groups	65
3.1.2.5 Empowerment	66
3.2 Relationships of QWL with Organisational Variables	67
3.2.1 QWL, Organisational Identification and Organisational Commitment	68
3.2.2 QWL and Productivity	68
3.2.3 QWL and Absenteeism and Turnover	70
3.2.4 QWL and Stress	70
3.3 Summary	71

CHAPTER FOUR	ORGANISATIONAL COMMITMENT	
4.0	Introduction	74
4.1	Concepts of Employee Commitment	75
4.1.1	Career Commitment	75
4.1.2	Work Commitment	76
4.1.3	Organisational Commitment	76
4.2	Dimensions of Organisational Commitment	84
4.3	Antecedents of Organisational Commitment	91
4.3.1	Age and Tenure	97
4.3.2	Education	97
4.3.3	Gender	98
4.3.4	Marital Status	98
4.3.5	Personality Factors	99
4.3.6	Ability	100
4.3.7	Salary	100
4.3.8	Career Experiences and Perceptions of Employment Practices	101
4.3.9	Job Characteristics	102
4.4	Consequences of Organisational Commitment	103
4.4.1	Job Performance	104
4.4.2	Turnover	105
4.4.3	Absenteeism	109
4.4.4	Organisational Citizenship Behaviour	109
4.5	Summary	111
CHAPTER FIVE	RESEARCH DESIGN AND METHODOLOGY	
5.0	Introduction	112
5.1	Research Questions and Hypotheses	114
5.1.1	Purposes of the Study	115
5.1.2	Research Questions	116
5.1.3	Research Hypotheses	117
5.2	Research Model	121
5.3	Research Design	121
5.4	Data Collection	124
5.4.1	Qualitative Vs Quantitative Methods	124
5.4.2	Data Collection Method	126
5.4.3	Data Collection Instrument	128
5.4.3.1	QWL Measure	129
5.4.3.2	Organisational Commitment Measure	134
5.4.3.3	Organisation of the Questionnaire	137
5.5	Sampling Process	140
5.5.1	The Population	141
5.5.2	The Sampling Frame	142
5.5.3	The Sampling Design	143
5.5.3.1	Non-Probability Sampling Designs	143
5.5.3.2	Probability Sampling Designs	145
5.5.3.3	The Choice : Cluster Sampling	147

5.5.4 The Determination of Sample Size	148
5.5.5 Selection of Sampling Units	151
5.6 Administration of Fieldwork	152
5.6.1 Translation of the Questionnaire	152
5.6.2 Pilot Test	153
5.6.3 The Actual Study	153
5.7 Data Analysis	154
5.7.1 Univariate/Descriptive	154
5.7.2 Bivariate	155
5.7.3 Analysis of Difference between Means	155
5.7.4 Multivariate	156
5.8 Assumptions and Limitations of the Study	158
5.8.1 Assumptions	158
5.8.2 Limitations	158
	159
CHAPTER SIX RELIABILITY AND VALIDITY OF MEASURES	
6.0 Introduction	161
6.1 Definition of Measurement	162
6.2 Scales of Measurement	163
6.2.1 Nominal Scales	163
6.2.2 Ordinal Scales	163
6.2.3 Interval Scales	163
6.2.4 Ratio Scales	165
6.3 Accuracy of Measures	167
6.3.1 Reliability	167
6.3.2 Validity	170
6.3.2.1 Content Validity	170
6.3.2.2 Criterion Validity	171
6.3.2.3 Construct Validity	171
6.3.3 Factor Analysis	173
6.3.3.1 Requirements of Factor Analysis	174
6.3.3.2 Determining the Number of Factors	176
6.3.3.3 Factor Rotation	179
6.3.3.4 Dimensions of QWL and Organisational Commitment	181
6.4 Summary	187
CHAPTER SEVEN RESULTS I : THE RELATIVE IMPORTANCE AND PERCEIVED PRESENCE OF QWL FACTORS	
7.0 Introduction	189
7.1 The Sample of the Study	190
7.2 The Relative Importance of QWL Factors	194
7.2.1 Total Sample	194
7.2.2 Organisational Type	195
7.2.3 Gender	197
7.2.4 Ethnic Group	198
7.2.5 Age Group	200

7.2.6 Marital Status	202
7.2.7 Qualification	203
7.2.8 Length of Service	205
7.2.9 Salary Level	208
7.3 Perceptions about the Presence of QWL Factors	210
7.3.1 The Total Sample	210
7.3.2 Organisational Type	211
7.3.3 Gender	213
7.3.4 Ethnic Group	215
7.3.5 Age Group	217
7.3.6 Marital Status	219
7.3.7 Qualification	221
7.3.8 Length of Service	223
7.3.9 Salary Level	226
7.4 Summary and Conclusions	228
CHAPTER EIGHT RESULTS II : RESEARCH FINDINGS	
8.0 Introduction	231
8.1 T-test and Analysis of Variance	233
8.1.1 T-test	233
8.1.2 Analysis of Variance	235
8.1.3 Differences Between Preferred and Perceived Presence of QWL Factors	238
8.1.4 The Importance of QWL Factors - Demographic Differences	241
Summary	261
8.1.5 Employees' Perceptions About the Presence of QWL Factors -	
Demographic Differences	262
Summary	280
8.2 Regression Analysis	281
8.2.1 Methods of Multiple Regression	282
8.2.2 Assumptions of Multiple Regression Analysis	283
8.2.3 Tests of Significance in Regression Analysis	285
8.2.4 The Effects of Demographic and QWL Variables on Organisational	
Commitment	287
8.2.4.1 Total Sample	288
8.2.4.2 Government Departments	294
8.2.4.3 Semi-Government Organisations	299
8.2.4.4 Private Organisations	305
Summary	311
8.3 Organisational Type and the Strength of Relationships between QWL and	
Organisational Commitment	313
8.3.1 Affective Commitment	313
8.3.2 Normative Commitment	314
8.3.3 Continuance Commitment (High Cost)	315
8.3.4 Continuance Commitment (Lack of Alternatives)	316
Summary	317
8.4 Summary and Conclusions	318

CHAPTER NINE	SUMMARY, DISCUSSION AND RECOMMENDATIONS	
9.0	Introduction	322
9.1	Limitations on Inference	322
9.1.1	Causal Inference	323
9.1.2	Generalisability	323
9.1.3	Methodological Limitations	325
9.2	Summary of Findings	326
9.2.1	Dimensions of QWL and Organisational Commitment	326
9.2.2	Preferred Vs Perceived QWL	329
9.2.3	Relative Importance of QWL Factors	329
9.2.4	Relative Strength of Agreement about the Presence of QWL Factors	332
9.2.5	Demographic Factors and QWL	335
9.2.5.1	Importance of QWL Factors	334
9.2.5.2	Perceived Presence of QWL Factors	337
9.2.6	The Effects of Demographic and QWL Variables on Organisational Commitment	339
9.2.6.1	Total Sample	340
9.2.6.2	Government Department	341
9.2.6.3	Semi-Government Organisation	341
9.2.6.4	Private Organisation	342
9.2.7	Organisational Type and the Relationships between QWL and Organisational Commitment	343
9.3	Discussion	344
9.3.1	Dimensions of Organisational Commitment	344
9.3.2	Relative Importance of QWL factors	345
9.3.3	Perceptions of QWL	348
9.3.4	Independents Variables and Organisational Commitment : A Review of their Relationships	350
9.3.5	Proposed Models of Organisational Commitment	360
9.4	Implications and Suggestions for Future Research	363
9.4.1	Theoretical Implications	363
9.4.2	Implications for Management Practice	364
9.4.3	Suggestions for Future Research	367
9.5	Conclusions	368
	REFERENCES	371
	APPENDICES	
Appendix A	Survey Questionnaire (Malay and English)	391
Appendix B	Map of Peninsular Malaysia	405
Appendix C	List of Organisations in the Sampling Frame	406
Appendix D1	Letter of Introduction from the Research Supervisor	408
Appendix D2	Personal Letter of Introduction to Heads of Organisations	409
Appendix E	Results of Reliability Analysis	411
Appendix F	Items for Preferred Quality of Worklife	427
Appendix G	Items for Perceived Presence of Quality of Worklife	428

Appendix H	Items for Organisational Commitment	429
Appendix I	Frequency Distributions of Items in Survey Questionnaire	430
Appendix J	Patterns of Distributions of Dependent Variables Used in Regression Analysis	445
Appendix K	Scatter Diagrams of Relationships between the Perceived Presence of QWL Factors and Organisational Commitment	447
Appendix L	Correlations between Independent and Dependent Variables used in Regression Analysis	461
Appendix M	Inter-correlations of Variables in Regression Analysis	463
Appendix N	Inter-item Correlations	464

LIST OF TABLES

		Page
Table 1.1	Malaysia: Gross Domestic Product by Industrial Origin, 1989 - 1995	2
Table 1.2	Malaysia: Employment Pattern, 1988 - 1985	4
Table 1.3	Origins of Foreign Investment in Malaysia (1989 - 1994)	5
Table 1.4	Variables Associated with Elements of the Environment	6
Table 2.1	Index Values and Ranks of Fifty Countries and Three Regions on Four Cultural Dimensions	19
Table 2.2	Consequences of Power Distance on Organisations	25
Table 2.3	Consequences of Uncertainty Avoidance on Organisations	25
Table 2.4	Consequences of Individualism on Organisations	26
Table 2.5	Consequences of Masculinity on Organisations	26
Table 2.6	Value Orientation of Organisational Development Practitioners	30
Table 2.7	Dominant Cultural Factors in Malaysia and their Managerial Implications	33
Table 3.1	Signs of the Empowering Organisation	67
Table 4.1	Typologies of Organisational Commitment	79
Table 4.2	Factors Hypothesised to be Antecedents of Organisational Commitment	94
Table 4.3	Antecedents of Organisational Commitment	94
Table 4.4	Relationships Between Organisational Commitment and Performance	105
Table 4.5	Relationships Between Organisational Commitment and Turnover	106
Table 5.1	Strengths of Qualitative and Quantitative Research	124
Table 5.2	Characteristics of Qualitative and Quantitative Research	125
Table 5.3	Different Research Strategies and Their Relevant Applications	128
Table 5.4	QWL Factors	132
Table 5.5	Operational Definitions and Items for QWL Dimensions	133
Table 5.6	Dimensions of Commitment and Their Respective Items	136
Table 5.7	The Coding Scheme for Demographic Variables	138
Table 5.8	Probable Response Rates and the Number of Questionnaires Required to be Distributed	151
Table 6.1	Types of Scales and Their Properties	166
Table 6.2	Summary of Scale Reliabilities	168
Table 6.3	Comparison of Reliability Coefficients for Organisational Commitment Sub-scales	169
Table 6.4	Rotated Factor Loadings - Preferred QWL	182
Table 6.5	Rotated Factor Loadings - Perceived QWL	183
Table 6.6	Rotated Factor Loadings of Organisational Commitment Items	185

Table 6.7	Revised Reliability Coefficients of Organisational Commitment Scale	187
Table 7.1	Number of Organisations, Questionnaires Distributed and Usable Questionnaires Returned	190
Table 7.2	Sample Characteristics	192
Table 7.3	Distribution of Respondents by Organisational Type and Demographic Characteristics	193
Table 7.4	Mean Scores and Ranks for the Importance of QWL Factors - Total Sample	194
Table 7.5	Mean Scores and Ranks for the Importance of QWL Factors by Organisational Type	195
Table 7.6	Mean Scores and Ranks for the Importance of QWL Factors by Gender	197
Table 7.7	Mean Scores and Ranks for the Importance of QWL Factors by Ethnic Group	199
Table 7.8	Mean Scores and Ranks for the Importance of QWL Factors by Age Group	200
Table 7.9	Mean Scores and Ranks for the Importance of QWL Factors by Marital Status	202
Table 7.10	Mean Scores and Ranks for the Importance of QWL Factors by Qualification	204
Table 7.11	Mean Scores and Ranks for the Importance of QWL Factors by Length of Service	207
Table 7.12	Mean Scores and Ranks for the Importance of QWL Factors by Salary Level	209
Table 7.13	Mean Scores and Ranks for the Strength of Agreement about the Presence of QWL Factors - Total Sample	210
Table 7.14	Mean Scores and Ranks for the Strength of Agreement about the Presence of QWL Factors by Organisational Type	212
Table 7.15	Mean Scores and Ranks for the Strength of Agreement about the Presence of QWL Factors by Gender	214
Table 7.16	Mean Scores and Ranks for the Strength of Agreement about the Presence of QWL Factors by Ethnic Group	215
Table 7.17	Mean Scores and Ranks for the Strength of Agreement about the Presence of QWL Factors by Age Group	217
Table 7.18	Mean Scores and Ranks for the Strength of Agreement about the Presence of QWL Factors by Marital Status	220
Table 7.19	Mean Scores and Ranks for the Strength of Agreement about the Presence of QWL Factors by Qualification	221
Table 7.20	Mean Scores and Ranks for the Strength of Agreement about the Presence of QWL Factors by Length of Service	225
Table 7.21	Mean Scores and Ranks for the Strength of Agreement about the Presence of QWL Factors by Salary Level	227
Table 8.1	Differences Between Preferred and Perceived Presence of QWL Factors - Total Sample	238

Table 8.2	Differences Between Preferred and Perceived Presence of QWL Factors - Government Departments	239
Table 8.3	Differences Between Preferred and Perceived Presence of QWL Factors - Semi-Government Organisations	240
Table 8.4	Differences Between Preferred and Perceived Presence of QWL Factors - Private Organisations	240
Table 8.5	One-way ANOVA and T-test for Mean Differences in the Importance of Growth and Development by Organisational Type and Demographic Characteristics	242
Table 8.6	ANOVA for Mean Differences in the Importance of Growth and Development - Employees by Academic Qualifications	243
Table 8.7	Scheffe Multiple Range Test for Mean Differences in the Importance of Growth and Development - Employees by Academic Qualifications	243
Table 8.8	One-way ANOVA and T-test for Mean Differences in the Importance of Participation by Organisational Type and Demographic Characteristics	244
Table 8.9	ANOVA for Mean Differences in the Importance of Participation - Employees by Length of Service	245
Table 8.10	Scheffe Multiple Range Test for Mean Differences in the Importance of Participation - Employees by Length of Service	245
Table 8.11	One-way ANOVA and T-test for Mean Differences in the Importance of Physical Environment by Organisational Type and Demographic Characteristics	246
Table 8.12	ANOVA for Mean Differences in the Importance of Physical Environment - Employees by Age Group	247
Table 8.13	Scheffe Multiple Range Test for Mean Differences in the Importance of Physical Environment - Employees by Age Group	248
Table 8.14	ANOVA for Mean Differences in the Importance of Physical Environment - Employees by Organisational Type	248
Table 8.15	Scheffe Multiple Range Test for Mean Differences in the Importance of Physical Environment - Employees by Organisational Type	249
Table 8.16	ANOVA for Mean Differences in the Importance of Physical Environment - Employees by Length of Service	249
Table 8.17	Scheffe Multiple Range Test for Mean Differences in the Importance of Physical Environment - Employees Length of Service	250
Table 8.18	ANOVA for Mean Differences in the Importance of Physical Environment - Employees by Salary Level	250

Table 8.19	Scheffe Multiple Range Test for Mean Differences in the Importance of Physical Environment - Employees Salary Level	251
Table 8.20	One-way ANOVA and T-test for Mean Differences in the Importance of Supervision by Organisational Type and Demographic Characteristics	252
Table 8.21	ANOVA for Mean Differences in the Importance of Supervision - Employees by Academic Qualifications	252
Table 8.22	Scheffe Multiple Range Test for Mean Differences in the Importance of Supervision - Employees Academic Qualifications	253
Table 8.23	One-way ANOVA and T-test for Mean Differences in the Importance of Pay and Benefits by Organisational Type and Demographic Characteristics	254
Table 8.24	ANOVA for Mean Differences in the Importance of Pay and Benefits - Employees by Age Groups	255
Table 8.25	Scheffe Multiple Range Test for Mean Differences in the Importance of Pay and Benefits - Employees Age Groups	255
Table 8.26	ANOVA for Mean Differences in the Importance of Pay and Benefits - Employees by Organisational Type	255
Table 8.27	Scheffe Multiple Range Test for Mean Differences in the Importance of Pay and Benefits - Employees by Organisational Type	256
Table 8.28	ANOVA for Mean Differences in the Importance of Pay and Benefits - Employees by Length of Service	256
Table 8.29	Scheffe Multiple Range Test for Mean Differences in the Importance of Pay and Benefits - Employees by Length of Service	257
Table 8.30	One-way ANOVA and T-test for Mean Differences in the Importance of Social Relevance by Organisational Type and Demographic Characteristics	258
Table 8.31	ANOVA for Mean Differences in the Importance of Social Relevance - Employees by Organisational Type	258
Table 8.32	Scheffe Multiple Range Test for Mean Differences in the Importance of Social Relevance - Employees by Organisational Type	259
Table 8.33	One-way ANOVA and T-test for Mean Differences in the Importance of Workplace Integration by Organisational Type and Demographic Characteristics	260
Table 8.34	ANOVA for Mean Differences in the Importance of Workplace Integration - Employees by Academic Qualifications	260
Table 8.35	Scheffe Multiple Range Test for Mean Differences in the Importance of Workplace Integration - Employees by Academic Qualifications	261

Table 8.36	Summary of ANOVA and t-tests for Mean Differences in the Importance of QWL Factors	262
Table 8.37	One-way ANOVA and T-test for Mean Differences in the Strength of Agreement About the Presence of Growth and Development by Organisational Types and Demographic Characteristics	263
Table 8.38	ANOVA for Mean Differences in the Strength of Agreement About the Presence of Growth and Development - Employees by Salary Level	264
Table 8.39	Scheffe Multiple Range Test for Mean Differences in the Strength of Agreement About the Presence of Growth and Development - Employees by Salary Level	264
Table 8.40	One-way ANOVA and T-test for Mean Differences in the Strength of Agreement About the Presence of Participation Opportunities by Organisational Types and Demographic Characteristics	265
Table 8.41	ANOVA for Mean Differences in the Strength of Agreement About the Presence of Participation Opportunities - Employees by Organisational Type	266
Table 8.42	Scheffe Multiple Range Test for Mean Differences in the Strength of Agreement About the Presence of Participation Opportunities - Employees by Organisational Type	267
Table 8.43	ANOVA for Mean Differences in the Strength of Agreement About the Presence of Participation Opportunities - Employees by Length of Service	267
Table 8.44	Scheffe Multiple Range Test for Mean Differences in the Strength of Agreement About the Presence of Participation Opportunities - Employees by Length of Service	268
Table 8.45	One-way ANOVA and T-test for Mean Differences in the Strength of Agreement About the Presence of Good Physical Environment by Organisational Types and Demographic Characteristics	269
Table 8.46	One-way ANOVA and T-test for Mean Differences in the Strength of Agreement About the Presence of Good Supervision by Organisational Types and Demographic Characteristics	270
Table 8.47	ANOVA for Mean Differences in the Strength of Agreement About the Presence of Good Supervision - Employees by Length of Service	270
Table 8.48	One-way ANOVA and T-test for Mean Differences in the Strength of Agreement About the Presence of Good Pay and Benefits by Organisational Types and Demographic Characteristics	271

Table 8.49	ANOVA for Mean Differences in the Strength of Agreement About the Presence of Good Pay and Benefits - Employees by Length of Service	272
Table 8.50	ANOVA for Mean Differences in the Strength of Agreement About the Presence of Good Pay and Benefits - Employees by Salary Level	273
Table 8.51	Scheffe Multiple Range Test for Mean Differences in the Strength of Agreement About the Presence of Good Pay and Benefits - Employees by Salary Level	273
Table 8.52	One-way ANOVA and T-test for Mean Differences in the Strength of Agreement About the Presence of Social Relevance by Organisational Types and Demographic Characteristics	274
Table 8.53	ANOVA for Mean Differences in the Strength of Agreement About the Presence of Social Relevance - Employees by Age Group	275
Table 8.54	Scheffe Multiple Range Test for Mean Differences in the Strength of Agreement About the Presence of Social Relevance - Employees by Age Group	276
Table 8.55	ANOVA for Mean Differences in the Strength of Agreement About the Presence of Social Relevance - Employees by Organisational Type	276
Table 8.56	Scheffe Multiple Range Test for Mean Differences in the Strength of Agreement About the Presence of Social Relevance - Employees by Organisational Type	277
Table 8.57	ANOVA for Mean Differences in the Strength of Agreement About the Presence of Social Relevance - Employees by Length of Service	277
Table 8.58	Scheffe Multiple Range Test for Mean Differences in the Strength of Agreement About the Presence of Social Relevance - Employees by Length of Service	278
Table 8.59	ANOVA for Mean Differences in the Strength of Agreement About the Presence of Social Relevance - Employees by Salary Level	278
Table 8.60	Scheffe Multiple Range Test for Mean Differences in the Strength of Agreement About the Presence of Social Relevance - Employees by Salary Level	279
Table 8.61	One-way ANOVA and T-test for Mean Differences in the Strength of Agreement About the Presence of Workplace Integration by Organisational Types and Demographic Characteristics	280
Table 8.62	Summary of ANOVA and t-tests for Mean Differences in the Strength of Agreement About the Presence of QWL Factors	281
Table 8.63	Multiple Regressions: The Effects of Demographic and Perceptions about the Presence of QWL Factors on Affective Commitment for the Total Sample	289

Table 8.64	Multiple Regressions: The Effects of Demographic and Perceptions about the Presence of QWL Factors on Continuance Commitment (High Cost) for the Total Sample	290
Table 8.65	Multiple Regressions: The Effects of Demographic and Perceptions about the Presence of QWL Factors on Continuance Commitment (Lack of Alternatives) for the Total Sample	292
Table 8.66	Multiple Regressions: The Effects of Demographic and Perceptions about the Presence of QWL Factors on Normative Commitment for the Total Sample	293
Table 8.67	Multiple Regressions: The Effects of Demographic and Perceptions about the Presence of QWL Factors on Affective Commitment for Employees in Government Departments	294
Table 8.68	Multiple Regressions: The Effects of Demographic and Perceptions about the Presence of QWL Factors on Continuance Commitment (High Cost) - Government Departments	296
Table 8.69	Multiple Regressions: The Effects of Demographic and Perceptions about the Presence of QWL Factors on Continuance Commitment (Lack of Alternatives) - Government Departments	297
Table 8.70	Multiple Regressions: The Effects of Demographic and Perceptions about the Presence of QWL Factors on Normative Commitment for Employees in Government Departments	299
Table 8.71	Multiple Regressions: The Effects of Demographic and Perceptions about the Presence of QWL Factors on Affective Commitment for Employees in Semi-Government Organisations	300
Table 8.72	Multiple Regressions: The Effects of Demographic and Perceptions about the Presence of QWL Factors on Continuance Commitment (High Cost) for Employees in Semi-Government Organisations	302
Table 8.73	Multiple Regressions: The Effects of Demographic and Perceptions about the Presence of QWL Factors on Continuance Commitment (Low Alternatives) for Employees in Semi-Government Organisations	303
Table 8.74	Multiple Regressions: The Effects of Demographic and Perceptions about the Presence of QWL Factors on Normative Commitment for Employees in Semi-Government Organisations	304
Table 8.75	Multiple Regressions: The Effects of Demographic and Perceptions about the Presence of QWL Factors on Affective Commitment for Employees in Private Organisations	306

Table 8.76	Multiple Regressions: The Effects of Demographic and Perceptions about the Presence of QWL Factors on Continuance Commitment (High Cost) for Employees in Private Organisations	307
Table 8.77	Multiple Regressions: The Effects of Demographic and Perceptions about the Presence of QWL Factors on Continuance Commitment (Low Alternatives) for Employees in Private Organisations	308
Table 8.78	Multiple Regressions: The Effects of Demographic and Perceptions about the Presence of QWL Factors on Normative Commitment for Employees in Private Organisations	310
Table 8.79	Summary of Regression Results : The Effects of demographic and QWL Variables on Organisational Commitment	312
Table 8.80	Comparison of Correlation Coefficients between QWL Factors and Affective Commitment	314
Table 8.81	Comparison of Correlation Coefficients between QWL Factors and Normative Commitment	315
Table 8.82	Comparison of Correlation Coefficients between QWL Factors and Continuance Commitment (High Cost)	315
Table 8.83	Comparison of Correlation Coefficients between QWL Factors and Continuance Commitment (Lack of Alternatives)	317
Table 9.1	Summary of Preferred QWL Factors and their Respective Items	326
Table 9.2	Summary of Perceived Presence of QWL Factors and their Respective Items	327
Table 9.3	Summary of Organisational Commitment Factors and their Respective Items	328
Table 9.4	Significant Relationships between Organisational Commitment and Demographic and QWL factors - Total Sample	340
Table 9.5	Significant Relationships between Organisational Commitment and Demographic and QWL factors - Government Departments	341
Table 9.6	Significant Relationships between Organisational Commitment and Demographic and QWL factors -Semi-Government Organisations	342
Table 9.7	Significant Relationships between Organisational Commitment and Demographic and QWL factors - Private Organisations	342

LIST OF FIGURES

		Page
Figure 2.1	Positions of Countries on Individualism x Power Distance Indices	34
Figure 3.1	Levels for Conceptualising and Measuring QWL	56
Figure 3.2	Job Characteristics Model	58
Figure 3.3	Quality Circles Programme Structure	64
Figure 3.4	How QWL Affects Productivity	69
Figure 4.1	Antecedents of Organisational Commitment	92
Figure 4.2	An Extended Model of Organisational Commitment	93
Figure 4.3	A Path Relationship Model of Organisational Commitment	96
Figure 4.4	Organisational Commitment and Turnover	107
Figure 4.5	A Model of Commitment-Turnover Relationship	108
Figure 5.1	The Research Model	122
Figure 5.2	The Sampling Process	141
Figure 5.3	Steps in Data Analysis	157
Figure 6.1	Scree Plot of Preferred QWL Items	177
Figure 6.2	Scree Plot of Perceived QWL Items	178
Figure 6.3	Scree Plot of Organisational Commitment Items	178
Figure 9.1	Antecedents of Affective Commitment	360
Figure 9.2	Antecedents of Continuance Commitment (High Cost)	361
Figure 9.3	Antecedents of Continuance Commitment (Lack of Alternatives)	362
Figure 9.4	Antecedents of Normative Commitment	362

CHAPTER ONE

INTRODUCTION

1.1 The Setting of the Study

Malaysia is a Southeast Asian country with a culturally diverse population of 18 million. The largest ethnic group is the Malay which forms 55% of the population, followed by the Chinese (34%) and the Indians (10%). In terms of religious life, Malaysia demonstrates a unique blend of Eastern religions - Islam, Confucianism, Buddhism, Taoism, Hinduism and also Animism. Efforts at nation-building, implemented since gaining independence from the British in 1957, led to the emergence of a national cultural pattern, though at a very slow rate. Many aspects of Malaysian life are still being conducted along the basis of racial or ethnic considerations.

In the economic sphere, Malaysia has undergone quite a remarkable transformation from the traditional, agricultural-based to the modern, industrial-based economy. The drive towards industrialisation is taken very seriously by the Malaysian government. This commitment to industrialisation is reflected in the various five-year development plans, especially since the First Malaysia Plan (1971-1975). Table 1.1 indicates the growing importance of the industrial sector in the Malaysian economy. The share of the industrial sector to GDP is estimated to reach about 30% in 1995.

Table 1.1 Malaysia: Gross Domestic Product by Industrial Origin, 1989 - 1995

(in RM million; RM4.00 = £1.00)

Sector/ Year	1989	1990	1991	1992	1993	1994 ^a	1995 ^b
Agriculture Forestry and Fishing %	14,768 (18.60)	14,827 (17.04)	14,828 (15.71)	15,468 (15.23)	16,077 (14.63)	16,155 (13.59)	16,527 (12.85)
Mining and quarrying %	7,383 (9.30)	7,757 (8.91)	7,944 (8.42)	8,075 (7.95)	8,031 (7.31)	8,175 (6.87)	8,338 (6.48)
Petroleum %	6,083 (7.66)	6,430 (7.39)	6,700 (7.10)	6,827 (6.72)	6,710 (6.10)	6,770 (5.69)	6,740 (5.24)
Manufacturing %	18,444 (23.23)	21,340 (24.52)	24,307 (25.75)	26,859 (26.45)	30,324 (27.59)	34,458 (28.98)	38,761 (30.13)
Construction %	2,380 (3.00)	2,832 (3.25)	3,240 (3.43)	3,619 (3.56)	4,023 (3.66)	4,545 (3.82)	5,122 (3.98)
Electricity, gas and water %	1,344 (1.70)	1,526 (1.75)	1,697 (1.80)	1,931 (1.90)	2,172 (1.98)	2,454 (2.06)	2,785 (2.16)
Transport, storage and communication %	4,839 (6.09)	5,487 (6.30)	6,079 (6.44)	6,479 (6.38)	6,998 (6.37)	7,627 (6.41)	8,322 (6.47)
Retail trade, hotel and restaurant %	7,687 (9.68)	8,807 (10.12)	10,068 (10.67)	11,181 (11.01)	12,298 (11.19)	13,587 (11.43)	14,946 (11.62)
Finance, insurance, real estate and business services %	6,771 (8.53)	7,759 (8.92)	8,733 (9.25)	9,659 (9.51)	10,761 (9.79)	11,943 (10.04)	13,259 (10.31)
Govt Services %	8,185 (10.31)	8,579 (9.86)	8,954 (9.49)	9,466 (9.32)	10,376 (9.44)	10,862 (9.14)	11,353 (8.82)
Other services %	1,522 (1.92)	1,678 (1.93)	1,831 (1.94)	1,983 (1.95)	2,146 (1.95)	2,318 (1.95)	2,503 (1.95)

Notes:

a. Estimates by Ministry of Finance, Malaysia

b. Forecasts by Ministry of Finance, Malaysia

Source : Adapted from Malaysia:Economic Report 1994/95

The contribution of the manufacturing sector to Malaysia's employment is significant. In 1970, the sector employed just about 9 % of the labour force. But with the introduction of the Second Malaysia Plan in 1971 the manufacturing sector continued to grow, and by the late 1980's it was the most important sub-section of the economy, having overtaken agriculture (O'Brien, 1994). In 1988 the manufacturing sector employed 987,000 people, or about 16 percent of the labour force. In 1995 the sector is estimated to employ about 26 percent of the labour force. The pattern of employment in Malaysia from 1988 to 1995 is shown in Table 1.2.

The ultimate aim of the industrialisation programme in Malaysia is embodied in the "*Wawasan 2020*" (Vision 2020), introduced by the present Prime Minister, Dr. Mahathir Mohamed, in 1990. The "vision" sets 2020 as the target year for Malaysia to achieve the status of a fully developed and industrialised economy.

Table 1.2 Malaysia: Employment Pattern (1988 - 1995)

Year	Employment (thousands)										Total						
	Agriculture, Forestry and Fishing		Mining and Quarrying		Manufacturing		Finance, Insurance, Business Services and Real Estate		Transport, Storage and Communication			Government Services ¹		Other Services ²		Construction	
	No.	%	No.	%	No.	%	No.	%	No.	%		No.	%	No.	%	No.	%
1988	1889.0	30.59	29.0	0.47	987.0	15.98	230.0	3.72	266.0	4.31	845.0	13.68	1590.0	25.74	340.0	5.51	6176.0
1989	1833.0	28.69	33.0	0.52	1171.0	18.33	253.0	3.96	278.0	4.35	847.0	13.26	1598.0	25.00	377.0	5.90	6390.0
1990	1738.0	25.99	37.0	0.55	1333.0	19.94	258.0	3.86	302.0	4.52	850.0	12.71	1744.0	26.08	424.0	6.34	6686.0
1991	1680.0	24.38	36.0	0.52	1470.0	21.33	279.0	4.05	314.0	4.56	854.0	12.39	1793.0	26.02	465.0	6.75	6891.0
1992	1585.0	22.34	36.0	0.51	1639.0	23.10	300.0	4.23	326.0	4.59	858.0	12.09	1845.0	26.00	507.0	7.14	7096.0
1993	1576.7	21.32	37.3	0.50	1742.0	23.55	331.7	4.48	344.0	4.65	863.5	11.67	1956.4	26.45	544.6	7.36	7396.2
1994 ³	1517.7	19.92	37.9	0.50	1877.5	24.64	346.2	4.54	362.2	4.75	868.1	11.39	2014.8	26.45	594.0	7.80	7618.4
1995 ⁴	1479.5	18.89	39.2	0.50	1997.4	25.50	362.0	4.62	387.1	4.94	872.0	11.15	2059.5	26.29	635.5	8.11	7832.3

Note

1. Includes public administration, health, education and defence.
2. Includes electricity, gas and water, wholesale and retail trade, hotels and restaurants and other services
3. Estimates by Economic Planning Unit, Malaysia
4. Forecasts by Economic Planning Unit, Malaysia

Source: Adapted from Malaysia: Economic Report 1994/95

As an effort to accelerate the industrialisation process, the Malaysian government has been encouraging investors from many parts of the world to invest in Malaysia. Foreign investment has played, and continues to play an important role in the economic development of Malaysia. Table 1.3 provides an indication as to the importance of foreign investment in Malaysia.

Table 1.3 Origins of Foreign Investment in Malaysia (1989-1994)

Country	Investment (in RM Million) ¹					
	1989	1990	1991	1992	1993	1994 ²
Australia	29.8	54.3	410.5	2125.6	52.1	164.7
Hong Kong	352.1	375.0	600.6	78.6	93.8	779.3
Indonesia	105.4	1,083.3	1,242.9	480.2	245.1	-
Japan	2,690.4	4,212.6	3,705.9	2,684.3	1,661.2	1,533.2
South Korea	188.9	650.4	1,818.7	99.4	111.1	26.2
Philippines	0.3	40.6	2.2	18.3	1.8	1.1
Singapore	914.7	895.3	1,114.3	442.4	521.9	529.8
Taiwan	2,159.9	6,339.1	3,607.2	1,500	894.2	1,574.4
United Kingdom	764.1	867.2	546.2	1,304.0	44.1	69.1
United States	320.8	567.3	1,798.4	3,298.7	1,757.7	452.4
Germany	309.5	126.9	193.3	72.8	64.9	38.1
Others ³	817.0	2,417.0	2,014.8	5,667.7	839.1	1,803.7

Notes:

1. RM (Ringgit Malaysia) is the unit for Malaysian currency; £1.00 approx. equals to RM4.00 (as 1 January 1995)
2. For the period of January to July only.
3. Includes West Asian countries, Austria, Belgium, Brunei, Canada, Denmark, France, The Netherlands, India, Italy, New Zealand, Norway, Sweden, Switzerland, Thailand and other unspecified countries.

Source: Malaysia: Economic Report 1994/95.

As can be seen from the table, Malaysia is playing host to investors as well as managers from various parts of the world. These investors, and more importantly the expatriate managers, have to gain an understanding of the Malaysian business environment if they are to be effective. The environment within each nation consists of four basic elements: legal, cultural, economic and political (Phatak, 1992). Table 1.4 shows the variables normally found in each element of the environment.

Table 1.4 Variables Associated with Elements of the Environment

LEGAL	CULTURAL	ECONOMIC	POLITICAL
Legal tradition Effectiveness of legal system Treaties with other nations Patent/trademark laws Laws affecting business firms	Customs, norms, values and beliefs Language Attitudes Motivation Social institutions Status symbols Religious beliefs	Level of economic development Population Gross National Product Literacy level Social infrastructure Natural resources Climate Membership in regional economic blocks Monetary and fiscal policies Nature of competition Currency convertibility Inflation Taxation system Interest rates Wage and salary levels	Form of government Political ideology Stability of government Strength of opposition parties and groups Social unrest Political strife Governmental attitudes towards foreign firms Foreign policy

Source: Phatak (1992).

Most of the companies investing in another country tend to adopt their home-country management practices (Horrungruang, 1989). This tendency of ethnocentrism may lead to problems. Davis and Rasool (1988) suggest that differing values of expatriate managers and host country employees are a factor in organisational conflicts. Expatriate managers applying their native management practices to host country employees may face problems in achieving their organisational objectives. To cope with these problems, such managers need to adapt their own management practices to the business conditions and cultural environments of host countries. They should adopt an attitude of "think globally, act locally".

Managers need to recognise that an individual's behaviour is significantly influenced by the situation in which it occurs. Lewin (1936) provided a formula to reflect this principle. He suggested that:

$$B = f(P,E)$$

In Lewin's formula, B refers to the behaviour, P to person and E to environment.

Lewin's principle suggests that in order for managers to elicit required behaviours from employees, the working environment must be as conducive as possible. The overall working conditions in an organisation are usually referred to as the quality of worklife (QWL). Wyatt (1987, quoted by Horrungruang (1989)), stated that QWL is

the result of socio-cultural conditioning. Therefore the way in which individuals perceive QWL depends on socio-cultural circumstances that affect them. Since the concept of QWL varies across cultures, it is important that studies should be conducted in countries, such as Malaysia, which host organisations from all over the world. An organisation which provides "good" QWL will gain more commitment from its employees.

It is important to realise that individuals choose to be a member of an organisation because they expect a work setting in which they can use their skills, satisfy their desires and achieve their goals (Mottaz, 1988). When the organisation is perceived as facilitating these ends, their desire to perform and to remain in the organisation is likely to increase. On the other hand, if the organisation is perceived as failing to provide sufficient opportunities along these lines, performance and loyalty are likely to decrease (Steers, 1977).

The present study is an effort towards a better understanding of the preferences of employees in a non-western culture, Malaysia, examining their levels of organisational commitment in relation to the perceived quality of worklife.

1.2 The Present Study

The research reported here examines the relative importance of the various factors that contribute to the quality of working life in public (government and semi-government) as well as private organisations in Malaysia. Respondents

were requested to rate the degree to which the factors are present in their organisations. The differences between the degree of importance and the degree of presence of the factors provide an indication of quality of worklife deficiency in a particular organisation. The various factors of quality of worklife are then analysed to predict its relationship with organisational commitment. The study utilised a cross-sectional survey design, with employees drawn from the government, semi-government and private organisations in northern Malaysia. The selected employees were of the same hierarchical levels. Employees at the lowest production or operational levels were selected to participate in this study.

Respondents were asked to complete a questionnaire which comprised the following aspects:

1. The degree of importance of various quality of worklife factors.
2. The degree of presence of the quality of worklife factors in their organisations.
3. An organisational commitment measure.
4. Demographic characteristics.

Data from the respondents were analysed statistically. Factor analytic techniques were used to examine the dimensions of quality of worklife (QWL) and organisational commitment. T- tests and analysis of variance (ANOVA) were used to test for statistical differences between preferred and perceived QWL and the differences in the mean scores of various demographic groups of the respondents.

Multiple regression techniques were used to examine the impacts of various quality of worklife factors on organisational commitment.

1.3 Organisation of the Thesis

This thesis is divided into eight further chapters.

Chapter Two specifically discusses the cultural relativity of management and organisational behaviour. Various studies conducted by researchers on cross-cultural management are reviewed and presented. Human beings in different cultures exhibit different responses to the same stimulus because they have different values. These value differences reflect differences in mental programming and national character (Hofstede, 1983). Various characteristics of Malaysian culture are also presented.

Chapter Three presents a literature review on the concept of quality of working life. The development of the concept is traced. The nature of relationships with various organisational outcomes is examined. Various strategies to improve the quality of work life, as suggested by previous researchers, are presented.

The concept of organisational commitment is presented in Chapter Four. The development of the concept in organisational research is examined. The concept has been shown to be both an independent and dependent variable. In this study, organisational commitment is treated as a dependent or outcome variable.

Chapter Five begins with a description of the research objectives, research questions and hypotheses adopted for this study. It also contains a description of the research design and sampling procedures employed in this research. The major classes of research designs are briefly discussed, and the rationale for the present choice is explained. Weaknesses and limitations of the research design are also acknowledged, and problems associated with cross-sectional research, especially with respect to causality and generalisability, are discussed. This chapter also contains the operational definitions of each of the study variables. A description of the instrument used in the study is also provided.

Chapter Six presents the reliability and validity analyses of the instruments used in the study. To assess the reliability coefficients of the research instruments, Cronbach alpha, which measures the internal consistency of the items making up the scale, is used. Construct validity of both the QWL and organisational commitment scales are assessed using factor analytic procedures.

Chapter Seven reports the results of descriptive analysis of the data. Means and standard deviations scores are used to indicate the rankings of both the importance and the perceived presence of the quality of work life factors, according to types of organisations and demographic characteristics of the respondents. Kendall's coefficient of concordance (W) and Kendall's coefficient of rank correlation (τ) are used to examine the degree of agreement in the rankings of the QWL factors between various categories of demographic variables. Paired t-tests are used to

examine for significant differences in the mean scores of QWL within categories of demographic variables.

In Chapter Eight, findings from the testing of hypotheses formulated for the present study are presented. T-test and analysis of variance (ANOVA) techniques are used to examine the statistical differences between the mean scores of QWL among various demographic variables. If ANOVA results indicate significant statistical differences between the groups on a demographic variable, Scheffe multiple comparison tests are then carried out to examine which particular pairs of groups differ. The nature of relationships between variables in the study is analysed by using techniques of multiple regressions. Beside examining the nature of relationships between QWL and organisational commitment in the total sample, separate regression analyses are also conducted for each type of organisations. These regression analyses are conducted to examine whether the relationships between QWL and organisational commitment are the same across organisations.

Chapter Nine summarises the conclusions drawn from the study. Discussions on the findings of the present research are also presented. In addition, the implications of the study, both for research and for practice, are considered.

CHAPTER TWO

CULTURAL RELATIVITY OF MANAGEMENT

2.0 Introduction

The importance of adopting a cross-cultural perspective in conducting psychological research was noted by Triandis (1980), when he stated that:

For a complete science of behaviour we need to tie the characteristics of the ecology with the characteristics of humans. Cross-cultural studies help us to learn how ecology and psychological variables are interrelated. (p. 35)

Triandis's statement is augmented by the considerable debate that has occurred recently over the transferability of American management methods and development programs to other countries' cultures (Tainio and Santalainen, 1983; Hofstede, 1980). Furthermore, Barrett and Bass (1976) are reported in Bassett (1991: 1) as observing that:

"generalisations about management and supervision in the cross-cultural context are limited ... concepts and constructs tend to shift in meaning as we move from one culture to another ... cross-cultural investigations have considerable utility for industrial and organisational psychology."

The importance of cross-cultural study was also recognised by Gill (1983) when he asserted that "understanding cross-cultural personality differences can help management and government to achieve more harmonious adjustment of expectations where managers are transferred from one country to another".

Recognising the importance of culture in management, this chapter reviews the literature relating to culture and management. It is divided into four sections. The first section presents a review of the concept of culture. This is followed by a discussion on the relationships of culture with various aspects of management. The third section provides an overview of Malaysian cultural characteristics. This is followed by the last section which reports some research findings on Malaysian management values, which form the context of the present study.

2.1 Culture

2.1.1. Definition of culture

There are various definitions of culture. In a broad sense, culture is defined as the symbolic-expressive aspect of human behaviour. This definition is sufficiently broad to take into account of the verbal utterances, gestures, ceremonial behaviour, ideologies, religions, and philosophical systems that are generally associated with the term culture (Wuthnow, Hunter, Bergesen, and Kurzweil, 1984:3).

From an anthropological perspective, culture is referred to as:

Patterned ways of thinking, feeling and reacting, acquired and transmitted mainly by symbols, constituting the distinctive achievements of human groups, including their embodiments in artefacts; the essential core of culture consists of traditional (i.e. historically derived and selected) ideas especially their attached values (Kluckhohn, 1951: 86).

Most management researchers subscribe to an ideational view of culture. They conceptualise culture as a set of ideas shared by members of a group (Jaeger, 1986). A definition which reflects this perspective is provided by Keesing (1974):

Culture is an individual's theory of what his fellows know, believe and mean, his theory of the code being followed, the game being played. Thus, culture is not an individual characteristic but rather denotes a set of common theories of behaviour or mental programs that are shared by a group of individuals.

From the manner in which culture is defined, it can be said that cultural processes involve several dimensions of behaviour such as: psychological dimensions of learning and consciousness; social interactions; and historical dimensions in the transmission of the consciousness or "mind-set" between groups and across generations (Beres and Portwood, 1979; quoted by Kamal Bashah, 1988).

2.1.2 Empirical Model of Culture

From the perspective of management, the definition and empirically derived model of culture by Hofstede (1980) is probably the most widely cited by researchers. According to Hofstede, culture is " the collective programming of the mind which distinguishes the members of one human group or category of people from another". (p. 21)

Hofstede's work is unique in that it uses an empirical survey to build a model of cultures (Jaeger, 1986). From the survey data of IBM employees world-wide, four dimensions of culture were extracted. The four dimensions which were found to differentiate national cultural groups were: power distance, uncertainty avoidance, individualism-collectivism, and masculinity-femininity. The interpretations of the cultural dimensions, provided by Hofstede (1984), are as follows:

1. Power Distance

As a characteristic of culture, power distance defines the extent to which the less powerful person in a society accepts inequality in power and considers it as normal. Inequality exists within any culture, but the degree of it that is tolerated varies between one culture and another.

2. Uncertainty Avoidance

It is defined as the extent to which people within a culture are made nervous by situations that they consider to be unstructured, unclear, or unpredictable, and the

extent to which they try to avoid such situations by adopting strict codes of behaviour and a belief in absolute truths. Cultures with a strong uncertainty avoidance are active, aggressive, emotional, security-seeking, and intolerant. Cultures with a weak uncertainty avoidance are contemplative, less aggressive, accepting of personal risk, and relatively tolerant.

3. Individualism-Collectivism

Individualism implies a loosely knit social framework in which people are supposed to take care of themselves and their immediate families only. On the other hand, collectivism is characterised by a tight social framework in which people distinguish between in-groups and out-groups; they expect their in-group (relatives, clans, organisations) to look after them, and in exchange for that they owe absolute loyalty to it.

4. Masculinity-Femininity

From cultural perspective, masculinity refers to the extent to which the dominant values in society are "masculine", that is, assertiveness, the acquisition of money and things, and not caring for others, the quality of life, or people (Jaeger, 1986). Masculine cultures use the biological existence of two sexes to define very different social roles for men and women. They expect women to serve and to care for the non-material quality of life, for children and for the weak.

Feminine cultures, on the other hand, define relatively overlapping social roles for the sexes, in which neither men nor women need to be ambitious or competitive. Both sexes may go for a different quality of life than material success and may respect whatever is small, weak and slow. In both masculine and feminine cultures, the dominant values within political and work organisations are those of men. In masculine cultures these political or organisational values stress material success and assertiveness. In feminine cultures they stress other types of quality of life, interpersonal relationships, and concern for the weak.

The index values and ranks for the fifty countries and three regions on the cultural dimensions are presented in Table 2.1.

Though the validity of the dimensions proposed by Hofstede has raised some doubts, most critics concede that they "make sense" (Triandis, 1982) and provided a "good framework" (Hunt, 1981). In a later study, using an instrument with a deliberate "eastern" bias, Hofstede (1991 and 1992) added a fifth dimension, labelled as "Long-Term Orientation" versus "Short-term Orientation".

Table 2.1 Index Values and Rank of Fifty Countries and Three Regions on Four Cultural Dimensions

Ranking: 1 = 'Lowest' 50 = 'Highest'

Country	Power Distance		Uncertainty Avoidance		Individualism		Masculinity	
	Index	Rank	Index	Rank	Index	Rank	Index	Rank
Argentina	49	18-19	86	36-41	46	28-29	56	30-31
Australia	36	13	51	17	90	49	61	35
Austria	11	1	70	26-27	55	33	79	49
Belgium	65	33	94	45-46	75	43	54	29
Brazil	69	39	76	29-30	38	25	49	25
Canada	39	15	48	12-13	80	46-47	52	28
Chile	63	29-30	86	36-41	23	15	28	8
Colombia	67	36	80	31	13	5	64	39-40
Costa Rica	35	10-12	86	36-41	15	8	21	5-6
Denmark	18	3	23	3	74	42	16	4
Ecuador	78	43-44	67	24	8	2	63	37-38
Finland	33	8	59	20-21	63	34	26	7
France	68	37-38	86	36-41	71	40-41	43	17-18
Germany (F.R)	35	10-12	65	23	67	36	66	41-42
Great Britain	35	10-12	35	6-7	89	48	66	41-42
Greece	60	26-27	112	50	35	22	57	32-33
Guatemala	95	48-49	101	48	6	1	37	11
Hong Kong	68	37-38	29	4-5	25	16	57	32-33
Indonesia	78	43-44	48	12-13	14	6-7	46	22
India	77	42	40	9	48	30	56	30-31
Iran	58	24-25	59	20-21	41	27	43	17-18
Ireland	28	5	35	6-7	70	39	68	43-44
Israel	13	2	81	32	54	32	47	23
Italy	50	20	75	28	76	44	70	46-47
Jamaica	45	17	13	2	39	26	68	43-44
Japan	54	21	92	44	46	28-29	95	50
Korea (South)	60	26-27	85	34-35	18	11	39	13
Malaysia	104	50	36	8	26	17	50	26-27
Mexico	81	45-46	82	33	30	20	69	45
Netherlands	38	14	53	18	80	46-47	14	3
Norway	31	6-7	50	16	69	38	8	2
New Zealand	22	4	49	14-15	79	45	58	34
Pakistan	55	22	70	26-27	14	6-7	50	26-27
Panama	95	48-49	86	36-41	11	3	44	19
Peru	64	31-32	87	42	16	9	42	15-16
Philippines	94	47	44	10	32	21	64	39-40
Portugal	63	29-30	104	49	27	18-19	31	9
South Africa	49	18-19	49	14-15	65	35	63	37-38
Salvador	66	34-35	94	45-46	19	12	40	14
Singapore	74	40	8	1	20	13-14	48	24
Spain	57	23	86	36-41	51	31	42	15-16
Sweden	31	6-7	29	4-5	71	40-41	5	1
Switzerland	34	9	58	19	68	37	70	46-47
Taiwan	58	24-25	69	25	17	10	45	20-21
Thailand	64	31-32	64	22	20	13-14	34	10
Turkey	66	34-35	85	34-35	37	24	45	20-21
Uruguay	61	28	100	47	36	23	38	12
United States	40	16	46	11	91	50	62	36
Venezuela	81	45-46	76	29-30	12	4	73	48
Yugoslavia	76	41	88	43	27	18-19	21	5-6
East Africa*	64	31-32	52	17-18	27	18-19	41	14-15
West Africa*	77	42	54	18-19	20	13-14	46	22
Arab Countries*	80	44-45	68	24-25	38	25	53	28-29

* Regions

Source: Hofstede (1983).

2.2 Culture and Management

Kedia and Rabi (1988) proposed that effectiveness of technology transfer depends on cultural compatibility between the two nations . Since technology includes not only information, rights, and services from a supplier organisation as well as skills, it can be argued that the transfer of management practices may also be subject to cultural constraints (Basset, 1991). Indeed, this is aptly described by Adler, Doktor and Redding (1986):

However defined, culture influences people's values, attitudes, and behaviours, which in turn collectively define their culture. Culture influences organisations through societal structures such as laws and political systems and also through the values, attitudes, behaviour, goals, and preferences of participants (clients, employees, and especially managers). Culture is certainly not identical to other primary societal structures, but it strongly influences their form and function. Specific educational, political, legal, and economic systems exist in a given society partly because of their cultural heritage. (pp. 299-300)

In this regard, this section provides a review of the relationships between culture and various aspects of management.

2.2.1 Interaction Between Culture and Organisations

National culture influences the structure and effectiveness of organisations. The influence of national culture is traceable through its effects on individuals who are members of the organisation and on individuals who interact with its members (Kamal Bashah, 1988). Oberg, as summarised by England and Negandhi, holds that:

If the ground rules under which the manager operates are different in different cultures and/or countries, then it would be fruitless to search for a common set of strategies of management ... cultural differences from one country to another are more significant than many writers appear to recognise..... A (universal claim) is hardly warranted by either evidence or intuition at this stage in the development of management theory (quoted by Kamal Bashah, 1988:25).

Hofstede (1981) provides four ways in which culture could affect organisations:

1. Effects on the Distribution of Power

The control of human behaviour necessary for organisations is achieved through an unequal distribution of power. Any organisation has its dominant coalitions and its other members; but the relative size of the dominant coalition, the fixity of its composition, and the distribution of power between it and the other members can vary widely under the influence of, among other things, culture. (p. 28)

2. Effects on the Values of the Dominant Coalitions

This is further divided into four different aspects of influence:

a. On the Organisational Goals and Objectives

The dominant coalition defines organisational goals and objectives and identifies the stakeholders whose interests have to be respected. Business organisations, for example, face a value issue with regard to social responsibility versus economic success to which they will respond according to the values of their elites. In Western countries, "success" is usually seen as the satisfaction of more demands, which leads to goals different from those societies that follow the Buddhist view of success as a reduction in demands. (p. 28)

b. On Decision-making Processes

These include values in the form of economic utilities and indifference curves and valuation criteria in accounting - for example in the fact that machines are usually considered as "investments," but people are not. (p. 28)

c. On Organisational Structure and Procedures

This influence is reflected in the number of hierarchical levels in organisations and the procedures adopted in certain aspects of management. (pp. 28-29)

d. On the Reward Systems

Members of the dominant coalition have been shown to rate people with similar value systems higher in competence. This has consequences for financial rewards

and promotion, and it is one of the processes by which the continuity of the dominant value system in the organisation is guaranteed. (p. 29).

3. Effects on the Values of Organisation's Members

The influence of culture on the non-elites who form the majority of organisation's members have an indirect but profound impact on the functioning of organisations:

a. On the Members' Compliance to Organisational Requirements

Members' involvement with an organisation can be alienative, calculative, or moral; the kind of power commonly used within organisation can be coercive, remunerative, or normative. Members will comply best with organisational requirements if there is congruence between type of power and type of involvement - coercive power for alienative involvement (as in a prison), remunerative power for calculative involvement (as in a business organisation), normative power for moral involvement (as in a church). These requirements would also determine the types of commitment exhibit by employees to the organisation. Employees who find that the values of the organisations are similar to theirs would probably be more affectively committed. Employees who are attracted by the rewards offered by the organisation would probably be more calculative in their decisions to remain. Business organisations assuming calculative involvement of workers alone and, consequently, using remunerative power may meet with growing alienation in more-educated workers valuing job-content factors besides money.

b. On the Methods of Regulation and Control Processes

The regulation and control processes adopted by organisation are determined by the values of its members. If people co-operate spontaneously, rules for co-operation can be minimal; if conflict is frequent, there should be rules for conflict resolution (Vickers, 1970 quoted by Hofstede, 1981;p. 29).

c. On the Members' Zone of Manageability

The degree of supervision in organisations depends upon the degree of manageability of members. In present-day China, work organisations can function with relatively little supervision because their members are very manageable. (P.30)

d. On the Accuracy of Communication

The accuracy of communication going on within the organisation is affected through the value consensus between the dominant coalition and other members and among members themselves. (p. 30)

e. On the Members' Support to Competing Elites

Members' support to the competing elites, is influenced by their values. This is usually guided by their own interests. (p. 30)

4. On the Values of Non-members

This includes values of members of competing organisations, interacting organisations, and governments, and of representatives of the press and the public at large. The values dominant in the environment of the organisation to a large extent determine what an organisation can and cannot do. Shifting values in society may pose problems for organisations.

The effects of culture on organisations, classified according to the four cultural dimensions, are shown in Tables 2.2, 2.3, 2.4 and 2.5.

Table 2.2 Consequences of Power Distance on Organisations

Low Power Distance	High Power Distance
Less centralisation	Greater centralisation
Flatter organisational pyramids	Tall organisational pyramids
Smaller proportion of supervisory personnel	Large proportion of supervisory personnel
Smaller wage differentials	Large wage differentials
High qualification of lower strata	Low qualification of lower strata
Manual work same status as clerical work	White-collar jobs value more than blue-collar jobs

Source: Hofstede (1984)

Table 2.3 Consequences of Uncertainty Avoidance on Organisations

Low Uncertainty Avoidance	High Uncertainty Avoidance
Less structuring of activities	More structuring of activities
Fewer written rules	More written rules
More generalists or amateurs	Larger number of specialists
Organisations can be pluriform	Organisations should be as uniform as possible
Managers more involved in strategy	Managers more involved in details
Managers more interpersonal oriented and flexible in their style	Managers more task-oriented and consistent in their decisions
Managers more willing to make individual risky decisions	Managers less willing to make individual and risky decisions
High labour turnover	Lower labour turnover
More ambitious employees	Less ambitious employees
Lower satisfaction scores	Higher satisfaction scores
Less power through control of uncertainty	More power through control of uncertainty
Less ritual behaviour	More ritual behaviour

Source: Hofstede (1984)

Table 2. 4 Consequences of Individualism on Organisations

Low Individualism	High Individualism
Involvement of individuals with organisations primarily moral	Involvement of individuals with organisations primarily calculative
Employees expect organisations to look after them like a family -- and can become very alienated if organisation dissatisfies them	Organisations are not expected to look after them from the cradle to the grave
Organisation has great influence on members' well-being	Organisation has moderate influence on members' well-being
Employees expect the organisation to defend their interests	Employees are expected to defend their own interests
Policies and practices based on loyalty and sense of duty	Policies and practices should allow for individual initiative

Source: Hofstede (1984)

Table 2.5 Consequences of Masculinity on Organisations

Low Masculinity	High Masculinity
Some young men and women want careers, others do not	Young men expect to make a career; those who don't see themselves as failures
Organisations should not interfere with people's private lives	Organisational interests are legitimate reason for interfering with people's private lives
More women in more qualified and better-paid jobs	Fewer women in more qualified and better-paid jobs
Women in more qualified jobs are not particularly assertive	Women in more qualified jobs are very assertive
Lower job stress	Higher job stress
Less industrial conflict	More industrial conflict
Appeal of job restructuring permitting group integration	Appeal of job restructuring permitting individual achievement

Source: Hofstede (1984)

2.2.2 Culture and Participative Management

Participation by employees in decisions relating to their work in the organisation has been advocated as a motivational tool by such noted management scholars as Argyris (1957), Vroom (1960) and Likert (1961). Employees who are given opportunities to participate would develop a sense of pride in their job. Participation could also enhance employees' sense of self-esteem, and therefore improve their perception of QWL. In relation to organisational commitment, Mowday et al. (1982) suggest that "employees should be included in decisions that affect their work because most individuals cannot identify strongly with an organisation when the leadership excludes them from decisions which they feel they have a stake or can make an important contribution". And strong identification with the organisation has often been cited as an important source of organisational commitment (e.g. Brown, 1969; Sheldon, 1971; Porter et al., 1974; Hall and Schneider, 1972). The degree to which employees wish to participate in the organisation is influenced by their cultural orientations.

The influence of cultural variables on participative management has been explored in some depth. Hofstede (1983) pointed out that power distance, uncertainty avoidance and individualism are linked to participative management. Cultures with low power distance tend to encourage participation. The acceptance of participative management in a particular culture depends upon its levels of uncertainty avoidance. This could help explain the popularity of informal and spontaneous forms of participative management in such low

uncertainty avoidance countries as Scandinavia, the Netherlands and the Anglo-American countries.

In contrast, countries with high uncertainty avoidance need a more formal, legally sanctioned forms of participation (Bassett, 1991). Hofstede also indicates that the individualism-collectivism dimension may partly determine the prevalence of participative management. Leadership in a high individualistic country, such as the United States could be said to be largely based on the premise that each individual seeks to satisfy his or her own interest. In contrast, leadership in collectivist countries tends to be more group-oriented. Thus, the practice of participative management in a particular culture is dependent upon the combination of the culture's cultural dimensions.

The influence of power distance and collectivism on the effectiveness of participative management can be seen in the following description of situational factors (Bassett, 1991: 43-44):

1. Sufficient time available for group decision making. A willingness to use work time for meetings.
2. The cost of participation must not be prohibitive, in view of the actual production hours lost due to group meetings.

3. A willingness to allow employees to identify problems and suggest solutions.
Management should trust the employees' integrity in problem-solving.
4. Employees should feel safe from retribution. Workers may participate in decision-making without fear of losing their rank, salary or jobs.
5. Commitment by management to listen and supply adequate feedback.
6. Managements' willingness to communicate and share organisational information.
7. Adequate training should be offered to employees to assist decision-making on qualified criteria.
8. Employee participation should not undermine the authority or perceived competence of managers.
9. Participation should be engaged by all employees and at all levels, including management.

2.2.3 Culture and Organisation Development

Organisation development is a prominent management tool of American origin and it is based upon a certain set of values relevant to that culture. The values of

organisational development are concisely expressed by Tannenbaum and Davis (1969) in their paper "Values, Man, and Organizations." These values are summarised in Table 2.6.

Table 2.6 Value Orientation of Organisational Development Practitioners

- | |
|---|
| <ol style="list-style-type: none">1. A view of man as essentially good2. Confirming individuals as human beings3. Seeing individuals as being in process4. Accepting and utilising individual differences5. Viewing the individual as a whole person6. Making possible both appropriate expression and effective use of feelings7. Authentic behaviour8. The use of status for organisationally relevant purposes9. Trusting people10. Making appropriate confrontation11. Willingness to risk12. Seeing process work as being essential to effective task accomplishment13. A much greater emphasis on collaboration |
|---|

Source: Adapted from Jaeger (1986).

The stated objectives of organisational development interventions in general, according to Tannenbaum and Davis, is to institutionalise those values in a group or organisation. The greater the initial acceptance of these values by the individuals in the target organisation, the easier the organisation development process will be and the greater the probability of ultimately institutionalising these values, all other things being equal (Jaeger, 1986). Jaeger, in examining the organisation development values on Hofstede's dimensions, suggested the following ratings:

Power distance : Low
Uncertainty avoidance : Low
Masculinity : Low
Individualism : Medium

By comparing the positions of countries on Hofstede's cultural dimensions and the positions of organisation development values, Jaeger (1986) found that the Scandinavian countries (Denmark, Norway and Sweden) are the closest. Thus it can be generally expected that organisation development is better accepted there. On the other hand, for a number of countries the scores on Hofstede's dimensions are polar opposites to those of organisation development values. In these countries, organisational development would be most difficult to implement (Jaeger, 1986). Examples of cultural problems in the acceptance of organisational development are illustrated in a volume by Mirvis and Berg (1977). One such example is provided by Steele (1977) regarding the failure of organisational development in the United Kingdom. Steel concluded that some of the key assumptions underlying organisational development clash with British culture. The cultural factors in the United Kingdom that were found to undermine organisational development efforts included a norm of avoidance of "unsuitable topics," a norm favouring security and stability versus the unknown resulting from "rocking the boat," a sense of fatalism, and a deeply rooted class structure that goes against the value of ownership of one's own personal space (Jaeger, 1986).

2.2.4 Culture and Motivation

There is a great variety of theories of human motivation. These theories, as well as the practices of motivating people, can both be related to the individualism-collectivism dimension (Hofstede, 1983). Motivation theories which originate from the United States reflect the individualistic nature of its culture. This is evident

in the postulation of needs such as "self-actualisation" and "self-respect" in those theories. In more collectivist cultures, people are more concerned for their group membership: where their collective loyalty may be directed towards a larger unit, department or organisation. Here, "saving face" or avoiding "shame" within their group is a prime motivator which is not evident in most western cultures (Hofstede, 1983).

Uncertainty avoidance and masculinity are strong motivational components in American theory and practice because the need to achieve, perform, assert (masculine) and take risks (weak uncertainty avoidance) is acceptable and desired by the society. In high masculinity countries with strong uncertainty avoidance, risk taking is not encouraged; instead security and performance become powerful motivators (Hofstede, 1983; Kamal Bashah, 1988).

2.3 Malaysian Cultural Characteristics

Malaysia's positions on Hofstede's cultural maps, especially on the Power Distance and Collectivism dimensions, are significantly different from those of the United States', Great Britain's and most of the Western countries'. Figure 2.1 shows that Malaysia (MAL) is located in the "Large Power Distance - Low Individualism" quadrant whereas most of the Western countries are in the "Small Power Distance - High Individualism" quadrant. Most management practices and theories are developed in the Western cultures, particularly the United States. There may therefore be difficulties in applying these management theories and practices in

Malaysia. Table 2.7 shows the dominant cultural factors in Malaysia and their potential implications on managerial practices.

Table 2.7 Dominant Cultural Factors in Malaysia and their Managerial Implications

Cultural Factors	Managerial Implications
<i>CULTURAL BACKGROUND</i>	
Malays comprise over 50 percent of the population but are a minority in some professions; historically each race has played a distinct role in society.	Training and development of Malays for certain professions; affirmative action programmes; local ownership, partnership and joint ventures.
<i>RELIGION</i>	
1. Predominant religions are Islam, Buddhism and Hinduism; some religious customs and traditions clash with Western managerial practices. 2. Religious symbols and meanings are diverse and conflicting.	1. Managers may be slow to adopt Western managerial practices such as participatory management and decentralisation. 2. Inter-racial and inter-departmental teams are used to create promotional materials for the firm.
<i>SOCIAL PRACTICES</i>	
1. Different values of debt are seen (i.e. Chinese use debt widely; Malays see debt as shameful). 2. Muslims attend prayer sessions in the mosque every Friday. 3. Management is paternalistic. 4. Malaysians take problems to third party.	1. A "cafeteria" of incentives (i.e. low interest rates, credit purchasing, "give-aways". 2. Mosque as a meeting place for business. 3. Employees are dismissed only if not trusted. 4. Managers are not confrontational.
<i>LANGUAGE</i>	
1. Four major languages are spoken (English, Malaysian, Chinese and Tamil). 2. Not all people in the country are fluent in more than one language. 3. Different naming systems and use of titles indicating marital status, social position and religion are part of the special vocabulary.	1. Fluency in at least two languages: Malaysian and English. 2. Language training for employees; documentation and addresses are made in most appropriate language. 3. Managers take care in addressing people properly; "first name basis" is meaningless.

Source: Adapted from Garsombke and Garsombke (1993)

There is very little research on Malaysian values that could be related to management and organisational behaviour in Malaysia. Most of the studies are historical and descriptive in nature. Since Malaysia is made up of three distinct

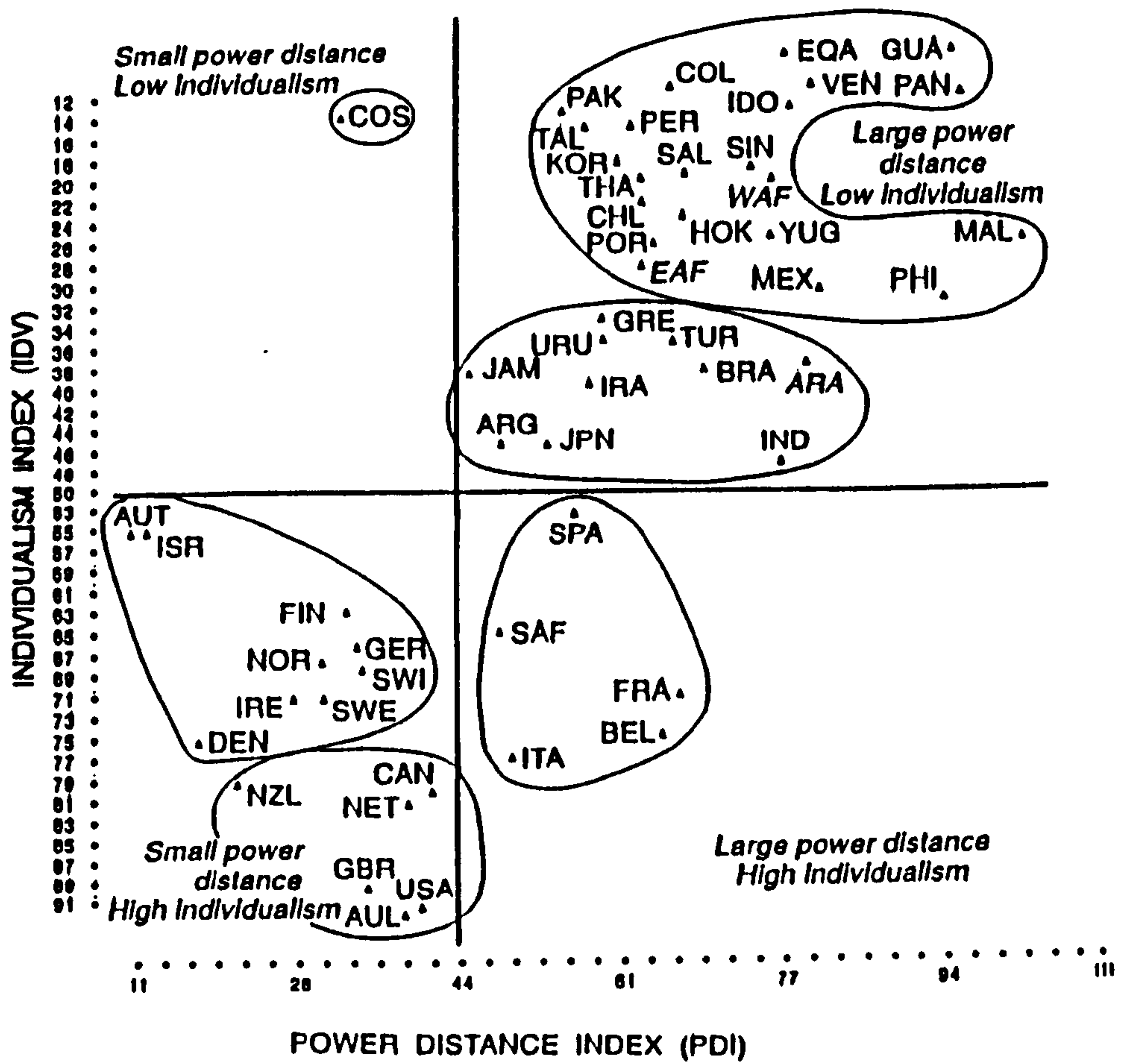


Figure 2.1 Positions of Countries on Individualism x Power Distance Indices
 (Source: Hofstede, 1983)

ethnic groups, each with its own cultural traditions, the following discussion is divided along the ethnic categorisation of the Malaysian society.

2.3.1 The Malays

With respect to administration, the Malay value systems are based on the foundation of customary leadership of the Sultans (rulers). The traditional value system ("*adat*"), feudalism and patronage are the three most important ingredients in this customary leadership. Traditional leaders and elders are usually treated with respect. The authoritarian style of leadership is widely endorsed and accepted by the community (Mano, 1986 ; Kamal Bashah, 1988). But due to changes within a rapidly modernising Malay society, there has been a growing intolerance of the abuse of privileges by the Malay royal families (Kok, 1994)¹.

The traditional Malay family is governed by customs and norms, familism and village-centred community organisation. The community provides the frame of reference for individual values. A Malay is expected to be kind and helpful to his/her fellow members. The principle which guides the conduct of an individual in relation to his/her community is "*budi*" (dignity; consideration; contribution). The concept of "*budi*" forms the basis of the Malays ethical system (Tham, 1971).

The value orientations of the Malays, as summarised by Tham, are as follows:

¹ Prior to 1993, the Sultans in the Malay states of Malaysia were protected from lawsuits by virtue of their royal immunity. In 1993 the Malaysian Parliament, after several incidents involving the royalty, passed a Bill to remove immunity from the rulers. This led to the establishment of a Special Court which has exclusive jurisdiction to try all offences committed by the rulers. For further details on the crisis which led to the introduction of the Bill see Harding (1993) and Kok (1994).

- emphasis on mutual help and adaptation
- kinship affiliation
- loyalty to ruler
- exclusiveness of the aristocracy
- submissiveness
- respect and adherence to customary traditions.

Men and women in a Malay society are therefore expected to consider their community's interests before taking any action. They must pay particular attention to the customary traditions of their community. The importance of these customary traditions ("*adat*") in the Malay society is reflected in the proverb "*Biar mati anak jangan mati adat*" which literally means "Let your child die, but not the customs".

Another aspect which is quite dominant among the Malays is their acceptance of fate and the predetermination of one's sustenance in life. Uncritical acceptance of these values leads to low motivational drive and low need for achievement.

2.3.2 The Chinese

The Chinese (and the Indians) were initially brought into Malaya (Malaysia's former name) in the late 1800's to work in the tin mines. They came with their cultural heritage. The Chinese are associated with such traits as having, "initiative, stamina, resistance, frugality and thrift, power, vitality, common sense and the will to survive" (Mano, 1986; Chatterjee, 1987). These traits, combined with their inherent business acumen, made the Chinese the wealthiest ethnic

group in Malaysia. They established prominent enterprises such as Hong Leong, Boon Siew and Lee Rubber. Most of these enterprises are family or clan oriented and will remain in tight control and be passed on to successive generations (Kamal Bashah, 1988). A fundamental aspect of the Chinese culture is their ability to twine the family as a sociological unit and as a business enterprise (Mano, 1986). One of the characteristics of Chinese family business is the nominal salaries paid to employees. The employees are however, paid additional benefits if the business prospers (Siew Sin, 1986).

In terms of managerial characteristics, the Chinese tend to be rigid and subscribe to clearly established lines of authority and position descriptions (Tipgos, 1978). Concern for face is another salient characteristic of the Chinese. This concern is derived from a socialisation process which uses shaming techniques to inculcate high sensitivity to group belonging and hence to peer opinion (Redding and Ng, 1982). Two dimensions in the Chinese concept of face are "*lien*" and "*mien-tzu*". The distinction between these two is as follows (Redding and Ng, 1982 quoting Hu, 1944). *Lien* refers to good moral character. It carries with it the idea of being a "decent human being". It is more ascribed than achieved. *Mien-tzu*, as well as meaning literally the face, carries with it the idea of reputation based on one's own efforts. It is useful but not essential to life. It is more achieved than ascribed.

2.3.3 The Indian

The Indians first came to Malaya as plantation workers. The term "Indian" is used as a generic name to refer to various sub-groups such as the Sri Lankans, Bangladeshis and Pakistanis. The Indians, like the Malays, value the extended family with hierarchically structured authority (Chatterjee, 1987). They are associated with the following traits (Mano, 1986):

- loyal
- hard working
- egalitarianism
- organisational abilities

2.4 Malaysian Management Values: Findings from Past Research

Employees' perceptions about their organisations are formed through their contacts with the managers. The values the managers are therefore important in understanding the attitudes of non-supervisory employees. In this context, this chapter now reviews some of the dominant management values in Malaysia.

Redding (1976), in a comparative study of psychological needs of managers in Southeast Asian countries (Hong Kong, Japan, Philippines, South Vietnam, Thailand, Singapore and Malaysia), provided the following findings:

Need Fulfilment: This indicates the extent to which a need is being met at work. The results indicate that the scores for need fulfilment of managers in those countries (except Philippines) were distinctively lower than those obtained from their counterparts in the United States and Europe. Esteem and autonomy need fulfilment in particular was lower for the Asian managers. Malaysians indicated security need fulfilment as the highest, followed by social, esteem, self-actualisation and autonomy need fulfilment.

Need Satisfaction: This indicates the extent to which the fulfilment meets the managers' own expectations. Malaysian managers indicated that they are most dissatisfied with their satisfaction of their need for self-actualisation, followed by autonomy, security, social, and esteem needs.

Need Importance: This refers to the managers' ratings of need priorities. Malaysian managers rate security as the most important, followed by self-actualisation, social, autonomy, and esteem needs.

In helping to understand superior-subordinate relationships, the findings indicate that there is a greater authoritarian stance taken in Malaysia, Indonesia, the Philippines and Thailand than in Western countries. This trend (though to a lesser extent) is also evident in Singapore and Hong Kong (Redding, 1976).

Kamal Bashah (1988) considers Nik Rashid's (1977) empirical research on the work value systems of Malaysian managers as a comprehensive and landmark investigation of Malaysian management values and beliefs. The study was based on the perceptions of 391 managers (180 Malay, 164 Chinese and 47 Indian and others) sampled from 112 government and private sector organisations. Nik Rashid tested the seven levels of value systems, as advanced by Graves (1970), on Malaysian managers. The value levels are (McKenna, 1994):

1. Reactive

This is the lowest level of the value systems. It refers to a condition in which individuals do not possess any meaningful value system which could influence their relationships with others. Individuals classified as reactive rarely inhabit formal organisations. Their basic orientation is to value fundamental physiological needs, and they are oblivious to their inner self and people around them.

2. Tribalistic or traditionalistic

These individuals value dependence, and are strongly influenced by tradition and the power wielded by authority figures. They respect the elderly and authority figures and work best with a considerate boss.

3. Ego-centric or exploitative

These individuals display determined individualism, and are easily seduced by power. They tend to be selfish and aggressive. They scheme deliberately rather than passively accepting their world.

4. Conformist or sacrificial

These individuals would like other people to accept their values and have difficulty in accepting people with values that are opposed to their own. They also have low tolerance for ambiguity. They usually comply with rules and regulations but may react forcefully when their values are violated. They prefer authoritarianism to autonomy. In terms of Hofstede's typology, these conformist or sacrificial values are associated with collectivism and high uncertainty avoidance.

5. Manipulative or materialistic

These individuals tend to be materialistic, with a strong penchant for significant status and recognition. They display behaviour which is manipulative to achieve worldly ends. They work best with a boss who does not question them as long as work is completed.

6. Sociocentric or sociocratic

These individuals value the gratification of social needs, and consequently place being liked and relating well to people higher than personal achievement. They value co-operation more than competition. This is quite similar to feminism and collectivism in Hofstede's cultural typology.

7. Existential

These individuals do not take kindly to restrictive bureaucratic practices or symbols of status. They find it easy to relate to people with values different from their own and display high tolerance for ambiguity. They are goal-oriented towards organisational success, but have patience and concern for colleagues. They will do well if the boss gives them access to information and provides sufficient autonomy.

Among the findings of Nik Rashid's study are the following:

- All groups of Malaysian managers have an equally tribalistic outlook. This is contrary to the widely held belief that the Malays are more tribalistic.
- Malay managers are more egocentric than the Chinese and other managers. Again, this finding contradicts the accepted notion that the Malays are shy and easily embarrassed in their interactions.

- Chinese managers are more conformist than their Malay counterparts. This is due to the inherently clannish nature of the Chinese society (Kamal Bashah, 1988).
- All the three groups of Malaysian managers (Malay, Chinese and "others") display an almost equal level of manipulative or materialistic values. But in terms of managing their company profits, the Chinese are more manipulative than the Malays. On the other hand, compared to the Chinese, the Malays are more manipulative of company rules.
- On the overall sociocentric value system, the three groups of Malaysian managers do not show a significant difference. But in expressing their preferences for superiors, the Malays tend to be more sociocentric than the other groups.
- Malay managers are more existential toward values of company loyalty than the Chinese and other managers as long as this does not require them to sacrifice their principles. Loyalty to the organisation is highly valued by the Chinese. Nik Rashid also found that all three groups of Malaysian managers prefer bosses that trust people, but Malay managers primarily prefer the sociocentric leadership style, i.e. the leader that "gets them working together in close harmony by being more a friend than a boss" (Kamal Bashah, 1988:118). This relates well to a description that Asians consider respect, courtesy and harmony as important criteria in judging others (Hamzah-Sendut, Madsen and Thong, 1989). The Malays

are very sensitive and concerned about getting along with others and place great significance on showing mutual respect (Kamal Bashah, 1988).

2.5 Summary and Conclusions

This chapter provides a review of the concept of culture from various perspectives, followed by an examination of its influences on management theories and practices. A general review of Malaysian cultural characteristics, as well as some research findings on Malaysian management values, were presented. Cultural differences between Malaysians and Western societies may pose some limitations in applying the management concepts and practices developed in the West. Malaysia has been characterised as a collectivist society. Therefore management practices which promote individualism in the workplace may not be readily accepted. Strategies to improve QWL which have been proposed by Western management scholars based on the values of their societies may not be totally applicable in the Malaysian context. This is perhaps particularly due to the fact that the definition of QWL itself is influenced by cultural factors. In a collectivist society, it is reasonable to expect that Malaysian organisations which devise strategies that promote integration and co-operation among employees will gain more commitment.

Within the Malaysian society itself there are some major cultural differences between the main ethnic groups, especially in their religious beliefs and practices. These cultural differences may result in different work preferences among employees of different ethnic groups. The Malays, for example, may not be very

willing to work in organisations that are involved in gambling or alcohol related activities because these are forbidden by Islam.

It has been shown that culture plays a very dominant role in organisational management. It is therefore appropriate that studies of organisational behaviour should be conducted in different cultural contexts so that we may examine the universality of its theories. The next chapter presents a review of the concept of QWL which is a variable of interest in the present study.

CHAPTER THREE

QUALITY OF WORKLIFE

3.0 Introduction

The concern for quality of life in the workplace has been articulated in management thought since McGregor (1960) introduced Theory X and Theory Y to describe two styles of management. Managers who subscribe to Theory X believe that workers in general are lazy, dislike responsibility, are self-centred and are strictly motivated by extrinsic rewards. Therefore managers should devote their energy toward directing and controlling people. In contrast, Theory Y managers believe that workers are inherently not lazy and self-centred. Workers can enjoy responsibility and are motivated by intrinsic rewards, such as self-esteem, belongingness, social recognition and self-actualisation. Managers who subscribe to the assumptions of Theory Y focus their efforts to facilitate the achievement of both the workers' and the organisational goals.

The phrase "quality of worklife" was first introduced in the United States in the late 1960's to address the problems of poor quality of life at the work place (Davis, 1977). The concern with quality of worklife originated from a series of studies carried out by Trist and his co-workers at the Tavistock Institute in London. The findings of these studies serve as the foundations for socio-technical systems theory on which many current efforts to reform work organisations are based (Huse and Cummings, 1985).

Since the meaning attributed the term has undergone considerable change and development (Huse and Cummings, 1985) a variety of concepts have been used to map out the conditions of QWL. Earlier the term referred to morale and later to human relations, organisation development, redesign of work systems and industrial democracy (Sayeed and Sinha, 1981). In reviewing the concept of quality of worklife, this chapter is divided into three sections. The first section focuses on the definition and review of QWL and related management techniques. The second section discusses some of the important relationships between QWL and selected organisational variables. The last section provides a summary of the present chapter.

3.1 Definitions and Review of QWL and Related Management Techniques

Though the interest in quality of worklife has been increasing among both researchers and practitioners, there is no general consensus concerning the meaning of the term. It appears that quality of worklife means different things to different people (Horrungruang, 1989). The term is extremely diffuse and may even mean different things to the parties (employees, employers, outside observers, and change consultants) involved in a single program (Ondrack and Evans, 1986). It has been suggested that quality of worklife is better understood as an interacting set of issues and processes directed at improving life at work (Nurick, 1985).

Despite the lack in agreement over its definition, quality of worklife is based on one central philosophy which views workers as capable of learning (Camman, 1984) and organisations as learning environments (Cherns and Davis, 1975). Learning

organisations are those that make continuous efforts to improve service effectiveness and productivity, staff morale and resource acquisition. This view emphasises that workers are assets, with abilities and ideas that, if given opportunity to develop, will result in enhanced personal growth as well as enhancing the quality of interaction between workers and clients from which service effectiveness results (Gowdy, 1988). In addition, Mirvis and Lawler (1984) posit that:

Despite the differences in conception, terminology and emphasis, two sets of criteria are common to definitions of QWL. The first set encompasses characteristics of the work and work environment that influence employees' work lives and the second set consists of criteria of employee welfare and well-being. (p.199)

Quality of worklife was first defined in terms of people's reaction to work, particularly individual outcomes related to job satisfaction and mental health. Using this definition, QWL focuses primarily on the personal consequences of the work experience and how to improve work to satisfy personal needs (Huse and Cummings, 1985). Later, QWL was defined in terms of specific techniques and approaches used for improving work. It was viewed as synonymous with methods such as job enrichment, autonomous work groups and labour-management committees (Nadler and Lawler, 1983).

3.1.1 QWL as a variable

As a variable, QWL is employed as an overall term for outcomes from a job (Cotton, 1993). From this perspective, QWL can be described as "the degree of excellence in work and working conditions, which contributes to the overall satisfaction of the individual and enhances individual as well as organisational effectiveness" (Sayeed and Sinha, 1981:16). Taylor and Bowers (1972) refer to it as the "phenomenological experience of people at work", focusing primarily on the quality of working life from the perspective of the individual employee.

The definition by Guest (1979:76) is probably the most representative of this perspective. According to Guest

Quality of worklife is a generic phrase that covers a person's feelings about every dimension of work including economic rewards and benefits, security, working conditions, organisational and interpersonal relationships, and its intrinsic meaning in a person's life.

From the definition by Guest above, it can be said that the goals of quality of worklife encompass both the extrinsic as well as the intrinsic aspects of work.

Walton (1973) suggests that the factors characterising quality of worklife can be analysed at three levels, namely : organisational conditions, employee attitudes and behavioural symptoms.

Level One : Organisational Conditions

At the organisational level, Walton proposed eight broad types of attributes which influence employees' level of satisfaction with their working lives. These are as follows:

1. Adequate and Fair Compensation

Adequate income: Does the income from full-time work meet socially determined standards of sufficiency? Does it meet the subjective standards of the recipients?

Fairness: Does the pay received for certain work have an appropriate relationship to the pay received for other work?

2. Safe and Healthy Working Condition

Reasonable hours: Enforced by a concept of a normal work period beyond which premium pay is required.

Physical conditions: Conditions that minimise risk of illness and injury.

Age limits: Imposed where work is potentially destructive to the welfare of persons below a certain age.

3. Immediate opportunity to use and develop human capacities

Autonomy: Does the work allow for substantial autonomy and self-control relative to external control?

Skill variety: Does the work allow one to exercise a wider range of skills and abilities rather than repetitively applying the same narrow skill?

Information and perspective: Is one allowed to obtain meaningful information about the total work process and about the results of one's own action, so that one can appreciate the relevance and consequences of one's actions?

Task identity: Does one's work embrace a whole task or is it a fragment of a meaningful task?

Planning: Does one's work embrace planning as well as implementation activities?

4. Future opportunity for continued growth and security

Development: To what extent does one's current activities contribute to maintenance and growth rather than obsolescence?

Application prospects: To what extent does the expanded or newly acquired knowledge and skills apply to future work assignments?

Advancements opportunities: Does the organisation provide opportunities for one to advance in his/her career?

Security: To what extent does one feel secure in employment or current income?

5. Social integration in the work organisation

Freedom from prejudice: To what extent does one feel accepted for one's work-related traits, skills, abilities and potentialities without respect to race, sex, creed and national origin and without regard to life styles and physical appearances that are not reasonably related to work performance?

Egalitarianism: To what extent does the members of work organisations not highly stratified in terms of status symbols and steep hierarchical structures?

Mobility: To what extent does upward mobility exist in the work organisation, as reflected by percentage of members who potentially could qualify for the next higher level?

Supportive primary group: To what extent is membership in a face-to-face work group marked by patterns of reciprocal help, social-emotional support and affirmation of the uniqueness of each individual?

Community: Do the organisational members feel a sense of community, extending beyond face-to-face work groups?

Interpersonal openness: Do people relate to one another with openness about their ideas and feelings?

6. Constitutionalism in the work organisation

Privacy: Do people have a right to personal privacy, for example, precluding the employer from attending to information about the person's off-the-job behaviour or about actions of other members of the employee's family?

Free speech: Does one have the right to openly dissent from the views of one's organisational superiors without fear of reprisal?

Equity: Does one have the right to equitable treatment under whatever scheme exists for employees, including pay, symbolic rewards and job security?

Rule of law and due process: To what extent is the governance of the organisation by "rule of law" rather than by the rule of people, with respect to such matters as equal opportunity, privacy, dissent and other organisational rules? Does one have

access to due process, for example a right to appeal to a higher authority, impartial judge and rules of evidence?

7. Work relative to the total life space

Balanced role for work: Do the work schedule, career demands and travel requirements regularly usurp leisure and family time?

8. Relevance to larger society

Social responsibility: Does the employee perceive the organisation to be socially responsible in its products, waste disposal, marketing tactics, employment practices, relations to under-developed countries, participation in political campaigns, etc.?

From the perspective at this level, quality of worklife means the perception of an employee towards his/her organisation with respect to the dimensions mentioned above.

Level Two: Employee Attitudes

According to Walton (1973) the perspective of quality of worklife can be shifted from the organisational conditions to the psychological consequences of the conditions. From his in-depth interviews, probing employees' feelings about the work situation, Walton encountered the following types of feelings:

- 1 Security versus insecurity in economic sense
Adequacy versus inadequacy as a provider
- 2 Safe versus vulnerable in physical sense
- 3 Stimulated versus apathetic about work content
Influential versus powerlessness with regards to work related matters.

- 4 Optimistic versus apprehensive with regard to career
- 5 Related to versus isolated from other people
Appreciated versus unappreciated as a person
- 6 Sense of justice versus injustice or inequity
Feeling of freedom versus controlled or constrained
- 7 Satisfaction versus guilt with regard to the balance or imbalance between
career and family
- 8 Pride versus shame with regard to social significance of product and
employer.

The specific attitudes listed above can be summarised by the following general feelings:

1. The feeling about self, ranging from high to low self-esteem.
2. The feeling about the job situation, ranging from involvement to alienation.

Level Three: Behavioural Symptoms

Walton suggests some consequences to the negative feeling-states just discussed. Aggressiveness is hypothesised to be the product of alienation. The aggressive responses may be passive or active, but in either event they can take forms that detract from performance.

Passive aggressive responses include turnover, absenteeism, tardiness, inattention on the job resulting in accidents and mistakes; lower energy and lower motivational levels; and passive resistance to rules.

Active aggressive responses include highly militant union positions in formal labour relations procedures such as grievances, negotiations and strikes; concerted worker rebelliousness reflected by wildcat strikes and membership failure to ratify contracts; individual acts of violence, sabotage, including destruction of property and physical attacks on persons.

Similarly, low self-esteem on the job is hypothesised to create harm to the employee's physical health and contribute to social conflict or disorganisation in the person's family and community life.

The three levels in which quality of work life can be conceptualised and measured are summarised in Figure 3.1

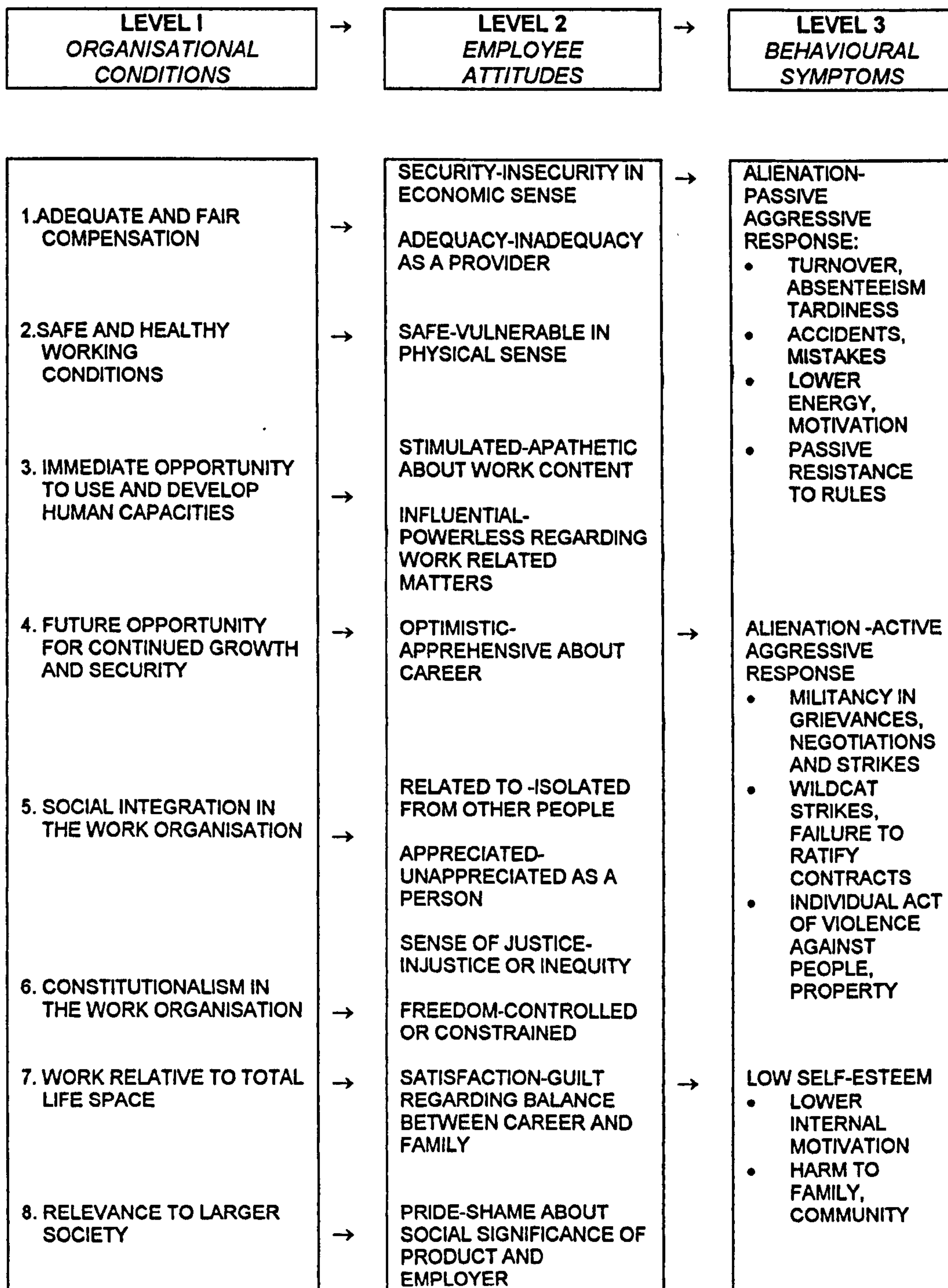


Figure 3.1 Levels for Conceptualising and Measuring QWL
(Source: Adapted from Walton, 1973)

3.1.2 QWL as an approach

Quality of work life has also been defined in terms of specific techniques and approaches used for improving work. In this respect, quality of work life is viewed as an intervention for improving co-operation between labour and management and for employee involvement. It is basically "permitting every employee to develop and to take on responsibility" (Sorensen, Head, and Stotz, 1985). Viewed in this manner, QWL is usually regarded as an organisational development (OD) intervention. OD is "a systemwide application of behavioural science knowledge to the planned development and reinforcement of organisational strategies, structures and processes for improving an organisation's effectiveness" (Huse and Cummings, 1985). Among the management techniques popularly associated with quality of worklife are: job enrichment, participative management, quality circles, autonomous work groups and empowerment. These techniques are briefly reviewed in the following sections.

3.1.2.1 Job Enrichment

Job enrichment is considered as an approach for formalising employees' involvement because it involves a conscious effort to increase the autonomy and responsibility of job incumbents (Cotton, 1993). One of the best known models of job enrichment is probably the "Hackman-Oldham Job Characteristics Model" (Cotton, 1993). A brief overview of the model is presented here.

Job Characteristics Model

Hackman and Oldham suggested that the degree to which jobs are motivating can be assessed through five core job characteristics: skill variety, task identity, task significance, autonomy, and feedback (Figure 3.2). These core features of the job will influence certain important, or "critical" states in individuals. These states will themselves then determine people's attitudes and behaviours towards the job. The model suggests therefore that the "core job dimensions" will influence the "critical psychological states", which in turn will influence the "personal and work outcomes". The strength of this relationship is moderated by the particular individual's "growth need strength" (Makin, Cooper and Cox, 1989), knowledge and skills and satisfaction with the work context (Cotton, 1993).

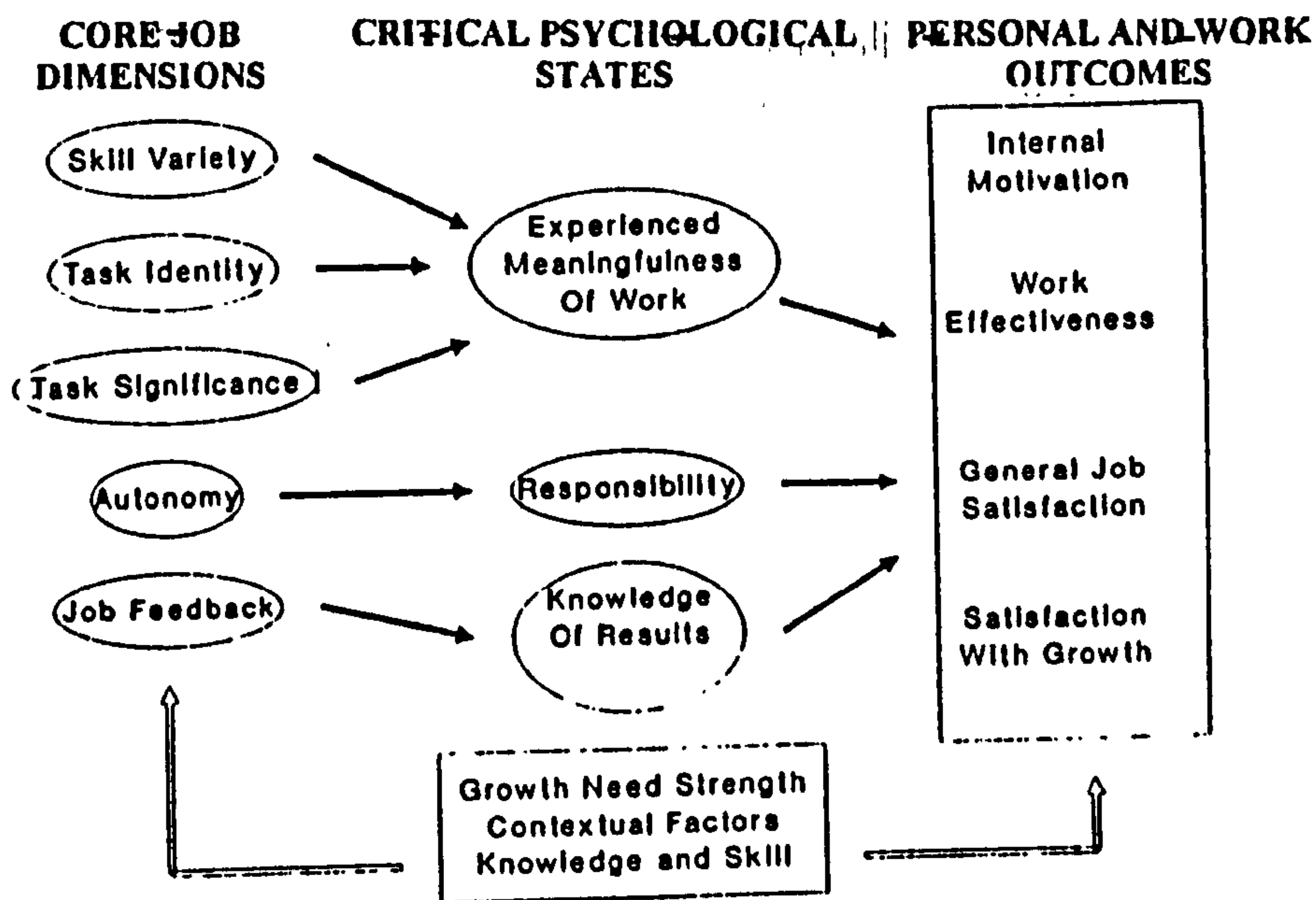


Figure 3.2 Job Characteristics Model
(Source: Cotton, 1993)

The descriptions of the core job dimensions are as follows:

Skill variety: This refers to the degree to which a job requires a variety of different skills.

Task identity: This refers to the degree to which a job requires completion of a whole, identifiable piece of work.

Task significance: Refers to the extent to which the job has a substantial impact on others.

Autonomy: Refers to the limit to which the job provides substantial freedom, independence and discretion.

Feedback: Refers to the degree to which carrying out the work activities provides the individual with direct and clear information about his or her performance.

To the extent that a job contains these five core characteristics, three psychological states are produced: experienced meaningfulness of the work, experienced responsibility for outcomes of the work, and knowledge of the actual results of the work activities. To the degree that these psychological states are present, high internal work motivation exists (Cotton, 1993).

3.1.2.2 Participative Management

The aim of participative management is to increase the amount of employees' participation in those decisions directly affecting their work lives. The focus of this work improvement is work groups and their involvement in work-related decisions. Participative management seeks to promote greater organisational democracy by a shift in the hierarchical allocation of decision making from higher to lower levels in the organisation (Cummings, 1977).

The origins of participative management can be traced to the studies on the effects of leadership style on children's play groups. This research provided a beginning for the studies of democratic procedures in a variety of organised settings. The main objective of the research was to compare the effects of three distinct styles of leadership: authoritarian, democratic and laissez-faire on the children and their play groups. Among the major findings of the research were:

1. Laissez-faire leadership was less efficient, less organised and less satisfying than democratic leadership.
2. Democratic leadership resulted in both high work effectiveness and member satisfaction.
3. Authoritarian leadership tended to create hostility, aggression and produced submissive dependence and a lack of individuality.

4. There was more group-mindedness and friendliness in democracy than under other styles of leadership.

When taken together, these findings demonstrated the significant impact of leadership style on important dimensions of group behaviour (Cummings, 1977). Furthermore, the findings provided a clear evidence of performance and satisfaction benefits to be gained from democratic forms of decision making.

Research on participative management in work organisations demonstrated that worker participation in decision making has led to increase in both productivity and human satisfaction. One explanation for this finding concerns individuals' needs and their motivation to perform to satisfy these needs. Management's willingness to allow workers to participate in important work-related decisions implies that workers are competent and valued partners. This satisfies workers' need for recognition, independence and appreciation by others (Cummings, 1977).

With respect to productivity, the effects of participation is more indirect. Greater participation in decision making increases workers' motivation to produce and, hence, productivity. The link between participation and motivation is employees' expectations that productivity is a path to greater need satisfaction (Cummings, 1977).

In general, participative management involves four key elements that promote worker involvement (Cummings and Worley, 1993):

a) Power

This includes providing people with sufficient authority to make work-related decisions such as work methods, task assignments, customer service and performance outcomes.

b) Information

This includes promoting free flow of necessary information which is vital to making effective decisions. The information may include data about operating results, business plans, competitive conditions, new technologies and work methods, and ideas for organisational improvement.

c) Knowledge and Skills

This includes the provision of training and development programmes for improving members' knowledge and skills necessary for making good decisions. Such programmes may cover an array of expertise related to task performance, decision-making, problem-solving and business operation.

d) Rewards

This includes external rewards such as pay and promotions or internal rewards such as feelings of self-worth and accomplishment. Rewards are given as recognition for members' participation in decisions leading to favourable outcomes.

3.1.2.3 Quality Circles

Quality circles can be considered as one of the most popular recent approaches to QWL and according to Lawler and Mohrman (1987), can be a good first step in employee involvement process, leading to other more participative programmes. Quality circles represent a participative approach to employee involvement in problem solving and productivity improvement. They consist of small groups of employees which meet on a volunteer basis to identify and solve productivity problems. The group method of problem solving and the participative management philosophy associated with it are natural outgrowths of managerial practices developed by the Japanese (Huse and Cummings, 1985). Decentralised decision making and the use of small groups to promote collective decision making and responsibility are highly emphasised by the Japanese (Munchus, 1983).

Quality circles were first promoted in Malaysia in the early 1980's when the Malaysian Prime Minister launched the "Look East Policy". The policy encouraged Malaysian organisations to adapt Japanese and Korean management styles and practices. The National Productivity Centre and the National Institute of Public

Administration were given the key role to promote quality circles in the private and public sectors respectively (Torrington and Tan, 1994).

Although the circles are implemented in varied forms by organisations, a typical programme structure is illustrated in Figure 3.3. Circle programmes generally consist of several circles, each consisting of three to fifteen members.

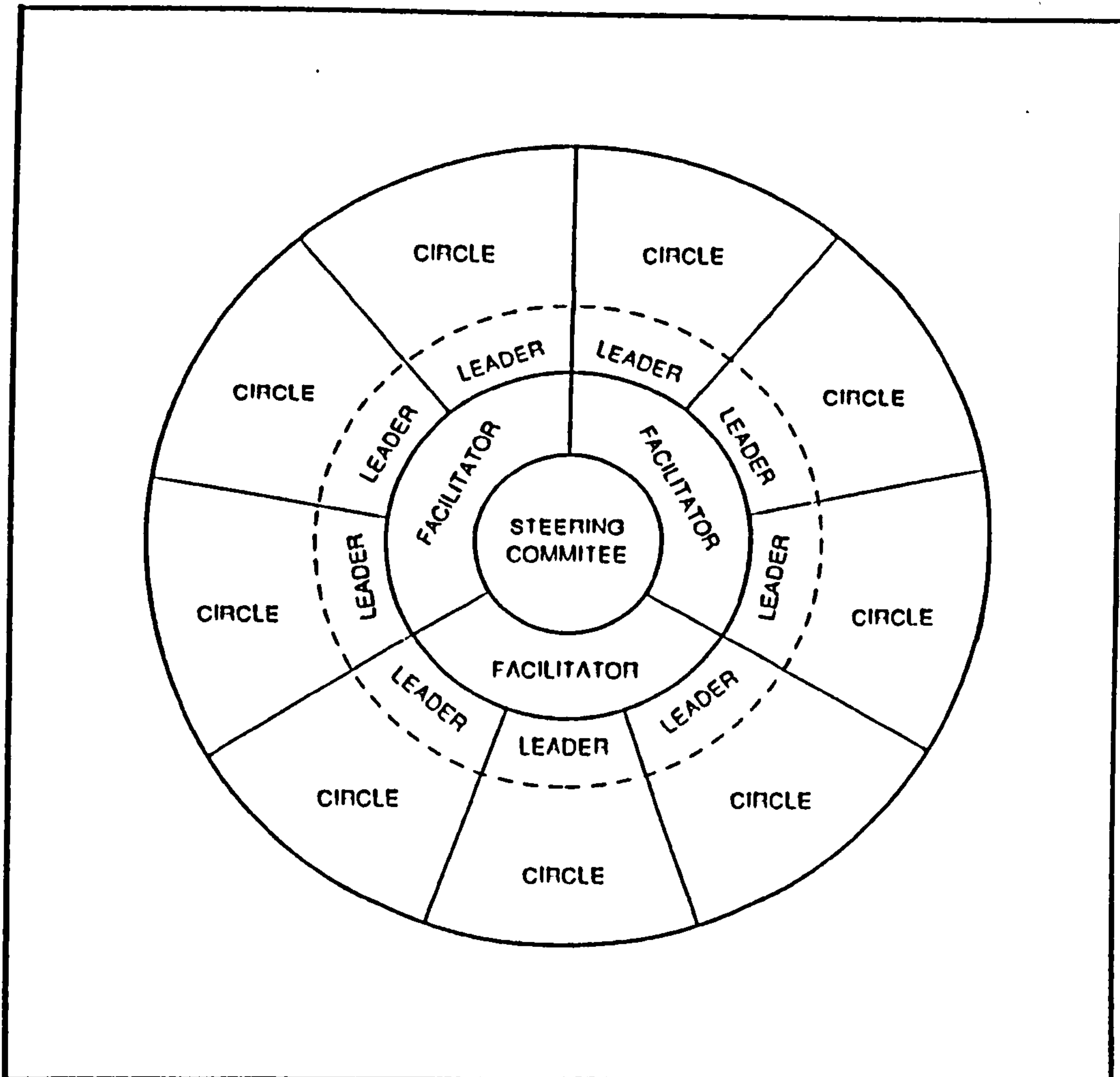


Figure 3.3 Quality Circles Programme Structure
(Source: Cummings and Worley, 1993)

3.1.2.4 Autonomous Work Groups

Autonomous work groups, which are also known as self-directed work teams, are probably one of the most radical approaches to improving quality of working life. It has been argued that this approach of employee involvement is the United States' best hope for meaningful competition against Japan and other global competitors (Lawler 1986). Autonomous work groups are work structures where members regulate their own behaviour around relatively whole tasks. This work design has at least two features that distinguish it from more traditional task structures: the focus of design is interdependent task groupings rather than individual tasks, and task control is located within the work group rather than external to it (Cummings, 1977).

The powerful relationship that exists between social and technical dimensions of work forms the basis of autonomous work groups. This point is emphasised by Trist and Bamforth (1951):

So close is the relationship between the various aspects that the social and psychological can be understood only in terms of the detailed engineering facts and of the way the technological system as a whole behaves in the environment of underground (coal mines) situation.

The notion of work as a socio-technical system is built upon the fact that task performance requires both a technology (tools, techniques and methods) and a social structure that relates people to technology and to one another (Cummings, 1977). It is necessary that both parts achieve optimum level of congruency in order to make a

system functions effectively. Autonomous work groups are an attempt to structure the social and technical components of work into a congruent system. Autonomous work groups have been implemented in a variety of organisational settings.

3.1.2.5 Empowerment

Another approach which has been suggested by management scholars to improve the quality of life in the workplace is empowerment. Empowerment has been defined as a way of "encouraging and allowing individuals to take personal responsibility for improving the way they do their jobs and contribute to the organisation's goals" (Clutterbuck and Kernaghan, 1994). Empowerment is a way of finding new ways to localise power in the hands of the people who need it most to get the job done - placing authority, responsibility, resources and rights at the most appropriate level for each task.

Bowen and Lawler (1992) suggest that empowerment involves the sharing of four organisational ingredients with front-line employees:

1. Information about the organisation's performance
2. Rewards based on the organisation's performance
3. Knowledge that enables employees to understand and contribute to organisational performance
4. Power to make decisions that influence organisational direction and performance.

Clutterbuck and Kernaghan (1994) suggests various signs that indicate characteristics of organisation that empowers its employees. These signs are summarised in Table 3.1.

Table 3.1 Signs of the Empowering Organisation

From	To
Fear	Challenge and adventure
Learning is a chore	Learning is an adventure
Dependence	Mutual independence
People take little initiative	People solve their own problems
	People suggest solutions to other people's problems
	People have the skills to work without supervision
Scant training and development	Continuous development
Avoiding change	Continuous change welcomed
Feedback is seen as criticism	Feedback seen as essential
Past experience has no relevance	Pause, reflect and learn
Training and development is the responsibility of personnel	Training and development is everyone's responsibility
Lack of vision	Strong, focused and shared vision
Problem avoiding	Problem solving
Closed communications	Open communications
	<ul style="list-style-type: none"> • sharing of information • sharing of ideas • sharing of skills
Distrust and suspicion	Trust

Source: Clutterbuck and Kernaghan, 1994

3.2 Relationships of QWL with Organisational Variables

The previous section provides a review of the definitions of QWL and also some management techniques usually associated with it. The focus of this section is on the relationships of QWL with some selected organisational variables.

3.2.1 QWL, Organisational Identification and Organisational Commitment

Several theorists have argued that organisational identification is an outcome of a process by which the goals of the individual and the goals of the organisation become increasingly integrated and congruent (Efraty and Sirgy, 1990). In their study Efraty and Sirgy found that the more employees are able to satisfy their survival, social, ego, and self-actualisation needs (defined as QWL in the study), the more they will identify with the organisation. Identification with the organisation is a precursor to organisational commitment.

3.2.2 QWL and Productivity

An assumption underlying much of QWL literature is that QWL leads to higher productivity (Huse and Cummings, 1985). This relationship is based on the idea that improving QWL would inevitably heighten employee motivation and would thereby improve job performance and productivity (Kerce and Booth-Kewley, 1993). Efraty and Sirgy (1990) in explaining the relationship in terms of dissonance theory suggest that the more the workers gratify their needs through their membership in the employing organisation, the more they may feel obliged to the organisation to invest effort in doing the job and be perceived effective workers.

Huse and Cummings (1985) suggest that QWL can improve productivity in three ways:

- 1) QWL interventions improve co-ordination and communication among employees and between organisational departments. This increases productivity by helping to integrate different jobs or departments contributing to an overall task.
- 2) QWL interventions improve employee motivation, particularly when they satisfy important individual needs. Motivation is translated into improved performance when people have the necessary abilities to perform well and when the technology and work situation allow people to affect productivity.
- 3) QWL activities improve the capabilities of employees, thus enabling them to perform better.

The relationships between QWL interventions and productivity is illustrated in Figure 3.4.

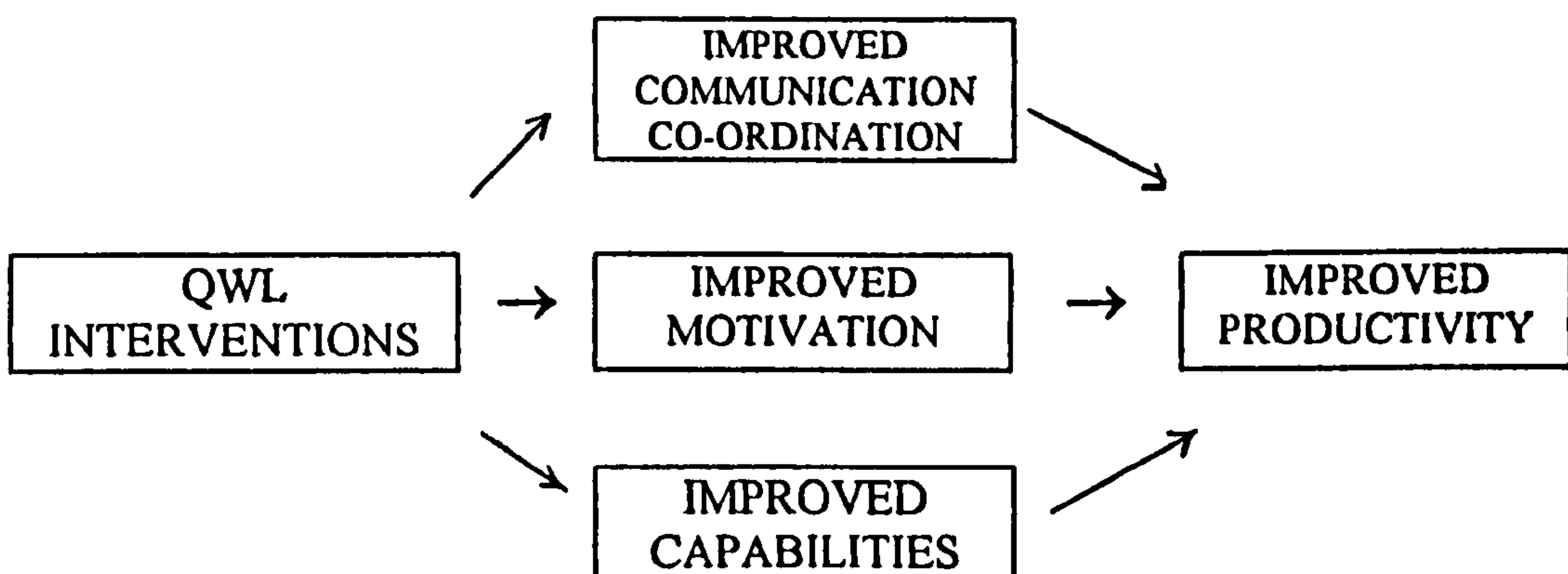


Figure 3.4 How QWL Affects Productivity
(Source: Huse and Cummings, 1985)

3.2.3 QWL and Absenteeism and Turnover

People who are highly involved in their jobs are less likely to quit their jobs or be absent (Kersee and Booth-Kewley, 1993). Harrison (1987) suggests that motivation and satisfaction needs have been consistently shown to be associated with job involvement and organisational commitment as well as with attendance and turnover. The degree of congruence between job characteristics and employee needs has also been found to be related to attendance (Furnham, 1991 quoted in Kersee and Booth-Kewley, 1993: 203). Efraty and Sirgy (1990) found that need satisfaction is significantly related with personal alienation.

3.2.4 QWL and Stress

Lack of fit between workers' needs and values and the characteristics of their jobs has been linked with adverse health outcomes (Kersee and Booth-Kewley, 1993: 204). Furnham (1991) found that work frustration and stress are consequences of a misfit between workers' needs and job characteristics. QWL interventions, which aim at creating a good person-job fit, will lead to subjective well-being. Also, the opportunity for employees to utilise their skills and make decisions about work activities is associated with reduced strain at every level of job demand (Kersee and Booth-Kewley, 1993).

3.3 Summary

This chapter reviews the concept of QWL and related management techniques typically associated with it. QWL has been defined in various ways by different authors, depending on their particular orientation and the associated emphasis of their studies. In general, management scholars think of QWL as having two characteristics, namely a concern for the well-being of the worker and organisational effectiveness (Beckman and Neider, 1987). The management techniques typically associated with QWL have a common aim of making the work environment more productive and more satisfying to workers. These techniques are distinguished from other (e.g. strategic management or organisational design) productivity or organisational development efforts in that their focus is on outcomes for the employee rather than for management (Kerce and Booth-Kewley, 1993). Traditional organisational development and its techniques focus primarily on the managerial level and are concerned with process variables, such as communication, group dynamics, interpersonal relations and leadership (Sun, 1988). The second section of the chapter presents an overview of relationships between QWL and some important organisational variables. It is shown that QWL is significantly related with all the variables. It is therefore essential that today's managers monitor the QWL conditions in their organisations.

Because of the importance of understanding QWL in organisations, and since its definition is influenced by various factors such as culture, organisational type, industry etc., a study of how these factors precisely determine QWL would be useful.

Also, the dimensions of QWL need to be examined if meaningful efforts at improving it are to be made. This is stressed by Eilon (1976) when he points out, "one cannot discuss intelligently ways in which the quality of working life can be improved or how the possible undesirable effects of certain characteristics of technology and organisational design can be avoided without an explicit measure of the quality of working life" (p. 368). One of the purposes of this study is to empirically define QWL in a specific cultural context, Malaysia, so that factors which are considered important by employees in different kinds of organisations may be identified. The pattern of relationships between employees' characteristics and the QWL factors are then examined because, as Strauss (1980) says " QWL acquires meaning in the eyes of the beholder".

Another purpose of this study is to examine the relationships between the QWL factors and organisational commitment, an attitude viewed as useful in the understanding of the ties between employees and their organisations. These linkages are also, to some extent, influenced by cultural factors. Allen et al. (1988), for example, note that, in countries where individualism dominates, individuals view their relationship with the organisation from a calculative perspective, whereas in collectivist societies, the ties between the individual and the organisation have a moral component. Malaysia, according to Hofstede's research mentioned in the previous chapter, is a collectivist society. This research therefore attempts to examine whether the antecedents of organisational commitment in Malaysia are

mainly those variables that reflect the collectivist nature of the society. A review of organisational commitment is presented in the next chapter.

CHAPTER FOUR

ORGANISATIONAL COMMITMENT

4.0 Introduction

The concept of organisational commitment came into the management literature in the early 1960's, replacing the concept of "organisational loyalty" (Brown, 1990). Commitment is a broader concept than job satisfaction, reflecting a general affective response to the organisation as a whole (Mowday, Steers and Porter, 1979). In recent years, organisational commitment has become an important and useful concept in organisational research and practice (Ismail, 1990). The concept has been widely studied as predictor of turnover, absenteeism and tardiness. It has also been established that increasing organisational commitment plays a significant role in reducing physical withdrawal behaviours (e.g. turnover, tardiness, absenteeism, poor performance due to poor motivation, etc.) among employees (Reichers, 1985). Since such withdrawal behaviours can be very costly to organisations, commitment is generally assumed to be a desirable quality that should be inculcated in employees.

This chapter reviews the concept of organisational commitment, which is the dependent variable of this study. It is divided into four sections. The first section presents the definitions of three concepts of employee commitment: career, work and organisational. This is followed by a section which discusses the conceptualisation of organisational commitment dimensions. The three dimensions

of organisational commitment are: affective, continuance and normative. The third section of this chapter reviews the antecedents of organisational commitment. The chapter closes with the final section which is devoted to an examination of the consequences of organisational commitment.

4.1 Concepts of Employee Commitment

In the literature on organisational behaviour, there are at least 25 employee commitment concepts and measures have been reported up to the early 1980's since 1965 (Morrow, 1983). Morrow (1983) grouped them according to five foci: commitment to work, the career, the organisation, the job, and the union. Though the main focus of this study is on organisational commitment, it also provides brief discussions on career and work commitment for the purpose of comparison between the different concepts of employee commitment.

4.1.1 Career Commitment

Career commitment refers to identification with and involvement in one's occupation. There are various terms in the literature which refer to the same or related concepts, such as career salience, professional commitment, professionalism, and occupational commitment (Mueller, Wallace and Price, 1992). The common factor which runs through all these concept is the critical notion of being committed to one's career or occupation rather than to the organisation in which one is employed (Mueller, Wallace and Price, 1992).

4.1.2 Work Commitment

Work commitment refers neither to the organisation nor to one's career but to employment itself. Persons committed to work hold a strong sense of duty toward their work and place intrinsic value on work as a central life interest (Lincoln and Kalleberg, 1990). This form of commitment has received the least attention of the employee commitment concepts discussed here (Mueller, Wallace and Price, 1992). In addition, it has been conceptualised and operationalised in a less consistent manner than either organisational or career commitment . Some of the concepts which are regarded as similar to work commitment are: job involvement, work involvement, work motivation, work as central life interest, and the "Protestant Work Ethic" (Mueller, Wallace and Price, 1992). Work commitment has been shown to be empirically distinct from career and organisational commitment (Morrow and McElroy, 1986), and is expected to be relatively stable over time and less dependent on actual work conditions (Mueller, Wallace and Price, 1992).

4.1.3 Organisational Commitment

Definitions of organisational commitment are varied, showing little consensus among researchers. The widely divergent definitions of organisational commitment arise because researchers from various disciplines tend to ascribe their own meanings to the concept (Mowday, Porter, and Steers., 1982). Also, inconsistency in defining organisational commitment arises because it has been defined both as an attitude and as a behaviour; as a unidimensional construct as well as a multidimensional construct; as an emotional, moral, normative, economic and value-

based construct; as a sociological (structural) as well as a psychological (functional) concept; and finally, as both an antecedent and an outcome variable (Roth, 1992). Mowday, Porter and Steers (1982) provide the following definitions by various authors to reflect the divergent conceptions of organisational commitment:

- An attitude or an orientation toward the organisation which links or attaches the identity of the person to the organisation (Sheldon, 1971).
- The willingness of social actors to give their energy and loyalty to social system, the attachment of personality systems to social relations which are seen as self-expressive (Kanter, 1968).
- A structural phenomenon which occurs as a result of individual-organisational transactions and alterations in side bets or investments over time (Hrebiniak and Alutto, 1972).
- A state of being in which an individual becomes bound by his actions and through these actions to beliefs that sustain the activities and his own involvement (Salancik, 1977).
- The process by which the goals of the organisation and those of the individual become increasingly integrated or congruent (Hall, Schneider and Nygren, 1970).
- The nature of relationship of the member to the system as a whole (Grusky, 1966)

- (1) It includes something of the notion of membership; (2) it reflects the current position of the individual; (3) it has a special predictive potential, providing predictions concerning certain aspects of performance, motivation to work, spontaneous contribution, and other related outcomes; and (4) it suggests the differential relevance of motivational factors (Brown, 1969).
- Commitments come into being when a person, by making a side-bet, links extraneous interests with a consistent line of activity (Becker, 1960).
- Commitment behaviours are socially accepted behaviours that exceed formal and/or normative expectations relevant to the object of commitment (Weiner and Gechman, 1977).
- A partisan, affective attachment to the goals and values of an organisation, to one's role in relation to goals and values, and to the organisation for its own sake, apart from its instrumental worth (Buchanan, 1974).

As an effort toward better understanding of organisational commitment, Mowday, Porter and Steers (1982) provided three typologies into which the various definitions could be organised (Table 4.1).

Table 4.1 Typologies of Organisational Commitment

Author(s)	Typology	Definition
Etzioni (1961)	Moral Involvement	A positive and high-intensity orientation based on internalisation of organisational goals and values and identification with authority
	Calculative Involvement	A lower intensity relationship based on a rational exchange of benefits and costs
	Alienative Commitment	A negative orientation that is found in exploitative relationships (e.g., in prisons)
Kanter (1968)	Continuance Commitment	Dedication to organisation's survival brought on by previous personal investments and sacrifices such that leaving would be costly or impossible
	Cohesion Commitment	Attachment to social relationships in an organisation brought on by such techniques as public renunciation of previous social ties or engaging in ceremonies that enhance group cohesion
	Control Commitment	Attachment to organisational norms that shape behaviour in desired directions resulting from requiring members to disavow previous norms publicly and reformulate their self-conceptions in terms of organisational values
Staw and Salancik (1977)	Organisational behaviour approach	Commitment viewed in terms of a strong identification with and involvement in the organisation brought on by a variety of factors (attitudinal commitment)
	Social psychological approach	Commitment viewed in terms of sunk costs invested in the organisation that bind the individual irrevocably to the organisation (behavioural commitment)

Source: Porter and Steers, 1982

Etzioni (1961)

Etzioni's typology of commitment is based on a model of member compliance with organisational directives. The nature of employee involvement in the organisation will affect the forms of power or authority the organisation has over its members.

Employee involvement in organisations can be categorised into three forms: moral; calculative; and alienative (Mowday, Porter and Steers, 1982: 21).

- **Moral Involvement**

Moral involvement represents a positive and intense orientation toward the organisation that is based on the internalisation of the organisation's goals, values and norms, and on an identification with authority. An employee who is morally involved engages in organisational activities because he or she feels the organisation is pursuing useful societal goals.

- **Calculative Involvement**

Calculative involvement represents a less intense relationship with the organisation and is largely based on exchange relationship that develop between members and the organisation. Members become committed to the organisation because they see a beneficial or equitable exchange relationship between their contributions to the organisation and the rewards they receive for service.

- **Alienative Involvement**

This represents a negative orientation toward the organisation, which is typically found in situations where individual behaviour is severely constrained.

Kanter (1968)

Kanter's typology of organisational commitment is based on her argument that different types of commitment result from different behavioural requirements imposed on members by the organisations. She suggested three different forms of commitment: continuance; cohesion; and control (Mowday, Porter and Steers, 1982: 23).

- **Continuance Commitment**

Continuance commitment is defined in terms of member's dedication to the survival of the organisation. It is believed to be caused by requiring members to make personal sacrifices and investments to the extent that it becomes costly or difficult for them to leave.

- **Cohesion Commitment**

Cohesion commitment is defined as an attachment to social relationships in an organisation brought on by such techniques as public renunciation of previous social ties or by engaging in ceremonies that enhance group cohesion.

- **Control Commitment**

Control commitment is identified as a member's attachment to the norms of the organisation that shape behaviour in desired directions. It exists when an employee believes that the norms and values of an organisation represent an

important guide to suitable behaviours and is influenced by such norms in everyday acts.

Staw and Salancik (1977)

Staw and Salancik (1977) suggested the need to differentiate the concept of commitment into its "attitudinal" and "behavioural" forms.

- **Attitudinal commitment**

Attitudinal commitment refers to "the process by which employees come to identify with the goals and values of the organisation and are desirous of maintaining membership in the organisation" (Mowday, Porter and Steers, 1982: 24). Mottaz (1989) suggests that attitudinal commitment refers to "an affective response (attitude or orientation) resulting from an evaluation of the work situation which links or attaches the individual to the organisation" (p. 144). The attitudinal model of organisational commitment is based on the degree of identification an individual has with the values and goals of an organisation and focuses on a variety of desired behavioural outcomes other than just individuals' turnover intentions (Johnston and Snizek, 1991).

- **Behavioural Commitment**

Behavioural commitment "focuses on the process by which an individual's past behaviour serves to bind him or her to the organisation" (Mowday, Porter and Steers, 1982: 25), or in Salancik's words, commitment is "a binding of the

individual to behavioural actions and then through these actions the individual becomes bound to beliefs that sustain activities and involvement" (1977: 4). Behavioural commitment comes about when individuals' behaviour mould self-perceptions and expectations such that future actions are constrained by those previously exhibited. To the extent that the individuals perceive their acts to be publicly visible, volitional and irrevocable they are more or less committed by their own behavioural acts (Roth, 1992: 4). The behavioural approach to the definition of commitment has its roots in the work of Becker (1964), who describes commitment as a process in which employees make "side-bets" with the organisation. "Side-bets" are organisationally based investments the individual values and has acquired as a result of past actions. These "side-bets" may include such things as money, time, pension plans, position and status (Roth, 1992).

In short it can be said that attitudinal commitment is a psychological attachment to a social system whilst behavioural commitment refers to persistent behaviour (Angle and Lawson, 1993).

Based on the definitions and conceptualisations of organisational commitment given above, it could be said that the concept could be examined from at least three different perspectives:

1. an affective based moral or control commitment reflecting the identification and internalisation of organisational goals and values.

2. a calculative or continuance commitment based on an instrumental exchange of costs and benefits, and
3. an alienative or cohesion commitment representing either a positive or negative affective attachment to the organisation based on either social identification and involvement or a lack of perceived social and employment alternatives.

In view of the possibility of the multi-dimensional nature of the organisational commitment concept, the following sub-section presents a discussion on the issue.

4.2 Dimensions of Organisational Commitment

The dimensionality of organisational commitment is one of the issues that have been central in the study of employee-organisation linkages. The issue is whether organisational commitment is a unitary or a multidimensional construct (Angle and Lawson, 1993). The dimensionality of organisational commitment needs to be mapped for two reasons: (1) "researchers are consistently finding that single-factor models do not represent the conceptual and empirical domains of organisational commitment" (Jaros, Jermier, Koehler, and Sincich, 1993: 955), and (2) the motives for commitment could "differentiate employees who are likely to remain with the organisation and to contribute positively to its effectiveness from those who are likely to remain but contribute little" (Allen and Meyer, 1990: 15).

The attitudinal approach to organisational commitment encompasses a very broad meaning of the concept. Some writers view it as unidimensional while others take a multidimensional perspective. Those who subscribe to the unidimensional approach tend to define organisational commitment exclusively in terms of a single underlying mechanism (or construct) which links the individual and the organisation. This is evident in the following definitions:

1. Weiner (1982: 418) "the totality of internalised normative pressures to act in a way that meets organisational interests".
2. Lee (1971: 215) "the degree of the individual's broad personal identification with the organisation".
3. Sheldon (1971, in Mowday et al., 1982) "an orientation toward the organisation which links or attaches the identity of the person to the organisation".
4. Kidron (1978, in Roth, 1992) "the willingness of the individual to remain with a particular system given an alternative job that provides slightly better outcomes".

Various authors (Becker and Billings, 1993; Allen and Meyer, 1990; Angle and Perry, 1981; McGee and Ford, 1987; O'Reilly and Chatman, 1986) suggest that

organisational commitment is a multidimensional construct, with at least two dimensions: (1) an affective or moral bond which constitutes a positive psychological attachment to the system; and (2) a desire to maintain membership, *per se*, in the system. Allen and Meyer (1985, 1990) suggested a third dimension of commitment, labelled as normative, which is based on one's belief about organisational loyalty. Consequently, Allen and Meyer (1990) proposed that the conceptualisations of attitudinal commitment can be categorised into three general themes: affective attachment, perceived costs and obligation.

Affective attachment

This is considered as the most prevalent approach to organisational commitment in the literature. Kanter's "cohesion commitment" which is defined as "the willingness of social actors to give energy and loyalty to the organisation" (Jaros et al., 1993: 953) and as "the attachment of an individual's fund of affectivity to the group" (Jaros et al., 1993: 953) and Buchanan's definition of commitment belong to this category. The affective attachment approach to the study of organisational commitment is probably best represented by the work of Porter and his colleagues who defined organisational commitment as "the relative strength of an individual's identification with and involvement in a particular organisation" (Allen and Meyer, 1990: 2). The popularity of Porter and colleagues' conceptualisation of organisational commitment is reflected in the extensive use of their "Organizational Commitment Questionnaire (OCQ)" by other researchers (Allen and Meyer, 1990; Ismail, 1990).

Perceived costs

Kanter's "continuance commitment" and Becker's "side-bets" notion of organisational commitment relate to costs associated with discontinuing a particular activity (Allen and Meyer, 1990). Cost-based conceptualisations of commitment centre on the calculative aspect of employee-organisation relationship. The desire to remain with one's organisation would result from the perceived economic advantage accrued in one's current job, relative to employment alternatives (Eisenberger, Fasalo and Davis-LaMastro, 1990:51). This calculative notion is consistent with exchange-theory concepts of commitment. According to the exchange theory, commitment develops as a result of an employee's satisfaction with the rewards and inducements an organisation offers, and these rewards will have to be sacrificed if the employee leaves the organisation. The employee feels compelled to commit to the organisation because the costs associated with leaving are high (Jaros et al., 1993)

Obligation

This is a less common approach to the study of commitment (Allen and Meyer, 1990). The definition by Weiner (1982) is representative of this approach. According to Wiener, commitment is "the totality of internalised normative pressures to act in a way which meets organisational goals and interests" (p. 471), and individuals exhibit behaviours because "they believe it is the right and moral thing to do" (p. 421).

Based on the above categories of conceptualisations, Meyer and Allen (1991) proposed a three-component model of organisational commitment, namely affective, continuance and normative. Their three-component model of commitment is considered as the most comprehensive (Popper and Lipshitz, 1992).

- **Affective Commitment**

Affective commitment is also known as value commitment (Wittig-Berman and Lang, 1990). The conceptualisation of commitment as an affective state is exemplified by Buchanan's definition of organisational commitment: "a partisan affective attachment to the goals and values of an organisation ... apart from its instrumental worth" (Popper and Lipshitz, 1992 : 2). Porter's definition "the strength of an individual's identification with, and involvement in a particular organisation" is also reflective of affective commitment. O'Reilly and Chatman (1986) suggested that identification occurs when an individual accepts influence to establish or maintain a satisfying relationship, that is, an individual may feel proud to be part of a group (p. 492). Employees who are affectively committed to the organisation remain with the organisation because they want to (Meyer, Allen and Gellatly, 1990).

- **Continuance Commitment**

The continuance component of commitment combines a behavioural conceptualisation (disinclination to leave the organisation) with an instrumental cause (potential costs and lack of alternatives) (Popper and

Lipshitz, 1992; Hackett, Bycio and Hausdorf, 1994). Becker's definition of commitment as "the tendency to engage in consistent line of activity because of the perceived cost of doing otherwise" is representative of this conceptualisation. O'Reilly and Chatman (1986) suggested that individuals comply with the organisation not because of shared beliefs, but simply to gain rewards.

Employees whose primary link to the organisation is based on continuance commitment remain because they need to do so (Meyer and Allen, 1991). Self-interest is the guiding criterion for the development of commitment to the organisation. The degree of an employee's commitment to his or her organisation is dependent upon his or her perception of the overall reward-cost balance of maintaining membership. Brown (1990) defined continuance commitment (referred to as calculative commitment) as:

An attachment to an organisation, built up over time through a composite of decisions, personal developments, investments and acquired benefits, which retrospectively binds an individual to an organisation by raising both the perceived benefits of remaining with an organisation and the perceived risks or costs associated with leaving.

- **Normative Commitment**

The normative component of commitment emphasises feelings of loyalty to a particular organisation resulting from the internalisation of normative pressures exerted on an individual (Popper and Lipshitz, 1992; Hackett, Bycio, and Hausdorf, 1994). In explaining the basis for acceptance of influence by individuals in organisations, O'Reilly and Chatman (1986) suggested that internalisation occurs when the induced values of the individual and the group or organisation are the same. Consequent to the congruency of values, individuals exhibit (committed) behaviours because they believe it is the right and moral thing to do (Allen and Meyer, 1990). This perspective of viewing commitment is consistent with the views of several authors who have suggested that personal norms (defined as internalised moral obligation) are important contributors to behaviour, including terminating employment with an organisation (Allen and Meyer, 1990: 3). Jaros et al. (1993), provided a definition of normative commitment (they referred to as moral commitment) which differentiates it from the affective and continuance components of commitment. They defined normative commitment as:

The degree to which an individual is psychologically attached to an employing organisation through internalisation of its goals, values, and missions. This form of commitment differs from affective commitment because it reflects a sense of duty,

an obligation or calling to work in the organisation, but not necessarily emotional attachment. It differs from continuance commitment because it does not necessarily fluctuate with personal calculations of inducements or sunk costs. (p. 955).

Employees with a high level of normative commitment feel that they ought to remain with the organisation (Meyer and Allen, 1991). Such an employee could be expected to indicate his/her willingness to place organisational goals before his/her own personal goals (Brown, 1990).

To summarise, it could be said that the concept of organisational commitment comprises at least three dimensions: affective, continuance and normative. Affective commitment is based on the strength of an individual's identification with a particular organisation. Continuance commitment is based on the perceived costs or lack of alternatives for leaving one's organisation. Normative commitment develops from an internalised sense of duty towards an organisation's goals, values and missions.

4.3 Antecedents of Organisational Commitment

Having outlined the dimensions of attitudinal commitment, we now turn to the factors which were identified as precursors to the formation of such attitudes. In the literature on organisational commitment, these factors are often referred to as the antecedents of commitment.

It has been suggested that the major influences of organisational commitment may be grouped into three categories (Mowday, Porter and Steers, 1982:29). These categories are:

- a. Personal characteristics
- b. Job or role-related characteristics; and
- c. Work experiences

A study by Steers (1977) on two diverse samples of hospital employees and research and development scientists supported the importance of all three of these categories as major influences on employee commitment. Subsequent studies (Morris and Steers, 1981) suggested the need to add a fourth category of antecedents, namely structural characteristics. The summary of antecedents of organisational commitment is shown in Figure 4.1.

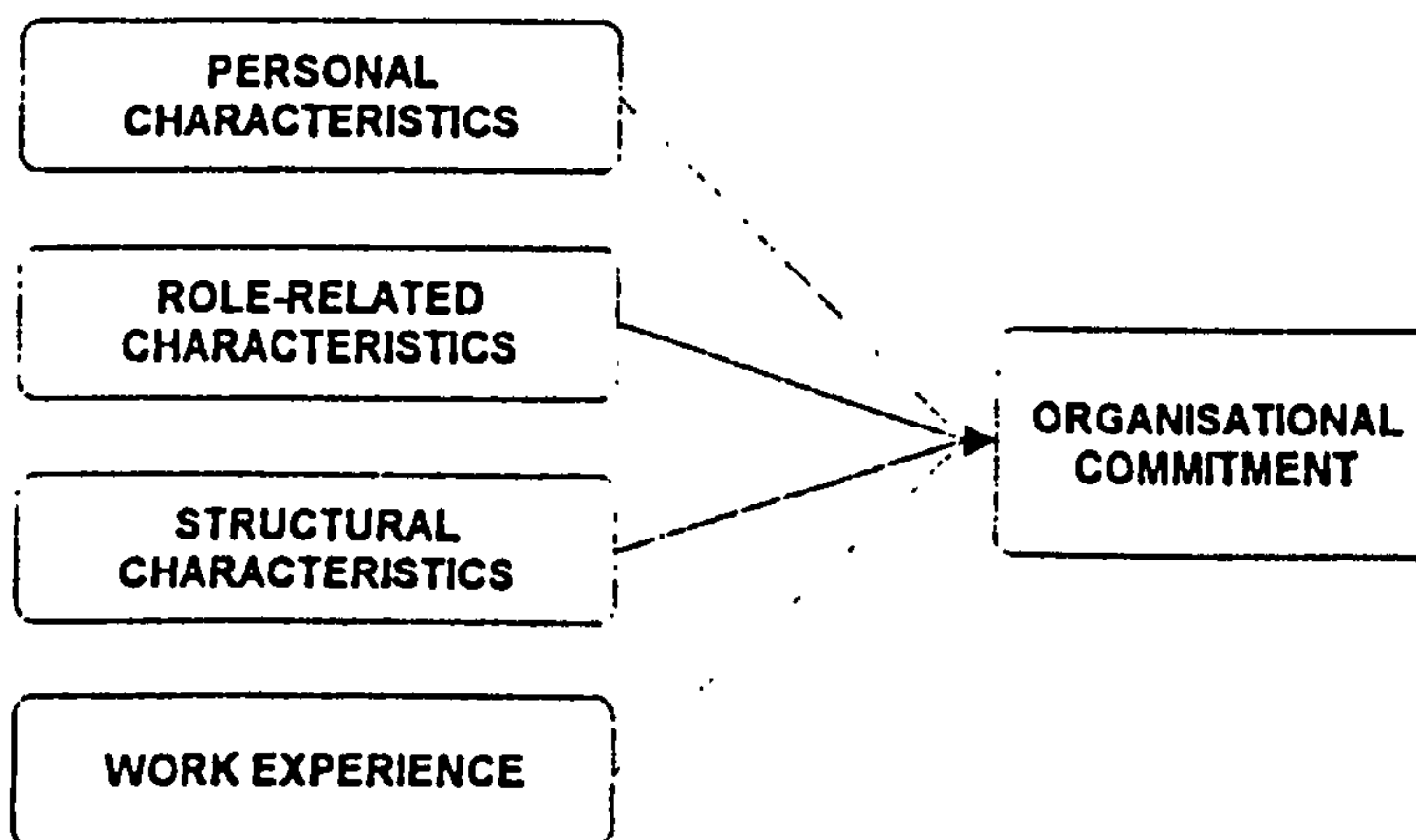
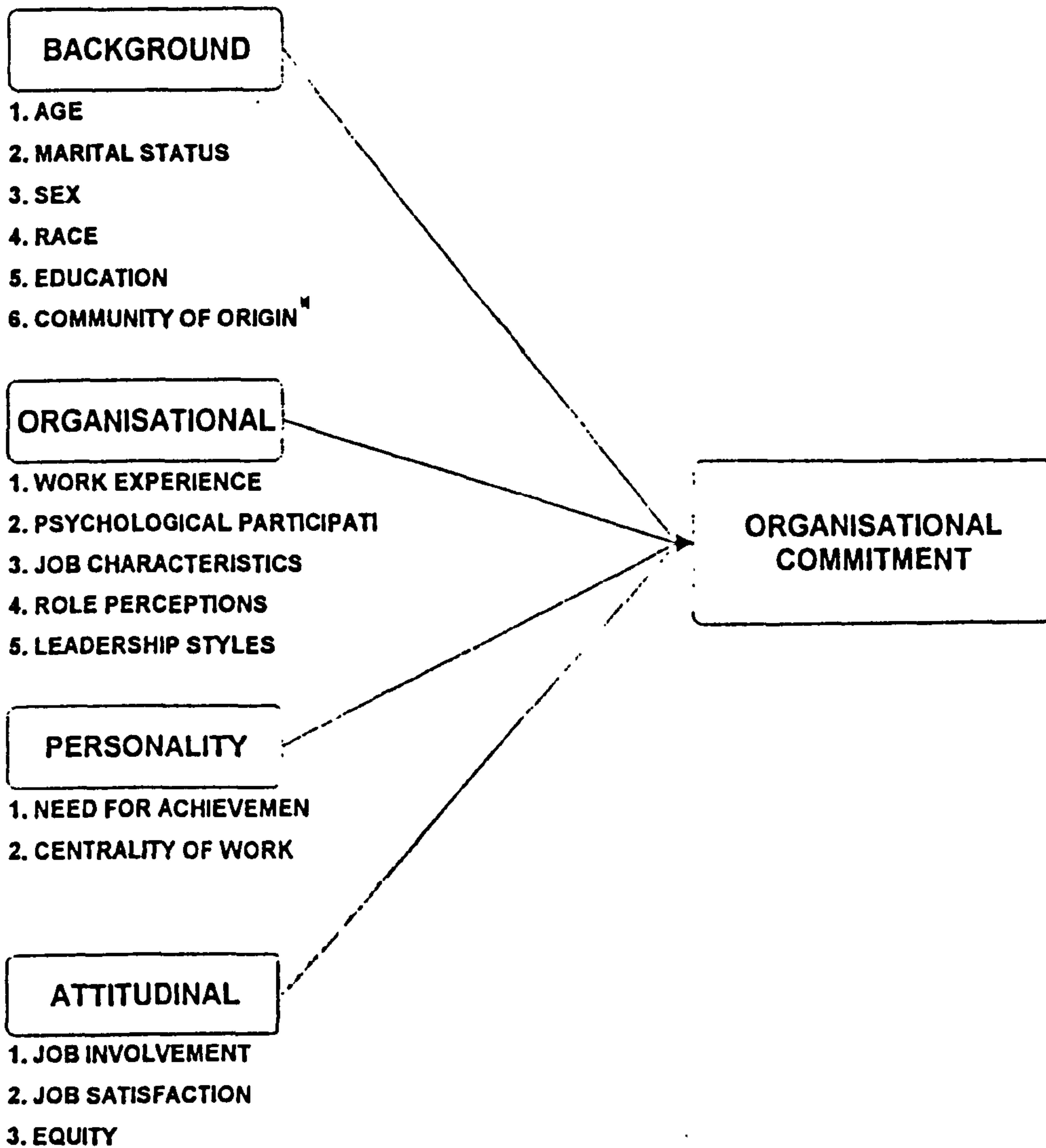


Figure 4.1 Antecedents of Organisational Commitment

(Source: Mowday, Porter and Steers, 1982)

Zahra (1984) in his review of the literature indicated that several important antecedents of organisational commitment have been ignored by researchers for the sake of simplicity or because of practical reasons. Subsequently, Zahra proposed an extended model of organisational commitment (Figure 4.2). This model consists of four sets of antecedent variables: background (general and demographic); organisational; psychological; and attitudinal.



* For example: Urban-Rural

Figure 4.2 An Extended Model of Organisational Commitment
(Source: Zahra, 1984)

Mathieu and Zajac (1990) conducted a meta-analysis of the antecedents, correlates and consequences of organisational commitment, using published studies involving organisational commitment from 1967 to 1986. The factors which were hypothesised to be the antecedents of organisational commitment by the authors of the studies used in the meta-analysis are summarised in Table 4.2.

Table 4.2 Factors Hypothesised to be Antecedents of Organisational Commitment

Personal Characteristics	Job Characteristics	Role States	Group/Leader Relations	Organisational Characteristics
Age Sex Education Marital Status Position Tenure Organisational Tenure Perceived Personal Competence Ability Salary Protestant Work Ethic Job Level	Skill Variety Task Autonomy Challenge Job Scope	Role Ambiguity Role Conflict Role Overload	Group Cohesiveness Task Interdependence Leader Initiating Structure Leader Consideration Leader Communication Participative Leadership	Organisational Size Organisational Centralisation

Table 4.3 Antecedents of Organisational Commitment

Personal Characteristics	Perceived Structure	Organisational Processes	Organisational Climate	Satisfaction with
Age Tenure No. of hours worked (-ve) Organisational level	Centralisation Role Conflict Role Ambiguity	Decision making Leader (consideration) Leader (structure) Leader (closeness) Communication Feedback Compensation HRM* practices <ul style="list-style-type: none"> • fairness of promotion • merit-system accuracy 	Task Identity Autonomy Trust Cohesiveness Support Recognition Pressure Fairness Innovation	Work itself Opportunities Co-workers Pay Supervision General aspects of work

* Human Resource Management

Meanwhile, DeCotiis and Summers (1987) suggested five categories of variables to be significantly related to organisational commitment. These variables are summarised in Table 4.3

However, when a stepwise multiple regression of the commitment measure was conducted on the variables within each category of antecedents, DeCotiis and Summers found that the categories of organisational climate and job satisfaction were most predictive, explaining about 43% and 46% of the variance, respectively.

In another study, Bateman and Strasser (1984) conducted a longitudinal analysis on data obtained from 129 nursing department employees to identify antecedents of organisational commitment. They found that, of the twelve variables investigated, only two accounted for most of the variance in organisational commitment: overall job satisfaction and environmental alternatives. They found that personal characteristics play a minor role in explaining variation in commitment. Age and education, though significant predictors in other studies, were found to be not significant in their study. Bateman and Strasser (1984) pointed out that this lack of significance of age in multiple regression analyses was probably due to the strong predictive power of satisfaction and environmental alternatives, which were not included in other studies.

Job characteristics factors, such as task identity and job challenge, which were found to be significantly related to organisational commitment by previous authors (Steers, 1977; Buchanan, 1974) were not supported by Bateman and Strasser's data.

This was again attributed to the inclusion of job satisfaction in their model. And these factors were shown to be antecedents of job satisfaction rather than organisational commitment (Bateman and Strasser, 1984).

Ismail (1990) performed a path analysis to examine the causal relationships of antecedent variables and organisational commitment. The data for the analysis was obtained from a quasi-experiment involving 128 tax assessment officers in Malaysia. The main purpose of Ismail's study was to examine the effect of supervisory behaviour on organisational commitment. From the study he found that ten relationships proposed for the antecedent variables were supported by the data.

These relationships are presented in Figure 4.3.

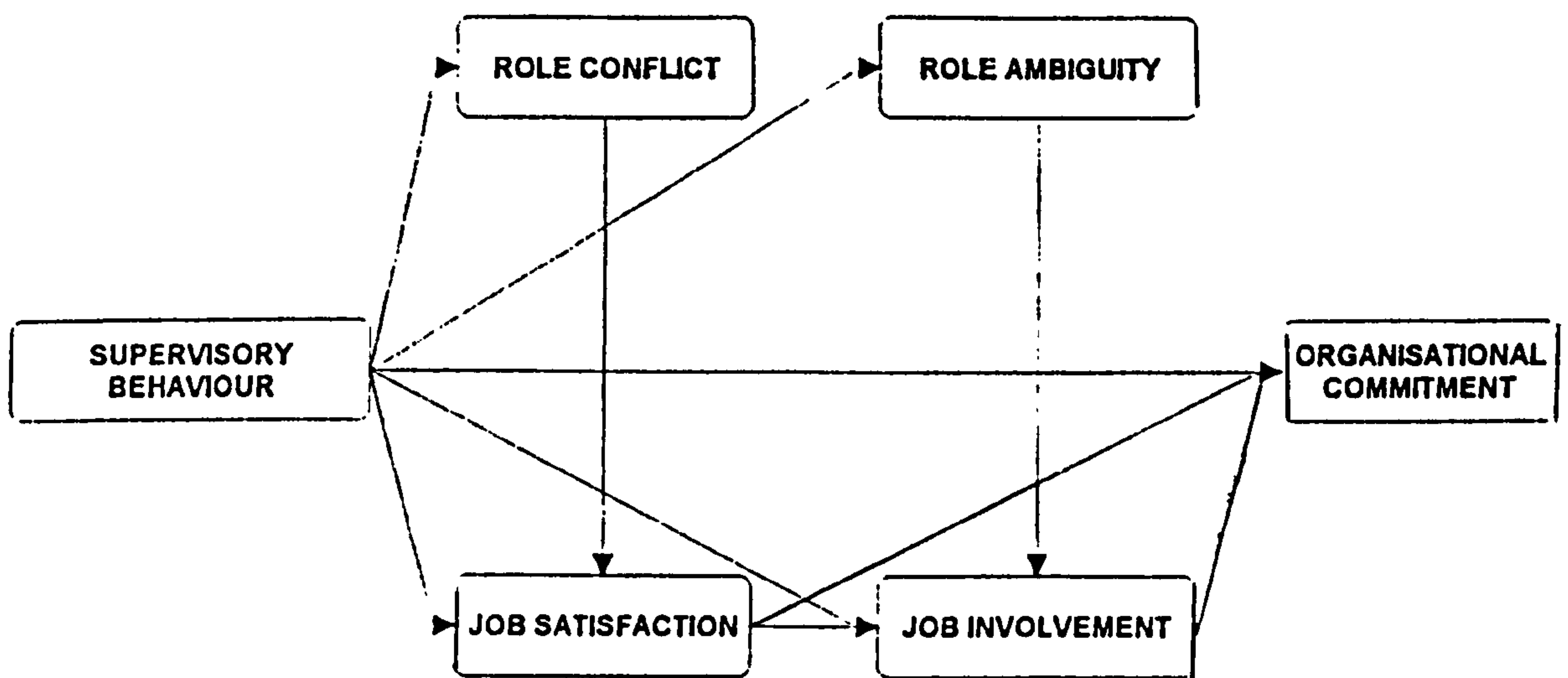


Figure 4.3 A Path Relationship Model of Organisational Commitment
(Source: Ismail, 1990)

The following sub-sections discuss the relationships of the various antecedents variables with organisational commitment, as found in previous studies.

4.3.1. Age and Tenure

These two variables have been found to be positively related to organisational commitment (Mowday, Porter and Steers, 1982; Zahra, 1984). This could be explained by March and Simon's (1958) observation that "as age or tenure in the organisation increases, the individual's opportunities for alternative employment become more limited". In view of this, Mathieu and Zajac (1990) suggested that age should be highly related to calculative (continuance) commitment. On the other hand, Meyer and Allen (1984) suggested that older workers become more attitudinally committed for a variety of reasons, such as greater satisfaction with their jobs, contribution to pension plans, and having "cognitively" justified their remaining in an organisation. Also, years spent in an organisation are likely to yield greater side-bets (Mathieu and Zajac, 1990). But a study by Alvi and Ahmed (1987), conducted in Pakistan, found that age is negatively related with organisational commitment. This is probably due to the fact that most workers, particularly males of older generation (35 years and above) are involved in such industries as construction, packaging, vending and house cleaning which provided only temporary jobs.

4.3.2 Education

Education has often been found to be negatively related to organisational commitment. This inverse relationship may result from the fact that more highly educated individuals have higher expectations that the organisation may be unable

to meet (Mowday, Porter and Steers, 1982). Mathieu and Zajac (1990) found that the negative relationship is stronger for attitudinal commitment than for calculative commitment. In addition to Mowday et al.'s explanation of the relationship, Mathieu and Zajac (1990) added that "more educated employees have a greater number of job options and are less likely to become entrenched in any one position or company" (p. 177).

4.3.3 Gender

Studies by Angle and Perry (1981), Gould (1975), and Grusky (1966) found that women as a group were found to be more committed than men. It has been suggested that women would become more committed to an organisation because they had to overcome more barriers than men to gain membership (Grusky, 1966; quoted by Mathieu and Zajac, 1990). In the case of a developing country (Pakistan), women were found to be more committed than men owing to the fact that most women are employed in white-collar and high status jobs as opposed to men who are mostly employed in lower level jobs (Alvi and Ahmed, 1987). This could also be interpreted along the lines of Marsh and Mannari's (1977) suggestion that status has a positive and direct effect on commitment.

4.3.4 Marital Status

Mathieu and Zajac (1990) in their meta-analysis reported that this variable was found to exhibit a small positive relationship with organisational commitment. This means that married individuals tend to be more calculatively committed because

they are, in general, likely to have greater financial burden. Their finding is consistent with Zahra (1984) who also found that married employees were more likely to be committed to the organisation.

4.3.5 Personality Factors

Mowday, Porter and Steers (1982) noted that commitment has been found to be related to achievement motivation, sense of competence and other higher order needs. They suggested that commitment to the organisation could be bolstered to the extent that employees see the organisation as a source of need satisfaction. Also, individuals with a strong personal work ethic tend to be highly committed to the organisation. A study by Dubin et al. (quoted in Mowday et al., 1982) discovered that workers whose central life interests are associated with work tend to be more committed to the organisation. Mathieu and Zajac (1990) found that perceived competence exhibited a large positive relationship with organisational commitment. This could be due to the fact that individuals will become committed to an organisation to the extent that it provides for growth and achievement needs. The relationships between work values and organisational commitment were also evident in Putti, Aryee and Liang's (1989) study in Singapore. They found that the intrinsic work values is related more to organisational commitment than the extrinsic work values. Their findings are consistent with those obtained in the western culture. The role of values in understanding commitment has in fact been rightly emphasised by Becker (1960) when he wrote:

For a complete understanding of a person's commitment we need ... an analysis of the system of values In short, to understand commitment fully, we must discover the systems of values within which the mechanisms and processes (of becoming committed) described earlier operate (p. 39).

4.3.6 Ability

Mathieu and Zajac (1990) found that employees' ability is positively related to organisational commitment. They quoted Steven et al. (1978) to explain this relationship : "highly skilled employees are of great value to organisation, which is likely to increase the rewards they receive, and thereby increase their calculative (continuance) commitment".

4.3.7 Salary

In Mathieu and Zajac's (1990) meta-analysis, salary was found to exhibit a fairly low positive correlation with organisational commitment. Salary is generally considered as a "side-bet" and thereby should be more related to calculative commitment, but it could also be related to attitudinal (affective) commitment in the sense that it may be related to levels of self-esteem (Mathieu and Zajac, 1990). Alvi and Ahmed (1987) also found positive relationship between income and organisational commitment.

4.3.8 Career Experiences and Perceptions of Employment Practices

Gaertner and Nollen (1989) pointed out that employees' career experiences and their perceptions of the organisation's employment practices are at the heart of the employment relationship. They suggested that employees' career experiences and their perceptions of organisational practices ought to be important factors in determining (psychological) commitment to the organisation. Gaertner and Nollen (1989) conducted a field research in a manufacturing firm of about one thousand employees. Based on 496 responses, they analysed the relationships between those factors and organisational commitment. Some important findings from their study are:

1. Employees who believe there are internal career opportunities and who believe the organisation tries to provide employment security are more committed than those who do not believe the firm is trying to provide secure, career-oriented employment.
2. Employees who have experienced promotion are more committed than those who have not, and those who have moved more quickly are more committed than those who have moved more slowly.
3. The perceptions of the organisation's employment practices are related to commitment above and beyond that achieved by other work place characteristics such as participation, communication and supervisory

relations. This means that employment perceptions explain more organisational commitment variance than the work context variables.

Gaertner and Nollen's findings are consistent with Ogilvie's (1986) and Aryee and Debrah's (1992) findings. Ogilvie (1986) conducted a study among sixty seven farm managers. He performed a hierarchical regression analysis to predict the impact of human resource management practices on organisational commitment. His results indicated that merit-system accuracy and the fairness of promotions were significant predictors of organisational commitment. Aryee and Debrah's (1992) research was conducted among managerial, professional and technical employees in Singapore. Results from hierarchical multiple regression analyses indicated that career development programs, career strategy and career satisfaction were significant predictors of organisational commitment (Aryee and Debrah, 1992).

4.3.9 Job Characteristics

Job characteristics are expected to be correlated with organisational commitment because, as suggested by Mowday, Porter and Steers (1982:58-59), "such task characteristics as autonomy, challenge, and significance may increase the behavioural involvement of employees in their job and thus increase their felt responsibility". In examining the relationships between job characteristics and organisational commitment, most authors used the Hackman-Oldham job characteristics model to suggest that enriched jobs are likely to result in higher commitment (Mathieu and Zajac, 1990). Mathieu and Zajac (1990) found that

aspects of job characteristics exhibited positive relationships with organisational commitment. The positive relationship between job challenge and organisational commitment is expected to be more evident among employees with high growth need strength (Mathieu and Zajac, 1990). Challenging jobs should be more motivating than mundane jobs, which in turn should lead to greater commitment (Flynn and Tannenbaum, 1993). Job scope, which demonstrated the highest correlation with commitment, is actually a summary variable, computed as the average of the job characteristics model components. Its high correlation with commitment, as compared to those of the separate components, might indicate "that individuals do not view jobs as having certain levels of variety, autonomy, significance and so forth, but instead see jobs in terms of a gestalt or summary dimension that might be labelled job complexity" (Mathieu and Zajac, 1990 : 179).

4.4 Consequences of Organisational Commitment

Having discussed some of the more commonly identified antecedent variables of organisational commitment, this chapter now presents the other half of the equation, the consequences of organisational commitment. As mentioned earlier, organisational commitment has been a widely-researched predictor of certain organisational outcomes. The role of organisational commitment in reducing turnover, absenteeism and tardiness has been well demonstrated (Reichers, 1985). Wittig-Berman and Lang (1990) have also pointed out that organisational commitment may bring about a variety of other potentially beneficial outcomes, such as organisational citizenship behaviour and improved customer service. The

following paragraphs provide a review of the consequences of organisational commitment which have been reported in previous studies.

4. 4.1 Job Performance

Mowday, Porter and Steers (1982) suggested that the relationship between organisational commitment and performance is rather weak. However, Brown (1990), in examining the relationships of organisational commitment dimensions with performance variables, found that affective commitment has a strong positive relationship with "voluntary effort", and with "pro-social behaviour", whereas goal (normative) commitment has a weak relationship with all the performance variables. Randall (1990) reported mixed results from her meta-analysis of the relationships between organisational commitment and performance (Table 4.4). These findings indicate that the relationships between organisational commitment and various aspects of performance indicators are somewhat inconclusive.

Several factors may account for the weak relationships between organisational commitment and performance. Mowday, Porter and Steers (1982) suggested the following explanation:

Following contemporary theories of employee motivation, performance is influenced by motivation level, role clarity and ability. Commitment would therefore only be expected to influence one aspect of actual job

performance. Hence, we would not expect a strong commitment-performance relationship (p. 36).

Table 4.4 Relationships Between Organisational Commitment and Performance

Author	Date	Performance Indicator	Average Correlation	Significant?*
Chelte and Tausky	1986	Effort	0.27	Yes
Ferris	1981	Performance	0.03	No
Jenner	1984	Hours worked	0.15	No
O'Reilly & Chatman	1986	Extra-role Pro-social behaviour Participation in extra-role activities	0.17	No
Van Maanen	1975	Performance	0.16	No
Wiener and Vardi	1980	Performance	0.05	No
Wiener and Vardi	1980	Effort	0.24	Yes
Zahra	1984	Quality & Quantity of work Voluntary participation Performance	0.17	No

Source: Adapted from Randall (1990).

* significant if $p < 0.05$

4.4.2 Turnover

Mowday, Porter and Steers (1982) believed that "reduced turnover" is the strongest or most predictable behavioural outcome of organisational commitment. Brown (1990) found that both goal commitment and affective commitment have strong positive relationships with expressed loyalty, intent to remain and desire to remain. In addition, affective commitment was also found to demonstrate a strong negative relationship with search activity as well as search frequency. Results of Randall's (1990) meta-analytic study concerning organisational commitment and turnover is presented in Table 4.5 below.

Table 4.5 Relationships Between Organisational Commitment and Turnover

Author	Date	Average Correlation Coefficient	Significant?*
Angle and Perry	1981	0.21	Yes
Arnold and Feldman	1982	0.26	Yes
Bluedorn	1982	0.14	No
Ferris and Aranya	1983	0.23	Yes
March and Mannari	1977	0.09	No
Mowday, Koberg and McArthur	1984	0.31	Yes
Mowday, Koberg and McArthur	1984	0.25	Yes
Mowday, Steers and Porter	1979	0.30	Yes

Source: Adapted from Randall (1990)

* Significant if $p < 0.05$.

Results from the above studies suggested that organisational commitment is a pertinent and relevant variable in the study of the processes leading to an employee's decision to stay or withdraw from an organisation (Ismail, 1990). In fact, most attention given to the concept of organisational commitment results from its relationship with turnover (Cohen, 1993). A generalised model of relationship between organisational commitment and turnover is shown in Figure 4.4. As shown in the figure, organisational commitment is the immediate precursor of intention to quit, while intention to quit is the immediate precursor of actual turnover behaviour (Ismail, 1990).

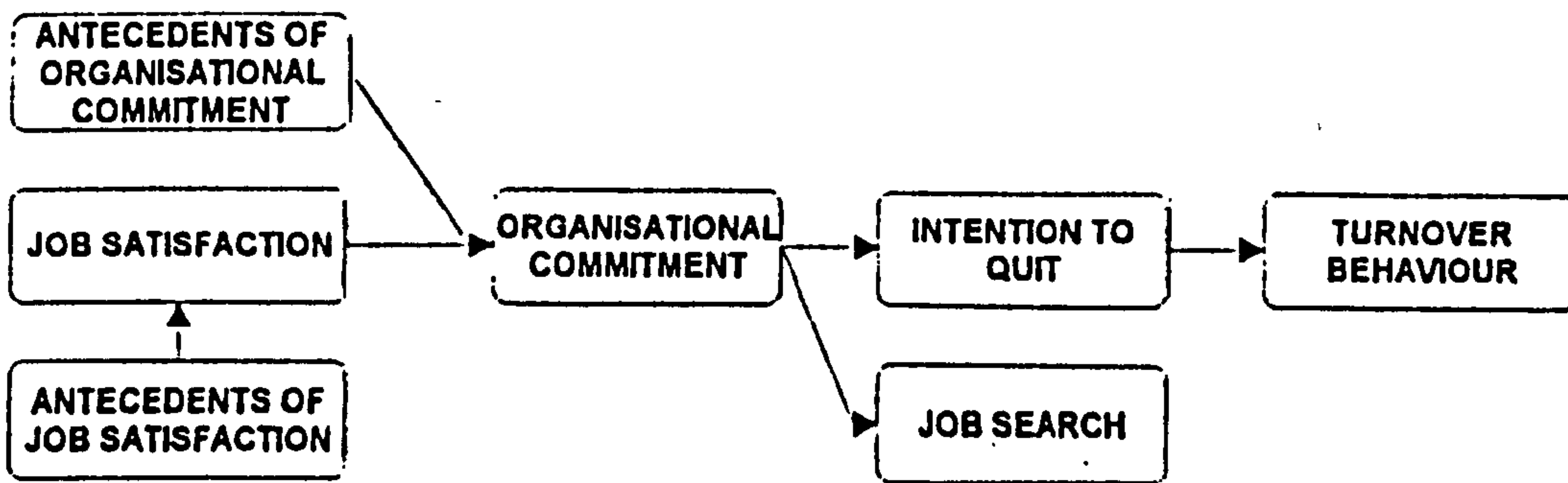


Figure 4.4 Organisational Commitment and Turnover
 (Source: Ismail, 1990)

Employing a three-component conceptualisation of organisational commitment, Jaros, Jermier, Koehler and Sincich (1993) suggested that commitment influences turnover through its effects on withdrawal tendency. Jaros, Jermier, Koehler and Sincich (1993) employed causal modelling techniques to evaluate several formulations of commitment-turnover relationship. They tested eight commitment-turnover models and found that the three latent commitment variables accounted for 68 percent of the variance in the withdrawal tendency variable. The model which was found to be the best in representing the data is presented in Figure 4.5 .

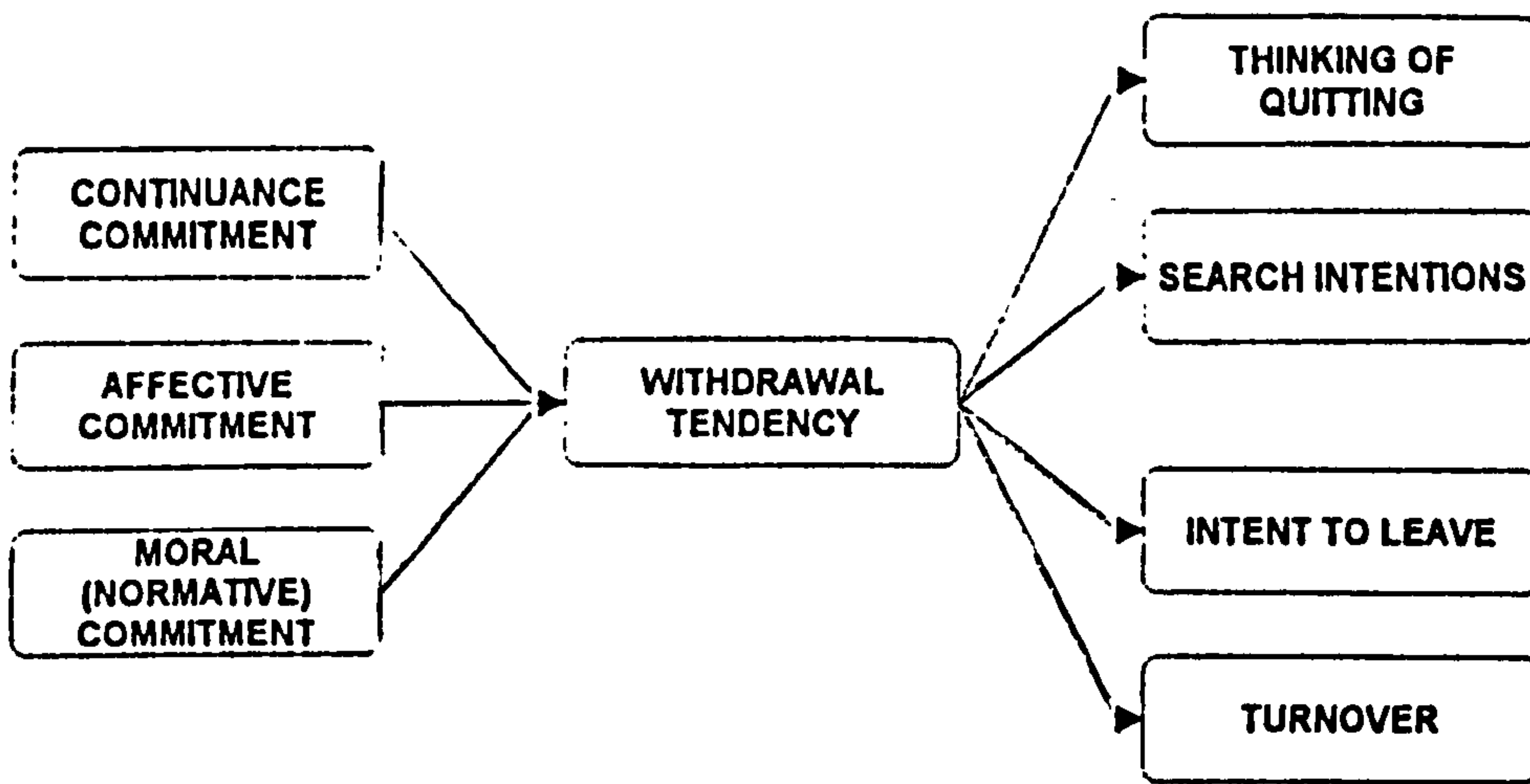


Figure 4.5 A Model of Commitment-Turnover Relationship
 (Source: Adapted from Jaros et al., 1993)

Bluedorn (1982) through his integrated turnover model posited that organisational commitment influences intention to leave indirectly through job search, while job satisfaction influences job search through organisational commitment.

In conclusion, the relationship between organisational commitment and turnover may be adequately explained as follows:

Highly committed employees by definition are desirous of remaining with the organisation and working toward organisational goals and should hence be less likely to leave. (Mowday, Porter and Steers (1982: 38).

4.4.3 Absenteeism

Theory would predict that highly committed employees would be more motivated to attend so that they could facilitate organisational goal attainment (Mowday, Porter and Steers, 1982). However these authors also caution us not to expect a direct commitment-attendance relationship. They suggested that commitment is only one of the factors which influence attendance motivation (Mowday, Porter and Steers, 1982). Randall's (1990) meta-analysis did not lend much support to commitment-attendance relationship, with only one study, by Mowday, Porter and Steers (1982), showing a significant relationship.

4.4.4 Organisational Citizenship Behaviour

Organisational citizenship behaviour is defined as "individual behaviour that is discretionary, not directly or explicitly recognised by the formal reward system, and in the aggregate promotes the efficient and effective functioning of the organisation" (Organ, 1988: 4). Empirical and conceptual work on the concept suggests that there are two broad categories of organisational citizenship behaviour (Williams and Anderson, 1991): (a) behaviours that benefit the organisation in general (e.g., giving advance notice when unable to come to work) and (b) behaviours that immediately benefit specific individuals and indirectly contribute to the organisation (e.g., helping others who have been absent).

Scholl (1981) suggested that commitment is a stabilising force which acts to maintain behavioural direction when expectancy/equity conditions are not met and

do not function. In that organisational citizenship behaviours represent behaviour that occurs when there is little expectation of formal organisational rewards for their performance, commitment represents a relevant determinant (Williams and Anderson, 1991). Weiner (1982) suggested that commitment is responsible for behaviours that (a) reflect personal sacrifice made for the sake of the organisation, (b) do not depend primarily on rewards or punishments, and (c) indicate a personal devotion to the organisation. A research by O'Reilly and Chatman (1986) showed that commitment was a significant predictor of organisational citizenship behaviour. But O'Reilly and Chatman's finding has to be interpreted with caution because, (1) their measure of extra-role behaviour contained only those items which were of benefit to the organisation, leaving those which might benefit the individuals, (2) six of the seven significant correlations reported were based on self-report measures of performance, thus may have been due to common method variance (i.e. the tendency of respondents to respond in a socially desirable manner), and (3) the commitment measures obtained from a sample of graduating business students may not reflect commitment to one's employing organisation. (Williams and Anderson, 1991).

Moorman, Niehoff and Organ (1993) found that the relationship between organisational commitment and organisational citizenship behaviour is insignificant when a common determinant, procedural justice, is introduced. Procedural justice, which refers to the fairness of organisational decision procedures (Tansky, 1993), was found to be positively correlated with affective commitment, continuance

commitment and with all aspects of organisational citizenship behaviour (altruism, courtesy, sportsmanship, consciousness, civic virtue and in-role behaviours) (Moorman, Nichoff and Organ, 1993). As such, the relationship between commitment and organisational citizenship behaviour has not been supported by Moorman, Nichoff and Organ's (1993) study.

4.5 Summary

This chapter has reviewed the concepts of employee commitment, particularly organisational commitment. Organisational commitment has been shown to consist of at least three dimensions: affective, continuance or calculative, and normative. The concept has also been shown to be an antecedent as well as an outcome variable. As an outcome variable, organisational commitment is influenced by various factors such as demographic, organisational, work-related and personality factors. As an antecedent, organisational commitment influences performance, turnover, absenteeism and organisational citizenship behaviour.

This research examines organisational commitment as an outcome variable, specifically as an outcome of perceived quality of worklife. The next chapter discusses the research design and methodology employed in this research to examine the relationships between these two variables in Malaysian organisations.

CHAPTER FIVE

RESEARCH DESIGN AND METHODOLOGY

5.0 Introduction

The purpose of this chapter is to explain the development of the research design and strategy used in this study. Research design is a means to guide the researcher in the collection and gathering of relevant data so as to provide answers to the research questions.

This chapter is divided into eight sections. The first section outlines the objectives which the present research seeks to achieve. There are three main objectives of the study. The first is to examine the relative importance of QWL factors, and to assess the degree of perceived presence of these factors in Malaysian organisations. The second objective is to analyse the influence of demographic variables on the perceptions of QWL. The third objective of this research is to examine the patterns of relationships of demographic variables and perceptions of QWL with organisational commitment. Research questions and hypotheses relevant to the objectives of the present research are also discussed in this section. These research questions and hypotheses were developed as a result of the review of relevant literature on quality of worklife and organisational commitment presented in the previous chapters.

The second section describes the research model which serves as the basis for providing answers to the research questions. Basically, the model is built around the three groups of variables which are of interest in this study: demographic, quality of worklife and organisational commitment.

The research design adopted for the present study is described in the third section. It concerns issues relating to data collection and interpretation which enable the researcher to conceptualise and observe the phenomena under study. The study adopted a descriptive research design, which is one of the most common designs in the study of social institutions and human behaviour.

The fourth section focuses on issues relating to the method of data collection. The survey, using questionnaires, was the chosen method. The process of questionnaire development is also described in this section. The questionnaire contains questions and statements relating to the three groups of variables under study.

The fifth section of the chapter describes the various sampling procedures available for selecting sampling units for inclusion in the sample. Cluster sampling design was used in this study. The calculation of minimum sample size needed for this study, based on the required precision, is then presented. The minimum sample size required was calculated to be at 192 non-supervisory employees (sampling units in this study).

Section six of the chapter presents the phases involved in the fieldwork for the data collection process. A total of 1280 sets of survey questionnaires were mailed to the heads of government departments or human resource managers of semi-government and private organisations for distribution to their non-supervisory employees.

The procedures for analysing the data obtained from the survey are outlined in section seven of this chapter. A number of statistical analyses were chosen for the purpose. Descriptive statistics, t-test, factor analysis, ANOVA and regression are the main statistical methods employed.

The last part, section eight, discusses the assumptions and limitations of the present research. As with any cross-sectional survey research, the main limitation is in our ability to infer causality among the variables. Relationships between variables do not necessarily mean that one causes the other.

5.1 Research Questions and Hypotheses

In the previous chapters, a series of issues related to culture, quality of worklife and organisational commitment were presented. It has been shown that culture plays a significant role in management theories and practices. Research findings from a particular culture may not be generalisable to another. In view of the possibility of lack of generalisability, the present research seeks to address the question of quality of worklife and organisational commitment in a Malaysian context.

5.1.1 Purposes of the study

This study was conducted to achieve the following purposes:

1. To identify the relative importance of QWL factors as perceived by non-supervisory employees in government, semi-government and private organisations in Malaysia.
2. To assess the degree of perceived QWL in the three types of Malaysian organisations.
3. To examine the nature of relationships between the perceived presence of QWL factors and organisational commitment using samples from Malaysia.
4. To examine whether the relationships between the perceived presence of QWL factors and organisational commitment are influenced by organisational type.

5.1.2 Research Questions

In order to achieve the purposes outlined above, six research questions were developed for this study.

1. How do Malaysian employees perceive the relative importance of QWL factors?
2. How do Malaysian employees perceive the relative presence of QWL factors?
3. What are the significant differences between the perceived importance of QWL factors and the perceived presence of those factors in their organisations?
4. What significant differences in perceptions of both "the importance" and "the presence" of QWL factors are evident between the different categories of demographic characteristics of employees in the sample?
5. What are the significant relationships of the demographic variables and the perceived presence of QWL factors with the dimensions of organisational commitment?

6. What are the significant differences in the relationships of the perceived presence of QWL factors with organisational commitment dimensions between the three types of organisations?

5.1.3 Research Hypotheses

In trying to provide answers to the above questions, the following hypotheses were tested:

Hypothesis One: Preferred Vs Perceived Presence of QWL Factors

- a) *There are significant differences between the perceived importance and the perceived presence of QWL factors in the total sample as well as in the three organisational types.*

As an effort at diagnosing the general feelings about QWL of non-supervisory employees in Malaysian organisations, this hypothesis is aimed at examining the differences between the degree of importance and the perceived presence of the QWL factors. This will provide guidance for Malaysian managers in their efforts to improve important aspects of QWL, especially for lower-level employees.

Hypothesis Two: Demographic Variables and QWL

- a) *There are significant differences in the perceived importance of QWL factors between employees in different categories of demographic variables.*

- b) *There are significant differences in the perceived presence of QWL factors between employees in different categories of demographic variables.*

The effects of demographic variables on work behaviours and attitudes have been extensively examined by researchers. This is due to the fact that there are differences in the goals and needs which people have. Lawler (1973) suggests that these individual differences are related in meaningful ways to a number of organisational factors, such as length of service, and to personal characteristics, such as age, gender, and education level. Consistent with Lawler's suggestion, these two hypotheses aim at examining individual differences in the importance as well as in the perceived presence of QWL factors.

Hypothesis Three: Demographic and Perceived Presence of QWL Factors and Organisational Commitment

- a) There is significant relationship between demographic and QWL variables and affective commitment.*
- b) There is significant relationship between demographic and QWL variables and normative commitment.*
- c) There is significant relationship between demographic and QWL variables and continuance commitment.*

This category of hypotheses aims to test for significant relationships of demographic and perceived QWL variables with the dimensions of organisational commitment in a Malaysian context. The relationships between demographic variables and organisational commitment have been discussed in some detail in Chapter Four.

Though the relationships between QWL and organisational commitment have been studied by previous researchers, most of them either used aspects of job satisfaction as surrogates for QWL or failed to examine the relationships of the QWL variables with the different dimensions of commitment. In order to add to our understanding of organisational commitment, this research seeks to examine the patterns of relationships between QWL variables and the different dimensions of organisational commitment.

Hypothesis Four: The Effects of Organisational Type on the Relationships between Perceived QWL on Organisational Commitment

- a) There are significant differences in the relationships between perceived presence of QWL factors and dimensions of organisational commitment among the three type of organisations in this study .*

As suggested by a number of authors, the term QWL may mean different things to different people or parties (Horrungruang, 1989; Ondrack and Evans, 1986), or as Strauss (1980) puts it "QWL acquires meaning in the eyes of the beholder". If meaning of QWL varies, then the nature of its relationships with other variables, such as organisational commitment, should also vary from person to person or from organisation to organisation. This research, therefore, intends to test whether there are significant differences in the strength of relationships between demographic and QWL factors and dimensions of organisational commitment among the three types of organisations.

5.2 Research Model

The research model developed for this research is divided into two stages. The first stage of the research concerns with the relationships between demographic factors and the relative importance as well as the perceived presence of QWL factors. This part of the research phase seeks to examine whether employees' demographic characteristics have any impact on the degree of importance and on their perceptions of QWL. This is related to Hypothesis Two developed in Section 5.1.3 above.

The second part of the research model is concerned with the relationships between demographic and QWL variables and organisational commitment. This is related to Hypothesis Three. The patterns relationships between demographic and QWL variables and organisational commitment in the different types of organisations are examined. The research model is presented in Figure 5.1.

5.3 Research Design

The study to be undertaken is designed to be descriptive in nature. As has been mentioned previously, the purpose of this study is to investigate the influence of various demographic variables on the perception QWL , and to ascertain the nature of relationships between QWL and organisational commitment in a Malaysian setting. In other words, attempts are being made to determine the degree of association between demographic, QWL and organisational commitment variables.

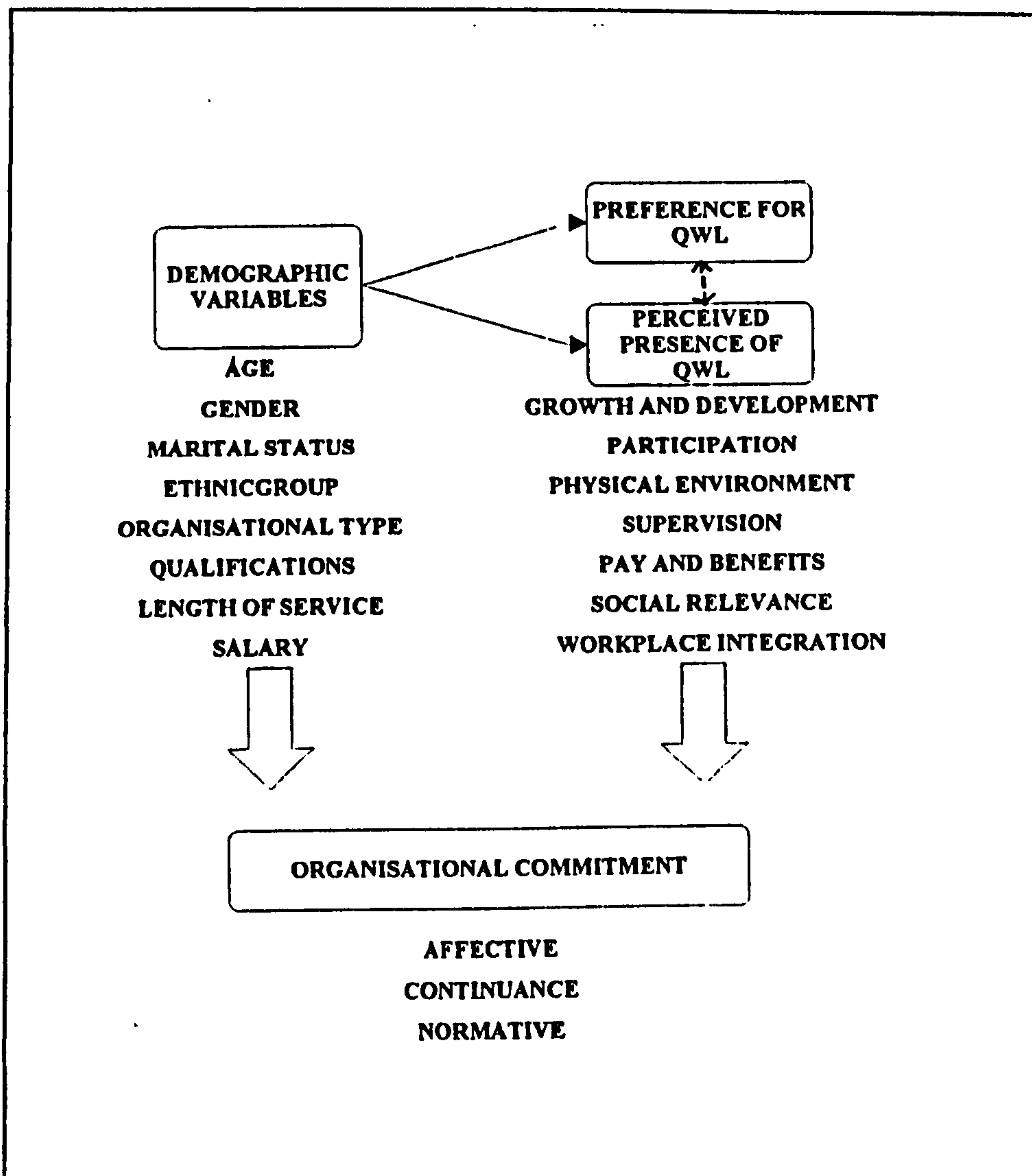


Figure 5.1 The Research Model

Descriptive research is considered to be more appropriate for this study because its objectives are to describe the perceptions of QWL among Malaysian employees, and how these perceptions could have an impact on their organisational commitment. In fulfilling the stated objectives, descriptive research is used to

generate the data describing the units of interest and to enable the researcher to identify patterns of association between variables.

As with most descriptive research, this study is cross-sectional in nature. It involves a "one-time" measurement. This study used a cross-sectional sample population, i.e. taking a sample of population elements at one point in time. In contrast, longitudinal studies typically use permanent samples, from which data are collected on various time intervals. It provides a basis for making causal inferences between variables. The reasons for using a cross-sectional research design are:

1. The researcher is interested in generating a representative sample in which statistics could be compiled and their relationships of the summary statistics could be established and compared.
2. This study attempts to generalise conclusions from the data collected from the sample and to make some recommendations from these generalisations.
3. Time limitation in data collection makes it impossible for the researcher to conduct an ongoing experiment (or to introduce interventions) in an organisation as required in a longitudinal design.

5.4 Data Collection

5.4.1 Qualitative Vs Quantitative Methods

The researcher is faced with two choices of data collection methods, qualitative and quantitative. Both methods have their strengths and weaknesses as shown in Table 5.1. Researchers have developed various hybrid methodologies to minimise the weaknesses. Qualitative research design is usually intended to generate ideas and hypotheses. This is done through: (a) expert opinion, (b) in-depth interviews, and (c) focus-group interviews. Chisnall (1991) considers qualitative research as a disciplined approach of collecting and analysing information because it enables a researcher to use a repertoire of open-ended interviewing techniques and formal and informal analysing methods. It aims to give insights into perception, motivation and attitudes - to answer what? why? and how?. The aim of qualitative methods of data collection is to probe rather than count.

Table 5-1 Strengths of Qualitative and Quantitative Research

QUALITATIVE	QUANTITATIVE
1. Open-ended, dynamic and flexible	1. Statistical and numerical
2. Depth of understanding	2. Sub-group comparison
3. Taps respondent's creativity	3. Enables replicability and comparison
4. Database - broader and deeper	4. Taps individual response
5. Probes rationalised or superficial responses	5. Less dependent on research executive skills

Source: Gordon and Langmaid (1988)

On the other hand, quantitative methods deal with the quantification of respondents' behavioural and personal characteristics. It is concerned with describing and measuring concepts or variables. By using quantitative research, the conceptual approaches to problem solving are explicit and fixed, using an agreed tool for

measuring. Statistical tests are usually employed to indicate whether a particular relationship, or the differences between groups are significant. Typically, quantitative research methods seek to test whether a particular hypothesis is true for the whole of the population.

Table 5.2 presents an outline of the characteristics of qualitative and quantitative research methods.

Table 5.2 Characteristics of Qualitative and Quantitative Research

QUALITATIVE	QUANTITATIVE
1. Concerned with understanding behaviour from the actor's frame of reference	1. Seeks the facts of social phenomena without advocating subjective interpretation
2. Phenomenological approach	2. Logical-positivistic approach
3. Uncontrolled, naturalistic observational measurement	3. Obtrusive, controlled measurement
4. Subjective; "insider's" perspective; close to data	4. Objective; "outsider's" perspective, distanced from data
5. Grounded, discovery-oriented, exploratory, descriptive and deductive	5. Ungrounded, verification-oriented, confirmatory and inferential
6. Validity is critical, "real" and deep data	6. Reliability is critical, "hard", replicable data
7. Holistic - attempt to synthesise	7. Particularistic - attempt to analyse

Source: Deshpande (1983)

Having reviewed the two approaches, it was felt that the quantitative method was more appropriate for this study. The reasons for choosing the quantitative approach to data collection in this research were as follows:

1. The quantitative method allows for standardisation of information and a controllable set of measures. This means that the questions asked of every respondent are identical and thus could be regarded as standard stimuli.
2. The quantitative method allows for a survey to be conducted on a sample from the population. Based on statistical inferences, the probable error of a sample's reporting certain results is readily established. This then allows one to say that, for example, in 90 or 95 out of 100 cases, the results will not vary by more than a certain amount, e.g. 5 or 10 percent.
3. Besides being representative, the sample sizes are controllable and allow for generalisation.

5.4.2 Data Collection Method

The method of data collection used in the present research is the survey. The survey is basically "the process of asking questions of people who are believed to be possessing the required information" (Cox, 1979). In studying QWL, various options with regard to the unit of analysis, are available : industry, organisation or individual firm, and individual. In this study the individual will be the unit of analysis. Consistent with the view that individuals differ in perceiving reality, this research is looking at individuals' perceptions of their jobs, in particular their views on factors which are considered important in their QWL.

The survey method allows for the use of statistical techniques in which the characteristics of the population may be estimated from a relatively small representative sample group. Survey data is collected using a set of questions directed to respondents. A well-designed questionnaire therefore is necessary for obtaining accurate and useful data.

For the purpose of this study, which is to investigate the influence of demographic factors on perceptions of QWL, and the relationship between QWL and organisational commitment, it was decided that the survey method was more appropriate for the following reasons:

1. The researcher was interested in obtaining a small amount of information from a large number of respondents.
2. The researcher wished to make inferences about Malaysian non-supervisory employees' perceptions of QWL and its relationship with organisational commitment, based on the data collected from a relatively small sample of those employees.
3. The basic purpose of the study was to describe and explain, statistically, the variability of the employees' perceptions of QWL in Malaysian organisations, and the relationship between QWL and organisational commitment.

Apart from the above reasons, the survey research strategy was chosen because it does not require control over behavioural actions and mainly focuses on contemporary events. It also allows the respondents to remain anonymous. They are therefore more likely to participate in the study. Table 5.3 illustrates the relevant applications suitable for different research strategies.

Table 5.3 Different Research Strategies and Their Relevant Applications

Strategy	Forms of Research Questions	Control over Events?	Focus on Contemporary Events?
Experiment	how, why	yes	yes
Survey	how, what, where, how many, how much	no	yes
Archival analysis	who, what, where, how many, how much	no	yes/no
History	how, why	no	no
Case study	how, why	no	yes

Source: Yin (1984)

5.4.3 Data Collection Instrument

The data collection instrument used for this study was a set of questionnaires designed to obtain the data necessary for answering the research questions. The process of questionnaire development is described in the following sub-sections.

5.4.3.1 QWL Measure

1. Conceptualisation

A review of the literature on the concept of QWL was carried out (see Chapter Three) to determine the appropriate concepts to be included in the questionnaire. The approach taken in this study was to view QWL in terms of perceived organisational conditions, as opposed to other views which regard QWL as either intervention strategies for organisational improvements (e.g. Gowdy, 1988) or as an institutional approach in creating workplace democracy (Maccoby, 1984). Though the approach taken was from the perspective of perceived organisational conditions, the basic philosophy of QWL which regards employees as capable of learning (Camman, 1984) and organisations as learning environments (Cherns and Davis, 1975) was given due consideration in constructing the questionnaire.

A dominant approach taken in previous studies on QWL was to regard job satisfaction as a measure of QWL. Wilcock and Wright (1991) remarked that the use of job satisfaction as a measure of QWL has its limitations, because satisfaction is only one of the many aspects of QWL (White, 1981; Davis and Cherns, 1975). Since a satisfactory measure of QWL suitable for adoption in this study was not available in the literature, and in order to avoid using job satisfaction as a single indicator of QWL, a set of questionnaires purporting to measure the concept had to be developed.

In this study, the conceptual categories proposed by Walton (1974) were adopted as the basis for designing the QWL measure. Walton provided eight aspects in which employees' perceptions toward their work organisations could determine their QWL:

1. Adequate and fair compensation
2. Safe and healthy environment
3. Development of human capacities
4. Growth and security
5. Social integration
6. Constitutionalism
7. The total life space
8. Social relevance

Since this study was, in part, an attempt to diagnose the conditions of QWL among non-supervisory employees in a developing country, Malaysia, it was decided that items relating to both the importance and the perceived presence of QWL should be incorporated into the questionnaire. To avoid the questionnaire being too long, the researcher decided to reduce the number of factors from eight to seven, and also to make some modifications in the naming of the factors.

The factor constitutionalism, which refers to "respect accorded to employees" and "the opportunity for employees to voice out their opinions" (Walton, 1974), was changed to supervision. In the context of non-supervisory employees, especially in Malaysia where power distance is high, there is a set procedure for employees to voice their opinions in the workplace. Employees are required to use proper

channels in expressing their opinions, i.e. in most cases, through their immediate supervisors. It is therefore appropriate that the items relating to the quality of relationship between a subordinate and his/her supervisor should be included as a measure of QWL.

The factor, development of human capacities, which refers to "the opportunity for employees to perform work which is meaningful" is replaced with participation. Again, in the context of lower level employees, it may quite difficult for them to judge the "meaningfulness" of their jobs because "meaningfulness", especially in Malaysia, is often based on amount of monthly salary the job holder receives. Participation has been considered as a key element in Nadler and Lawler's (1983) working definition of QWL because participation can cause people to work better: employees who are allowed to be involved in decisions relating to their jobs will develop certain interpersonal and analytical skills, thus enhancing their sense of meaningfulness.

Walton's factor, total life space was not included in the QWL questionnaire for this study. This was to avoid redundancy because Walton's definition of total life space as a "balance between work and non-work" was thought to be adequately represented in another factor, social relevance.

Table 5.4 provides a summary of Walton's QWL factors and the factors adopted for the present study.

Table 5.4 QWL Factors

Walton's QWL Factors	Present Study
Adequate and fair compensation	Pay and benefits
Safe and healthy environment	Physical environment
Development of human capacities	Participation
Growth and security	Growth and development
Social integration	Workplace integration
Constitutionalism	Supervision
Social relevance	Social relevance
Total life space	(not included)

2. Selection of Items

Having defined the factors representing the construct of QWL, the next step in the development of a QWL measure involved the selection of items to represent the respective factors. In searching for appropriate items, the researcher referred to various published sources in the literature. Items were collected from various scales which were thought to represent the defined dimensions of QWL. The items and the sources are presented in Table 5.5.

Table 5.5 Operational Definitions and Items for QWL Dimensions

Dimensions	Operational Definitions	Items (Abbreviated)/Sources*
Growth and development	Opportunity to use variety of skills and perform challenging jobs	Job provides sufficient opportunities for growth and development (Hackman and Lawler, 1971) Job allows for a variety of skills (Hackman & Oldham, 1975) Job is challenging (Seashore et al, 1982)
Participation	Opportunity to be involved in decisions relating to work	Organisation provides opportunities to contribute ideas (Hackman and Lawler, 1971; Eisenberger et al., 1986). Organisation provides effective suggestion scheme (Vroom, 1960). Organisation implements employees' suggestions (Warr et al., 1979).
Physical Environment	Presence of conducive work environment including work scheduling	The working environment is safe (Stanley, 1986). The physical surroundings are good (Chelte, 1983; Quinn and Staines, 1979). The working hours in this organisation are good (Chelte, 1983).
Supervision	Relationship with supervisor and mutual understanding	Supervisor has confidence in subordinates' abilities (Stogdill, 1963). Supervisor is capable to develop teamwork (Taylor and Bowers, 1972). Supervisor concerns for subordinates' welfare (Seashore et al., 1982; Chelte, 1983; Quinn and Staines, 1979).
Pay and Benefits	Fairness and adequate monetary benefits	Salary is good (Chelte, 1983; Quinn and Staines, 1979). Pay is based on merit (Stanley, 1986). Fringe benefits are good (Chelte, 1983; Quinn and Staines, 1979).
Social Relevance	Relationship between work and other aspects of life	Job allows for contribution to society (Hackman and Oldham, 1975) Able to pursue other interests (Sayeed and Sinha, 1981). Consistent with personal values (Eisenberger et al., 1986).
Workplace Integration	Relationships and cohesiveness among co-workers	Work together as a team (Stanley, 1986). Co-workers provide support to one another (Stanley, 1986). Able to get to know other people (Hackman and Lawler, 1971).

* Note:

As some of the sources were only used as guides in constructing the items, the wording of some items may not be identical to the original items.

5.4.3.2 Organisational Commitment Measure

1. Conceptualisation

The organisational commitment measure adopted for this study was the one developed by Allen and Meyer (1990). In order to provide some perspectives on the measure, this section briefly revisits the concept of organisational commitment, discussed in Chapter Four. Allen and Meyer (1990) noted that, although several conceptualisations of attitudinal commitment have appeared in the literature, each reflects one of three general themes: affective, perceived cost and obligation. Based on these general theme, Allen and Meyer conceptualised organisational commitment in terms of three distinct dimensions: affective, continuance and normative.

Affective commitment is characterised by the presence of emotional attachment to the organisation such that the affectively committed individual identifies with, is involved in, and enjoys membership in, the organisation (Allen and Meyer, 1990). The affectively committed employees remain with the organisation because they want to (Meyer, Allen and Gellatly, 1990).

The continuance dimension of commitment combines a behavioural conceptualisation (disinclination to leave the organisation) with an instrumental cause (potential costs and lack of alternatives) (Popper and Lipshitz, 1990). Employees whose primary link to the organisation is based on continuance commitment remain because they need to so (Meyer and Allen, 1991). The guiding criterion in the development of continuance commitment is self-interest, or, in the

words of Heetderks (1993): "what's best for me, rather than what's in the best interests of the organisation".

The normative dimension of organisational commitment focuses on feelings of loyalty to a particular organisation resulting from the internalisation of normative pressures exerted on an individual (Popper and Lipshitz, 1992; Hackett et al., 1992). Internalisation occurs when the induced values of the individual and the organisation are in congruence (O'Reilly and Chatman, 1986). Consequent to the similarity of values, individuals exhibit committed behaviours because it is the right thing to do (Allen and Meyer, 1990). Employees who are normatively committed feel they ought to remain with the organisation (Meyer and Allen, 1991).

On the basis of their conceptualisation, Allen and Meyer (1990) developed an instrument to measure organisational commitment along the three dimensions. The three-component measure was found to be psychometrically sound (Meyer, Allen and Smith, 1993). Factor analytic studies of the measure have shown that they measure three relatively distinct constructs (Meyer et al., 1993; Hackett, Bycio and Hausdorf, 1994). It has also been shown that the three dimensions of commitment correlate differently with variables purported to be antecedents of commitment (Shore and Tetrick, 1991, Meyer et al., 1993).

Table 5.6 Dimensions of Commitment and their Respective Items

Dimension	Definition	Items
Affective	Affective attachment - enjoys membership in, identifies with and involves in, the organisation. Remains because he/she wants to.	<p>I would be very happy to spend the rest of my career with this organisation</p> <p>I enjoy discussing my organisation with people outside it</p> <p>I feel as if these organisation's problems are my own</p> <p>I do not think I could become as attached to another organisation as I am to this one</p> <p>I feel "like part of family" at my organisation</p> <p>I feel emotionally attached to this organisation</p> <p>This organisation has personal meaning for me</p> <p>I feel a strong sense of belonging to my organisation</p>
Continuance	Calculative - based on the reward-cost relationships, "what's best for me". Remains because he/she needs to.	<p>It would be hard for me to leave my organisation right now, even if I wanted to</p> <p>My life would be disrupted if I decided to leave my organisation now</p> <p>I am afraid of what might happen if I quit my job without having another one lined up</p> <p>It would be costly to leave my organisation now</p> <p>Right now, staying with my organisation is a matter of necessity as much as desire</p> <p>I feel that I have few options to consider leaving this organisation</p> <p>One of the serious consequences of leaving this organisation would be the scarcity of available alternatives</p> <p>One of the major reasons I continue to work for this organisation is that leaving would require personal sacrifice - another organisation may not match the overall benefits I have here</p>
Normative	Internalisation of normative pressures - congruency of values. Remains because he/she ought to	<p>I think that people these days move from organisation to organisation too often</p> <p>I feel that a person must always be loyal to his/her organisation</p> <p>Jumping from organisation to organisation seems unethical to me</p> <p>I believe that loyalty is important, therefore I feel a strong sense of moral obligation to remain</p> <p>If I got another offer for a better job elsewhere I would not feel it was right for me to leave my organisation</p> <p>I was taught to believe in the value of remaining loyal to one organisation</p> <p>Things were better in the days when people stayed with one organisation for most of their careers</p> <p>I do not think that wanting to be a "company man/woman" is sensible anymore</p>

2. Dimensions of Commitment and Questionnaire Items

Table 5.6 summarises the dimensions of organisational commitment and their respective items.

5.4.3.3 Organisation of the Questionnaire

The questionnaire (Appendix A) was divided into four parts. The first part was designed to obtain the demographic characteristics of the respondents. The second part was designed to measure the respondents' perceived importance of various QWL factors. The third part of the questionnaire was a measure of the respondents' perceptions of QWL in their work organisations. The final part of the questionnaire was designed to measure the respondents' organisational commitment on three dimensions: affective, continuance and normative.

The coding scheme used for the first part of the questionnaire, which consisted of questions relating to the demographic characteristics of the respondents is given in Table 5.7.

Table 5.7 The Coding Scheme for Demographic Variables

Variable	Categories and Codes
Gender	1. Male 2. Female
Age Group	1. 25 years and below 2. 26 - 35 years 3. 36 years and above
Marital Status	1. Married 2. Single
Ethnic Group	1. Malay 2. Non-Malay
Organisational Type	1. Government 2. Semi-Government ¹ 3. Private
Academic Qualification ^a	1. LCE and below 2. MCE or equivalent 3. HSC and above
Length of Service	1. 3 years or less 2. 4 - 6 years 3. 7 - 9 years 4. 10 - 12 years 5. More than 12 years
Salary Level (Monthly) ^b	1. RM400 or less 2. RM401 - RM600 3. RM601 - RM800 4. RM801 - RM1000 5. More than RM1000

Notes

a. Equivalent qualifications in the United Kingdom:

Lower Certificate of Education : GCSE

Malaysian Certificate of Education : GCE (O Level)

Malaysian Higher School Certificate: GCE (A Level)/Scottish Higher

b. RM (Ringgit Malaysia) is the unit of Malaysian currency

(£1.00 approx. equals RM4.00 (as at January 1995).

Likert scales were used for the second, third and fourth parts of the questionnaire.

For the first and second parts, two different five-point Likert scales were used.

Questions which were designed to obtain the respondents' assessment on the

¹ Semi-Government organisations are established by Parliamentary Acts to carry out special public services not covered by ordinary government departments. Examples of such organisations in Malaysia are: research (e.g. Malaysian Agricultural Research and Development Institute, and Palm Oil Research Institute of Malaysia) land development (e.g. Federal Land Development Authority) higher education (e.g. MARA Institute of Technology, University of Malaya, and Universiti Utara Malaysia) local government (all city and municipal councils) and regional development (e.g. Kedah Development Authority).

importance of the various QWL factors contained five possible responses on a continuum from "Not important at all" (1) to "Very important" (5). The QWL factors which were included in questionnaire are:

1. Growth and Development
2. Participation Opportunities
3. Physical Working Environment
4. Supervision
5. Pay and Benefits
6. Social Relevance of Work Life
7. Social Integration in the Organisation

These questions were scored as follows:

1. Not important at all
2. Not important
3. Undecided
4. Fairly important
5. Very important

Questions which were meant to measure the respondents' perceptions of QWL in their organisations also contained five possible responses, but on a continuum from "Strongly Disagree" (1) to "Strongly Agree" (5). These questions were scored as follows:

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

The fourth part of the questionnaire measured the respondents' level of organisational commitment on three dimensions: normative, affective and continuance. These questions were taken from Allen and Meyer's (1990) instrument which was developed for the purpose of measuring the construct. Each dimension of commitment contained eight questions. For the purpose of this research, responses for the questions were arrayed on a five-point Likert scale (as opposed to Allen and Meyer's seven-point scale), which ranged from "strongly disagree" (1) to "strongly agree" (5). Scoring for the questions are as follows:

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

5.5 Sampling Process

This section describes the sampling process in this research. Since it is often impossible, impractical or extremely expensive to collect data from all the potential units of analysis covered by the research problem, it is usual that empirically

supported generalisations are based on partial information obtained from a relatively small sample. The process of sampling involves five major aspects:

1. The definition of the population
2. The selection of sampling frame
3. The selection of sample design
4. The determination of sample size
5. Sample selection

The steps involved in the sampling process are shown in Figure 5.2

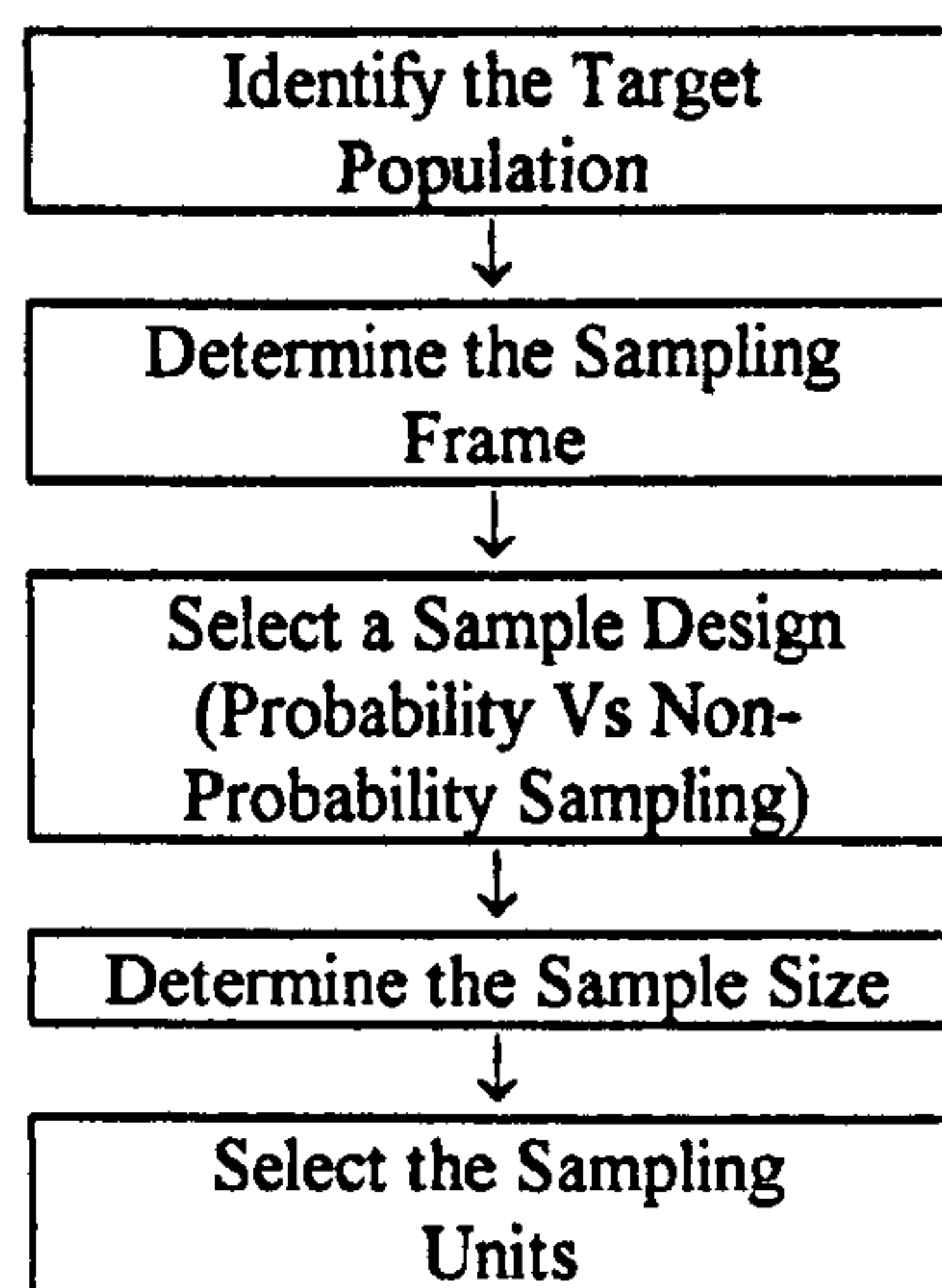


Figure 5.2 The Sampling Process
(Source: Adapted from Aaker et al., 1995)

Each of the sampling aspects is outlined in the following sub-sections.

5.5.1 The Population

The target population of the study, from which the researcher seeks to generalise, is the Malaysian workers. But as already pointed out, to survey the total population would be very difficult and very expensive. Taking into consideration the

difficulties and resource limitations, the target population of this study was defined as all non-supervisory employees in three types of organisations in the northern states of Peninsular Malaysia.

This category of employees was chosen because previous studies conducted in Malaysia were limited in the sense that they focused on either the supervisory or managerial levels of employees (e.g. Nik Rashid, 1977), or, if non-supervisory employees were included, they were rather specific to particular organisations (e.g. Ismail, 1990; Kamal, 1988; MatZin, 1993).

5.5.2 The Sampling Frame

The sampling frame is usually a list of population members used to obtain a sample, i.e. in this case, non-supervisory employees in the northern states of Peninsular Malaysia. A list containing the names of all employees working in government, semi-government and private organisations in Malaysia which could be used as a sampling frame was not available during the time this study was conducted. As a substitute, a sampling frame containing the names of organisations was drawn up by the author. This list was developed using two sources:

1. The names of organisations contained in a list supplied by the Career and Industrial Placement Unit (*Unit Kerjaya dan Penempatan Industri*), Universiti Utara Malaysia.

2. The 1994 edition of northern region telephone directory published by Telekom Malaysia Berhad.

From these two sources, 61 organisations which had their addresses in any one of the northern Malaysian states (Kedah, Perlis and Pulau Pinang - see Appendix B) were selected for inclusion in the sampling frame. The full list of the organisations is given in Appendix C.

5.5.3 The Sampling Design

In modern sampling theory, two categories of sampling designs are available: probability sampling and non-probability sampling. In probability sampling, the probability of a sampling unit of the population to be included in the sample can be specified. But in non-probability sampling, there is no way of specifying the probability of each unit's inclusion in the sample, and there is no assurance that every unit has some chance of being included (Frankfort-Nachmias and Nachmias, 1996). The following sub-sections outline the various sampling designs under the two categories.

5.5.3.1 Non-Probability Sampling Designs

There are three major designs utilising the non-probability samples often used by researchers in the social science: convenience samples, purposive samples and quota samples (Frankfort-Nachmias and Nachmias, 1996).

1. Convenience Sampling

Convenience samples are obtained by researchers by selecting whatever sampling units are conveniently available, e.g. a researcher may take the first one hundred people encountered on the street who are willing to be interviewed. Under convenient sampling design, the researcher has no way of estimating the representativeness of the samples, and therefore one cannot estimate the population parameters (Frankfort-Nachmias and Nachmias, 1996)

2. Purposive Sampling

In purposive sampling (also known as judgmental sampling) design, researchers select sampling units subjectively, based on judgement, to obtain a sample that appears to be representative of the population. The probability that a sampling unit will be selected for inclusion in the sample depends on the subjective judgement of the researcher. Since the sampling frame is unknown and the sampling procedure is not well specified, the resulting bias cannot be quantified (Aaker et al., 1995).

3. Quota Sampling

Quota sampling is an extension of judgmental sampling in which the researcher specifies a minimum number of sampling units from each sub-group to be included in the sample. Quota sampling often is based on such demographic data as geographic location, age, sex, education and income (Aaker et al., 1995). By specifying the minimum number of cases from each group, the researcher knows that the sample represents the population with respect to these demographic

characteristics. But, as pointed out by Frankfort-Nachmias and Nachmias (1996), representativeness in demographic characteristics does not guarantee that there is no bias in the results obtained from quota samples. To illustrate the point that we cannot estimate the parameters of the population accurately from quota samples, Frankfort-Nachmias and Nachmias provide the following example:

"Pollsters frequently used quota samples until the presidential election of 1948, when the polls incorrectly predicted that Thomas E. Dewey would be elected president. Three major polls predicted the outcome of the election, and all three declared Dewey the winner. Yet on election day, President Harry S. Truman won with almost 50 percent of the popular vote, whereas Dewey just received just over 45 percent". (p. 185)

5.5.3.2 Probability Sampling Designs

In contrast to non-probability sampling, probability sampling allows the researcher to determine the probability of each sampling unit's being included in the sample. Four common designs under the category of probability sampling are: simple random sampling, systematic sampling, stratified sampling and cluster sampling (Frankfort-Nachmias and Nachmias, 1996).

1. Simple Random Sampling

Simple random sampling is the basic probability sampling design, and it is incorporated in all other probability sampling designs. Under simple random sampling design, each population member or sampling unit has an equal probability of being selected. Usually selecting sampling units for inclusion in the sample is carried out by using a table of random numbers (Aaker et al., 1995; Frankfort-Nachmias and Nachmias, 1996). Random selection procedures ensure that every sampling unit of the population has an equal chance of being selected. The probability is n/N , where n stands for the size of the sample, and N for the size of the population (Frankfort-Nachmias and Nachmias, 1996).

2. Systematic Sampling

The approach of systematic sampling involves systematically spreading the sample through the list of population members. Thus, if the population contained 20,000 people (N) and a sample of 1,000 (n) were required, every twentieth (K , the sampling interval) person would be selected for inclusion in the sample. A starting point could be randomly chosen between the first name and the K th name initially, and then every K th name would be chosen.

With systematic sampling, each sampling unit in the population has a $1/K$ probability of being included in the sample. However, there may be a pattern in the data systematically occurring every K th unit. This phenomenon will bias the sample (Frankfort-Nachmias and Nachmias, 1996).

3. Stratified Sampling

Stratified sampling design is used by researchers to ensure that different groups of a population are adequately represented in the sample so as to increase the level of accuracy in estimating parameters (Frankfort-Nachmias and Nachmias, 1996).

Stratified sampling improves the sampling efficiency by increasing the accuracy at a faster rate than the cost increase (Aaker et al., 1995).

4. Cluster Sampling

In cluster sampling design, the population is divided into sub-groups called clusters. A random sample of clusters is then selected and sampling units in the selected clusters will be chosen for inclusion in the sample. There are two types of cluster sampling: single-stage and multi-stage cluster samplings. In single-stage cluster sampling, all sampling units in the selected clusters are included in the sample. For multi-stage cluster sampling, after the clusters are randomly selected, the sampling units in the clusters are again subjected to random selection for inclusion in the sample (Frankfort-Nachmias and Nachmias, 1996; Aaker et al., 1995; Moser and Kalton, 1971).

5.5.3.3 The Choice : Cluster Sampling

Owing to the absence of a sampling frame (list of non-supervisory employees) which could be used as a basis for the selection of sampling units for inclusion in the sample, the present study was not able to employ the simple random sampling design. Meanwhile, systematic and stratified sampling designs require that the total

number of sampling units must be known. Therefore, the only probability sampling design which could be used in this study was cluster sampling.

Based on the list containing the names of organisations prepared for the sampling frame described in Section 5.5.2 above, it was decided that a variation of cluster sampling be adopted for this study. Between 10 and 30 sets of questionnaires were sent to every organisation in the list, with a request for the co-operation of the respective Head of Departments or Personnel/Human Resource Managers in participation. As it was not possible for the researcher to request the organisations to furnish lists of their non-supervisory employees, the distribution of questionnaires was left to the discretion of the respective Heads of Departments or Personnel/Human Resource Managers.

5.5.4 The Determination of Sample Size

A sample is any sub-set of sampling from a population. A sub-set is any combination of sampling units that does not include the entire set of sampling units that has been defined as the population (Frankfort-Nachmias and Nachmias, 1996).

A sample therefore, by definition, may contain only one sampling unit, all but one sampling unit, or any number in between. The determination of the appropriate number of sampling units to be included in a sample is known as sample size determination. The determination of sample size involves three factors: the specified allowable error (also known as sampling error or error margin), the level of confidence, and the variance of the variable under study.

In this study, the minimum sample size required is determined by using the formula suggested by Aaker et al. (1995):

$$n = \frac{z^2 \sigma^2}{(SE)^2}$$

where

n = the required sample size

z = the value of standard normal variable for the confidence level

σ = the standard deviation of the variable being studied

SE = the allowable sampling error

The value of the standard normal variable (z) depends on the chosen level of confidence, which is expressed in percentage. In social science research, three levels of confidence are usually used: 95%, 99% and 99.9%. The confidence level chosen for the present study is 95%, representing a z value of 1.96

The standard deviation (σ) or the variance (σ^2) of the variable of interest, organisational commitment is not known. It is therefore necessary that an estimation of the score be made. Aaker et al. (1995) suggest that the estimate of the standard deviation can be obtained either from a previous comparable survey or from a pilot study. Based on results obtained from a pilot survey conducted by the author prior to the actual survey (see Section 5.6.2), the standard deviation (σ) was calculated at

0.7 or a variance (σ^2) of 0.49. It is therefore considered acceptable that a variance of 0.5 be used to calculate the sample size required for this study.

The sampling error (SE) is a statistical measure which indicates how closely the sample results reflect the true values of a parameter. In this research, the level of allowable sampling error (SE) was set at 10 % (0.10).

Using the values mentioned above, the sample size required for this research is given by:

$$\begin{aligned}n &= \frac{(1.96)^2(0.5)}{(0.10)^2} \\ &= 192.08 \\ &\approx 192\end{aligned}$$

It should be noted here that the calculation of sample size does not depend on the size of population: it depends on the population variance (Baker et al., 1994). As pointed out by Aaker et al. (1995), "the size of the sample will be determined in the same manner whether the population is 1,000 or 1,000,000" (p. 402).

Based on the calculated minimum sample size of 192, the total number of questionnaires that should be mailed to organisations for distribution to the potential respondents was determined by using three probable rates of return: 10%, 15% and

20%. These are believed to be the typical response rates for a survey of this kind in Malaysia. The number of questionnaires that should be sent, based on the three probable conditions is shown in Table 5.8.

Table 5.8 Probable Response Rates and the Number of Questionnaires Required to be Distributed

Response Rate	No. of Questionnaires Required
10 percent	1920
15 percent	1280
20 percent	960

The response rate of 15 percent was selected for the present study. This means that a total of 1,280 questionnaires should be sent in order to meet the requirement of the minimum sample size of 192. This was considered to be practicable.

5.5.5 Selection of Sampling Units

As it was impossible for the researcher to obtain a list containing the names of all non-supervisory employees from every organisation included in the sampling frame, the process of selecting respondents (sampling units) was left to the contact person (Head of Department, Human Resource/Personnel Manager) in each particular organisation. The contact persons were requested to distribute the questionnaires at random to the non-supervisory employees in their respective organisations. The definition of non-supervisory employees was explained in the covering letter

attached to the set of questionnaires sent to each contact person. This was done in order to avoid the need for the researcher to visit every organisation and do the randomisation himself, and therefore would preserve the anonymity and increase the response rate. This was also done in order to minimise the need for the researcher to interfere with the day-to-day running of the organisations.

5.6 Administration of Fieldwork

The field work for data collection in this study was carried out from mid- August 1994 to mid-November 1994. During this three-month period the researcher was based in Universiti Utara Malaysia (UUM) in Sintok, Kedah. The university paid for the researcher's return air passage from Glasgow. The fieldwork involved a number of stages. These are described in the following sub-sections.

5.6.1 Translation of Questionnaire

Before the data collection instrument could be administered to employees in Malaysia, it had to be translated to Bahasa Malaysia (the Malaysian language). For this purpose the questionnaire, which was prepared in English, was translated into Bahasa Malaysia by a university lecturer who is competent in both languages. The translated version was then given to another lecturer to be back-translated into English. Comparison was made between the back-translated and the original versions of the questionnaire. Corrections were made if the back-translated version indicated that the Bahasa Malaysia version did not really represent the original

English version. This was done to ensure that the Bahasa Malaysia version of the questionnaire was equivalent to the original English version.

5.6.2 Pilot Test

A pilot test was conducted using the Bahasa Malaysia questionnaire. Fifty students from Universiti Utara Malaysia were selected to take part. All the selected participants responded to the survey. The responses were then checked and analysed. Questions which were found to be ambiguous were then reworded. Participants in the pilot test were also asked to suggest means of improving the questionnaire in order to increase understanding.

5.6.3 The Actual Study

Questionnaires were sent to the Head of Departments or Human Resource/Personnel Managers of organisations which were chosen from the sampling frame described in Section 5.5.2 above. Their assistance was requested in distributing the questionnaires to the non-supervisory employees in their organisations. Included with the sets of questionnaires were: an introduction letter from the researcher's supervisor (Appendix D1) and a personal introduction letter (Appendix D2) addressed to the Head of Department or Human Resource/Personnel Manager of the respective organisations. To encourage participation, a self-addressed stamped envelope was enclosed with every questionnaire. Respondents were requested to return completed questionnaires directly to the researcher.

To encourage co-operation and participation, both of the personal introduction letters and the envelope were printed on the official stationery of Universiti Utara Malaysia. The introduction letter from the supervisor was printed on the Strathclyde Graduate Business School's official stationery.

The questionnaires were mailed to the managers in early-October 1994. Reminders were sent three weeks after the mailing of the questionnaires. Respondents were asked to return the completed questionnaires to the researcher in the envelopes provided.

5.7 Data Analysis

For the purpose of data analysis, standard statistical techniques were used. Data obtained from the survey were analysed using three statistical software packages: SPSS PC+ Version 4, SPSS for Windows and MODSTAT Version 3.2 (for Kendall's W, Kendall's tau and test of significant differences between correlation coefficients). The statistical analyses used in this study are outlined in the following sub-sections.

5.7.1 Univariate/Descriptive Analysis

These include frequency distribution, mean scores of variables and standard deviations.

5.7.2 Bivariate Analysis

Bivariate analysis was used to examine the relationships between the variables employed in this study. The bivariate data analysis technique used in this study was the Kendall's Coefficient of Concordance (W) and the Kendall's Coefficient of Rank Correlation (Kendall's tau). Kendall's W was used in examining the degree of agreement between the rankings of QWL factors between the various groups of respondents, when the number of groups is more than two. Kendall's tau was used in measuring the degree of agreement in the rankings of QWL factors between two groups.

5.7.3 Analysis of Differences between Means

Two statistical procedures were used in testing whether there is statistical significance in the differences between group means: t-test and Analysis of Variance (ANOVA).

The t-test

The t-test was used to determine whether the means of two groups differ. In this study, demographic variables which consisted of two groups are: gender (male and female), ethnic group (Malay and Non-Malay) and marital status (married and single). The t-test was also used to test whether there was any significant difference between the perceived importance of QWL factors and the perceived presence of those factors in the different types of organisations. A more detailed discussion of the t-test is given in Chapter Eight.

Analysis of Variance (ANOVA)

ANOVA was used to compare the means when the number of groups involved were more than two. In this study the demographic variables which consisted of more than two groups are: type of organisation, age group, academic qualification, length of service and salary level. Further discussion on ANOVA is presented in Chapter Eight.

5.7.4 Multivariate Analysis

For multivariate data analysis, two statistical techniques were used: factor analysis and regression analysis.

1. Factor Analysis

Factor analysis is a multivariate technique whose purpose is to replace a collection of intercorrelated variables by another set of variables, called factors, which will be (1) fewer in number, (2) relatively independent, (3) conceptually meaningful, that is plausible in theoretical terms (Hair et al., 1995). Factor analysis was used to examine the factor structures (or dimensions) of QWL and organisational commitment measures. Further discussion on factor analysis is presented in Chapter Six.

2. Regression Analysis

Regression analysis is a statistical technique that is used to relate two or more variables. Here, a variable of interest, the dependent variable (Y) is related to one or

more independent or predictor variables (X's). The objective in regression analysis is to build a regression model or equation relating the dependent variable to one or more independent variables. The model can then be used to describe, predict and control the dependent variable on the basis of the independent variables (Aaker et al., 1995). Further description of regression analysis is given in Chapter Eight of this thesis.

A summary of the steps taken in the data analysis of the present study is given in Figure 5.3

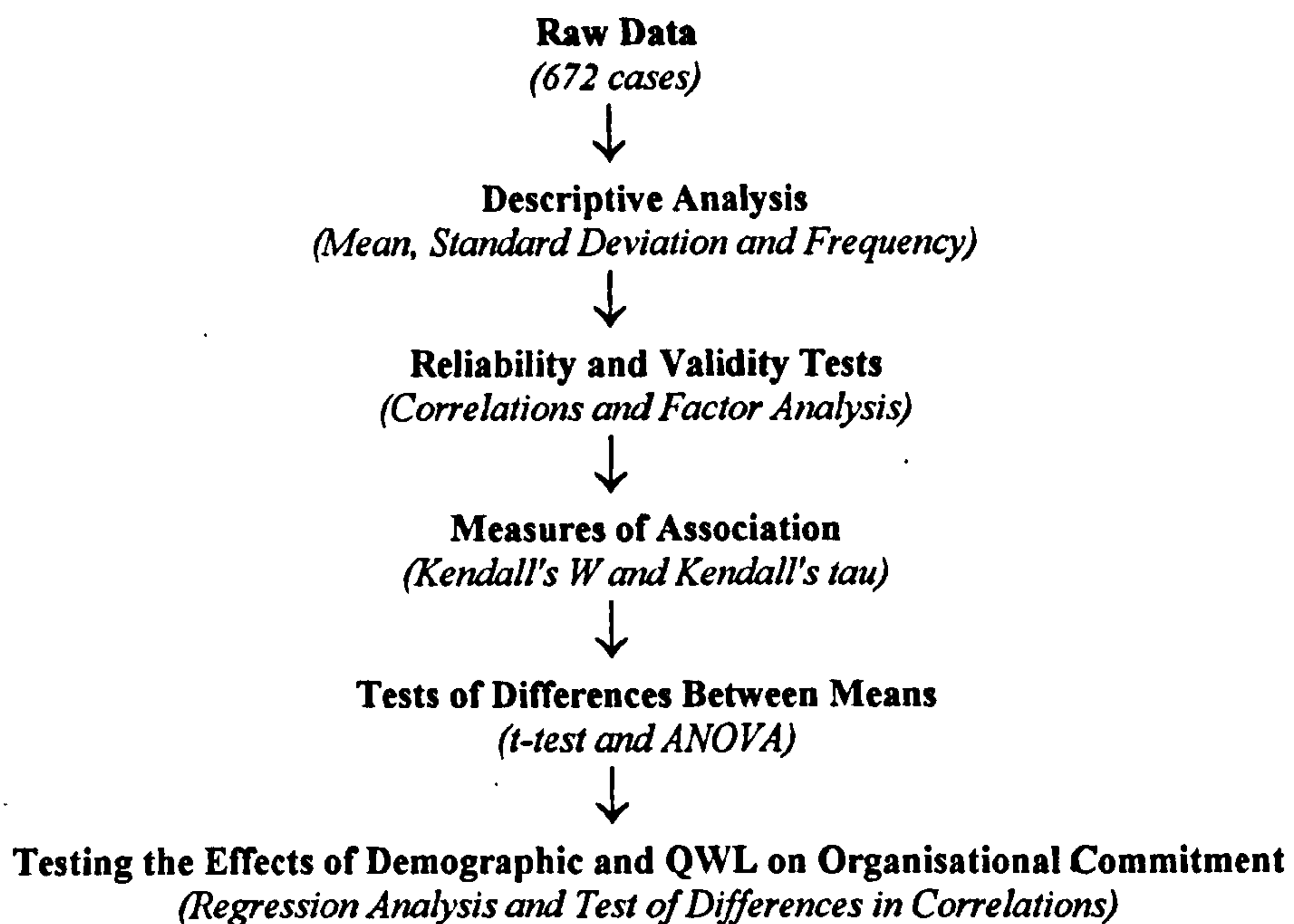


Figure 5.3 Steps in Data Analysis

5.8 Assumptions and Limitations of the Study

5.8.1 Assumptions

The following assumptions should be used to guide the interpretations of results obtained in this study:

1. The samples of this study were assumed to be adequately representative of non-supervisory employees in Malaysian organisations.
2. It was assumed that the items included in the questionnaire were adequate in tapping the perceptions of Malaysian employees with regard to their quality of worklife and organisational commitment.
3. The instrument used in this study was assumed to be an effective measurement tool for collecting the data needed.
4. The responses of the respondents were assumed to be expressing their true and candid perceptions of their quality of worklife and organisational commitment.

5.8.2 Limitations

1. Different people have different meanings for "quality of worklife". The items included in this study might not have fully covered the concept. The items used were those QWL factors in which the researcher was most interested in.

2. This research only studied the perceptions of non-supervisory employees working in three different types of organisations in Malaysia at the time of the study. Their perceptions might not truly represent the actual management practices in those organisations or the perceptions of other categories of employees in the organisations.
3. Owing to time and financial constraints, the researcher was unable to conduct the survey on a larger scale to cover most parts of Malaysia. It was limited to organisations in the northern states of Peninsular Malaysia (Penang, Kedah and Perlis).

5.9 Summary

This chapter presented a description and justification of the research design and methodology used for this research. The research utilises a descriptive research design in the data collection and analysis. The purpose is to describe the characteristics of the population with regard to QWL and organisational commitment. Four groups of research hypotheses are developed for this research.

The first hypothesis was formulated to test whether there is a significant difference in the perceived importance and the perceived presence of QWL factors. The second group of hypotheses aimed to test for significant differences in the perceived importance as well as the perceived presence of QWL factors between categories of employees' demographic variables. The third group of hypotheses was formulated to

test for significant relationships between the demographic variables and the perceived presence of QWL factors with dimensions of organisational commitment. The fourth group of hypotheses was to examine whether the nature of relationships between demographic and QWL variables with organisational commitment dimensions were the same in the three types of organisations.

Quantitative techniques were used to collect the data required in this study. These techniques were employed because their findings can be quantified and generalised. A survey was used to solicit responses from the respondents. This was to enable the researcher to collect information from many respondents within a relatively short period of time.

This study has several limitations. These include: lack of a proper sampling frame, limited resources and the overall research method employed. Only quantitative research method was undertaken. It would have been more informative if qualitative techniques had been taken to complement the quantitative method.

The next chapter is concerned with the reliability and validity of the data collection instruments used for this study.

CHAPTER 6

RELIABILITY AND VALIDITY OF MEASURES

6.0 Introduction

The previous chapter presented the research design and methodology adopted for the present study. Since measurement of variables is an integral part in any empirical research, this chapter is devoted to a discussion of issues related to it.

The chapter begins with a section on the meaning of measurement, which has been defined as a procedure of assigning numbers to aspects of objects. The second section of the chapter focuses on issues related to the scales of measurement. Scales can be categorised into four categories: nominal, ordinal, interval and ratio. The third section deals with accuracy of measures. Accuracy of measures depends on reliability and validity.

Reliability is commonly assessed using Cronbach's alpha (α), which is a measure of internal consistency of items making up the scale. Results of reliability analysis for the measures used in the present research indicated that Cronbach's α ranges from 0.60 to 0.89, thus displaying acceptable levels of internal consistency.

There are three main types of validity: content validity, criterion validity and construct validity. Factor analysis was used to examine the construct validity of measures. Results of factor analysis lend some support for the presence of seven

factors determined a priori for QWL. As for organisational commitment measures, though the factor analysis results indicate that the basic conceptualisation of a three-component model is acceptable, the continuance commitment factor could be further divided into two categories: commitment due to high cost of leaving one's organisation, and commitment due to perceived lack of employment alternatives.

6.1 Definition of Measurement

Measurement has been defined as a way of assigning numerals to aspects of objects or events according to a rule (Kurtz, 1983), the process through which the kind and intensity of a phenomenon are determined, and an assignment of points for responses, or the summing of numerals assigned to responses of two or more items (Wiersma, 1991).

Measurement often deals with numbers, because mathematical and statistical analyses can be performed only on numbers, and they can be easily communicated (Aaker, Kumar and Day, 1995). The process of assigning numerical values to the properties of the object being measured can be in several forms. This is known as scales of measurement. The following sub-section present brief descriptions of the scales used in measurement.

6.2 Scales of Measurement

Scales have been developed to measure four types of variables: nominal, ordinal, interval and ratio scales (Aaker et al., 1995). Each of the scales conforms to the definition of measurement mentioned previously, that is, each embodies rules for assigning numerals according to a predetermined rules. Moreover the scales must meet the criteria of being exhaustive and mutually exclusive (Kurtz, 1983).

6.2.1 Nominal Scales

Also referred to as qualitative or categorical scales, nominal scales are the least sophisticated of the four scale types. They only provide categories for sorting or classifying objects or events on the basis of some quality or attribute, such as gender or ethnic groups. Numbers are assigned to subjects to classify them into categories (e.g. male = 1, female = 2) without carrying any mathematical meanings. The only mathematical operation that can be performed on such a scale is a count of each category (Aaker et al., 1995).

6.2.2 Ordinal Scales

The scale is obtained by ranking objects or by arranging them in order with regard to some common variable. The question is simply whether each object has more or less of this variable than some other object. The rule for assigning numerals to ordinal scale categories is based on ordering observations in a descending or ascending order. The numerals, however, are more than labels because they reflect relative positions on the scale.

Though the numerals on an ordinal scale arrange objects from lowest to highest, they do not provide information on the size of difference between scale categories. For example, if one's perception of organisational climate on a scale of 1 (lowest) to 5 (highest) is '3', this does not mean that his perception has a difference of 2 with someone else who has an evaluation of '1'. The numerals on ordinal scales serve only as ranks for ordering observations from the least to the most in terms of the characteristics measured, and they fail to indicate the precise amount of the characteristic that is present.

6.2.3 Interval Scales

Interval scales incorporate all the properties of nominal and ordinal scales but they go beyond this in that the categories consist of equal intervals. This means that the distance of each interval is known (Kurtz, 1983). Here, the numerals used to rank the objects also represent equal increments of the attribute being measured. This means that the differences can be compared. The difference between 1 and 2 is the same as between 2 and 3. An interval scale provides a measure of intensity in which we are able to say that the object is greater than the other and by how much the difference is. But interval scale does not possess a true zero point so no conclusion can be made about the absolute magnitude of the rank positions.

Another property of interval scale is divisibility, which means that the scale consists of an infinite number of points. Therefore the scale is described as continuous, whereas nominal and ordinal scales are discrete. The difference is that continuous

scales provide exact measures of the amount of a characteristic present, while discrete scales only provide counts of the number of observations appearing in a finite set of scale categories (Kurtz, 1983). With such properties, interval scales can be subjected to virtually the entire range of statistical operations (Aaker et al., 1995).

6.2.4 Ratio Scales

The ratio scale is a special kind of interval scale that has a meaningful zero point (Aaker et al., 1995), a point at which the characteristic being measured is presumed to be absent (Kurtz, 1983). With a true zero point, the ratio scale is able to identify the point of origin of a characteristic. With such a scale, it is possible to say how many times greater or smaller one object is than another. This is the only type of scale that enables us to make comparisons of absolute magnitude. For example, we can say that someone whose annual income is £20,000 is twice as rich as another person who has an annual income of £10,000. Example of other measures in social research which meet the requirements of a ratio scale are years of education, length of service and age. The properties of the various scales are summarised in Table 6-1.

The objective of the present study was to explore employees' perceptions about their organisations. An attitudinal scale was therefore considered appropriate, with the aim of constructing indices for the variables used. Measurement scales were constructed (in the case of QWL) or adapted (for organisational commitment) to measure the level of agreement or disagreement to items making up the constructs.

Table 6.1 Types of Scales and Their Properties.

Type of Measurement Scale	Type of Attitude Scale	Rules for Assigning Numbers	Typical Application	Statistics /Statistical Tests
Nominal	Dichotomous "yes" or "no" scales	Objects are either identical or different	Classification (by gender, geographic area, ethnic)	Percentages, mode, chi-square
Ordinal or Rank Order	Comparative, Rank order, Itemised Category, Paired Comparison	Objects are greater or smaller	Rankings (preference, class standing)	Percentile, median, Rank correlation, Friedman (non-parametric) ANOVA
Interval	Likert, Thurstone, Stapel, Associative, Semantic Differential	Intervals between adjacent ranks are equal	Index numbers, temperature scales, attitude measures	Mean, standard deviation, product moment correlations, t-tests, ANOVA, regression, factor analysis
Ratio	Certain scales with special instructions	There is a meaningful zero, so comparison of absolute magnitudes is possible	Sales, incomes, units produced, costs, age	Geometric and harmonic mean, coefficient of variation

(Source: Aaker et al., 1995)

Attention was also given to the extent of statistical procedures required for data analysis. The Likert scale was considered to be suitable for the purposes at hand, and therefore it was extensively used. Each item in the Preferred QWL questionnaire was scored along the scale of 1 (not important at all) to 5 (very important). For the Perceived QWL and Organisational Commitment questionnaires, the items were scored on a scale 1 (strongly disagree) to 5 (strongly agree). The summated score (obtained by adding numerals assigned to the responses) represents the perceived attitude towards a particular construct. The higher the summated score, the more positive is the perception about that construct.

6.3 Accuracy of Measures

Attitude measures, as with other measures in social research, must be accurate and useful (Aaker et al., 1995). In this section, discussion is focused on the aspects of measures which contribute to accuracy: reliability and validity.

6.3.1 Reliability

Some error is involved in any type of measurement. This error takes the form of either a systematic bias or random errors. To the extent to which measurement error is slight, a measure or an instrument is said to be reliable. In statistical terms, the concept of reliability refers to the degree of accuracy of the estimate of the true score in a population of objects to be measured. The reliability coefficient used in this study is the Cronbach's alpha (α). Cronbach's α is given by the following equation:

$$\alpha = \frac{(k)\text{cov}/\text{var}}{1 + (k-1)\text{cov}/\text{var}}$$

where k is the number of items in the scale, cov is the average covariance between items, and var is the average variance of the items. If the items are standardised to have the same variance, the formula can be simplified to:

$$\alpha = \frac{k r}{1+(k-1)r}$$

where r is the average correlation between items.

Looking at the second equation above, we can see that Cronbach's α depends on both the length of the test (k) and the correlation of the items on the test (r) (Nurosis, 1992).

Relative to other measures, such as the split-half or the odd-even, coefficient alpha is by far the most popular and superior technique for estimating internal consistency. Internal consistency, also known as estimate of homogeneity, is a measure which assesses the degree to which the item used is internally consistent with other items

Table 6.2 Summary of Scale Reliability Coefficients

Scale	Alpha (α)
<u>Preferred OWL</u> ($\alpha = 0.92$) (3 items each) <ol style="list-style-type: none"> 1. Growth and Development 2. Participation Opportunities 3. Physical Environment 4. Supervision 5. Pay and Benefits 6. Social Relevance 7. Workplace Integration 	0.72 0.80 0.79 0.79 0.72 0.69 0.68
<u>Actual OWL</u> ($\alpha = 0.90$) (3 items each) <ol style="list-style-type: none"> 1. Growth and Development 2. Participation Opportunities 3. Physical Environment 4. Supervision 5. Pay and Benefits 6. Social Relevance 7. Workplace Integration 	0.76 0.82 0.77 0.77 0.60 0.61 0.75
<u>Organisational Commitment</u> ($\alpha = 0.87$) (8 items each) <ol style="list-style-type: none"> 1. Affective Commitment 2. Continuance Commitment 3. Normative Commitment 	0.89 0.79 0.75

comprising the scale. If the coefficient alpha is too low, either the scale has too few items measuring the same construct or there are too few items in the scale. In the following discussions, the term reliability coefficient therefore refers to the inter-correlation coefficient of items within a scale using the coefficient alpha technique. Table 6.2 summarises the reliability coefficients for the scales used in this study. The full results of reliability analysis is given in Appendix E.

For the preferred QWL scale, the reliability coefficient obtained is 0.92. The reliability coefficients of its sub-scales range from 0.68 to 0.80. The reliability coefficient for the actual QWL scale is 0.90, and for its sub-scales, the coefficients range from 0.60 to 0.82. For the organisational commitment scale, the overall reliability coefficient is 0.87, and for its sub-scales the reliability coefficients range

Table 6.3 Comparison of Reliability Coefficients of Organisational Commitment Sub-scales

Organisational Commitment Sub-scale	Author					
	Allen & Meyer (1990)	Hackett et al. (1994)	Brown (1990) *	Meyer, Allen & Smith (1993)	Heetderks (1993) *	Present Study
Affective	0.86	0.86	0.89	0.82	0.85	0.89
Continuance	0.82	0.79	0.65 (Calculative)	0.74	0.86 (Calculative)	0.79
Normative	0.73	0.73	-	0.83	-	0.75

Note:

Brown used a 6-item scale from Meyer and Allen's Continuance Commitment scale. Normative Commitment scale was not included in Brown's and Heetderks' studies.

from 0.75 to 0.89. The reliability coefficients for the organisational commitment sub-scales compare well with those obtained in previous studies. To enable comparison, Table 6.3 summarises the reliability coefficients of organisational commitment sub-scales obtained by previous researchers.

The items contained in the QWL scale were specifically put together for the purpose of the present study. Therefore there are no previous reliability coefficients to be compared with. However, the α coefficients obtained in this study indicate that the scale does not suffer from serious problems of reliability.

6.3.2 Validity

Validity refers to the ability of a measure to accurately measure what it is supposed to measure. There are several types of validity, categorised according to the purposes of the assessment and the kinds of evidence on which the validity is to be judged. The most common types of validity are content validity, criterion validity and construct validity.

6.3.2.1 Content Validity

Content validity is also known as face or consensus validity. It refers to whether a measure contains an adequate sample of the relevant subject matter (Allinson, 1982). There is no statistical test to assist in evaluating the content validity of a measure. It is common practice for researchers to consult experts in the relevant area to determine whether the items included in the measure do actually measure the

construct they are supposed to measure. Thus, content validity is basically judgmental in nature.

6.3.2.2 Criterion Validity

Criterion validity is based on empirical evidence that the measure correlates with other "criterion" variables (Aaker et al., 1995). It is studied by comparing test scores with external variables, or criteria, believed to reflect the attribute measured (Allinson, 1982). If the two variables are measured at the same time, concurrent validity is established, or if the measure can predict some future event, then predictive validity is said to be established (Aaker et al., 1995).

6.3.2.3 Construct Validity

Construct validity refers to the ability of a measure to measure the theoretical construct which it is supposed to measure. In other words, it assesses the extent to which the measure is consistent with the theoretical understanding of the construct. In social science research, this requirement poses some difficulty because of the unobservable nature of many of the constructs, such as personality or attitudes, used to explain behaviour. One way to assess construct validity is to test whether or not the measure confirms hypotheses generated from the theory based on the concepts (Aaker et al., 1995).

In this study, issues relating to validity of the measures were addressed in the following ways:

1. Most of the items used to develop measures of preferred QWL and perceived QWL were taken from various sources in the literature. The items were selected after an extensive review of the literature related to the concept of QWL. It was therefore reasonable to believe that both QWL measures possess sufficient content validity. For the organisational commitment measure, all the items were taken from an established instrument developed by Allen and Meyer (1991), who in their study had sought the opinions of experts in the area. Furthermore the instrument had been extensively used by other researchers who found that the measure possessed sound psychometric properties, including validity (Meyer et al., 1993).
2. The items used in the measures were checked by academics and post-graduate students. Their suggestions were incorporated into the final version of the questionnaire. This procedure provided valuable inputs in lending support for content validity of the measures.
3. The evidence of construct validity was statistically supported through the application of factor analysis. Factor analysis is extensively used in establishing construct validity in social science research. According to

Mason and Bramble (1989), factor analysis can be used to support construct validity because it allows sets of highly correlated variables to be grouped into factors that determine the structure of a concept and into groups which the instrument is designed to measure. The next section provides a discussion of factor analysis and the results obtained when the measures were factor analysed.

6.3.3 Factor Analysis

Factor analysis is a statistical technique used to identify a relatively small number of factors that can be used to represent relationships among sets of many inter-related variables. Factor analysis helps to identify underlying constructs which are not directly observable.

The basic assumption of factor analysis is that underlying dimensions, or factors, can be used to explain complex phenomena. Observed correlations between variables result from the sharing these factors. The general goal of factor analysis is to identify the non-directly observable factors based on a set of observable variables. More specifically, factor analysis techniques can meet any the following objectives (Hair , et al., 1995):

1. Identify the structure of relationships among either variables (R factor analysis) or respondents (Q factor analysis).

2. Identify representative variables from a much larger set of variables for use in subsequent multivariate analyses.
3. Create an entirely new set of variables, much smaller in number, to partially or completely replace the original set of variables for inclusion in subsequent analysis.

6.3.3.1 Requirements of Factor Analysis

In determining the appropriateness of factor analysis, Hair et al. (1995) suggest the following criteria:

1. The Bartlett Test of Sphericity. This is a statistical test for the presence of correlations among the variables. It provides the statistical probability that the correlation matrix has significant correlations among at least some of the variables. If the Bartlett test is not significant (i.e. its associated probability is greater than 0.05), then there is the danger that the correlation matrix is an identity matrix, and is therefore unsuitable for further analysis (Kinnear and Gray, 1994). The Bartlett test of sphericity for the instruments used in the present study produced the following results:

Preferred Quality of Worklife - 5855.5726 (p <0.001)

Perceived Quality of Worklife - 5510.6900 (p <0.001)

Organisational Commitment - 6238.5688 (p <0.001)

2. Measure of Sampling Adequacy (MSA). This is a measure which quantifies the degree of inter-correlations among the variables. SPSSPC+ Version 4 gives the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. The measure can be interpreted with the following guidelines: 0.90 or above , marvellous; 0.80 or above, meritorious; 0.70 or above, middling; 0.60 or above, mediocre; 0.50 or above, miserable; and below 0.50, unacceptable (Kaiser, 1974). The KMO measures of sampling adequacy for the instruments in the present study are:

Preferred Quality of Worklife - 0.9237

Perceived Quality of Worklife - 0.9076

Organisational Commitment - 0.9041

3. Sample Size. It has been suggested that, as general rule, the minimum is to have at least five times as many observations as there are variables to be analysed, and the more acceptable range would be a ten-to-one ratio (Hair, et. al.,1995). Employing this criterion, the minimum sample size required for the present study is 240 (i.e. ten times the number of items in the organisational commitment questionnaire). The sample size in the present study (672) is more than adequate in meeting this requirement for conducting factor analysis.

The results obtained from the Bartlett test of sphericity and Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy as well as the sample size requirement together indicate that factor analysis is suitable for the instruments used in the present study.

6.3.3.2 Determining the Number of Factors

Though an exact quantitative basis for deciding the number of factors to extract has not been developed, the following criteria are currently used (Hair, et.al.,1995):

1. Latent Root or Eigenvalues. This is the most commonly used technique in deciding the number of factors to extract. Only the factors having latent roots or eigenvalues greater than 1 are considered significant; all factors with latent roots less than 1 are considered insignificant and are disregarded.
2. A Priori. This method is usually applied when the analyst already knows the number of factors to be extracted before undertaking the factor analysis.
3. Percentage of Variance. The percentage of variance criterion is an approach in which the cumulative percentages of the variance extracted by successive factors are the criterion. The purpose is to ensure practical significance for the derived factors. In social science, a solution which accounts for about 60 percent of the total variance is considered satisfactory.

The scree test is used to identify the optimum number of factors that can be extracted before the amount of unique variance begins to dominate the common variance structure. The scree test is obtained by plotting the latent roots against the number of factors in their order of extraction, and the shape of the resulting curve is used to evaluate the cut-off point. As a general rule, the scree test results in at least one and sometimes two or three more factors being considered significant than does the latent root technique. Figures 6-1, 6-2 and 6-3 display the scree plots for Preferred QWL, Perceived QWL, and Organisational Commitment scales, respectively.

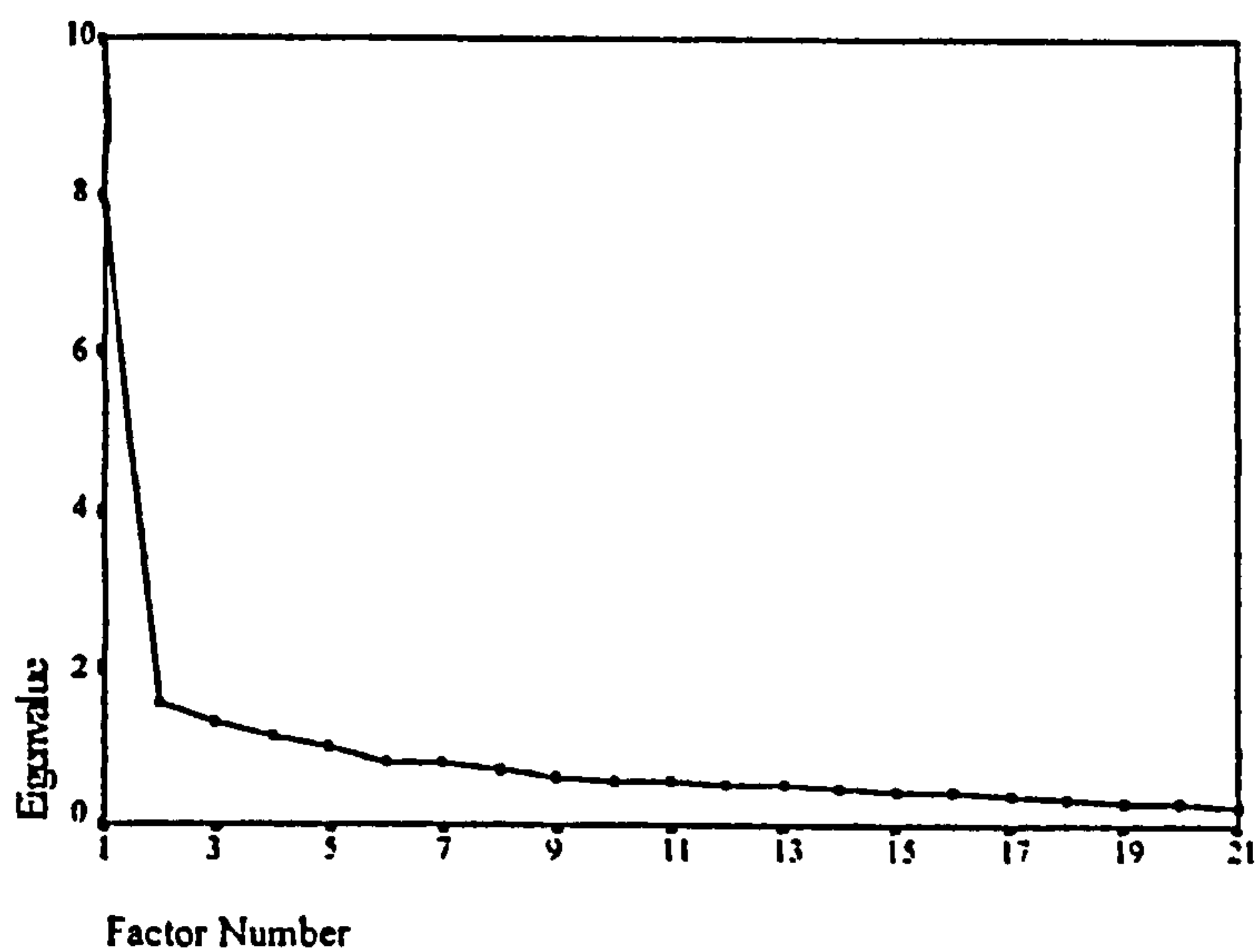


Figure 6-1 Scree Plot of Preferred QWL Items

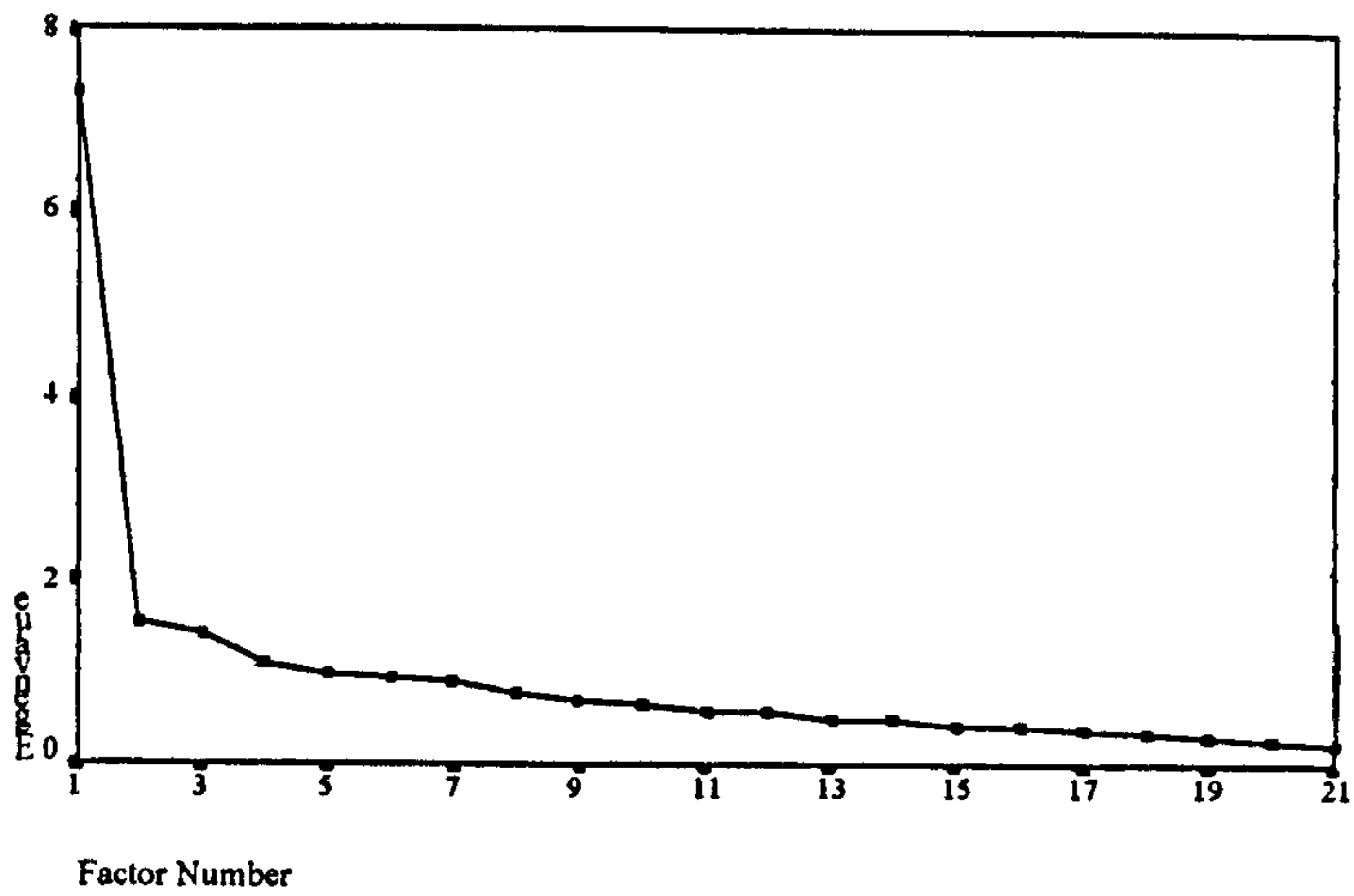


Figure 6-2 Scree Plot of Perceived QWL Items

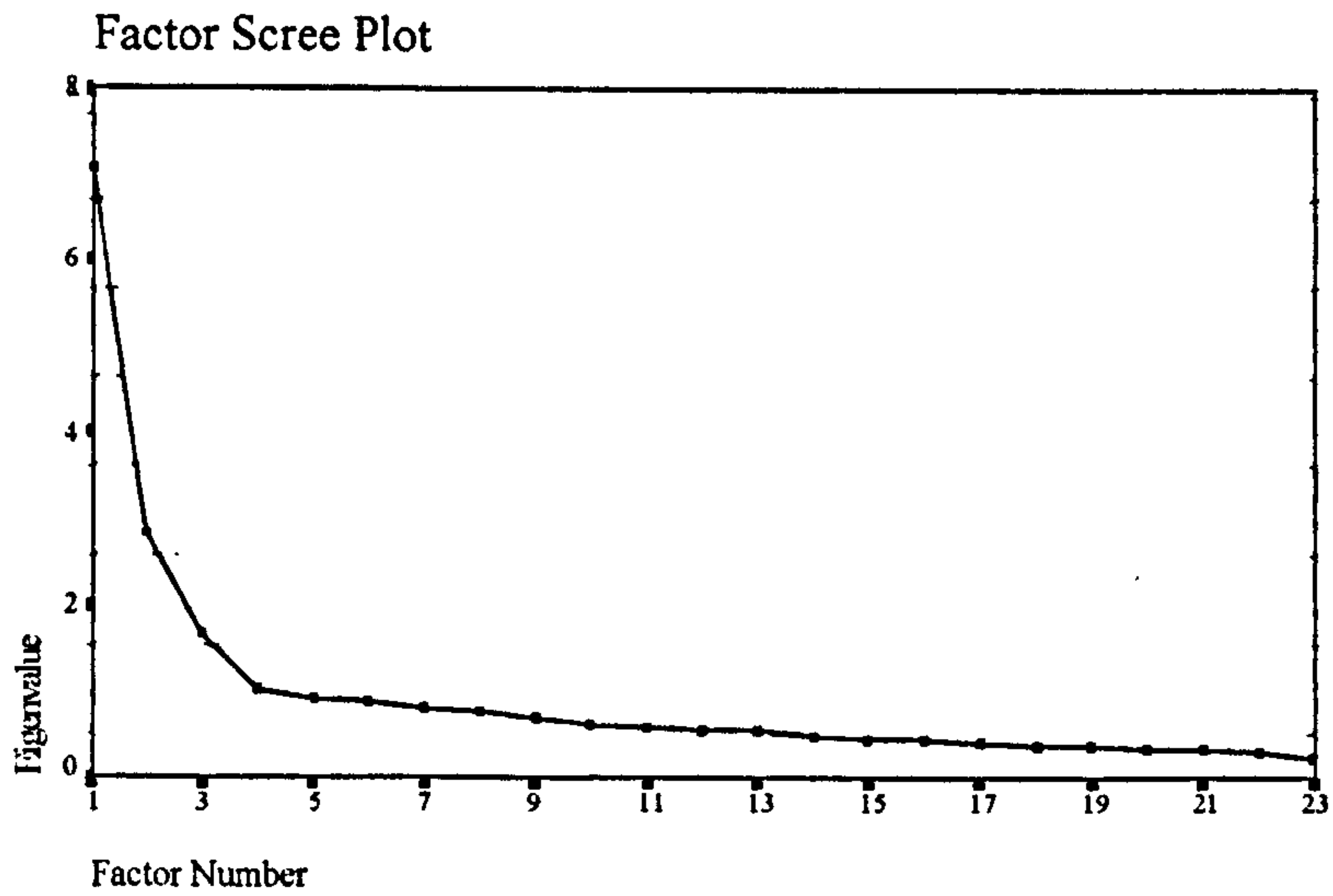


Figure 6-3 Scree Plot of Organisational Commitment Items

The purpose of the present research was to examine the perceptions of the respondents on the seven factors which were suggested to represent the quality of worklife dimensions. It was therefore decided that the number of factors to be

extracted for QWL be pre-determined at seven. This is in line with the factors proposed by Walton (1973) discussed in Chapter Three.

6.3.3.3 Factor Rotation

Rotation of factors is an important tool in the interpretation of factors. This is due to the fact that the unrotated factors extracted through various factoring techniques may not give a meaningful patterning of factors. Various rotation methods are available in factor analysis. These can be categorised into orthogonal and oblique rotations.

1. Orthogonal Rotation Methods

There are three major orthogonal rotation methods : Quartimax, Varimax and Equimax.

- a) Quartimax. The ultimate goal of quartimax rotation is to simplify the rows of a factor matrix, that is the initial factors are rotated in such a way that a variable loads high on one factor but almost zero on all others (Nurosis, 1992). In quartimax rotations, many variables can load high or near on the same factor because the technique centres on simplifying the rows. This leads to one major difficulty in quartimax rotation, that is, the tendency to produce a general factor as the first factor on which most of the variables have high loadings. Thus the method tends to create a large general factor, which is not in line with the goals of rotation (Hair et al., 1995).

- b) Varimax. In contrast to quartimax, which centres on simplifying the rows of a factor matrix, the varimax criterion centres on simplifying the columns of a factor matrix. With the varimax rotation, the maximum possible simplification is reached if there are only 1's and 0's in a single column. That is the varimax method maximises the sum of variances of required loadings of the factor matrix. The logic of varimax rotation is that interpretation is easiest when the variable-factor correlations are close to either (a) +1 or -1, thus indicating a clear positive or negative association between the variable and the factor, or (b) close to zero, indicating a clear lack of association (Hair et al., 1995). This method of rotation is the most widely used (Nurosis, 1992).
- c) Equimax. The equimax is a compromise between the quartimax and varimax approaches. Rather than concentrating either on simplification of the rows or the simplification of the columns, it tries to accomplish some of each. Equimax has not gained widespread acceptance and is used infrequently (Hair et al., 1995).

2. Oblique Rotation Methods

Oblique rotation involves a similar type of simplifying principle, except that the requirement of orthogonality among the factor axes is relaxed (Nurosis, 1992). In principle, the initial factor axes are allowed to rotate freely to best summarise any clustering of variables. Oblique rotation methods allow for correlations between

factors, and the results have the tendency of becoming specific to the sample and not generalisable, particularly with small samples or a low cases-to-variable ratio (Hair et al., 1995). Among the most commonly used oblique rotation methods are OBLIMIN and PROMAX.

There are no specific rules to guide in making the choice between the rotational techniques. It is made on the basis of the particular needs of a given research problem. If the goal of the research is to reduce the number of original variables, regardless of how meaningful the resulting factors may be, the appropriate solution would be an orthogonal one. Also, if the researcher wants to reduce a larger number of variables to a smaller set of uncorrelated variables for subsequent use in a regression analysis, an orthogonal rotation is the best (Hair et al., 1995).

6.3.3.4 Dimensions of QWL and Organisational Commitment

Tables 6.4 , 6.5 and 6.6 present the results of factor analyses conducted on Preferred Quality of Work Life, Perceived Quality of Work Life and Organisational Commitment questionnaires, respectively.

The results of factor analysis for Preferred QWL indicated that all the items have highest loadings on the dimensions which they are supposed to represent. The seven factors extracted account for 69.2 percent of the total variance. Each factor is represented by three items.

1. Preferred Quality of Work Life

Table 6-4 Rotated Factor Loadings (VARIMAX) - Preferred QWL

QWL Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
PREFER7	0.80379	0.25117	0.07293	0.16749	0.10824	0.10165	0.10107
PREFER8	0.78214	0.19062	0.12481	0.16316	0.14348	0.16324	0.03973
PREFER9	0.70088	0.01264	0.26190	0.07670	0.10634	0.11495	0.15837
PREFER5	0.17047	0.78591	0.21779	0.11608	0.16220	0.23107	0.08606
PREFER4	0.06979	0.78589	0.15098	0.10100	0.27697	0.06648	0.09520
PREFER6	0.29777	0.63850	0.16841	0.22771	0.17014	0.06688	0.14674
PREFER11	0.11288	0.24062	0.78528	0.16829	0.10116	0.17347	0.12630
PREFER10	0.24339	0.11593	0.72070	0.14819	0.27487	0.14265	0.06959
PREFER12	0.27804	0.33312	0.58820	0.32640	0.07621	0.02478	0.14240
PREFER14	0.02117	0.16372	0.13477	0.79748	0.13316	0.16106	0.02629
PREFER13	0.28691	0.14775	0.17845	0.70972	0.13940	0.05504	0.15884
PREFER15	0.40283	0.09583	0.26182	0.54631	0.05963	0.24662	0.05459
PREFER1	0.21430	0.23437	0.04163	0.21562	0.74731	-0.05100	0.13867
PREFER2	0.14828	0.21778	0.12850	0.09879	0.71802	0.24845	0.03796
PREFER3	0.02269	0.11785	0.22040	0.02652	0.68351	0.27158	0.16029
PREFER17	0.09559	0.06015	0.06794	0.17270	0.17018	0.80962	-0.05385
PREFER16	0.12811	0.19276	0.14305	0.02051	0.08530	0.63616	0.31635
PREFER18	0.22906	0.09254	0.13319	0.17535	0.16900	0.61890	0.29713
PREFER21	0.05197	-0.00488	0.03067	-0.05616	0.22483	0.27570	0.76842
PREFER20	0.23773	0.26792	0.31148	0.25735	0.09058	0.03958	0.60760
PREFER19	0.16098	0.37876	0.31809	0.31245	0.00851	0.07061	0.57755
Eigenvalue	7.91372	1.52917	1.30106	1.11512	1.01378	0.82948	0.82740
% Variance	37.70	7.30	6.20	5.30	4.80	3.90	3.90
Cum. % of Var	37.70	45.00	51.20	56.50	61.30	65.20	69.20

Bold prints indicate highest loadings

Full list of items represented by the abbreviations is given in Appendix F

The first factor, comprising PREFER7, PREFER8 and PREFER9, with an eigenvalue of 7.91 accounts for 37.7 percent of the total variance. This factor is labelled as Physical Work Environment. The second factor, represented by PREFER4, PREFER5 and PREFER6 accounts for 7.3 percent of the total variance. The eigenvalue associated with this factor is 1.53. This factor is named Participation Opportunities. The third factor is made up of PREFER10, PREFER11 and PREFER12. The variance accounted for by this factor is 6.2 percent, and its associated eigenvalue is 1.30. It is labelled as Supervision. The fourth factor, which accounts for 5.3 of the total variance and an eigenvalue of 1.12, is represented by PREFER13, PREFER14 and PREFER15. This factor is named as Pay and Benefits.

The fifth factor extracted by the factor analysis made up of PREFER1, PREFER2 and PREFER3. It accounts for 4.8 percent of the total variance and an eigenvalue of 1.01. It has been labelled as Growth and Development. The sixth factor is represented by PREFER16, PREFER17 and PREFER18. It accounts for 3.9 percent of the total variance, and an eigenvalue of 0.83. The factor is labelled as Social Relevance. The last factor extracted by the factor analysis comprised items concerning relationships in the workplace, i.e. PREFER19, PREFER20 and PREFER21. The percentage of total variance accounted for by this factor is 3.9 percent, and an eigenvalue of 0.83. It has been named as Workplace Integration.

2. Perceived Quality of Work Life

Table 6-5 Rotated Factor Loadings - Perceived Presence of QWL

QWL Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
ACTUAL6	0.78526	0.14399	0.16216	0.16416	0.11283	0.03143	0.23061
ACTUAL5	0.76889	0.16428	0.19207	0.21294	0.15513	0.08752	0.18959
ACTUAL4	0.68216	0.19561	0.06259	0.14270	0.34060	0.19320	0.05521
ACTUAL3	0.18288	0.78158	-0.00579	0.06183	0.08462	0.19437	0.06037
ACTUAL2	0.16570	0.77923	0.07308	0.15208	0.14039	0.14329	0.12045
ACTUAL1	0.07888	0.68378	0.17970	0.16171	0.22994	0.02166	0.20317
ACTUAL7	0.16945	0.08053	0.84125	0.16873	0.01398	0.04365	0.10087
ACTUAL8	0.16602	0.07017	0.80724	0.20751	0.11901	0.04693	0.07786
ACTUAL9	0.02238	0.08489	0.66665	-0.02217	0.24222	0.30827	0.12769
ACTUAL19	0.18608	0.11446	0.13786	0.75764	0.27564	0.13989	0.22278
ACTUAL20	0.24950	0.09565	0.14491	0.73661	0.25202	0.11278	0.20656
ACTUAL21	0.10523	0.27325	0.13702	0.57465	-0.01909	0.30441	-0.13778
ACTUAL10	0.23813	0.20438	0.08376	0.04069	0.74112	0.26383	0.01172
ACTUAL11	0.17674	0.16565	0.19078	0.42084	0.69178	-0.00528	0.11133
ACTUAL12	0.26371	0.19139	0.25325	0.33624	0.53537	-0.04261	0.22016
ACTUAL17	0.10538	0.01526	0.06835	0.08679	0.17955	0.75033	0.09910
ACTUAL18	-0.05691	0.30421	0.18542	0.24707	0.11028	0.57806	0.22087
ACTUAL16	0.24059	0.34689	0.12518	0.18139	-0.13696	0.57390	-0.03364
ACTUAL14	0.25206	0.15934	0.02650	0.06055	0.05491	-0.04225	0.74516
ACTUAL13	0.00916	0.07658	0.17888	0.03522	0.24106	0.31585	0.62090
ACTUAL15	0.26182	0.14792	0.21222	0.34835	-0.09267	0.11358	0.56658
Eigenvalue	7.32215	1.54573	1.41811	1.11809	0.98709	0.93733	0.90107
% Variance	34.90	7.40	6.80	5.30	4.70	4.50	4.30
Cum. % Variance	34.90	42.20	49.00	54.30	59.00	63.50	67.80

Bold prints indicate highest loadings.

Full list of items represented by the abbreviations is given in Appendix G.

The results of factor analysis for Perceived QWL also indicated that all the items have their highest loadings on the dimensions which they are supposed to represent. The seven factors extracted by factor analysis account for 67.8 percent of the total variance. Each factor is represented by three items.

The first factor, comprising ACTUAL4, ACTUAL5 and ACTUAL6, with an eigenvalue of 7.32, accounts for 34.9 percent of the total variance. This factor is labelled as Participation Opportunities. The second factor, represented by ACTUAL1, ACTUAL2 and ACTUAL3 accounts for 7.4 percent of the total variance. The eigenvalue associated with this factor is 1.55. This factor is named Growth and Development. The third factor is made up of ACTUAL7, ACTUAL8 and ACTUAL9. The variance accounted for by this factor is 6.8 percent, and its associated eigenvalue is 1.42. It is labelled as Physical Environment. The fourth factor, which accounts for 5.3 of the total variance and an eigenvalue of 1.12, is represented by ACTUAL19, ACTUAL20 and ACTUAL21. This factor is named as Workplace Integration. The fifth factor extracted by the factor analysis made up of ACTUAL10, ACTUAL11 and ACTUAL12. It accounts for 4.7 percent of the total variance and has an eigenvalue of 0.99. It has been labelled as Supervision. The sixth factor is represented by ACTUAL16, ACTUAL17 and ACTUAL18. It accounts for 4.5 percent of the total variance, and an eigenvalue of 0.94. The factor is labelled as Social Relevance. The last factor extracted by the factor analysis for perceived QWL comprised items concerning pay and rewards, i.e. ACTUAL13, ACTUAL14 and

ACTUAL15. The percentage of total variance accounted for by this factor is 4.3 percent, and an eigenvalue of 0.90. It has been named as Pay and Benefits.

3. Organisational Commitment

Table 6-6 Rotated Factor Loadings of Organisational Commitment Items

Items	Factor 1	Factor 2	Factor 3	Factor 4
AC1	0.78841	0.19752	0.10783	0.03809
AC6	0.75663	0.26262	0.20629	-0.03895
AC7	0.75635	0.18676	0.11430	-0.01299
AC3	0.71545	0.20886	0.01563	0.05274
AC1	0.68058	0.29997	0.17551	0.02531
AC2	0.68008	0.09558	0.02397	-0.06122
AC8	0.67510	0.01959	0.07757	-0.02686
AC4	0.59836	0.22972	0.33121	-0.10236
NC7	0.15378	0.71382	0.08323	-0.07383
NC4	0.33567	0.68572	0.13158	0.14879
NC6	0.28042	0.64027	0.05288	-0.01751
NC3	-0.00588	0.61190	0.06329	0.12655
NC2	0.29263	0.60088	-0.10599	0.19517
NC5	0.13249	0.55978	0.34430	-0.16239
NC8	0.13582	0.52479	0.18287	0.03848
CC2	0.34265	0.19291	0.72229	0.11923
CC4	0.10209	0.15529	0.71565	0.38573
CC3	0.00425	0.10511	0.64186	0.39861
CC1	0.46531	0.08230	0.54599	0.03874
CC6	-0.03626	0.09133	0.18320	0.79557
CC7	0.02824	0.07979	0.22790	0.78171
CC5	-0.16947	-0.11390	-0.02391	0.62004
CC8	0.21504	0.26631	0.28466	0.48180
Eigenvalue	7.09389	2.84204	1.68531	1.02002
% Variance	30.80	12.40	7.30	4.40
Cum. % of Variance	30.80	43.20	50.50	55.00

Bold prints indicate highest loadings.

Full list of items represented by the abbreviations is given in Appendix H.

Results of factor analysis on organisational commitment items produced four interpretable factors. The percentage of variance explained by the four factors is 55 percent. The first factor comprises all the items which were supposed to represent affective commitment. This factor explains 30.8 percent of the total variance, and

has an eigenvalue of 7.09. The second factor extracted by the factor analysis consists of seven items from the normative commitment scale. One item from the normative commitment scale was dropped after the first analysis because it loaded on single factor by itself. The item (NC1), "I think people these days move from organisation to organisation too often", has the tendency of soliciting response on others' commitment, which does not suit the objective of the present research. The normative commitment factor accounts for 12.4 percent of the total variance and has an eigenvalue of 2.84. The third factor is represented by four items from the continuance commitment scale. The items, associated with 'perceived cost of leaving the organisation', account for 7.3 percent of the total variance and has an eigenvalue of 1.69. The fourth factor comprises the four remaining items on continuance commitment. These items are associated with 'lack of employment alternatives'. The factor accounts for 4.4 percent of the total variance, and has an eigenvalue of 1.02.

Since four factors were obtained from factor analysis for the organisational commitment scale (as opposed to the three original factors), it was necessary that the reliability coefficients be recalculated. The recalculation was also made necessary by the deletion of one item from the normative commitment scale. Table 6.7 shows the recalculated α coefficients for the organisational commitment measure. From the table it is observed that the reliability coefficient for the normative commitment dimension is higher than the one obtained previously (0.75).

Table 6-7 Revised Reliability Coefficients for Organisational Commitment Scale

Scale	α
Organisational Commitment (Full Scale) (23 items)	0.88
Affective Commitment (8 items)	0.89
Normative Commitment (7 items)	0.78
Continuance Commitment - High Cost (4 items)	0.77
Continuance Commitment - Lack of Alternatives (4 items)	0.69

6.4 Summary

In establishing the accuracy of measures used in this research, this chapter presented results of reliability and validity analyses of the research instruments. It was found that all the measures possess a high degree of internal consistency. The seven factors thought to represent both the Preferred QWL and the Perceived QWL measures were found to be reasonably well supported by factor analysis. This provides some support for the construct validity of both measures. For organisational commitment measure, factor analysis results indicated the presence of a two-factor continuance commitment: high cost of leaving, and perceived lack of employment alternatives.

The factors obtained from the factor analytic procedures conducted on QWL and organisational commitment measures were used in computing the scores of the various constructs for further analyses. There are many methods in computing the factor scores. In the present research, factor scores were obtained by calculating the mean scores of the items making up the factor.

The next chapter presents results of descriptive statistical analyses conducted to provide insights into the relative importance of QWL factors in Malaysian organisations, as well as the perception about the presence of QWL factors in those organisations. The analyses were based on the mean scores of the constructs obtained through factor analysis. Significant differences, if any, between the mean scores are also indicated. The mean differences were tested using the t-test procedures. Kendall's coefficient of concordance (W) and Kendall's coefficient of rank correlations were used to examine the degree of agreement between the rankings of QWL factors among groups.

CHAPTER SEVEN

RESULTS I : THE RELATIVE IMPORTANCE AND PERCEIVED PRESENCE OF QWL FACTORS

7.0 Introduction

The purpose of this chapter is to present a descriptive analysis of the data gathered for this study. The chapter is divided into three parts. The first part presents the sample characteristics, the second part presents the results of the descriptive analysis for the relative importance of QWL factors, and the third part reports the results of descriptive analysis of the relative strength of agreement about the relative perceived presence of QWL factors.

A total of 672 usable questionnaires were returned and subsequently used for the data analysis in this study. Results of the descriptive analyses indicate that, in general, employees in this sample regard integration, supervision and physical working environment as the most important QWL factors. Factors which received the lowest ranks are social relevance, pay and benefits and participation opportunities. For the actual or perceived QWL, the three factors which have the strongest agreement about their presence are: physical environment, workplace integration and social relevance. There was weakest agreement about the presence of growth and development, participation opportunities and pay and benefits.

7.1 The Sample of the Study

The data gathered for this study was obtained from 672 non-supervisory employees from 61 organisations in Malaysia. The detailed breakdown of the sample appears in Table 7.1. The sample was selected by types of organisations, i.e. government departments, semi-government organisations and private organisations. The frequency distribution of all variables used in the survey is given in Appendix I.

Table 7.1 Number of Organisations, Questionnaires Distributed and Usable Questionnaires Returned

Organisation	Number	%	Questionnaires Distributed		Questionnaires Usable	
			Number	%	Number	%
Government Dept	13	21.31	380	29.69	185	47.80
Semi-Govt. Orgn.	12	19.67	300	23.44	214	66.05
Private Orgn.	36	59.02	600	46.87	273	43.75
TOTAL	61	100.0	1280	100.00	672	52.50

The sample may not be strictly a representative sample of non-supervisory employees in Malaysian organisations. To obtain a truly representative sample of the employees one would have to develop a random sample of non-supervisory employees from a complete list of such employees in the entire country. Unfortunately, such a complete list does not exist. However, an attempt was made to sample non-supervisory employees in different types of organisations using the list of organisations contained in the sampling frame described in Chapter Five (Section 5.5.2).

A total of 1,280 sets of questionnaires were mailed to the Heads of Departments (government departments), the Directors of Personnel/Human Resource (semi-government and private organisations). They were asked to distribute the questionnaires at random to their employees who are holding non-supervisory positions. A covering letter, a letter from the research supervisor and a self-addressed stamped envelope were included in each set of the questionnaire. To ensure anonymity, each respondent was asked to send the completed questionnaire directly to the researcher in the envelope provided.

A total of 672 usable questionnaires were returned and used in this analysis. This constitutes an overall response rate of 52.5%. This response rate is considered highly satisfactory in view of the fact that Malaysian employees, especially at a lower level, are not used to participating in such a survey. Furthermore, as noted by Frankfort-Nachmias and Nachmias (1996), many mail surveys seldom achieve a response rate of larger than 50%. Also, the total number of usable questionnaires used in the data analysis exceeds the required minimum sample size of 192 calculated in Section 5.5.4 (Chapter Five). The distribution of respondents by organisation and demographic characteristics is presented in Table 7.2 and Table 7.3.

Table 7.2 Sample Characteristics

Variable	Frequency	%
<u>Organisational Type</u>		
Government Department	185	27.5
Semi-Government Organisation	214	31.8
Private Organisation	273	40.6
<u>Gender</u>		
Male	357	53.1
Female	315	46.9
<u>Age Group</u>		
25 years and below	161	24.0
26 - 35 years	319	47.5
36 years and above	192	28.6
<u>Marital Status</u>		
Married	460	68.5
Single	212	31.5
<u>Ethnic Group</u>		
Malay	608	90.5
Non-Malay	64	9.5
<u>Academic Qualification</u>		
Lower Certificate of Education and below	122	18.2
Malaysian Certificate of Education or equivalent	383	57.0
Malaysian Higher School Certificate and above	167	24.9
<u>Length of Service</u>		
3 years or less	234	34.8
4 - 6 years	98	14.6
7 - 9 years	46	6.8
10 - 12 years	99	14.7
More than 12 years	195	29.0
<u>Monthly Salary</u>		
RM400 or less	111	16.5
RM401 - RM600	159	23.7
RM601 - RM800	145	21.6
RM801 - RM1000	130	19.3
More than RM1000	127	18.9

Table 7.3

Distribution of Respondents by Organisational Type and Demographic Characteristics

Variable	Government Dept. (N=185)		Semi-Govt. (N=214)		Private (N=273)	
	F	%	F	%	F	%
<i>Gender</i>						
1. Male	130	70.3	115	53.7	112	41.0
2. Female	55	29.7	99	46.3	161	59.0
<i>Age Group</i>						
1. 25. and below	14	17.6	25	11.7	122	44.7
2. 26 - 35 years	78	42.2	127	59.3	114	41.8
3. 36 and above	93	50.3	62	29.0	37	13.6
<i>Marital Status</i>						
1. Married	164	88.6	176	82.2	120	44.0
2. Single	21	11.4	38	17.8	153	56.0
<i>Ethnic Group</i>						
1. Malay	182	98.4	209	97.7	217	79.5
2. Non-Malay	3	1.6	5	2.3	56	20.5
<i>Qualification</i>						
1. LCE & below	29	15.7	30	14.0	63	23.1
2. MCE	111	60.0	134	62.6	138	50.5
3. HSC & above	45	24.3	50	23.4	72	26.4
<i>Length of Service</i>						
1. 3 yrs. or less						
2. 4 - 6 years	32	17.3	41	19.2	161	59.0
3. 7 - 9 years	16	8.6	40	18.7	42	15.4
4. 10 - 12 years	12	6.5	23	10.7	11	4.0
5. More than 12 yrs.	32	17.3	49	22.9	18	6.6
	93	50.3	61	28.5	41	15.0
<i>Salary</i>						
1. RM400 or less	6	3.2	17	7.9	88	32.2
2. RM401-RM600	44	23.8	66	30.8	49	17.9
3. RM601-RM800	43	23.2	58	27.1	44	16.1
4. RM801-RM1000	57	30.8	39	18.2	34	12.5
5. More than RM1000	35	18.9	34	15.9	58	21.2

7.2 The Relative Importance of QWL Factors

This section presents the degree of relative importance of QWL factors for the total sample as well as for the various groups of employees, categorised according to the demographic variables. The results are based on the mean scores for the strengths of agreement about the importance of those factors. T-test is used to examine whether the mean scores of the factors are significantly different.

7.2.1 Total Sample

Based on the responses given by the respondents, this section tabulates the factors of QWL according to their relative importance. The rankings of these factors are based on the mean scores of the degree of importance of the factors as perceived by the respondents. Table 7.4 presents the mean scores and rankings for the importance of QWL factors of the total sample in this research.

Table 7.4 Mean Scores and Ranks for the Importance of QWL Factors - Total Sample

QWL Factors	Mean	S.D	Rank
Workplace Integration	4.17	0.68	1
Supervision	4.14	0.78	2
Physical Environment	4.13	0.72	3
Growth and Development	3.97	0.71	4***
Social Relevance	3.86	0.72	5***
Pay and Benefits	3.84	0.82	6
Participation Opportunities	3.72	0.83	7***

(Scale: 1=Not Important at all 2=Not Important 3=Uncertain 4=Important 5=Very Important)

Asterisks indicate the mean score for the factor is significantly lower than the mean score of the immediately higher ranked (preceding) factor: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Table 7.4 shows that, for the total sample, the three most important QWL factors are integration in the work place (M = 4.17) followed by supervision (M = 4.14) and physical working environment (M = 4.13). Results of t-tests show that the mean score of growth and development is significantly lower ($p < 0.001$) than the score for physical environment; the score for social relevance is significantly lower ($p < 0.001$) than the score for growth and development, and the mean score for participation opportunities is significantly lower than the mean score for pay and benefits. Pay and benefits (M = 3.84), and participation opportunities (M = 3.72) are the two least important QWL factors for this sample. Growth and development (M = 3.97) and social relevance (M = 3.84) are of moderate importance.

7.2.2 Organisational Type

Table 7.5 describes the relative importance of QWL factors according to non-supervisory employees working in the three different types of organisations in Malaysia.

Table 7.5 Mean Scores and Ranks for the Importance of QWL Factors by Organisational Type

QWL Factors	Organisational Type								
	Government (N=185)			Semi-Government (N=214)			Private (N=273)		
	M	S.D	Rank	M	S.D	Rank	M	S.D	Rank
Workplace Integration	4.21	0.68	1	4.17	0.68	3	4.15	0.68	3
Supervision	4.07	0.87	2***	4.18	0.78	2	4.16	0.72	2
Physical Environment	3.98	0.81	3	4.19	0.64	1	4.19	0.69	1
Social Relevance	3.90	0.69	4.5	4.01	0.65	5	3.72	0.76	7
Growth and Development	3.90	0.71	4.5	4.04	0.73	4*	3.95	0.69	4***
Participation Opportunities	3.73	0.77	6**	3.70	0.88	7**	3.74	0.83	6***
Pay and Benefits	3.68	0.84	7	3.86	0.81	6**	3.94	0.80	5

Kendall's $W = 0.855$, $\chi^2(6) = 15.39$, $p < 0.05$

Asterisks indicate the mean score for the factor is significantly lower than the mean score of the immediately higher ranked (preceding) factor: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

From Table 7.5 it can be seen that there is a significantly strong agreement between the rankings of QWL factors among the non-supervisory employees working in the three types of organisations in Malaysia (Kendall's $W = 0.855$, $\chi^2 (6) = 15.39$, $p < 0.05$). For employees in the government departments, integration ($M = 4.21$) is perceived to be the most important factor. For employees in the semi-government and private organisations, physical working environment is regarded as the most important QWL factor, with mean scores of 4.19 for both groups.

Employees in the government departments regard pay and benefits ($M = 3.68$) as the least important factor for their QWL. For employees in the semi-government sector, participation opportunities ($M = 3.70$) is considered to be the least important. The private sector employees regard social relevance ($M = 3.72$) as the least important QWL factor.

In the government sub-sample, the mean score for supervision (4.07) is significantly lower ($p < 0.001$) than the mean score for workplace integration (4.21); and the mean score for the importance of participation (3.73) is significantly lower ($p < 0.01$) than the mean scores of both social relevance (3.90) and growth and development (3.90).

For the semi-government, the mean score of the fourth-ranked factor, growth and development (4.04) is significantly lower ($p < 0.05$) than the mean score of the third-ranked factor, workplace integration (4.17). The mean score for the importance of

pay and benefits (3.86) is significantly lower ($p < 0.01$) than the mean score of social relevance (4.01). And the mean score for the importance of participation (3.70) is significantly lower ($p < 0.01$) than the mean score for pay and benefits (3.86).

In the private sector organisations, the mean score of the fourth ranked factor, growth and development (3.95), is significantly lower ($p < 0.001$) than the mean score of workplace integration (4.15). The mean score for the importance of participation (3.74), which is in the sixth position, is significantly lower ($p < 0.001$) than the mean score of the fifth-ranked factor, pay and benefits (3.94).

7.2.3 Gender

Table 7.6 shows the relative importance of QWL factors according to the gender of the respondents in this research. Kendall's tau for the coefficient of rank correlation is 0.714 ($p < 0.05$) indicating that there is significant agreement in the rankings of the factors between the two groups.

Table 7.6 Mean Scores and Ranks for the Importance of QWL Factors by Gender

QWL Factors	Gender					
	Male (N=357)			Female (N=315)		
	Mean	S.D	Rank	Mean	S.D	Rank
Workplace Integration	4.13	0.73	1	4.21	0.62	2
Supervision	4.10	0.82	2	4.19	0.74	3
Physical Environment	4.00	0.75	3**	4.28	0.65	1
Growth and Development	3.93	0.78	4	4.00	0.61	4***
Social Relevance	3.86	0.75	5	3.87	0.67	6
Pay and Benefits	3.76	0.85	6*	3.94	0.78	5
Participation	3.65	0.88	7*	3.81	0.76	7

Kendall's tau = 0.714, $p < 0.05$.

Asterisks indicate the mean score for the factor is significantly lower than the mean score of the immediately higher ranked (preceding) factor: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

From Table 7.6, it can be seen that male employees regard integration ($M = 4.13$) as the most important factor in their working life. For women employees, physical environment ($M = 4.28$) is regarded as the most important factor. Both groups of employees regard participation opportunities as the least important factor.

For male employees, the mean score for the importance of physical environment (4.00), ranked third, is significantly lower ($p < 0.01$) than the mean score of supervision (4.10, ranked 2nd). The mean score of pay and benefits (3.76, ranked 6th) is significantly lower ($p < 0.05$) than the mean for social relevance (3.86, ranked 5th). The mean score for the least important factor, participation (3.65), is significantly lower than the mean of pay and benefits.

In the female sub-sample, the mean score for the importance of growth and development (3.93, ranked 4th) is significantly lower ($p < 0.001$) than the mean score of the third-ranked factor, supervision (4.19).

7.2.4 Ethnic Group

Table 7.7 shows the relative importance of QWL factors according to the ethnic groups of the respondents.

From Table 7.7, it is observed that there is a significant degree of agreement in the rankings of QWL factors between both ethnic groups (Kendall's tau = 0.619, $p < 0.05$). Integration is perceived as the most important factor by the Malays ($M =$

4.16), and as the second most important factor by the non-Malays (M = 4.26). The most important QWL factor for the non-Malays is supervision (M = 4.41). The Malays regard participation (M = 3.71), while the non-Malays regard social relevance (M = 3.87), as the least important factors.

Table 7.7 Mean Scores and Ranks for the Importance of QWL Factors by Ethnic Group

QWL Factors	Ethnic					
	Malay (N=608)			Non-Malay (N=64)		
	Mean	S.D	Rank	Mean	S.D	Rank
Workplace Integration	4.16	0.69	1	4.26	0.63	2*
Physical Environment	4.13	0.73	2	4.18	0.61	3
Supervision	4.11	0.80	3	4.41	0.53	1
Growth and Development	3.95	0.72	4***	4.13	0.62	4
Social Relevance	3.86	0.72	5**	3.87	0.71	7
Pay and Benefits	3.82	0.83	6	4.06	0.73	5
Participation	3.71	0.84	7**	3.90	0.73	6

Kendall's tau = 0.619, $p < 0.05$

Asterisks indicate the mean score for the factor is significantly lower than the mean score of the immediately higher ranked (preceding) factor: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Results of t-tests for significant differences in the mean scores show that, for the Malays, the mean score of growth and development (3.95, ranked 4th) is significantly lower ($p < 0.001$) than the mean score of supervision (4.11, ranked 3rd). The mean score of social relevance (3.86, ranked 5th) is significantly lower ($p < 0.01$) than the mean score of growth and development. And the mean score of participation (3.71, ranked 7th) is significantly lower ($p < 0.01$) than the mean score for the importance of pay and benefits (3.82, ranked 6th).

For the non-Malays in this sample, the mean score of the second most important factor, workplace integration (4.26) is significantly lower ($p < 0.05$) than the mean score of the first-ranked factor, supervision (4.41).

7.2.5 Age Group

Table 7.8 shows relative importance of QWL factors as perceived by different age groups of respondents in this study. The Kendall's coefficient of concordance is 0.927 ($\chi^2 (6) = 16.0, p < 0.05$) indicating that there is significant agreement in the order of importance of the factors.

Table 7.8 Mean Scores and Ranks for the Importance of QWL Factors by Age Group

QWL Factors	Age Group								
	≤ 25 years (N=161)			26 - 35 years (N=319)			≥ 36 years (N=192)		
	Mean	S.D	Rank	Mean	S.D	Rank	Mean	S.D	Rank
Physical Environment	4.23	0.74	1	4.15	0.67	3	4.02	0.76	3
Supervision	4.12	0.75	2	4.18	0.71	1	4.08	0.92	2**
Workplace Integration	4.10	0.77	3	4.17	0.62	2	4.23	0.70	1
Growth and Devt	3.97	0.64	4*	3.99	0.71	4***	3.93	0.77	4
Pay and Benefits	3.88	0.79	5	3.90	0.79	5	3.72	0.89	7
Social Relevance	3.81	0.76	6	3.87	0.69	6	3.90	0.73	5
Participation	3.72	0.82	7	3.71	0.82	7**	3.75	0.86	6**

Kendall's W = 0.927, $\chi^2 (6) = 16.0, p < 0.05$

Asterisks indicate the mean score for the factor is significantly lower than the mean score of the immediately higher (preceding) ranked factor: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

It can be observed from Table 7.8 that physical environment, supervision and workplace integration are the three most important QWL factors for the groups. growth and development and participation opportunities were the three most important QWL factors for the groups. Pay and benefits, social relevance and participation are perceived to be among the least important factors.

However, there are some variations in the order of importance of the QWL factors among the three age groups. Employees in the lowest age group (25 years and below) regard physical environment ($M = 4.23$) as the most important factor. For employees in the '26 - 35 years' age group, supervision ($M = 4.18$) is perceived to be the most important. And for employees in the '36 years and above', workplace integration ($M = 4.23$) is the most important QWL factor.

The order of importance for the three least important factors are identical in two of the groups (25 years and below; and 26 - 35 years). Participation is considered as the least important by both groups. But for employees in the '36 years and above', pay and benefits is regarded as the least important factor.

T-test results show that in the '25 and below' age group, the mean score for the importance of growth and development (3.97, ranked 4th) is significantly lower ($p < 0.05$) than the mean score of workplace integration (4.10, ranked 3rd).

In the '26 - 35 years' age group, the mean score of the fourth ranked factor, growth and development (3.99), is significantly lower ($p < 0.001$) than the score of the third-ranked factor, physical environment (4.15). And the mean score for the importance of participation (3.71, ranked 7th) is significantly lower ($p < 0.01$) than the mean score of social relevance (3.87, ranked 6th).

In the '36 years and above' age group, the mean score of the second most important factor, supervision (4.08) is significantly lower ($p < 0.01$) than the score of the most important factor, workplace integration (4.23). And the mean score for the importance of participation (3.75, ranked 6th) is significantly lower ($p < 0.01$) than the score of social relevance (3.90, ranked 5th).

7.2.6 Marital Status

Table 7.9 presents the relative importance of QWL factors according to the respondents' marital status.

Table 7.9 Mean Scores and Ranks for the Importance of QWL Factors by Marital Status

QWL Factors	Marital Status					
	Married (N=460)			Single (N=212)		
	Mean	S.D	Rank	Mean	S.D	Rank
Workplace Integration	4.17	0.66	1	4.18	0.72	2
Supervision	4.14	0.79	2	4.15	0.77	3
Physical Environment	4.08	0.73	3	4.24	0.67	1
Growth and Development	3.96	0.74	4**	3.97	0.66	4**
Social Relevance	3.90	0.70	5*	3.80	0.76	6**
Pay and Benefits	3.79	0.84	6**	3.95	0.78	5
Participation	3.72	0.84	7	3.73	0.81	7

Kendall's tau = 0.714, $p < 0.05$

Asterisks indicate the mean score for the factor is significantly lower than the mean score of the immediately higher ranked (preceding) factor: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

From Table 7.9, it can be seen that though there is a significant agreement in the rankings of QWL factors between the two groups of employees in this sample (Kendall's tau = 0.714, $p < 0.05$), some variations do exist. Married employees perceive workplace integration ($M = 4.17$) as the most important factor, but single

employees consider physical environment ($M = 4.24$) as the most important factor for their QWL. Both groups of employees regard participation as the least important factor, with mean scores of 3.72 for married, and 3.73 for single, employees.

For the married employees sub-sample, the mean score for the importance of growth and development (3.96, ranked 4th) is significantly lower ($p < 0.01$) than the mean score of physical environment (4.08, ranked 3rd). The mean for social relevance (3.90, ranked 5th) is significantly lower ($p < 0.05$) than the mean for growth and development. And the mean score for the importance of pay and benefits (3.79, ranked 6th) is significantly lower ($p < 0.01$) than the mean score of social relevance.

In the single employees sub-sample, the mean score of the fourth-ranked factor, growth and development (3.97) is significantly lower ($p < 0.01$) than the mean score of the third-ranked factor, supervision (4.15). And the mean score for the importance of social relevance (3.80, ranked 6th) is significantly lower ($p < 0.01$) than the mean score for the importance of pay and benefits (3.95, ranked 5th).

7.2.7 Qualifications

Table 7.10 shows the relative importance of QWL factors as perceived by employees of different levels academic qualifications.

Table 7.10 Mean Scores and Ranks for the Importance of QWL Factors by Qualification

QWL Factors	Qualification								
	LCE and below (N=122)			MCE (N=383)			HSC and above (N=167)		
	M	S.D	R	M	S.D	R	M	S.D	R
Physical Environment	4.10	0.76	1	4.16	0.69	3	4.09	0.75	3
Workplace Integration	3.99	0.71	2	4.22	0.64	1	4.18	0.74	2
Supervision	3.83	0.94	3*	4.21	0.68	2	4.20	0.82	1
Pay and Benefits	3.76	0.91	4	3.89	0.77	6	3.79	0.86	6
Social Relevance	3.75	0.80	5	3.91	0.64	5**	3.84	0.82	5**
Growth and Development	3.73	0.76	6	4.02	0.67	4***	4.02	0.74	4
Participation	3.66	0.86	7	3.76	0.79	7**	3.68	0.89	7

Kendall's W = 0.873, $\chi^2 (6) = 15.714$, $p < 0.05$

Asterisks indicate the mean score for the factor is significantly lower than the mean score of the immediately higher ranked (preceding) factor: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Note:

M = Mean; S.D = Standard Deviation; R = Ranks

LCE : Lower Certificate of Education

MCE : Malaysian Certificate of Education

HSC : Higher School Certificate

From Table 7.10 it is observed that there is not much difference in the rankings of the QWL factors among the different qualification groups of employees in this sample (Kendall's W = 0.873, $\chi^2 (6) = 15.714$, $p < 0.05$). Physical environment, workplace integration and supervision are perceived to be the three most important QWL factors by the groups. Participation is considered to be the least important factor by all the three groups.

Employees with the lowest category of qualifications (LCE and below) perceive physical environment (M = 4.10) as the most important factor. Those in the second category (MCE or equivalent) regard workplace integration (M = 4.22) as the most important factor. And those in the highest category of qualifications (HSC and above) perceive supervision (M = 4.20) as the most important factor.

T-test results indicate that in the 'LCE and below' category, the mean for the importance of supervision (3.83, ranked 3rd) is significantly lower ($p < 0.05$) than the mean score for the importance of workplace integration (3.99, ranked 2nd). In the 'MCE' sub-sample, the mean score of growth and development (4.02, ranked 4th) is significantly lower ($p < 0.001$) than the mean score of physical environment (4.16, ranked 3rd). The mean score of social relevance (3.91, ranked 5th) is significantly lower ($p < 0.01$) than the mean score of growth and development. And the mean score for the importance of participation (3.76, ranked 7th) is significantly lower ($p < 0.01$) than the mean score of pay and benefits (3.89, ranked 6th). In the 'HSC and above' category of employees, the mean score of social relevance (3.84, ranked 5th) is significantly lower ($p < 0.01$) than the mean score of growth and development (4.02, ranked 4th).

7.2.8 Length of Service

Table 7.11 presents the relative importance of QWL factors according to the respondents' length of service. There is a strong degree of agreement in the rankings of QWL factors between employees in the different lengths of service categories (Kendall's $W = 0.903$, $\chi^2 (6) = 27.09$, $p < 0.001$).

From Table 7.11, it could be observed that physical environment, supervision and workplace integration are perceived as the three most important QWL factors. All the groups, except those with more than 12 years of service, regard participation as

the least important factor for their QWL. Employees in the 'More than 12 years' category regard pay and benefits as the least important factor.

T-test results show that, in the '3 years or less' category, the mean scores for the importance of supervision and workplace integration (4.20, joint 2nd) are significantly lower ($p < 0.05$) than the mean score of the most important factor, physical environment (4.31). And the mean score for the importance of growth and development (4.04, ranked 4th) is significantly lower ($p < 0.01$) than the mean scores of supervision and workplace integration.

In the '4 - 6 years' category, the mean score for the importance of growth and development (3.95, 4th) is significantly lower ($p < 0.01$) than the mean score of the third-ranked factor, physical environment (4.16). For the '7 - 9 years' sub-sample, the mean score for the importance of pay and benefits (3.44, 6th) is significantly lower ($p < 0.05$) than the mean score of social relevance (3.76, 5th).

In the '10 - 12 years' sub-sample, the mean score of the least important factor, participation (3.66, 7th) is significantly lower ($p < 0.05$) than the mean score of social relevance (3.85, 6th). For employees in the 'More than 12 years' category, the mean score for the importance of participation (3.76, 6th) is significantly lower than the mean score for the importance of social relevance (3.92, 5th)

Table 7.11 Mean Scores and Ranks for the Importance of QWL Factors by Length of Service

QWL Factors	Length of Service														
	3 years or less (N=234)			4 - 6 years (N=98)			7 - 9 years (N=46)			10 - 12 years (N=99)			> 12 years (N=195)		
	M	SD	R	M	SD	R	M	SD	R	M	SD	R	M	SD	R
Physical Environment	4.31	0.63	1	4.16	0.71	3	3.93	0.83	2	4.00	0.75	3	4.02	0.73	3
Supervision	4.20	0.72	2.5*	4.27	0.71	1	3.89	0.80	3	4.07	0.77	1.5	4.10	0.87	2
Workplace Integration	4.20	0.66	2.5*	4.21	0.78	2	4.08	0.62	1	4.07	0.63	1.5	4.18	0.70	1
Growth and Devt	4.04	0.65	4**	3.95	0.72	4**	3.79	0.79	4	3.94	0.75	4	3.94	0.74	4
Pay and Benefits	3.96	0.75	5	3.90	0.84	5	3.44	1.03	6*	3.90	0.73	5	3.73	0.86	7
Social Relevance	3.86	0.75	6	3.84	0.73	6	3.76	0.61	5	3.85	0.70	6	3.92	0.70	5
Participation	3.78	0.80	7	3.75	0.85	7	3.36	0.87	7	3.66	0.86	7*	3.76	0.81	6**

Kendall's $W = 0.903$, $\chi^2(6) = 27.09$, $p < 0.001$

Asterisks indicate the mean score for the factor is significantly lower than the mean score of the immediately higher ranked (preceding factor). *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Note: M = Mean; SD = Standard Deviation; R = Rank

7.2.8 Salary Level

Table 7.12 shows the mean scores and ranks for the relative importance of QWL factors according to the salary levels of the respondents. Kendall's W for the strength of agreement between the groups' rankings of QWL factors is 0.904, indicating significant agreement ($\chi^2 (6) = 27.11, p < 0.001$). In general physical environment, workplace integration and supervision are perceived to be the three most important QWL factors by all the groups. All groups regard participation as the least important factor.

T-test results show that in the 'RM400 or less' salary level, the mean score for the importance of workplace integration (4.06, 2nd) is significantly lower ($p < 0.001$) than the mean score of the most important factor, physical environment (4.35). And the mean score for the importance of social relevance (3.72, 6th) is significantly lower ($p < 0.05$) the mean score of pay and benefits (3.91, 5th).

In the 'RM401 -RM600' salary level, the mean score of social relevance (3.92, 4th) is significantly lower ($p < 0.01$) than the mean score of physical environment (4.12, 3rd). And the mean score for the importance of participation (3.63, 7th) is significantly lower ($p < 0.05$) than the mean score of pay and benefits (3.82, 6th).

Table 7.12 Mean Scores and Ranks for the Importance of QWL Factors by Salary Level

QWL Factors	Salary Level														
	1 (N=111)			2 (N=159)			3 (N=145)			4 (N=130)			5 (N=127)		
	M	SD	R	M	SD	R	M	SD	R	M	SD	R	M	SD	R
Physical Environment	4.35	0.57	1	4.12	0.70	3	4.05	0.81	3	4.07	0.78	3	4.12	0.64	3
Workplace Integration	4.06	0.72	2***	4.21	0.61	1	4.13	0.75	2	4.22	0.72	1	4.20	0.62	2
Supervision	4.00	0.81	3	4.15	0.74	2	4.16	0.84	1	4.13	0.84	2	4.24	0.68	1
Growth and Devt.	3.94	0.68	4	3.88	0.73	5	3.94	0.73	4	4.00	0.71	4.5	4.08	0.69	4
Pay and Benefits	3.91	0.83	5	3.82	0.83	6	3.85	0.83	5	3.79	0.87	6**	3.86	0.76	5**
Social Relevance	3.72	0.77	6*	3.92	0.69	4**	3.82	0.75	6	4.00	0.65	4.5	3.83	0.72	6
Participation	3.68	0.87	7	3.63	0.83	7*	3.78	0.78	7	3.73	0.87	7	3.80	0.81	7

Kendall's $W = 0.904$, $\chi^2(6) = 27.11$, $p \leq 0.001$

Asterisks indicate the mean score for the factor is significantly lower than the mean score of the higher ranked factor: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Notes:

Groups: 1 (RM400 or less) 2 (RM401-RM600) 3 (RM601-RM800) 4 (RM801-RM1000) 5 (More than RM1000).

M=Mean; SD=Standard Deviation; R=Rank

For the 'RM801 - RM1000' sub-sample, the mean score for the importance of pay and benefits (3.79, 6th) is significantly lower ($p < 0.01$) than the mean scores of both growth and development and social relevance (4.00, joint 4th). In the highest category of salary level (More than RM1000), the mean score of pay and benefits (3.86, 5th) is significantly lower ($p < 0.01$) than the mean score of growth and development (4.08, 4th).

7.3 Perceptions about the Presence of QWL Factors

This section presents the results relating to the relative degree of presence of QWL factors as perceived by the respondents in this study. These findings are based on the strengths of agreement about the degree of presence of those factors. Results are presented for the total sample as well for the various demographic variables.

7.3.1 The Total Sample

Table 7.13 shows the relative strength of agreement about the presence of QWL factors for the total sample in this study.

Table 7.13 Mean Scores and Ranks for the Strengths of Agreement about the Presence of QWL Factors - Total Sample

QWL Factors	Mean	S.D	Rank
Physical Environment	3.83	0.72	1
Workplace Integration	3.74	0.75	2**
Social Relevance	3.66	0.69	3**
Supervision	3.61	0.79	4
Growth and Development	3.56	0.83	5
Participation Opportunities	3.30	0.85	6***
Pay and Benefits	3.14	0.78	7***

Asterisks indicate the mean score for the factor is significantly lower than the mean score of the immediately higher ranked (preceding) factor: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

It may be observed from Table 7.13 that, on the whole, the respondents in this study perceived physical environment, integration and social relevance to be the three factors which have the highest degree of presence. The factors which have the weakest agreement about their presence are growth and development, participation opportunities and pay and benefits.

Results of t-test indicate that the mean score for the strength of agreement about the presence of workplace integration (3.74, 2nd) is significantly lower ($p < 0.01$) than the mean score for physical environment. The mean score for social relevance (3.66, 3rd) is significantly lower ($p < 0.01$) than the mean score for workplace integration. The mean score for the strength of agreement about the presence of participation opportunities (3.30, 6th) is significantly lower than the mean score of growth and development (3.56, 5th). And the mean score of pay and benefits (3.14, 7th) is significantly lower than the score for the strength of agreement about the presence of participation opportunities.

7.3.2 Organisational Type

Table 7.14 shows the rankings for the strengths of agreement about the presence of QWL factors according to employees in the three types of organisations.

From Table 7.14 it is observed that there is significant degree of concordance between the rankings of the perceived presence of QWL factors by employees in all the three types of organisations (Kendall's $W = 0.891$, $\chi^2 (6) = 16.04$, $p < 0.05$). All

the three groups regard physical environment as having the highest degree of presence in their organisations. Participation opportunities and pay and benefits are perceived to be of the lowest degree of presence. Social relevance which is ranked third and second by the employees in the government departments (M = 3.79) and semi-government organisations (M = 3.77) respectively, is ranked fifth by those in the private sector organisations. Supervision is ranked higher by the private sector employees (3rd) compared to the ranks assigned by employees in the government and semi-government organisations (4th and 5th respectively).

Table 7.14 Mean Scores and Ranks for the Strengths of Agreement about the Presence of QWL Factors by Organisational Type

QWL Factors	Organisational Type								
	Government (N=185)			Semi-Government (N=214)			Private (N=273)		
	Mean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank
Physical Environment	3.88	0.68	1	3.88	0.70	1	3.76	0.75	1.5
Workplace Integration	3.81	0.71	2	3.65	0.81	3*	3.76	0.72	1.5
Social Relevance	3.79	0.65	3	3.77	0.66	2	3.48	0.69	5
Supervision	3.67	0.80	4*	3.52	0.85	5	3.64	0.73	3*
Growth and Development	3.50	0.82	5**	3.61	0.84	4	3.56	0.82	4
Participation Opportunities	3.35	0.78	6**	3.13	0.84	6***	3.40	0.89	6
Pay and Benefits	3.12	0.76	7***	3.08	0.80	7	3.20	0.77	7***

Kendall's W = 0.891, $\chi^2(6) = 16.04$, $p < 0.05$

Asterisks indicate the mean score for the factor is significantly lower than the mean score of the immediately higher ranked (preceding) factor: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Results of t-test indicate that, in the government sub-sample, the mean score for the strength of agreement about the presence of good supervision (3.67, 4th) is significantly lower ($p < 0.05$) than the mean score for the presence of social relevance (3.79, 3rd). The mean score of growth and development (3.50, 5th) is

significantly lower ($p < 0.01$) than the mean score of supervision. The mean score for the strength of agreement about the presence of participation opportunities (3.35, 6th) is significantly lower ($p < 0.01$) than the mean score of growth and development. And the mean for pay and benefits (3.12, 7th) is significantly lower than the mean score of participation opportunities.

In the semi-government sub-sample, the mean score of workplace integration (3.65, 3rd) is significantly lower ($p < 0.05$) than the mean score for the perceived presence of social relevance (3.77, 2nd). And the mean score for the strength of agreement about the presence of participation opportunities (3.13, 6th) is significantly lower ($p < 0.001$) than the score for the perceived presence of good supervision.

With regard to the private sector organisations, the mean for supervision (3.64, 3rd) is significantly lower ($p < 0.05$) than the mean scores of physical environment and workplace integration (3.76, joint 1st). And the mean score for the strength of agreement about the presence of good pay and benefits (3.20, 7th) is significantly lower ($p < 0.001$) than the score of participation opportunities (3.40, 6th).

7.3.3 Gender

Table 7.15 shows the rankings for the strength of agreement about the perceived presence of QWL factors according to the gender of the respondents. From the table, it may be noticed that there is a strong correlation between the rankings of the QWL factors by both groups of employees (Kendall's tau = 0.905, $p < 0.05$). The only

difference is in the rankings of social relevance and supervision. Male employees perceived social relevance (3rd) to be of higher degree of presence than supervision (4th), whereas supervision is ranked higher (3rd) than social relevance (4th) by the female employees in this sample. The other factors are similarly ranked by both groups, with physical environment and integration as first and second in terms of their relative degree of presence. Participation opportunities and pay and benefits are perceived to be the factors with the lowest degree of presence.

Table 7.15 Mean Scores and Ranks for the Strengths of Agreement about the Presence of QWL Factors by Gender

QWL Factors	Gender					
	Male (N=357)			Female (N=315)		
	Mean	SD	Rank	Mean	SD	Rank
Physical Environment	3.77	0.76	1	3.89	0.66	1
Workplace Integration	3.73	0.77	2	3.75	0.73	2**
Social Relevance	3.70	0.70	3	3.61	0.67	4
Supervision	3.60	0.86	4*	3.64	0.70	3**
Growth and Development	3.59	0.83	5	3.53	0.82	5
Participation Opportunities	3.23	0.87	6***	3.38	0.82	6**
Pay and Benefits	3.13	0.78	7*	3.15	0.78	7***

Kendall's tau = 0.905, $p < 0.05$

Asterisks indicate the mean score for the factor is significantly lower than the mean score of the immediately higher ranked (preceding) factor: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Results of t-test show that, in the male sub-sample, the mean strength of agreement about the presence of good supervision (3.60, 4th) is significantly lower ($p < 0.05$) the mean score for the perceived presence of social relevance (3.70, 3rd). The mean score for participation opportunities (3.23, 6th) is significantly lower ($p < 0.001$) than the mean score for the perceived presence of growth and development (3.59, 5th). And the mean score for pay and benefits (3.13, 7th) is significantly lower ($p < 0.05$) than the mean score of participation opportunities.

In the female sub-sample, the mean score for the perceived presence of workplace integration (3.75, 2nd) is significantly lower ($p < 0.01$) than the mean score of the perceived presence of good physical environment (3.89). The mean score for supervision (3.63, 3rd) is significantly lower ($p < 0.01$) than the mean score of workplace integration. The mean score of participation opportunities (3.38, 6th) is significantly lower ($p < 0.01$) than the mean score for the perceived presence of growth and development (3.53, 5th). And the mean score for pay and benefits (3.15, 7th) is significantly lower than the mean score for the perceived presence of participation opportunities.

7.3.4 Ethnic Group

Table 7.16 shows the rankings the relative strengths of agreement about the presence of QWL factors by Malay and non-Malay respondents in this study.

Table 7.16 Mean Scores and Ranks for the Strengths of Agreement about the Presence of QWL Factors by Ethnic Group

QWL Factors	Ethnic Group					
	Malay (N=608)			Non-Malay (N=64)		
	Mean	SD	Rank	Mean	SD	Rank
Physical Environment	3.84	0.71	1	3.71	0.74	2
Workplace Integration	3.74	0.74	2**	3.73	0.83	1
Social Relevance	3.69	0.67	3	3.37	0.76	5
Supervision	3.61	0.79	4*	3.65	0.75	3
Growth and Development	3.56	0.82	5	3.52	0.89	4
Participation Opportunities	3.30	0.85	6***	3.32	0.90	6
Pay and Benefits	3.15	0.78	7***	3.00	0.76	7**

Kendall's tau = 0.714, $p < 0.05$

Asterisks indicate the mean score for the factor is significantly lower than the mean score of the immediately higher ranked (preceding) factor: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

The Kendall's coefficient of rank correlation shows that there is significant similarity in the rankings of both groups (Kendall's tau = 0.714, $p < 0.05$). Nevertheless, from Table 7.16 it can be observed that there is a difference in the rankings of the factor with the strongest degree of agreement about its presence. The Malay respondents regard physical environment as the factor with the highest degree of presence, as opposed to the non-Malays who perceive integration as the factor with the highest degree of presence. The strengths of agreement of both groups about the presence of participation opportunities and good pay and benefits indicate that the two factors are perceived to be of the lowest degree of presence in their work lives.

The mean score for the strength of agreement about the presence of social relevance is higher (3.69, 3rd) in the Malay sub-sample than the mean score for the factor in non-Malay sub-sample (3.37, 5th).

Results of t-test indicate that, in the Malay sub-sample, the mean score for the perceived presence of workplace integration (3.74, 2nd) is significantly lower ($p < 0.01$) than the mean score of physical environment (3.84). The mean score of supervision (3.61, 4th) is significantly lower ($p < 0.05$) than the mean score of social relevance (3.69, 3rd). The mean score for the perceived presence of participation opportunities (3.30, 6th) is significantly lower ($p < 0.001$) than the mean score for growth and development (3.56, 5th). And the mean score for pay and benefits (3.15, 7th) is significantly lower ($p < 0.001$) than the mean score for the strength of agreement about the presence of participation opportunities.

7.3.5 Age Group

Table 7.17 presents the mean scores for the strengths of agreement, and the rankings, about the presence of QWL factors according to the three age groups of the sample in this study.

Table 7.17 Mean Scores and Ranks for the Strengths of Agreement about the Presence of QWL Factors by Age Group

QWL Factors	Age Group								
	25 years and below (N=161)			26 - 35 years (N=319)			36 years and above (N=192)		
	Mean	S.D	Rank	Mean	S.D	Rank	Mean	S.D	Rank
Physical Environment	3.81	0.79	1	3.80	0.69	1	3.89	0.70	1
Workplace Integration	3.70	0.77	2	3.70	0.74	2*	3.84	0.73	2
Supervision	3.63	0.70	3	3.59	0.77	4	3.65	0.88	4**
Social Relevance	3.58	0.71	4	3.61	0.66	3*	3.81	0.69	3
Growth and Development	3.52	0.85	5	3.58	0.79	5	3.56	0.87	5
Participation Opportunities	3.39	0.83	6	3.26	0.85	6***	3.29	0.87	6***
Pay and Benefits	3.21	0.76	7**	3.09	0.79	7***	3.16	0.78	7*

Kendall's' W = 0.984, $\chi^2 (6) = 17.714$, $p < 0.01$

Asterisks indicate the mean score for the factor is significantly lower than the mean score of the immediately higher ranked (preceding) factor: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

From Table 7.17 it can be seen that the rankings for the strengths of agreement about the presence of QWL factors among the three age groups are quite similar, (Kendall's $W = 0.984$, $\chi^2 (6) = 17.71$, $p < 0.01$), with physical environment and integration as the two factors having the strongest degree of agreement about their presence. All the three age groups consider participation opportunities, and pay and benefits as the two factors which have the lowest degree of presence in their work organisations.

There are differences in the rankings of supervision and social relevance among the three groups. Supervision is ranked third ($M = 3.63$) by those in the '25 years and

below' age group but has been ranked fourth by employees in the '26 - 35 years' (M = 3.59) and '36 years and above' (M= 3.65) age groups. Social relevance is ranked fourth by employees in the '25 years and below' (M = 3.58) but has been ranked third by employees in the '26 - 35 years' (M = 3.61) and '36 years and above' (M = 3.81) age groups.

In the '25 years and below' age group, the mean score for the strength of agreement about the presence of good pay and benefits (3.21, 7th) is significantly lower ($p < 0.01$) than the mean score for the perceived presence of participation opportunities.

In the '26 -35 years' age group, the mean score for the strength of agreement about the presence of workplace integration (3.70, 2nd) is significantly lower ($p < 0.05$) than the score for physical environment (3.80, 1st). The mean score for social relevance (3.61, 3rd) is significantly lower ($p < 0.05$) than the mean score for workplace integration. The mean score for the strength of agreement about the presence of participation opportunities (3.26, 6th) is significantly lower ($p < 0.001$) than the mean score for the perceived presence of growth and development (3.58, 5th). And the mean score for the factor with the weakest agreement about its presence, good pay and benefits (3.09) is significantly lower ($p < 0.001$) than the mean score for participation opportunities.

In the '36 years and above' age group, t-test results show that the mean score for the strength of agreement about the presence of good supervision (3.65, 4th) is

significantly lower ($p < 0.01$) than the mean score of social relevance (3.81, 3rd). The mean score for the perceived presence of participation opportunities (3.29, 6th) is significantly lower ($p < 0.001$) than the mean score of growth and development (3.56, 5th). And the mean score for the perceived presence of good pay and benefits (3.16, 7th) is significantly lower than the mean score of participation opportunities.

7.3.6 Marital Status

The rankings in the strength of agreement about the presence of QWL factors according to the marital status of the respondents are presented in Table 7.18. From the table, it can be observed that the rank correlation between the rankings of both groups is significant (Kendall's tau = 0.810, $p < 0.05$). Both of the married and single respondents' strengths of agreement about the presence of conducive physical environment and workplace integration indicate that these two factors are having the highest degree of perceived presence. Social relevance is ranked third by married respondents, but was ranked fifth by single respondents. Again, participation opportunities and pay and benefits are the two lowest-ranked factors.

For married employees, t-test results indicate that the mean score for the strength of agreement about the presence of workplace integration (3.74, 2nd) is significantly lower ($p < 0.05$) than the mean score of physical environment (3.83, 1st). The mean score of supervision (3.58, 4th) is significantly lower ($p < 0.01$) than the mean score of social relevance (3.72, 3rd). The mean score for the strength of agreement about the presence of participation opportunities (3.28, 6th) is significantly lower ($p <$

0.001) than the mean score of growth and development (3.57, 5th). And the mean score of pay and benefits (3.14, 7th) is significantly lower ($p < 0.001$) than the mean score of participation opportunities.

In the single employees sub-sample, the mean score for the perceived presence of growth and development (3.55, 4th) is significantly lower ($p < 0.01$) than the mean score of supervision (3.69, 3rd). The mean score of participation opportunities (3.34, 6th) is significantly lower ($p < 0.01$) than the mean score of social relevance (3.52, 5th). And the mean score for the perceived presence of good pay and benefits (3.14, 7th) is significantly lower ($p < 0.001$) than the mean score of participation opportunities.

Table 7.18 Mean Scores and Ranks for the Strengths of Agreement about the Presence of QWL Factors by Marital Status

QWL Factors	Marital Status					
	Married (N=460)			Single (N=212)		
	Mean	S.D	Rank	Mean	S.D	Rank
Physical Environment	3.83	0.71	1	3.81	0.74	1
Workplace Integration	3.74	0.74	2*	3.73	0.77	2
Social Relevance	3.72	0.66	3	3.52	0.73	5
Supervision	3.58	0.82	4**	3.69	0.72	3
Growth and Development	3.57	0.82	5	3.55	0.83	4**
Participation Opportunities	3.28	0.87	6***	3.34	0.81	6**
Pay and Benefits	3.14	0.78	7***	3.14	0.77	7***

Kendall's tau = 0.810, $p < 0.05$

Asterisks indicate the mean score for the factor is significantly lower than the mean score of the immediately higher ranked (preceding) factor: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

7.3.7 Qualifications

Table 7.19 shows the rankings of QWL factors, based on the mean scores of the strengths of agreement about their presence, according to the qualifications of the respondents in this study.

Table 7.19 Mean Scores and Ranks for the Strengths of Agreement about the Presence of QWL Factors by Qualification

QWL Factors	Qualification								
	LCE and below (N=122)			MCE (N=383)			HSC and above (N=167)		
	M	S.D	Rank	M	S.D	Rank	M	S.D	Rank
Physical Environment	3.85	0.72	1	3.82	0.73	1	3.84	0.67	1
Workplace Integration	3.81	0.74	2	3.74	0.75	2	3.67	0.76	2*
Social Relevance	3.65	0.75	3*	3.69	0.65	3	3.58	0.72	5
Supervision	3.58	0.83	4	3.63	0.79	4	3.60	0.77	4
Growth and Development	3.47	0.79	5	3.55	0.81	5	3.65	0.88	3
Participation Opportunities	3.44	0.82	6	3.30	0.83	6***	3.21	0.91	6***
Pay and Benefits	3.21	0.84	7**	3.14	0.79	7***	3.08	0.71	7

Kendall's $W = 0.937$, $\chi^2 (6) = 16.86$, $p < 0.01$

Asterisks indicate the mean score for the factor is significantly lower than the mean score of the immediately higher ranked factor: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Note:

1. LCE = Lower Certificate of Education
2. MCE = Malaysian Certificate of Education or equivalent
3. HSC = Higher School Certificate and above.

The rankings in the strength of agreement about the perceived presence of QWL factors by the three groups of respondents, categorised by their levels of qualifications, are quite similar (Kendall's $W = 0.937$, $\chi^2 (6) = 16.86$, $p < 0.01$). All the groups regard physical environment and integration as the factors with highest degree of presence; and participation opportunities and pay and benefits as the factors with the lowest degree of presence.

In the 'LCE and below' category, the mean score for the strength of agreement about the presence of social relevance (3.65, 3rd) is significantly lower than the mean score of workplace integration (3.81, 2nd). And the mean score of the factor with the weakest agreement about its presence, pay and benefits (3.21, 7th) is significantly lower ($p < 0.01$) than the mean score for the factor with is ranked sixth in terms of its presence, participation opportunities (3.44).

For the 'MCE' category, the mean score for the perceived presence of participation opportunities (3.30, 6th) is significantly lower ($p < 0.001$) than the score for growth and development (3.35, 5th). And the score for the strength of agreement about the presence of good pay and benefits (3.14, 7th) is significantly lower ($p < 0.001$) than the mean score of participation opportunities.

Results of t-test for significant differences in the mean strength of agreement about the presence of QWL factors for the 'HSC and above' category indicate that the mean score of workplace integration (3.67, 2nd) is significantly lower ($p < 0.05$) than the mean score of the factor with the strongest degree of agreement, physical environment (3.84). And the mean score for the perceived presence of participation opportunities (3.21, 6th) is significantly lower ($p < 0.001$) than the mean score of social relevance (3.58, 5th).

7.3.8 Length of Service

From Table 7.20 it is observed that physical environment and integration are the two factors with the strongest degree of agreement about their presence. The strength of agreement for the presence of participation opportunities and pay and benefits indicate that these two factors are perceived to be of the lowest degree of presence in the organisations. The degree of concordance between the rankings of the QWL factors by the different groups is highly significant (Kendall's $W = 0.948$, $\chi^2 (6) = 28.44$, $p < 0.001$), indicating little variation in the rankings between the groups.

T-test results for employees in the '3 years or less' category show that the mean score for the strength of agreement about the presence of workplace integration (3.74, 2nd) is significantly lower ($p < 0.05$) than the mean score of the highest ranked factor, physical environment (3.86). The mean score of supervision (3.66, 3rd) is significantly lower ($p < 0.05$) than the mean score of workplace integration. The mean score of participation opportunities (3.41, 6th) is significantly lower ($p < 0.05$) than the mean score of the fifth-ranked factor, growth and development (3.54). And the mean score for the factor with the weakest agreement about its presence, pay and benefits (3.18, 7th) is significantly lower than the mean score of participation opportunities.

In the '4 - 6 years' category, the mean score of participation opportunities (3.18, 6th) is significantly lower ($p < 0.001$) than the mean score of supervision (3.47, 5th). And the mean score of the lowest ranked factor, pay and benefits (2.94, 7th) is

significantly lower than the mean score of participation opportunities. In the '7 - 9 years' category, the mean score for the strength of agreement about the presence of participation opportunities (3.35, 6th) is significantly lower (0.01) than the mean score for growth and development. The same pattern is also evident in the '10 -12 years' where the mean score of participation opportunities (3.35, 6th) is significantly lower ($p < 0.01$) than the mean score of growth and development (3.63, 5th). And in the 'More than 12 years' category, where the mean score for participation (3.28, 6th) is significantly lower ($p < 0.001$) than the score for growth and development (3.61, 5th).

Table 7.20 Mean Scores and Ranks for the Strengths of Agreement about the Presence of QWL Factors by Length of Service

QWL Factors	Length of Service														
	3 years or less (N=234)			4 - 6 years (N=98)			7 - 9 years (N=46)			10 - 12 years (N=99)			> 12 years (N=195)		
	M	SD	R	M	SD	R	M	SD	R	M	SD	R	M	SD	R
Physical Environment	3.86	.74	1	3.73	.76	1	3.72	.58	1	3.83	.67	1	3.86	.72	1
W. Integration	3.74	.73	2*	3.65	.80	2	3.49	.85	3	3.82	.66	2	3.80	.75	2
Supervision	3.66	.71	3*	3.47	.85	5	3.37	.86	4	3.64	.66	4	3.68	.88	4
Social Relevance	3.58	.69	4	3.56	.77	3.5	3.55	.66	2	3.71	.65	3	3.79	.65	3
Growth and Development	3.54	.83	5	3.65	.91	3.5	3.28	.70	5	3.63	.76	5	3.61	.83	5
Participation Opportunities	3.41	.82	6*	3.18	.87	6***	2.98	.85	6*	3.35	.76	6**	3.28	.91	6***
Pay and Benefits	3.18	.78	7***	2.94	.80	7*	2.96	.77	7	3.20	.76	7	3.19	.76	7

Kendall's $W = 0.948$, $\chi^2(6) = 28.44$, $p < 0.001$

Asterisks indicate the mean score for the factor is significantly lower than the mean score of the immediately higher ranked (preceding) factor: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Note:

M = Mean; SD = Standard Deviation; R = Rank

7.3.9 Salary Level

Table 7.21 shows the rankings of QWL factors, based on the mean scores of the strengths of agreement about their presence, categorised according to the salary levels of the respondents. From the table, it could be concluded that the rankings of the factors between the groups of respondents are quite similar (Kendall's $W= 0.876$, $\chi^2 (6) = 26.507$, $p < 0.001$). Physical environment is perceived as having the highest degree of presence by all the groups. Participation opportunities and pay and benefits are the two lowest ranked factors.

T-tests for significant differences in the mean scores of the QWL factors show that, in the lowest salary group (RM400 or less), the mean score of supervision (3.60, 3rd) is significantly lower ($p < 0.05$) than the mean score of workplace integration (3.74, 2nd). And the mean score of pay and benefits (3.02, 7th) is significantly lower ($p < 0.001$) than the mean score of participation opportunities (3.43, 6th).

In the 'RM401-RM600' salary level, the mean score of the strength of agreement about the presence of participation opportunities (3.23, 6th) is significantly lower ($p < 0.01$) than the mean score for growth and development (3.46, 5th).

Table 7.21 Mean Scores and Ranks for the Strengths of Agreement about the Presence of QWL Factors by Salary Level

QWL Factors	Salary Level														
	RM400 or less (N=111)			RM401-RM600 (N=159)			RM601-RM800 (N=145)			RM801-RM1000 (N=130)			> RM 1000 (N=127)		
	M	SD	R	M	SD	R	M	SD	R	M	SD	R	M	SD	R
Physical Environment	3.87	.68	1	3.81	.76	1	3.76	.78	1	3.83	.70	1.5	3.89	.64	1
Workplace Integration	3.74	.68	2	3.71	.79	2	3.68	.78	2	3.83	.75	1.5	3.75	.71	3.5
Supervision	3.60	.68	3*	3.50	.87	4	3.58	.80	4	3.66	.81	4	3.75	.72	3.5
Social Relevance	3.50	.65	4	3.63	.73	3	3.65	.70	3	3.79	.67	3	3.71	.65	5
Growth and Devt.	3.46	.82	5	3.46	.80	5	3.53	.89	5	3.51	.81	5	3.77	.78	2
Participation															
Opportunities	3.43	.80	6	3.23	.86	6**	3.23	.91	6***	3.32	.81	6***	3.34	.87	7
Pay and Benefits	3.02	.80	7***	3.13	.82	7	2.97	.80	7***	3.20	.74	7	3.36	.66	6***

Kendall's $W = 0.876$, $\chi^2(6) = 26.507$, $p < 0.001$

Asterisks indicate the mean score for the factor is significantly lower than the mean score of the immediately higher ranked (preceding) factor:

*** $p < 0.001$, ** $p \leq 0.01$, * $p < 0.05$.

Note:

M= Mean; SD= Standard Deviation; R=Rank

For the 'RM601 - RM800' salary level, the mean score for the perceived presence of participation opportunities (3.23, 6th) is significantly lower ($p < 0.001$) than the mean score of growth and development (3.53, 5th). And the mean score of participation is significantly higher ($p < 0.001$) than the mean score of the lowest ranked factor, pay and benefits (2.97, 7th).

In the 'RM801 -RM1000' salary group, the mean score of participation opportunities (3.32, 6th) is significantly lower ($p < 0.001$) than the mean score of growth and development (3.51, 5th).

For employees in the highest salary group (More than RM1000), the mean score of the sixth-ranked factor, pay and benefits (3.36) is significantly lower ($p < 0.001$) than the mean score of the fifth-ranked factor, social relevance (3.71).

7.4 Summary and Conclusions

This chapter has described the characteristics of the respondents who participated in this study. A total of 672 usable questionnaires were returned to the researcher and subsequently used in the analysis. A descriptive analysis of the relative importance and the degree of presence of QWL factors was conducted using three statistical procedures. The first procedure, Kendall's W, was used to assess the degree of concordance between the rankings of the QWL factors assigned by three or more groups. The second statistical procedure used for the analysis was the Kendall's coefficient of rank correlation (Kendall's tau) between the rankings of two groups.

Results from both analyses indicate that, in general, the rankings of the QWL factors are quite similar across groups. Salient departures from the general pattern in the rankings were highlighted. The third procedure used for the data analysis was the paired t-test. This was used for investigating significant differences between the mean scores of the QWL factors within a group. Results obtained from the data analysis in this chapter indicate that, in general, non-supervisory employees in this sample regarded workplace integration, supervision, physical environment and growth and development as the most important QWL factors. Factors which were perceived to be of lesser importance are: social relevance, participation opportunities and pay and benefits.

With respect to the strength of agreement about the presence of QWL factors, respondents in this sample indicated that physical environment, workplace integration, social relevance and supervision as the factors with the highest degree of presence. QWL factors which were perceived to of lower degree of presence are growth and development, participation opportunities, and pay and benefits.

It should be pointed out that the rankings of the QWL factors were based on their mean scores: respondents were not asked to rank the factors themselves. Also, the means scores were only used as a basis for evaluating the relative importance, as well as the degree of perceived presence, of those factors. There may or may not be significant differences in the mean scores of the degree of "importance" or the degree

of "perceived presence" of the factors between the various groups of employees. The investigation of differences between group means is carried out in next chapter, where results of t-tests and one-way ANOVA are presented.

CHAPTER EIGHT

RESULTS II : RESEARCH FINDINGS

8.0 Introduction

This chapter presents the findings obtained from statistical analyses of the survey data. The chapter is divided into three main sections. The first section provides a discussion of t-tests and ANOVAs, and the results obtained when the procedures were used to examine statistical differences between the preferred and the perceived QWL as well the differences in group means of QWL factors. The second section of the chapter examines the effects of demographic and QWL factors on organisational commitment using the techniques of multiple regressions. These effects were analysed first for the total sample, and then for the different organisational types. The third section presents the results of z-tests investigating for the presence of significance differences in the relationships between QWL factors and the dimensions of organisational commitment among the three types of organisations.

Results from the statistical analyses suggest that there are significant differences between the level of preference for QWL factors and the perceived presence of those factors in the respondents' organisations. T-tests and ANOVA results suggest that the level of preference as well as the perceived presence of QWL factors are significantly related to some of the demographic variables. Results of regression analyses provided some evidence for the presence of significant relationships between the perceived QWL factors and the dimensions of organisational commitment.

Results of z-tests comparing the relationships between QWL factors and the commitment dimensions reveal some significant differences among the three organisations.

Significant differences, for the affective dimension, are as follows:

- a) The relationships between physical environment and affective commitment are higher in both the semi-government and private sector organisations, compared to the government sub-sample.
- b) the relationship between pay and benefits and affective commitment in the semi-government sub-sample is also significantly higher than in the government sub-sample.

For continuance commitment (high cost), its relationship with pay and benefits is significantly stronger in the semi-government sample than the government sample. Finally, for the continuance commitment (lack of alternatives), its relationships with both growth and development and supervision in the semi-government sub-sample are significantly stronger than its relationships with the two factors in the government sub-sample. The results of z-tests do not indicate any significant differences in the relationships between QWL factors and normative commitment among the three sub-samples.

8.1 T-test and Analysis of Variance (ANOVA)

Hypothesis testing involving mean differences may be categorised into two types.

The first involves independent variables which consist of two groups, and the second is for independent variables which are of more than two levels of groups. The t-test is used for the first, and analysis of variance (ANOVA) for the second.

8.1.1 T- test

Procedures involving t-tests which were used in the present study can be categorised into two main groups:

1. T-test for paired comparisons
2. T-test involving two independent samples

1. T-test for Paired Comparisons

T-test for paired comparison was used in comparing the differences between the means of preferred QWL factors and the means of the perceived presence of the respective factors. The test is based on the difference between the preferred and the perceived presence scores. The logic underlying the distribution of the difference is based on the central-limit theorem: the sampling distribution of the means of the differences assumes a normal form (Kurtz, 1983). Consequently the t-distribution can be used to evaluate the probability of the statistic. The statistic used to test the hypothesis that the mean difference in the population is zero is

$$t = \bar{D} / (S_D / \sqrt{N})$$

where \bar{D} is the observed difference between the two means and S_D is the standard deviation of the differences of the paired observations (Nurosis,1992). The sampling distribution of t , if the differences are normally distributed with a mean of zero, is Student's t with $N-1$ degrees of freedom, where N is the number of pairs.

The forms of hypotheses associated with the tests are :

$$H_0 : \mu_1 = \mu_2$$

$$H_1 : \mu_1 \neq \mu_2$$

2. T-test for Two Independent Samples

In the present study, the t-test procedures for two independent samples were used to examine the statistical differences between the mean scores of two independent groups, viz. the demographic variables which are made up two categories. The variables are:

1. Gender : Male - Female
2. Marital Status : Married - Single
3. Ethnic Group : Malay - Non-Malay

The test uses the t-value which is the ratio of the difference between the sample means to their combined standard error terms, referred to as the standard error of the difference. The formula associated with the test is:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S_1^2 / N_1 + S_2^2 / N_2}}$$

where \bar{X}_1 = mean of Sample 1
 \bar{X}_2 = mean of Sample 2
 S_1^2 = variance of Sample 1
 S_2^2 = variance of Sample 2
 N_1 and N_2 = sizes of Sample 1 and Sample 2 respectively

In the cases where the variances of the two groups are equal, the test statistic, known as pooled-variance t-test, is given by the following equation (Nurosis, 1990):

$$t = \frac{\bar{X}_1 - \bar{X}_2}{S_p^2 / N_1 + S_p^2 / N_2}$$

where S_p^2 is the pooled variance which is a weighted average of the individual variances and is calculated as

$$S_p^2 = \frac{(N_1 - 1)S_1^2 + (N_2 - 1) S_2^2}{N_1 + N_2 - 2}$$

In the present research, two-tailed t-tests were used: the hypotheses of equality between the means of two populations were not based to be on any particular direction of the differences.

8.1.2 Analysis of Variance (ANOVA)

ANOVA utilises an F test, a procedure for testing the hypothesis that several population means are equal. In ANOVA, the observed variability in the sample is divided into two components:

(1) variability of the observations within a group about the group mean, and

(2) variability of the group means.

The within-group sum of squares is a measure of variability within groups. It is calculated as

$$SSW = \sum_{i=1}^k (N_i - 1) S_i^2$$

where S_i^2 is the variance of group i about its mean, and N_i is the number of cases in group i .

Variability of the group means is measured by the between-groups sum of squares, which is

$$SSB = \sum_{i=1}^k N_i (\bar{X}_i - \bar{X})^2$$

where the mean of the i th group is \bar{X}_i , and the mean of the entire sample is \bar{X} .

The testing of hypothesis in ANOVA can be represented as:

$$H_0 : \mu_a = \mu_b = \mu_c \dots \dots = \mu_n$$

that is there is no significant differences between the means of the groups a , b, cn etc. A test statistic, known as F is calculated , where

$$F = \frac{\text{Between-groups mean square}}{\text{Within-groups mean square}}$$

An F test, if significant, implies that a relationship exists between two variables (Kerlinger, 1964), and that one can accept the hypothesis that the means between the groups tested are different. In other words, the null hypothesis will have to be rejected. However, all the F test in an ANOVA can tell us is that there exists

statistically significant differences between the means of the groups. In order to identify which of the group means are statistically different, another test, known as multiple comparison test was used.

A number of methods have been devised for testing the significance of multiple comparisons, such as the Duncan, the Student-Newman-Keuls, the Tukey, the Least Significant Difference (LSD) and the Scheffe methods. The Scheffe methods has the advantage of simplicity, applicability to groups of unequal sizes, and suitability of pair-wise and multiple group comparisons. In view of the presence of groups with unequal sizes, the present study adopted the Scheffe method of multiple comparison.

In the present research, ANOVA procedures were used to test for statistical differences between the means of groups which comprise three or more levels. The groups are:

Age Group

1. *25 years and below*
2. *26 - 35 years*
3. *36 and above*

Academic Qualification

1. *LCE and below*
2. *MCE*
3. *HSC and above*

Length of Service

1. *3 years or less*
2. *4 - 6 years*
3. *7 - 9 years*
4. *10 - 12 years*
5. *More than 12 years*

Monthly Salary

1. RM400 or less
2. RM401 - RM600
3. RM601 - RM800
4. RM801 - RM1000
5. More than RM1000

8.1.3 Differences Between Preferred and Perceived Presence of QWL Factors

Hypothesis One

There are significant differences between the employees' perceived preference of QWL factors and the perceived presence of those factors in the total sample as well as in each type of the organisation

1. Total Sample

Figure 8.1 presents the results of paired t-tests for the mean differences between preferred and perceived presence of QWL factors for the total sample. It may be observed from the table that preferred and perceived presence of all QWL factors are significantly different ($p < 0.001$).

Table 8.1 Differences Between Preferred and Perceived Presence of QWL Factors - Total Sample

QWL Factors	Preferred		Perceived Presence		T-value value
	Mean	S.D	Mean	S.D	
Growth and Development	3.9663	0.712	3.5610	0.825	12.95***
Participation Opportunities	3.7247	0.829	3.3016	0.853	12.02***
Supervision	4.1329	0.716	3.8289	0.716	9.63***
Physical Environment	4.1404	0.782	3.6136	0.788	14.92***
Pay and Benefits	3.8433	0.822	3.1359	0.778	18.42***
Social Relevance	3.8641	0.717	3.6577	0.688	6.77***
Workplace Integration	4.1696	0.682	3.7391	0.748	14.66***

N=672; ***p < 0.001

2. Government Departments

Table 8.2 presents the results of paired t-test for mean differences between preferred and the perceived presence of QWL factors for employees in government departments. The results indicate that five QWL factors are significantly different at $p < 0.001$ (growth and development, participation opportunities, physical environment, pay and benefits, and workplace integration). Another factor, social relevance, is significantly different at the $p < 0.05$ level. For supervision, there is no significant difference between preferred and perceived presence.

Table 8.2 Differences Between Preferred and Perceived Presence of QWL Factors - Government Departments

QWL Factors	Preferred		Perceived Presence		t-value
	Mean	S.D	Mean	S.D	
Growth and Development	3.9009	0.709	3.4991	0.822	7.12***
Participation Opportunities	3.7297	0.773	3.3495	0.780	6.29***
Supervision	3.9784	0.813	3.8829	0.676	1.72
Physical Environment	4.0649	0.872	3.6739	0.797	5.76***
Pay and Benefits	3.6775	0.843	3.1153	0.764	8.51***
Social Relevance	3.9027	0.687	3.7874	0.654	2.27*
Workplace Integration	4.2072	0.684	3.8108	0.707	7.88***

N=185; * $p < 0.05$; *** $p < 0.001$

3. Semi-Government Organisations

Table 8.3 shows the results of t-test for mean differences of preferred and the perceived presence of QWL factors for employees in the semi-government organisations. The results indicate that preferred and perceived presence of all QWL factors are significantly different at $p < 0.001$ level.

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Table 8.3 Differences Between Preferred and Perceived Presence of QWL Factors - Semi-Government Organisations

QWL Factors	Preferred		Perceived Presence		t-value
	Mean	S.D	Mean	S.D	
Growth and Development	4.0421	0.732	3.6121	0.837	7.75***
Participation Opportunities	3.6963	0.880	3.1308	0.844	8.16***
Supervision	4.1885	0.640	3.8754	0.700	5.62***
Physical Environment	4.1838	0.778	3.5249	0.850	9.61***
Pay and Benefits	3.8629	0.811	3.0763	0.796	10.64***
Social Relevance	4.0125	0.653	3.7695	0.663	5.01***
Workplace Integration	4.1682	0.682	3.6495	0.810	8.87***

N=214; *** p < 0.001

4. Private Organisations

Table 8.4 shows the results of t-test for mean differences of preferred and the perceived presence of QWL factors for employees in the private sector organisations. The results indicate that preferred and perceived presence of all factors are significantly different at the $p < 0.001$ level.

Table 8.4 Differences Between Preferred and Perceived Presence of QWL Factors - Private Organisations

QWL Factors	Preferred		Perceived Presence		T-value
	Mean	S.D	Mean	S.D	
Growth and Development	3.9512	0.694	3.5629	0.818	7.62***
Participation Opportunities	3.7436	0.828	3.4029	0.889	6.42***
Supervision	4.1941	0.689	3.7558	0.751	8.67***
Physical Environment	4.1575	0.716	3.6422	0.726	10.35***
Pay and Benefits	3.9402	0.802	3.1966	0.773	12.52***
Social Relevance	3.7216	0.759	3.4823	0.693	4.38***
Workplace Integration	4.1453	0.683	3.7067	0.720	8.72***

N=273; *** p < 0.001

From the t-test results it may be concluded that there are significant differences in the preferred and the perceived presence of all QWL factors, in the total sample as well as in the semi-government and private sector sub-samples. In the government sub-sample, supervision is the only factor in which the mean scores are not significantly different. Hypothesis One is thus supported by the data.

8.1.4 The Importance of QWL Factors - Demographic Differences

This sub-section deals with the following hypothesis:

Hypothesis Two

a: There are significant differences in the importance of QWL factors between the groups in the following demographic variables:

- *Age*
- *Academic Qualification*
- *Organisational Type*
- *Length of Service*
- *Salary*
- *Gender*
- *Marital Status*
- *Ethnic Group*

The testing of the above-mentioned hypothesis was carried out through the application of t-tests and one-way analyses of variance for mean differences in the preferred QWL factors according to the demographic characteristics of the respondents. If ANOVA indicated that a particular demographic variable was significant, Scheffe multiple range test was performed to identify pairs of means which were significantly different.

1. Growth and Development

Table 8.5 displays the results of ANOVA and t-test for mean differences in the perceived importance of growth and development. The results of ANOVA in the table indicates that respondents' academic qualification is the only demographic variable which accounts for differences in the perception of importance of growth and development ($F=8.63$; $p < 0.001$). Table 8.6 indicates that the groups with higher qualifications, MCE ($M=4.02$, $SD=0.67$) and HSC ($M=4.02$, $SD=0.74$) have higher mean scores than those with LCE qualification ($M=3.73$, $SD=0.75$).

Table 8.5 One-way Anova and T-Test for Mean Differences in the Importance of Growth and Development by Organisational Types and Demographic Characteristics

Variables	F Ratio
Age Group	0.37
Academic Qualification	8.63***
Organisational Type	2.06
Length of Service	1.44
Salary	1.67

*** $p < 0.001$

T-Test

Variables	Mean	S.D	T-value
<u>Gender</u>			
Male	3.93	0.79	-1.47
Female	4.01	0.61	
<u>Marital Status</u>			
Married	3.96	0.74	-0.13
Single	3.97	0.66	
<u>Ethnic Group</u>			
Malay	3.95	0.72	-1.88
Non-Malay	4.13	0.62	

Table 8.6 Anova for Mean Differences in the Importance of Growth and Development - Employees by Academic Qualifications

Source	D. F	Sum of Squares	Mean Squares	F Ratio
Between Groups	2	8.55	4.27	8.63***
Within Groups	669	331.35	0.50	
Total	671	339.90		

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S.D</u>
1. LCE and below	122	3.73	0.75
2. MCE	383	4.02	0.67
3. HSC and above	167	4.02	0.74

Results of Scheffe multiple comparison test in Table 8.7 indicates that the means of the MCE and HSC groups are significantly higher ($p < 0.05$) than the mean score for growth and development of those with LCE qualification.

Table 8.7 Scheffe Multiple Range Test for Mean Differences in the Importance of Growth and Development - Employees by Academic Qualifications

Mean	Group	1	2	3
3.73	1			
4.02	2	*		
4.02	3	*		

- Group
 1. LCE and below
 2. MCE
 3. HSC and above

(*) Denotes pairs of groups significantly different at the 0.05 level

2. Participation

Results of ANOVA and t-test in Table 8.8 show that only two demographic variables, length of service ($F = 2.78, p < 0.05$) and gender ($t = -2.62, p < 0.01$) are significant in explaining the mean differences in the perception of importance of participation. Result of the t-test indicates that female employees ($M = 3.81, SD = 0.76$) have a higher mean score for importance of participation than their male counterparts ($M=3.65, SD=0.88$).

Table 8.8 One-way Anova and T-Test for Mean Differences in the Importance of Participation by Organisational Types and Demographic Characteristics

Variables	F Ratio
Age Group	0.16
Academic Qualification	0.98
Organisational Type	0.20
Length of Service	2.78*
Salary	1.03

* $p < 0.05$

T-Test

Variables	Mean	S.D	T - Value
<u>Gender</u>			
Male	3.65	0.88	-2.62**
Female	3.81	0.76	
<u>Marital Status</u>			
Married	3.72	0.84	-0.17
Single	3.73	0.81	
<u>Ethnic Group</u>			
Malay	3.71	0.84	-1.79
Non-Malay	3.90	0.73	

** $p < 0.01$

Table 8.9 Anova for Mean Differences in the Importance of Participation - Employees by Length of Service

Source	D. F	Sum of Squares	Mean Squares	F Ratio
Between Groups	4	7.56	1.89	2.78*
Within Groups	667	454.07	0.68	
Total	671	461.63		

* $p < 0.05$

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S.D</u>
1. 3 years or less	234	3.41	0.82
2. 4 - 6 years	98	3.18	0.87
3. 7 - 9 years	46	2.98	0.85
4. 10 - 12 years	99	3.35	0.76
5. More than 12 years	195	3.28	0.91

The Scheffe multiple comparison test in Table 8.10 indicates that employees in the third group (7-9 years of service) have a significantly lower mean score ($p < 0.05$) for the importance of participation than the other groups of employees.

Table 8.10 Scheffe Multiple Range Test of Mean Differences in the Importance of Participation - Employees by Length of Service

Mean	Group	3	4	2	5	1
3.36	3					
3.66	4	*				
3.75	2	*				
3.76	5	*				
3.78	1	*				

Group 1 : 3 years or less

Group 2 : 4 - 6 years

Group 3 : 7 - 9 years

Group 4 : 10 - 12 years

Group 5 : More than 12 years

(*) Denotes pairs of groups significantly different at the 0.05 level

3. Physical Environment

Table 8.11 displays the results of ANOVA and t-test for mean differences in the importance of physical environment. The ANOVA results indicate that age group ($F = 3.91, p < 0.05$), organisational type ($F = 6.04, p < 0.01$), length of service ($F=6.62, p < 0.001$), and salary level ($F = 3.39, p < 0.01$) are significant in explaining the mean differences for the importance of this QWL factor. The results of t-test show that gender is the only variable which is significant ($t = -5.20, p < 0.001$), with female employees ($M = 4.28, SD = 0.65$) having a significantly higher mean score for the importance of physical environment than the male employees ($M = 4.00, SD = 0.75$).

Table 8.11 One-way Anova and T-Test for Mean Differences in the Importance of Physical Environment by Organisational Types and Demographic Characteristics

Variables	F Ratio
Age Group	3.91*
Academic Qualification	0.69
Organisational Type	6.04**
Length of Service	6.62***
Salary	3.39**

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

Table 8.11 (continued)

T-Test

Variables	Mean	S.D	T - Value
<u>Gender</u>			
Male	4.00	0.75	-5.20***
Female	4.28	0.65	
<u>Marital Status</u>			
Married	4.08	0.79	-0.17
Single	4.15	0.77	
<u>Ethnic Group</u>			
Malay	4.13	0.73	-0.58
Non-Malay	4.18	0.61	

*** p < 0.001

Table 8.12 Anova for Mean Differences in the Importance of Physical Environment - Employees by Age Group

Source	D. F	Sum of Squares	Mean Squares	F Ratio
Between Groups	2	3.97	1.99	3.91*
Within Groups	669	339.93	0.51	
Total	671	343.90		

* P < 0.05

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S.D</u>
1.25 years or less	161	4.23	0.74
2.26 - 35 years	319	4.15	0.67
3.36 years and above	192	4.02	0.76

The Scheffe multiple range test for mean differences in the importance of physical environment between the age groups (Table 8.13) indicates that employees in the '25 years or less' age group have a significantly higher mean score than those in the highest age group, i.e. '36 years and above'.

Table 8.13 Scheffe Multiple Range Test for Mean Differences in the Importance of Physical Environment - Employees by Age Group

Mean	Group	3	2	1
4.02	3			
4.15	2			
4.23	1	*		

Group
 1. 25 years or less
 2. 26 - 35 years
 3. 36 years and above

(*) Denotes pairs of groups significantly different at the 0.05 level

Results of ANOVA in Table 8.14 indicate that employees in 'Government Department' (M = 3.98, S.D = 0.81) have the lowest mean score for the importance of physical environment compared to those in the 'Semi-Government' (M = 4.19, S.D = 0.64) and 'Private' (M=4.19, S.D=0.69) organisations. Both the means of the 'Semi-Government' and 'Private' organisations, as indicated by Scheffe multiple comparison test in Table 8.15, are significantly different ($p < 0.05$) from the mean of 'Government Department' employees.

Table 8.14 Anova for Mean Differences in the Importance of Physical Environment - Employees by Organisational Type

Source	D. F	Sum of Squares	Mean Squares	F Ratio
Between Groups	2	6.10	3.05	6.04**
Within Groups	669	337.80	0.50	
Total	671	343.90		

** P < 0.01

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S.D</u>
1. Government Department	185	3.98	0.81
2. Semi-Government Organisation	214	4.19	0.64
3. Private Organisation	273	4.19	0.69

Table 8.15 Scheffe Multiple Range Test of Mean Differences for the Importance of Physical Environment - Employees by Organisational Type

Mean	Group	1	2	3
3.98	1			
4.19	2	*		
4.19	3	*		

Group 1 : Government Department

Group 2 : Semi-Government Organisation

Group 3 : Private Organisation

(*) Denotes pairs of groups significantly different at the 0.05 level.

As for length of service, ANOVA results in Table 8.16 show that the mean score for the importance of physical environment of employees in the '3 years or less' group (M = 4.31, S.D = 0.63) is the highest. Scheffe multiple comparison test (Table 8.17) shows that the mean score for employees in this group is significantly different from the means of employees in the '7 - 9 years' (M = 3.93, S.D = 0.82), '10 - 12 years' (M = 4.00, S.D = 0.75), and 'More than 12 years' (M = 4.02, S.D = 0.73) groups.

Table 8.16 Anova for Mean Differences in the Importance of Physical Environment - Employees by Length of Service

Source	D. F	Sum of Squares	Mean Squares	F Ratio
Between Groups	4	13.14	3.28	6.62** *
Within Groups	667	330.77	0.50	
Total	671	343.90		

*** p < 0.001

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S.D</u>
1.3 years or less	234	4.31	0.63
2.4 - 6 years	98	4.16	0.71
3.7 - 9 years	46	3.93	0.82
4.10 - 12 years	99	4.00	0.75
5. More than 12 years	195	4.02	0.73

Table 8.17 Scheffe Multiple Range Test of Mean Differences for the Importance of Physical Environment - Employees by Length of Service

Mean	Group	3	4	5	2	1
3.93	3					
4.00	4					
4.02	5					
4.16	2					
4.31	1	*	*	*		

Group 1 : 3 years or less

Group 2 : 4 - 6 years

Group 3 : 7 - 9 years

Group 4 : 10 - 12 years

Group 5 : More than 12 years

(*) Denotes pairs of groups significantly different at the 0.05 level.

For salary level, Table 8.18 shows that the mean score for the importance of physical environment for employees in the 'RM400 or less' group is the highest (M = 4.35, S.D = 0.57). And the Scheffe multiple comparison test (Table 8.19) shows that the mean score of this group is significantly different from the mean scores of those in the 'RM601 -RM800' (M = 4.05, S.D = 0.81) and 'RM801 - RM1000' (M = 4.07, S.D = 0.78) groups.

Table 8.18 Anova for Mean Differences in the Importance of Physical Environment - Employees by Salary Levels

Source	D. F	Sum of Squares	Mean Squares	F Ratio
Between Groups	4	6.86	1.71	3.39**
Within Groups	667	337.04	0.51	
Total	671	343.90		

** p < 0.01

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S D</u>
1.RM400 or less	111	4.35	0.57
2.RM401 - RM600	159	4.12	0.70
3.RM601 - RM800	145	4.05	0.81
4.RM801 - RM1000	130	4.07	0.78
5. More than RM1000	127	4.12	0.64

Table 8.19 Scheffe Multiple Range Test of Mean Differences for the Importance of Physical Environment - Employees by Salary Levels

Mean	Group	3	4	2	5	1
4.05	3					
4.07	4					
4.12	2					
4.12	5					
4.35	1	*	*			

Group 1 : RM400 or less

Group 2 : RM401 - RM600

Group 3 : RM601 - RM800

Group 4 : RM801 - RM1000

Group 5 : More than RM1000

(*) Denotes pairs of groups significantly different at the 0.05 level.

4. Supervision

Table 8.20 displays the results of ANOVA and t-test for mean differences in the importance of supervision. The results indicate that academic qualification ($F = 12.10, p < 0.001$), length of service ($F = 2.49, p < 0.05$) and ethnic group ($t = -4.06, p < 0.001$) explain the differences in the mean importance of supervision among employees in this sample. Scheffe test of multiple comparisons for academic qualification (Table 8.22) shows that employees with higher academic qualifications (MCE/equivalent and HSC & higher) have significantly ($p < 0.05$) higher means than those with LCE/lower qualifications. As for the length of service, though the overall F test shows that there is a significant difference in the means of the groups, results of Scheffe multiple comparison test fails to provide any support for significant differences between any pairs of groups at the 0.05 level. Results of t-test show that the non-Malay employees ($M = 4.41, SD = 0.53$) in this sample have a significantly higher mean score for the importance of supervision than the Malay employees ($M = 4.11, SD = 0.80$).

Table 8.20 One-way Anova and T-Test for Mean Differences in the Importance of Supervision by Organisational Type and Demographic Characteristics

Variables	F-Ratio
Age Group	1.02
Academic Qualification	12.10***
Organisational Type	1.26
Length of Service	2.49*
Salary	1.47

* p < 0.05; *** p < 0.001

T-Test

Variables	Mean	S.D	T-Value
<u>Gender</u>			
Male	4.10	0.82	-1.46
Female	4.19	0.74	
<u>Marital Status</u>			
Married	4.14	0.79	-0.17
Single	4.15	0.77	
<u>Ethnic Group</u>			
Malay	4.11	0.80	-4.06***
Non-Malay	4.41	0.53	

*** p < 0.001

Table 8.21 Anova for Mean Differences in the Importance of Supervision - Employees by Academic Qualifications

Source	D. F	Sum of Squares	Mean Squares	F Ratio
Between Groups	2	14.31	7.16	12.10***
Within Groups	669	395.67	0.59	
Total	671	409.98		

*** p < 0.001

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S.D</u>
1.LCE and below	122	3.83	0.94
2.MCE	383	4.21	0.68
3.HSC and above	167	4.20	0.81

Table 8.22 Scheffe Multiple Range Test of Mean Differences for the Importance of Supervision - Employees by Academic Qualifications

Mean	Group	1	3	2
3.83	1			
4.20	3	*		
4.21	2	*		

Group 1 : LCE and below

Group 2 : MCE

Group 3 : HSC and above

(*) Denotes pairs of groups significantly different at the 0.05 level.

5. Pay and Benefits

Results of ANOVA and t-test for mean differences in the importance of pay and benefits are presented in Table 8.23 . ANOVA results show that age group ($F = 3.33, p < 0.05$), organisational type ($F = 5.80, p < 0.01$) and length of service ($F = 5.26, p < 0.001$) are significant variables in explaining the differences in the importance of pay and benefits. T-test results show that: the female employees' ($M = 3.94, SD = 0.78$) mean score for the importance of pay and benefits is significantly higher than the mean score of male employees ($M = 3.76, SD = 0.85$), ($t = -2.87, p < 0.01$); single employees ($M = 3.95, SD = 0.78$) place more importance of pay and benefits than married employees ($M = 3.79, SD = 0.84$) ($t = -2.39, p < 0.05$); and the non-Malays ($M = 4.06, SD = 0.73$) have a higher mean score than the Malays ($M = 3.82, SD = 0.83$) ($t = -2.25, p < 0.05$).

Table 8.23 One-way Anova and T-Test for Mean Differences in the Importance of Pay and Benefits by Organisational Type and Demographic Characteristics

Variables	F-Ratio
Age Group	3.33*
Academic Qualification	1.73
Organisational Type	5.80**
Length of Service	5.26***
Salary	0.35

T-Test

Variables	Mean	S.D	T-Value
<u>Gender</u>			
Male	3.76	0.85	-2.87**
Female	3.94	0.78	
<u>Marital Status</u>			
Married	3.79	0.84	-2.39*
Single	3.95	0.78	
<u>Ethnic Group</u>			
Malay	3.82	0.83	-2.25*
Non-Malay	4.06	0.73	

* p < 0.05; ** p < 0.01; *** p < 0.001

To determine which pairs of age groups and how organisational types and length of service differ in relation to the importance of pay and benefits, Scheffe multiple comparison tests were conducted. Table 8.25 displays the results for age group. From the table, it could be observed that employees in the '26-35 years' age group has significantly higher mean score than the '36 years and above' age group.

Table 8.24 Anova for Mean Differences in the Importance of Pay and Benefits - Employees by Age Groups

Source	D. F	Sum of Squares	Mean Squares	F Ratio
Between Groups	2	4.47	2.23	3.33*
Within Groups	669	448.80	0.67	
Total	671	453.27		

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S.D</u>
1.25 years or less	161	3.88	0.79
2.26 - 35 years	319	3.90	0.79
3.36 years and above	192	3.72	0.89

Table 8.25 Scheffe Multiple Range Test of Mean Differences for the Importance of Pay and Benefits - Employees by Age Groups

Mean	Group	3	1	2
3.72	3			
3.88	1			
3.90	2	*		

Group 1 : 25 years or less
 Group 2 : 26 - 35 years
 Group 3 : 36 years and above

(*) Denotes pairs of groups significantly different at the 0.05 level.

Table 8.26 Anova for Mean Differences in the Importance of Pay and Benefits - Employees by Organisational Type

Source	D. F	Sum of Squares	Mean Squares	F Ratio
Between Groups	2	7.73	3.87	5.80**
Within Groups	669	445.54	0.67	
Total	671	453.27		

** p < 0.01

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S.D</u>
1. Government Department	185	3.68	0.84
2. Semi-Government Organisation	214	3.86	0.81
3. Private Organisation	273	3.94	0.80

The Scheffe test results in Table 8.27 indicate that the mean score for the importance of pay and benefits of employees in the private sector organisations (M = 3.94 , SD = 0.80) is significantly higher than the mean score of employees in the government department (M = 3.68, SD = 0.84). There is no significant difference between the mean score of employees in the government departments and that of the semi-government organisations, and between the mean score of employees in the semi-government and private organisations.

Table 8.27 Scheffe Multiple Range Test of Mean Differences for the Importance of Pay and Benefits - Employees by Organisational Type

Mean	Group	1	2	3
3.68	1			
3.86	2			
3.94	3	*		

Group 1 : Government Department
 Group 2 : Semi-Government Organisation
 Group 3 : Private Organisation

(*) Denotes pairs of groups significantly different at the 0.05 level.

Table 8.28 Anova for Mean Differences in the Importance of Pay and Benefits- Employees by Length of Service

Source	D. F	Sum of Squares	Mean Squares	F Ratio
Between Groups	4	13.87	3.47	5.26***
Within Groups	667	439.39	0.66	
Total	671	453.27		

*** p < 0.001

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S.D</u>
1.3 years or less	234	3.96	0.74
2.4 - 6 years	98	3.90	0.84
3.7 - 9 years	46	3.44	1.03
4. 10 - 12 years	99	3.90	0.73
5. More than 12 years	195	3.73	0.86

Table 8.29 presents the results of Scheffe multiple comparison test for the differences in mean scores for the importance of pay and benefits based on the employees' lengths of service. It can be observed that the mean scores of employees in '3 years or less', '4 to 6 years' and '10 to 12 years' groups are significantly different from the mean scores of employees in the '7 to 9 years' group. No other pairs of group scores are significantly different at the 0.05 level.

Table 8.29 Scheffe Multiple Range Test of Mean Differences for the Importance of Pay and Benefits - Employees by Length of Service

Mean	Group	3	5	4	2	1
3.44	3					
3.73	5					
3.90	4	*				
3.90	2	*				
3.96	1	*				

Group 1 : 3 years or less

Group 2 : 4 - 6 years

Group 3 : 7 - 9 years

Group 4 : 10 -12 years

Group 5 : More than 12 years

(*) Denotes pairs of groups significantly different at the 0.05 level.

6. Social Relevance

Table 8.30 displays the results of ANOVA and t-test for mean differences in the importance of social relevance. ANOVA results indicate that organisational type ($F = 10.53, p < 0.001$) and salary level ($F = 2.67, p < 0.05$) have significant effects on the mean scores. The results of t-test do not indicate any significant differences in the mean scores.

Table 8.30 One-way Anova and T-Test for Mean Differences in the Importance of Social Relevance by Organisational Type and Demographic Characteristics

Variables	F-Ratio
Age Group	0.77
Academic Qualification	2.50
Organisational Type	10.53***
Length of Service	0.59
Salary	2.67*

T-Test

Variables	Mean	S.D	T-Value
<u>Gender</u>			
Male	3.86	0.75	-0.12
Female	3.87	0.67	
<u>Marital Status</u>			
Married	3.90	0.70	-1.68
Single	3.80	0.76	
<u>Ethnic Group</u>			
Malay	3.86	0.72	-0.07
Non-Malay	3.87	0.71	

* p < 0.05; *** p < 0.001

Table 8.31 Anova for Mean Differences in the Importance of Social Relevance - Employees by Organisational Type

Source	D. F	Sum of Squares	Mean Squares	F Ratio
Between Groups	2	10.53	5.26	10.53***
Within Groups	669	334.39	0.50	
Total	671	344.92		

*** p < 0.001

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S.D</u>
1. Government Department	185	3.90	0.69
2. Semi-Government Organisation	214	4.01	0.65
3. Private Organisation	273	3.72	0.76

The Scheffe test on the mean scores of employees in the three organisational types (Table 8.32) shows that the means for those in the government department (M = 3.90, SD = 0.69) and in the semi-government (M = 4.01 , SD = 0.65) are significantly higher than the mean score of employees in the private organisation (M = 3.72 , SD = 0.76). Scheffe test on the mean scores of employees based on salary level does not indicate any significant differences at the 0.05 level.

Table 8.32 Scheffe Multiple Range Test of Mean Differences for the Importance of Social Relevance - Employees by Organisational Type

Mean	Group	3	1	2
3.72	3			
3.90	1	*		
4.01	2	*		

Group 1 : Government Department

Group 2 : Semi-Government Organisation

Group 3 : Private Organisation

(*) Denotes pairs of groups significantly different at the 0.05 level.

7. Workplace Integration

Table 8.33 shows the results of ANOVA and t-test for mean differences in the importance of workplace integration according to the demographic variables of the respondents. Academic qualification is the only variable which explains significant differences in the mean scores (F = 5.16, p < 0.01). The Scheffe test (Table 8.35) shows that the mean score of employees with MCE qualification (M = 4.22 , SD = 0.64) is significantly higher than the mean score of employees with LCE qualification (M= 3.99, SD = 0.71).

Table 8.33 One-way Anova and T-Test for Mean Differences in the Importance of Workplace Integration by Organisational Type and Demographic Characteristics

Variables	F-Ratio
Age Group	1.78
Academic Qualification	5.16**
Organisational Type	0.45
Length of Service	0.95
Salary	1.29

T-Test

Variables	Mean	S.D	T-Value
<u>Gender</u>			
Male	4.13	0.73	-1.52
Female	4.21	0.62	
<u>Marital Status</u>			
Married	4.17	0.66	-0.21
Single	4.18	0.72	
<u>Ethnic Group</u>			
Malay	4.16	0.69	-1.12
Non-Malay	4.26	0.63	

** p < 0.01

Table 8.34 Anova for Mean Differences in the Importance of Workplace Integration - Employees by Academic Qualifications

Source	D. F	Sum of Squares	Mean Squares	F Ratio
Between Groups	2	4.74	2.37	5.16**
Within Groups	669	307.70	0.46	
Total	671	312.44		

** p < 0.01

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S.D</u>
1.LCE and below	122	3.99	0.71
2.MCE	383	4.22	0.64
3.HSC and above	167	4.18	0.74

Table 8.35 Scheffe Multiple Range Test of Mean Differences for the Importance of Workplace Integration - Employees by Academic Qualifications

Mean	Group	1	3	2
3.99	1			
4.18	3			
4.22	2	*		

Group 1 : LCE and below; Group 2 : MCE; Group 3 : HSC and above
 (*) Denotes pairs of groups significantly different at the 0.05 level.

Summary

From the results of the t-tests and ANOVA, it appears that Hypothesis 2(a):

There are significant differences in the importance of QWL factors between the groups in the following demographic variables:

- *Age*
- *Academic Qualification*
- *Organisational Type*
- *Length of Service*
- *Salary*
- *Gender*
- *Marital Status*
- *Ethnic Group*

is partially supported by the data. Table 8.36 provides a summary of findings for the importance of QWL factors based on the results of ANOVA and t-tests presented in this sub-section.

Table 8.36 Summary of ANOVA and t-tests for Mean Differences in the Importance of QWL Factors

VARIABLES	Gender ^a	Age	Marit ^a	Qual	Ethnic ^a	Orgn	Length of Service	Salary
Growth and Development	ns	ns	ns	***	ns	ns	ns	ns
Participation	**	ns	ns	ns	ns	ns	*	ns
Physical Environment	***	*	ns	ns	ns	**	***	**
Supervision	ns	ns	ns	***	***	ns	*	ns
Pay and Benefits	**	*	*	ns	*	**	***	ns
Social Relevance Workplace Integration	ns	ns	ns	ns	ns	***	ns	*
Integration	ns	ns	ns	**	ns	ns	ns	ns

Supported at : * p < 0.05 ; ** p < 0.01; *** p < 0.001; ns : not significant

Note:

Marit = Marital Status

Qual = Qualification

Orgn = Organisational Type

^a Based on t-tests

8.1.5 Employees' Perceptions About the Presence of QWL Factors - Demographic Differences

This sub-section addresses the following hypothesis:

Hypothesis Two

b. There are significant differences in the perceptions about the presence of QWL factors between groups on the following demographic variables:

- *Age*
- *Academic Qualification*
- *Organisational Type*
- *Length of Service*
- *Salary*
- *Gender*
- *Marital Status*
- *Ethnic Group*

The testing of the above hypothesis was carried out by using t-test and one-way ANOVA procedures. If a particular variable indicates significant differences in the mean scores between groups, Scheffe multiple comparison test was then conducted to identify pairs of groups which have significant difference in their means.

1. Growth and Development

Table 8.37 presents the results of ANOVA and t-test for mean differences in the strength of agreement about the presence of growth and development. From the table it can be seen that the only variable which is significant in explaining the difference in the mean score is Salary Level (F=3.27, p < 0.01).

Table 8.37 One-way Anova and T-Test for Mean Differences in the Strength of Agreement About the Presence of Growth and Development by Organisational Types and Demographic Characteristics

Variables	F Ratio
Age Group	0.32
Academic Qualification	1.80
Organisational Type	0.93
Length of Service	1.74
Salary	3.27**

T-Test

Variables	Mean	S.D	T - Value
<u>Gender</u>			
Male	3.59	0.83	1.07
Female	3.52	0.82	
<u>Marital Status</u>			
Married	3.57	0.82	0.19
Single	3.55	0.83	
<u>Ethnic Group</u>			
Malay	3.57	0.82	0.46
Non-Malay	3.52	0.89	

** p < 0.01

ANOVA results in Table 8.38 show that the mean score for the perceived presence of growth and development for employees in the 'More than RM1000' salary level is the highest (M = 3.77, SD = 0.78), while those in the 'RM400 and below' (M = 3.46, SD = 0.82) and 'RM401 - RM600' (M = 3.46, SD = 0.80) salary levels are having the lowest.

Table 8.38 Anova for Mean Differences in the Strength of Agreement about the Presence of Growth and Development - Employees by Salary Level

Source	D. F	Sum of Squares	Mean Squares	F Ratio
Between Groups	4	8.79	2.20	3.27**
Within Groups	667	448.04	0.67	
Total	671	456.83		

** p < 0.01

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S.D</u>
1. RM400 and below	111	3.46	0.82
2. RM401 - RM600	159	3.46	0.80
3. RM601 - RM800	145	3.53	0.89
4. RM801 - RM1000	130	3.61	0.80
5. More than RM1000	127	3.77	0.78

The Scheffe multiple range test (Table 8.39) indicates that the only pair of means which is significantly different is between the scores of 'More than RM1000' (M = 3.77, SD = 0.78) and the 'RM401 - RM600' (M = 3.46, SD = 0.80) salary groups.

Table 8.39 Scheffe Multiple Range Test for Mean Differences in the Strength of Agreement About the Presence of Growth and Development- Employees by Salary Level

Mean	Group	1	2	3	4	5
3.46	1					
3.46	2					
3.53	3					
3.61	4					
3.77	5		*			

Table 8.39 (continued)

Group

1. RM400 and below
2. RM401 - RM600
3. RM601 - RM800
4. RM801 - RM1000
5. More than RM1000

(*) Denotes pairs of groups significantly different at the 0.05 level

2. Participation Opportunities

Table 8.40 displays the results of ANOVA and t-test for mean differences in the strength of agreement about the presence of participation opportunities. Three of the demographic variables are significant in accounting for the differences in the mean scores: organisational type ($F = 6.62, p < 0.01$), length of service ($F = 3.30, p < 0.05$) and gender ($t = -2.27, p < 0.05$). Results of the t-test show that female employees ($M = 3.38, SD = 0.82$) have a significantly higher mean score than the male employees ($M = 3.23, SD = 0.87$).

Table 8.40 One-way Anova and T-Test for Mean Differences in the Strength of Agreement About the Presence of Participation Opportunities by Organisational Types and Demographic Characteristics

Variables	F Ratio
Age Group	1.26
Academic Qualification	2.55
Organisational Type	6.62**
Length of Service	3.30*
Salary	1.26

Table 8.40 (continued)

T-Test

Variables	Mean	S.D	T - Value
<u>Gender</u>			
Male	3.23	0.87	-2.27*
Female	3.38	0.82	
<u>Marital Status</u>			
Married	3.28	0.87	-0.95
Single	3.34	0.81	
<u>Ethnic Group</u>			
Malay	3.30	0.85	-0.16
Non-Malay	3.32	0.90	

* p < 0.05; ** p < 0.01

ANOVA results in Table 8.41 indicate that the highest mean score for the availability of participation opportunities is by employees in the private sector organisations (M = 3.40, SD = 0.89), followed by employees in government department (M = 3.35, SD = 0.78), and the lowest score is by employees in semi-government organisations (M = 3.13, SD = 0.84).

Table 8.41 Anova for Mean Differences in the Strength of Agreement about the Presence Participation Opportunities - Employees by Organisational Type

Source	D. F	Sum of Squares	Mean Squares	F Ratio
Between Groups	2	9.47	4.73	6.62**
Within Groups	669	478.52	0.72	
Total	671	487.99		

** p < 0.01

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S.D</u>
1. Government Department	185	3.35	0.78
2. Semi-Government Organisation	214	3.13	0.84
3. Private Organisation	273	3.40	0.89

The results of Scheffe multiple range test in Table 8.42 show that the mean scores of both the 'Private Organisation' and the 'Government Department' are significantly different ($p < 0.05$) than the score of the 'Semi-Government' organisation. There is no significant difference between the mean scores of 'Government Department' and 'Private' organisation.

Table 8.42 Scheffe Multiple Range Test for Mean Differences in the Strength of Agreement About the Presence of Participation Opportunities - Employees by Organisational Type

Mean	Group	2	1	3
3.13	2			
3.35	1	*		
3.40	3	*		

Group 1 : Government Department

Group 2 : Semi-Government Organisation

Group 3 : Private Organisation

(*) Denotes pairs of groups significantly different at the 0.05 level

Table 8.43 displays the ANOVA results for mean differences in the perceived presence of participation opportunities according to the length of service of employees in this sample. Employees in the '3 years or less' group ($M = 3.41$, $SD = 0.82$) have the highest mean score for this factor. The lowest score for the availability of participation opportunities is from employees in the '7 - 9 years' group.

Table 8.43 Anova for Mean Differences in the Strength of Agreement About the Presence of Participation Opportunities - Employees by Length of Service

Source	D. F	Sum of Squares	Mean Squares	F Ratio
Between Groups	4	9.47	2.37	3.30*
Within Groups	667	478.52	0.72	
Total	671	487.99		

* $p < 0.05$

Table 8.43 (continued)

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S.D</u>
1. 3 years or less	234	3.41	0.82
2. 4 - 6 years	98	3.18	0.87
3. 7 - 9 years	46	2.98	0.85
4. 10 - 12 years	99	3.35	0.76
5. More than 12 years	195	3.28	0.91

The Scheffe multiple range test (Table 8.44) shows that the mean score of the '3 years or less' group is significantly different from the score of the '7-9 years' group ($p < 0.05$). No other pairs of mean scores are significantly different at the 0.05 level.

Table 8.44 Scheffe Multiple Range Test of Mean Differences in the Strength of Agreement about the Presence Participation Opportunities - Employees by Length of Service

Mean	Group	3	2	5	4	1
2.98	3					
3.18	2					
3.28	5					
3.35	4					
3.41	1	*				

Group 1 : 3 years or less

Group 2 : 4 - 6 years

Group 3 : 7 - 9 years

Group 4 : 10 - 12 years

Group 5 : More than 12 years

(*) Denotes pairs of groups significantly different at the 0.05 level

3. Physical Environment

Table 8.45 shows the results of ANOVA and t-test for mean differences in the perception of the presence of good physical environment. From the ANOVA and t-test results it can be observed that only one of the variables, gender ($t = -2.14, p < 0.05$), accounts for significant differences in the mean scores. The mean score for female employees in this sample ($M = 3.89, SD = 0.66$) is significantly higher than the mean score of the male employees.

Table 8.45 One-way Anova and T-Test for Mean Differences in the Strength of Agreement About the Presence of Good Physical Environment by Organisational Types and Demographic Characteristics

Variables	F Ratio
Age Group	0.84
Academic Qualification	0.13
Organisational Type	2.41
Length of Service	0.89
Salary	0.65

T-Test

Variables	Mean	S.D	T - Value
<u>Gender</u>			
Male	3.77	0.76	-2.14*
Female	3.89	0.66	
<u>Marital Status</u>			
Married	3.83	0.71	0.24
Single	3.82	0.74	
<u>Ethnic Group</u>			
Malay	3.84	0.71	1.36
Non-Malay	3.71	0.74	

* p < 0.05

4. Supervision

Table 8.46 shows the results of ANOVA and t-test for mean differences in the strength of agreement about the presence of good supervision. ANOVA results indicate that only length of service accounts for significant differences in the mean scores ($F = 2.42, p < 0.05$).

Table 8.46 One-way Anova and T-Test for Mean Differences in the Strength of Agreement About the Presence of Good Supervision by Organisational Types and Demographic Characteristics

Variables	F Ratio
Age Group	0.42
Academic Qualification	0.27
Organisational Type	2.08
Length of Service	2.42*
Salary	1.99

T-Test

Variables	Mean	S.D	T - Value
<u>Gender</u>			
Male	3.59	0.86	-0.67
Female	3.63	0.70	
<u>Marital Status</u>			
Married	3.58	0.82	-1.72
Single	3.69	0.72	
<u>Ethnic Group</u>			
Malay	3.61	0.79	-0.40
Non-Malay	3.65	0.75	

* p < 0.05

From Table 8.47 it can be seen that the mean score of employees in the 'More than 12 years' group (M = 3.68, SD = 0.87) is the highest. However, Scheffe multiple range test does not indicate any two groups whose means are significantly different at the 0.05 level.

Table 8.47 Anova for Mean Differences in the Strength of Agreement About the Presence of Good Supervision- Employees by Length of Service

Source	D. F	Sum of Squares	Mean Squares	F Ratio
Between Groups	4	5.96	1.49	2.42*
Within Groups	667	410.71	0.62	
Total	671	416.66		

* p < 0.05

Table 8.47 (continued)

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S.D</u>
1. 3 years or less	234	3.66	0.71
2. 4 - 6 years	98	3.47	0.85
3. 7 - 9 years	46	3.37	0.86
4. 10 - 12 years	99	3.64	0.66
5. More than 12 years	195	3.68	0.87

5. Pay and Benefits

Table 8.48 presents the results of ANOVA and t-test for mean differences in the strength of agreement about the presence of good pay and benefits. ANOVA results show that two variables significantly account for mean differences between group means, length of service ($F = 2.75, p < 0.05$) and salary level ($F = 5.07, p < 0.001$).

Table 8.48 One-way Anova and T-Test for Mean Differences in the Strength of Agreement about the Presence of Good Pay and Benefits by Organisational Types and Demographic Characteristics

<u>Variables</u>	<u>F Ratio</u>
Age Group	1.32
Academic Qualification	0.95
Organisational Type	1.52
Length of Service	2.75*
Salary	5.07***

T-Test

<u>Variables</u>	<u>Mean</u>	<u>S.D</u>	<u>T - Value</u>
<u>Gender</u>			
Male	3.13	0.78	-0.35
Female	3.15	0.78	
<u>Marital Status</u>			
Married	3.14	0.78	-0.02
Single	3.14	0.77	
<u>Ethnic Group</u>			
Malay	3.15	0.78	1.47
Non-Malay	3.00	0.76	

* $p < 0.05$; *** $p < 0.001$

Result of ANOVA for the effects of length of service on the strength of agreement about the presence of good pay and benefits is displayed in Table 8.49. It is observed that employees in the '10 -12 years' group (M = 3.20, SD = 0.76) have the highest mean score for the perceived presence of good pay and benefits. Though the overall F score indicates significant differences in the mean scores of the groups, the Scheffe multiple range test fails to identify any two groups whose means are significantly different at the 0.05 level.

Table 8.49 Anova for Mean Differences in the Strength of Agreement about the Presence of Good Pay and Benefits- Employees by Length of Service

Source	D. F	Sum of Squares	Mean Squares	F Ratio
Between Groups	4	6.59	1.65	2.75*
Within Groups	667	399.88	0.60	
Total	671	406.48		

* p < 0.05

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S.D</u>
1. 3 years and less	234	3.18	0.78
2. 4 - 6 years	98	2.94	0.80
3. 7 - 9 years	46	2.96	0.77
4. 10 - 12 years	99	3.20	0.76
5. More than 12 years	195	3.19	0.76

Table 8.50 shows the results of ANOVA for the effects of salary level on the strength of agreement about the presence of good pay and benefits. Employees in the highest salary group (More than RM1000 per month) have the highest mean score for this factor (M = 3.36, SD = 0.66), and the lowest score is from employees in the mid-income group (RM601 - RM800 per month) (M = 2.97, SD = 0.80).

Table 8.50 Anova for Mean Differences in the Strength of Agreement About the Presence of Good Pay and Benefits- Employees by Salary Level

Source	D. F	Sum of Squares	Mean Squares	F Ratio
Between Groups	4	12.00	3.00	5.07***
Within Groups	667	394.47	0.59	
Total	671	406.48		

*** p < 0.001

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S.D</u>
1. RM400 or less	111	3.02	0.79
2. RM401 - RM600	159	3.13	0.82
3. RM601 - RM800	145	2.97	0.80
4. RM801 - RM1000	130	3.20	0.74
5. More than RM1000	127	3.36	0.66

The Scheffe multiple range test (Table 8.51) shows that the mean score of employees in the 'More than RM1000' group is significantly different from the means of employees in the 'RM601 -RM800' and 'RM400 or less' groups.

Table 8.51 Scheffe Multiple Range Test for Mean Differences in the Strength of Agreement about the Presence of Good Pay and Benefits - Employees by Salary Level

Mean	Group	3	1	2	4	5
2.98	3					
3.02	1					
3.13	2					
3.20	4					
3.36	5	*	*			

Group 1 : RM400 or less

Group 2 : RM401 -RM600

Group 3 : RM601 - RM800

Group 4 : RM801 - RM1000

Group 5 : More than RM1000

(*) Denotes pairs of groups significantly different at the 0.05 level

6. Social Relevance

Table 8.52 displays the results of ANOVA and t-test for mean differences in the strength of agreement for the perceived presence of social relevance in the jobs and organisations. Five of the demographic variables account for significant differences in the group means: age group ($F = 6.72, p < 0.01$), organisational type ($F = 15.65, p < 0.001$), salary level ($F = 3.05, p < 0.05$), marital status ($t = 3.46, p < 0.01$) and ethnic group ($t = 3.55, p < 0.001$). Results of the t-test indicate that the mean score of married employees ($M = 3.72, SD = 0.66$) is significantly higher than the mean score of single employees ($M = 3.52, SD = 0.73$); and the mean score of the Malays ($M = 3.69, SD = 0.67$) is significantly higher than the mean score of the non-Malays ($M=3.37, SD=0.76$).

Table 8.52 One-way Anova and T-Test for Mean Differences in the Strength of Agreement about the Presence of Social Relevance by Organisational Types and Demographic Characteristics

Variables	F Ratio
Age Group	6.72**
Academic Qualification	1.45
Organisational Type	15.65***
Length of Service	3.47
Salary	3.05*

T-Test

Variables	Mean	S.D	T - Value
<u>Gender</u>			
Male	3.70	0.70	1.75
Female	3.61	0.67	
<u>Marital Status</u>			
Married	3.72	0.66	3.46**
Single	3.52	0.73	
<u>Ethnic Group</u>			
Malay	3.69	0.67	3.55***
Non-Malay	3.37	0.76	

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Results of ANOVA for the effects of age groups on the perceived presence of social relevance is presented in Table 8.53. The results indicate that older employees have higher mean scores than younger employees. Employees in the '36 years and above' group have the highest mean ($M = 3.81$, $SD = 0.69$), followed by the '26-35 years' ($M = 3.61$, $SD = 0.66$). Those in the '25 years or less' age group have the lowest mean score for this factor ($M = 3.58$, $SD = 0.71$).

Table 8.53 Anova for Mean Differences in the Strength of Agreement about the Presence of Social Relevance- Employees by Age Group

Source	D. F	Sum of Squares	Mean Squares	F Ratio
Between Groups	2	6.25	3.12	6.72**
Within Groups	669	311.03	0.46	
Total	671	317.28		

** $p < 0.01$

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S.D</u>
1. 25 years or less	161	3.58	0.71
2. 26 - 35 years	319	3.61	0.66
3. 36 years and above	192	3.81	0.69

Table 8.54, which shows the results of the Scheffe multiple range test, indicates that the mean score of employees in the '36 years and above' age group is significantly higher ($p < 0.05$) than the scores of the other two groups. There is no significant difference between the means score of the '25 years or less' and the '26 - 35 years' age groups.

Table 8.54 Scheffe Multiple Range Test of Mean differences for the Strength of Agreement About the Presence of Social Relevance - Employees by Age Group

Mean	Group	1	2	3
3.58	1			
3.61	2			
3.81	3	*	*	

Group 1: 25 years or less

Group 2: 26 - 35 years

Group 3: 36 years and above

(*) Denotes pairs of groups significantly different at the .05 level.

Table 8.55 shows the results of ANOVA for organisational type. The results indicate that employees who are from the 'Government' (M = 3.79, SD = 0.65) and 'Semi-Government' (M = 3.77, SD = 0.66) organisations have significantly higher mean scores than employees from the 'Private' organisations (M = 3.48, SD = 0.69). Both the means of the 'Government' and 'Semi-Government' are significantly higher ($p < 0.05$) than the mean score of the 'Private' sector organisations. This is shown by the results of the Scheffe multiple range test in Table 8.56.

Table 8.55 Anova for Mean Differences in the Strength of Agreement about the Presence of Social Relevance- Employees by Organisational Type

Source	D. F	Sum of Squares	Mean Squares	F Ratio
Between Groups	2	14.18	7.09	15.65***
Within Groups	669	303.10	0.45	
Total	671	317.28		

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S.D</u>
1. Government Department	185	3.79	0.65
2. Semi- Government Organisation	214	3.77	0.66
3. Private Organisation	273	3.48	0.69

*** $p < 0.001$

Table 8.56 Scheffe Multiple Range Test of Mean Differences for the Strength of Agreement About the Presence of Social Relevance- Employees by Organisational Type

Mean	Group	3	2	1
3.48	3			
3.77	2	*		
3.79	1	*		

Group 1: Government Department

Group 2: Semi-Government Organisations

Group 3: Private Organisation

(*) Denote pairs of groups significantly different at the 0.05 level.

Table 8.57 shows the results of ANOVA for mean differences between groups of employees according to their lengths of service. From the table it could be observed that employees who are in the 'More than 12 years' group have the highest mean score for this factor (M = 3.79, SD = 0.65). The lowest mean score for the factor is from employees in the '7-9 years' length of service (M = 3.55, SD = 0.66). Scheffe multiple range test (Table 8.58) shows that the mean score of employees in the 'More than 12 years' group is significantly higher ($p < 0.05$) than the mean score of employees in the '3 years or less' (M = 3.58, SD = 0.69) group. No other two group means are significantly different at the 0.05 level.

Table 8.57 Anova for Mean Differences in the Strength of Agreement about the Presence of Social Relevance- Employees by Length of Service

Source	D. F	Sum of Squares	Mean Squares	F Ratio
Between Groups	4	6.46	1.62	3.47**
Within Groups	667	310.82	0.47	
Total	671	317.28		

** $p < 0.01$

Table 8.57 (continued)

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S.D</u>
1. 3 years or less	234	3.58	0.69
2. 4 - 6 years	98	3.56	0.77
3. 7 - 9 years	46	3.55	0.66
4. 10 - 12 years	99	3.71	0.64
5 More than 12 years	195	3.79	0.65

Table 8.58 Scheffe Multiple Range Test of Mean Differences for the Strength of Agreement About the Presence of Social Relevance - Employees by Length of Service

Mean	Group	3	2	1	4	5
3.55	3					
3.56	2					
3.58	1					
3.70	4					
3.79	5			*		

Group 1: 3 years or less

Group 2: 4 - 6 years

Group 3: 7 - 9 years

Group 4: 10 - 12 years

Group 5: More than 12 years

(*) Denotes pairs of groups significantly different at the 0.05 level

Table 8.59 shows the results of ANOVA for mean differences of the mean scores for the perceived presence of social relevance between employees in the salary groups. The mean score of employees in the 'RM801 - RM1000' salary group is the highest (M = 3.79, SD = 0.67). The lowest mean score for this factor is from employees in the 'RM400 or less' group (M = 3.50, SD = 0.65).

Table 8.59 Anova for Mean Differences in the Strength of Agreement about the Presence of Social Relevance - Employees by Salary Level

Source	D. F	Sum of Squares	Mean Squares	F Ratio
Between Groups	4	5.71	1.43	3.05*
Within Groups	667	311.57	0.47	
Total	671	317.28		

* p < 0.05

Table 8.59 (continued)

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>S.D</u>
1. RM400 or less	111	3.50	0.65
2. RM401 - RM600	159	3.63	0.73
3. RM601 - RM800	145	3.65	0.70
4. RM801 - RM1000	130	3.79	0.67
5. More than RM1000	127	3.71	0.65

Results of the Scheffe multiple range test in Table 8.60 indicates that the mean score of employees in the 'RM801 - RM1000' is significantly higher than the mean score of employees in the 'RM400 or less' salary group. No other two group means are significantly different at the 0.05 level.

Table 8.60 Scheffe Multiple Range Test of Mean Differences for the Strength of Agreement About the Presence of Social Relevance - Employees by Salary Level

Mean	Group	1	2	3	5	4
3.50	1					
3.63	2					
3.65	3					
3.71	5					
3.79	4	*				

- Group 1: RM400 or less
- Group 2: RM401 - RM600
- Group 3: RM601 - RM800
- Group 4: RM801 - RM1000
- Group 5: More than RM1000

(*) Denotes pairs of groups significantly different at the 0.05 level

7. Workplace Integration

Table 8.61 shows the ANOVA and t-test results for mean differences in the strength of agreement about the presence of workplace integration according to the demographic characteristics of employees in this sample. The results of ANOVA and t-test indicate that there is no significant difference in the group means of any of the demographic variables.

Table 8.61 One-way Anova and T-Test for Mean Differences in the Strength of Agreement about the Presence of Workplace Integration by Organisational Types and Demographic Characteristics

Variables	F Ratio	F Prob.
Age Group	2.56	0.08
Academic Qualification	1.20	0.30
Organisational Type	2.51	0.08
Length of Service	2.28	0.06
Salary	0.83	0.50

T-Test

Variables	Mean	S.D	T - Value
<u>Gender</u>			
Male	3.73	0.77	-0.43
Female	3.75	0.73	
<u>Marital Status</u>			
Married	3.74	0.74	0.26
Single	3.73	0.77	
<u>Ethnic Group</u>			
Malay	3.74	0.74	0.11
Non-Malay	3.73	0.83	

Summary

From the results of t-tests and ANOVA presented in this section, it appears that

Hypothesis 2(b):

There are significant differences in the perceptions about the presence of QWL factors between groups on the following demographic variables:

- *Age*
- *Academic Qualification*
- *Organisational Type*
- *Length of Service*
- *Salary*
- *Gender*
- *Marital Status*
- *Ethnic Group*

is partially supported by the data. Table 8.62 provides the summary for the results obtained in this sub-section.

Table 8.62 Summary of ANOVA and t-tests for Mean Differences in the Strength of Agreement about the Presence of QWL Factors

VARIABLES	Gender ^a	Age	Marit ^a	Qual	Ethnic ^a	Orgn	Length of Service	Salary
Growth and Development	ns	ns	ns	ns	ns	ns	ns	**
Participation Physical Environment	*	ns	ns	ns	ns	**	*	ns
Supervision	ns	ns	ns	ns	ns	ns	*	ns
Pay and Benefits	ns	ns	ns	ns	ns	ns	*	***
Social Relevance Workplace Integration	ns	**	**	ns	***	***	ns	*
	ns	ns	ns	ns	ns	ns	ns	ns

Supported at: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; ns = not significant

Note:

Marit = Marital Status

Qual = Qualification

Orgn = Organisational Type

^a Based on t-tests

8.2 Regression Analysis

Multiple regression analysis can be used in investigating the patterns of relationships of demographic and perceived QWL variables with organisational commitment dimensions. Regression analysis is a statistical technique that is used to relate two or more variables. Here, a variable of interest, the dependent variable (Y) is related to one or more independent or predictor variables (X). The objective of regression analysis is to build a regression model or a prediction equation relating the dependent variable to one or more independent variables. The model can then be

used to describe, predict and control the variable of interest on the basis of the independent variables.

The construction of a simple linear regression model usually starts with the specification of the dependent variable and the independent variable. This can be represented by the following general form of regression equation:

$$Y = a + b_1x_1 + b_2x_2 + \dots b_ix_i$$

where

Y = the dependent variable

x_1, x_2, x_i = the independent variables

a = the Y -intercept, represents the value of Y when x 's = 0

b_1, b_2, b_i = the regression coefficients, i.e. the slope of the regression line

8.2.1 Methods of Multiple Regression

Multiple regression analysis can be conducted by three different methods (Allinson, 1982). First, in the 'standard regression' procedure, all independent variables are assumed to be of equal importance and are entered into the regression equation simultaneously. Second, in the 'hierarchical regression' procedure, independent variables are added to the regression equation in an order pre-determined by the researcher. Finally, in the 'stepwise regression' procedure, independent variables are entered one by one on the basis of some pre-determined statistical procedure.

The choice of a regression procedure depends upon the objective of the analysis. The hierarchical approach is suitable when the researcher has theoretical expectations of causal ordering. The stepwise technique is suitable when the researcher wishes to reduce a large number of variables to a smaller set for some later analysis. In the present study, it was not possible to identify a causal path amongst the independent variables and, since all independent variables were of immediate and potentially equal interest, the standard regression technique was used.

8.2.2 Assumptions of Multiple Regression Analysis

Techniques of multiple regression analysis and its associated significance tests are based on a number of assumptions (Hair et al., 1995). These assumptions are discussed in the following sub-sections.

1. Normal Distribution

It is assumed that the scores on the dependent variable (Y) are normally distributed on each value of the independent variable (x). Kim and Kohout (1975) point out, however, that if the sample size is large (as was the case in the present study), this assumption may be relaxed. The dependent variables used in the present study are affective commitment, normative commitment, continuance commitment - high cost, and continuance commitment - lack of alternatives. Their distributions are shown in Appendix J.

2. Linearity

It is assumed that each of the independent variables has a linear relationship with the dependent variable. Linearity can be examined by looking at the scatter diagrams of relationships between each independent variable and the dependent variable. In the present study, the scatter diagrams of the relationships between each of the QWL factors and dimensions of organisational commitment are given in Appendix K. From the scatter diagrams, it may be concluded that all the independent variables appear to exhibit linear relationships with the dependent variables.

3. Independence

The Y values (the individual values of the dependent variable) are statistically independent of one another. That is, observations are in no way influenced by other observations. This assumption is satisfied in the present study because the respondents were individually asked to indicate their responses on the commitment measures without collaborating with other respondents.

4. Metric Measurement

It is assumed that all variables in the regression equation are measured on at least metric levels. This assumption can always be met by the transformation of non-metric measures to interval scales through the application of dummy variables. In the present research, all the categorical variables (gender, ethnic, and marital status) used in regression analyses were re-coded into dummy variables, thus satisfying the requirement of metric measurement.

8.2.3 Tests of Significance in Regression Analysis

There are several tests of significance that may be applied to the results of multiple regression analysis. Two of the most common tests are discussed here:

1. Test of R² Coefficient

An important component of any statistical procedure which constructs models from data is determining how well the model actually fits. R² is a measure commonly used for evaluating the goodness of fit of a regression equation. R² is sometimes called the coefficient of determination. It indicates the portion of the variance of the dependent variable due to the joint effect of the independent variables. If there is a perfect linear relationship between the dependent and the independent variables, R² equals 1. If there is no linear relationship between the dependent and the independent variables, R² is 0. The significance of the regression equation is assessed by subjecting R² to hypothesis testing procedures (null hypothesis that R² = 0) using the following F ratio:

$$F = \frac{R^2 / k}{(1 - R^2) / N - k - 1}$$

where

N is the number of cases

k is the number of independent variables in the equation

degrees of freedom are: k and (N-k-1)

Since the sample R^2 tends to be an optimistic estimate of how well the model fits the population, adjusted R^2 is usually used to correct the R^2 so that it reflects more closely the goodness of fit of the model in the population (Nurosis, 1990). Adjusted R^2 is given by:

$$\text{Adjusted } R^2, \quad R_a^2 = R^2 - \frac{k(1-R^2)}{N-k-1}$$

2. Test of Regression Coefficients

If the overall null hypothesis is rejected, one or more population partial regression coefficients have a value different from zero. To determine which specific coefficients are non-zero, additional tests are necessary. Testing for the significance of the regression coefficients (b's) can be done in a manner similar to that in the bivariate case, by using t-tests (Aaker et al., 1995). The significance of the partial regression coefficient is tested using the following equation:

$$t = \frac{b}{S_b}$$

which has a t-distribution with $n-k-1$ degrees of freedom, and where b is the parameter estimate for the particular independent variable, and S_b is the standard error of estimate of that variable.

When regression analysis is used to compare the relative influence of the independent variables which are measured on different units of measurement, the regression coefficients are converted to 'beta coefficients'. Beta coefficients are simply the regression coefficients multiplied by the ratio of the standard deviations

of the corresponding independent variable to the dependent variable (Aaker et al., 1995):

$$\text{beta, } \beta \text{ (for variable } i) = \frac{b_i \text{ (standard deviation of } x_i)}{\text{(standard deviation of } Y)}$$

The beta coefficients can be compared to one another, the larger the beta coefficient, the stronger the impact of that variable on the dependent variable.

8.2.4 The Effects of Demographic and QWL Variables on Organisational Commitment

The hypothesis associated with this section is:

Hypothesis Three

There are significant relationships between demographic and QWL variables with

3a: Affective Commitment

3b: Normative Commitment

3c: Continuance Commitment

The demographic variables included in the regression analyses were:

1. Gender (*Female=0, Male=1*)
2. Age Group
3. Marital Status (*Single=0, Married=1*)
4. Ethnic Group (*Non-Malay=0, Malay=1*)
5. Qualification
6. Length of Service
7. Salary Level

The QWL variables used for the regression analyses are the seven factors obtained from factor analysis of the Perceived QWL:

1. Growth and Development
2. Participation Opportunities
3. Physical Environment
4. Supervision
5. Pay and Benefits
6. Social Relevance
7. Workplace Integration

The hypothesis was tested for the total sample and also for sub-samples categorised according to the organisational types. Since factor analysis of the organisational commitment items produced a four-factor solution it was considered necessary that the effects of demographic and QWL variables be examined separately for each of the commitment dimensions: affective, continuance (high cost), continuance (lack of alternatives) and normative.

8.2.4.1 Total Sample

1. Affective Commitment

Table 8.63 shows the results of multiple regression analysis of demographic and QWL variables on affective commitment for the total sample. The results indicate that the variables used in the analysis account for about 44 percent of the variance in affective commitment. The regression equation is statistically significant in explaining the variation in affective commitment ($F = 37.35, p < 0.001$). Gender is the only demographic variable which is significant ($t = 2.285, p < 0.05$) in

explaining affective commitment. Of the QWL factors, only supervision failed to achieve statistical significance.

Table 8.63 Multiple Regressions: The Effects of Demographic Variables and Perceptions about the Presence of QWL Factors on Affective Commitment for the Total Sample

Multiple R	0.6657
R ²	0.4432
Adjusted R ²	0.4313
Standard Error	0.5410

Analysis of variance

	DF	Sum of squares	Mean squares
Regression	14	153.0091	10.9292
Residual	657	192.2564	0.2926
F= 37.3486***			

Variable	B	SE B	Beta	T
<u>Demographic</u>				
Gender	0.1042	0.0456	0.0726	2.285*
Age Group	0.0690	0.0449	0.0696	1.537
Marital Status	0.0438	0.0597	0.0284	0.733
Ethnic Group	-0.0760	0.0766	-0.0311	-0.992
Qualification	-0.0063	0.0380	-0.0058	-0.166
Length of Service	0.0157	0.0202	0.0370	0.780
Salary Level	-0.0302	0.0236	-0.0573	-1.279
<u>QWL Factors</u>				
Growth and Development	0.1495	0.0326	0.1720	4.581***
Participation Opportunities	0.1027	0.0336	0.1221	3.053**
Physical Environment	0.1505	0.0352	0.1503	4.274***
Supervision	0.0242	0.0373	0.0266	0.648
Pay and Benefits	0.1362	0.0340	0.1478	4.004***
Social Relevance	0.1369	0.0387	0.1313	3.538***
Workplace Integration	0.1490	0.0394	0.1553	3.784***
(Constant)	0.3229	0.1780		1.814

* p < 0.05; ** p < 0.01; *** p < 0.001

2. Continuance Commitment

(a) High Cost of Leaving

Table 8.64 provides the results of regression analysis of demographic and QWL variables on continuance commitment (high cost) for the total sample of this study. The variables account for about 9.7 percent of the total variance in this dimension of continuance commitment ($R^2 = 0.0967$, $F = 5.0370$, $p < 0.001$). Two demographic variables achieve statistical significance: academic qualification ($t = 2.554$, $p < 0.05$) and length of service ($t = 2.266$, $p < 0.05$). QWL variables which demonstrate statistically significant effects on this dimension of commitment are: growth and development ($t = 2.493$, $p < 0.05$), supervision ($t = -2.148$, $p < 0.05$), and pay and benefits ($t = 3.445$, $p < 0.001$).

Table 8.64 Multiple Regression: The Effects of Demographic Variables and Perceptions about the Presence of QWL Factors on Continuance Commitment (High Cost) for the Total Sample

Multiple R	0.3113
R^2	0.0969
Adjusted R^2	0.0777
Standard Error	0.8473

Analysis of variance

	<u>DF</u>	<u>Sum of squares</u>	<u>Mean squares</u>
Regression	14	50.6216	3.6158
Residual	657	471.6269	0.7179
$F=5.0370***$			

Variable	B	SE B	Beta	T
<u>Demographic</u>				
Gender	0.0815	0.0714	0.0461	1.141
Age Group	-0.0683	0.0702	-0.0561	-0.972
Marital Status	0.0453	0.0936	0.0239	0.484
Ethnic Group	-0.0230	0.1200	-0.0076	-0.191
Qualification	0.1521	0.0596	0.1126	2.554*
Length of Service	0.0716	0.0316	0.1367	2.266*
Salary Level	-0.0481	0.0370	-0.0741	-1.299

Table 8.64 (continued)

<u>QWL Factors</u>				
Growth and Development	0.1275	0.0511	0.1192	2.493*
Participation Opportunities	0.0547	0.0527	0.0529	1.038
Physical Environment	0.0864	0.0552	0.0702	1.567
Supervision	-0.1255	0.0584	-0.1121	-2.148*
Pay and Benefits	0.1835	0.0533	0.1619	3.445***
Social Relevance	0.0020	0.0606	0.0016	0.033
Workplace Integration	0.0734	0.0617	0.0622	1.190
(Constant)	1.5299	0.2787		5.489***

* p < 0.05; ** p < 0.01; *** p < 0.001

(b) Lack of Employment Alternatives

Table 8.65 provides the results of regression analysis of demographic and QWL variables on the second dimension of continuance commitment : lack of employment alternatives. The results of the regression analysis suggest that the independent variables (demographic and QWL) only account for about 3 percent of variance in the dependent variable: commitment due to perceived lack of employment alternatives ($R^2 = 0.0324$, $F = 1.5728$, $p > 0.05$). The F-ratio for the regression equation failed to achieve statistical significance at the 0.05 level.

Length of service is the only demographic variable which has significant effect on organisational commitment due to lack of employment alternatives ($t = 2.869$, $p < 0.01$), and the only QWL variable which achieves statistical significance is pay and benefits ($t = 2.065$, $p < 0.05$).

Table 8.65 Multiple Regression: The Effects of Demographic Variables and Perceptions about the Presence of QWL Factors on Continuance Commitment (Lack of Alternatives) for the Total Sample

Multiple R	0.1801
R ²	0.0324
Adjusted R ²	0.0118
Standard Error	0.7850

Analysis of variance

	<u>DF</u>	<u>Sum of squares</u>	<u>Mean squares</u>
Regression	14	13.5702	0.9693
Residual	657	404.8926	0.6163
F=1.5728			

Variable	B	SE B	Beta	T
<u>Demographic</u>				
Gender	-0.0208	0.0662	-0.0131	-0.314
Age Group	-0.0420	0.0651	-0.0385	-0.645
Marital Status	0.0439	0.0867	0.0258	0.506
Ethnic Group	-0.0485	0.1112	-0.0180	-0.436
Qualification	0.0845	0.0552	0.0699	1.532
Length of Service	0.0839	0.0293	0.1791	2.869**
Salary Level	-0.0551	0.0343	-0.0950	-1.607
<u>QWL Factors</u>				
Growth and Development	0.0371	0.0474	0.0388	0.783
Participation Opportunities	-0.0708	0.0488	-0.0765	-1.450
Physical Environment	0.0309	0.0511	0.0280	0.604
Supervision	0.0258	0.0541	0.0258	0.477
Pay and Benefits	0.1019	0.0494	0.1005	2.065*
Social Relevance	-0.0673	0.0562	-0.0586	-1.198
Workplace Integration	0.0511	0.0571	0.0484	0.894
(Constant)	2.6387	0.2582		10.218***

* p < 0.05; ** p < 0.01; *** p < 0.001

3. Normative Commitment

Table 8.66 displays the results of regression analysis for the effects of demographic and QWL variables on normative commitment. The demographic and QWL variables account for about 20 percent of variance in normative commitment ($R^2 = 0.2030$, $F = 11.9549$, $p < 0.001$). The results indicate that, in this sample, none of demographic variables is statistically significant in predicting normative commitment. Three of the QWL variables achieve statistical significance: growth

and development ($t = 3.954, p < 0.001$), participation opportunities ($t = 2.433, p < 0.05$), and pay and benefits ($t = 3.872, p < 0.001$).

Table 8.66 Multiple Regression: The Effects of Demographic Variables and Perceptions about the Presence of QWL Factors on Normative Commitment for the Total Sample

Multiple R	0.4506
R ²	0.2030
Adjusted R ²	0.1860
Standard Error	0.5928

Analysis of variance

	<u>DF</u>	<u>Sum of squares</u>	<u>Mean squares</u>
Regression	14	58.8139	4.2010
Residual	657	230.8713	0.3514
F=11.9549***			

Variable	B	SE B	Beta	T
<u>Demographic</u>				
Gender	-0.0148	0.0500	-0.0113	-0.297
Age Group	0.0526	0.0492	0.0580	1.070
Marital Status	-0.0268	0.0655	-0.0190	-0.410
Ethnic Group	-0.0651	0.0840	-0.0291	-0.775
Qualification	-0.0272	0.0417	-0.0270	-0.652
Length of Service	-0.0127	0.0221	-0.0325	-0.574
Salary Level	-0.0097	0.0259	-0.0201	-0.375
<u>QWL Factors</u>				
Growth and Development	0.1414	0.0358	0.1776	3.954***
Participation Opportunities	0.0897	0.0369	0.1164	2.433*
Physical Environment	0.0551	0.0386	0.0600	1.427
Supervision	0.0247	0.0409	0.0296	0.605
Pay and Benefits	0.1443	0.0373	0.1709	3.872***
Social Relevance	-0.0020	0.0424	-0.0020	-0.046
Workplace Integration	0.0383	0.0431	0.0436	0.888
(Constant)	1.6679	0.1950		8.553***

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

8.2.4.2 Government Departments

This sub-section reports the results of multiple regression analyses for the effects of demographic and QWL variables on the four dimensions of organisational commitment for employees in government departments.

1. Affective Commitment

From Table 8.67 it is observed that, for the government department sub-sample, the demographic and QWL variables account for about 47 percent of the total variance in affective commitment ($R^2 = 0.4682$, $F = 10.6920$, $p < 0.001$). Salary is the only demographic variable which has significant effect on affective commitment ($t = -2.984$, $p < 0.01$). Three QWL factors are significant : growth and development ($t = 2.991$, $p < 0.01$), social relevance ($t = 2.295$, $p < 0.05$), and workplace integration ($t = 2.819$, $p < 0.01$).

Table 8.67 Multiple Regressions: The Effects of Demographic Variables and Perceptions about the Presence of QWL Factors on Affective Commitment for Employees in Government Departments

Multiple R	0.6843
R^2	0.4682
Adjusted R^2	0.4244
Standard Error	0.4965

Analysis of variance

	<u>DF</u>	<u>Sum of squares</u>	<u>Mean squares</u>
Regression	14	36.9026	2.6360
Residual	170	41.9103	0.2465
F=10.6920***			

Table 8.67 (continued)

Variable	B	SE B	Beta	T
<u>Demographic</u>				
Gender	0.0391	0.0842	0.0274	0.465
Age Group	0.0921	0.0851	0.0888	1.082
Marital Status	-0.1856	0.1295	-0.0902	-1.433
Ethnic Group	0.0569	0.3024	0.0110	0.188
Qualification	0.0504	0.0761	0.0484	0.663
Length of Service	0.0483	0.0349	0.1150	1.384
Salary Level	-0.1387	0.0465	-0.2409	-2.984**
<u>QWL Factors</u>				
Growth and Development	0.1999	0.0668	0.2512	2.991**
Participation Opportunities	0.1164	0.0709	0.1387	1.642
Physical Environment	-0.0070	0.0639	-0.0073	-0.111
Supervision	0.0297	0.0698	0.0361	0.426
Pay and Benefits	0.0379	0.0623	0.0443	0.609
Social Relevance	0.1693	0.0738	0.1692	2.295*
Workplace Integration	0.2093	0.0742	0.2260	2.819**
(Constant)	0.7456	0.4676		1.594

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

2 Continuance Commitment

(a) High Cost of Leaving

The results of multiple regression analysis for the effects of demographic and QWL variable on continuance commitment (high cost) are shown in Table 8.68. The amount of variance accounted for by the independent variables is 9.7 percent ($R^2 = 0.0970$, $F = 1.3049$, $p > 0.05$).

Table 8.68 Multiple Regressions : The Effects of Demographic Variables and the Perception about the Presence of QWL Factors on Continuance Commitment (High Cost) - Government Department

Multiple R	0.3115
R ²	0.0970
Adjusted R ²	0.0227
Standard Error	0.8926

Analysis of variance

	<u>DF</u>	<u>Sum of squares</u>	<u>Mean squares</u>
Regression	14	14.5561	1.0397
Residual	170	135.4493	0.7968
F=1.3049			

Variable	B	SE B	Beta	T
<u>Demographic</u>				
Gender	0.0600	0.1513	0.0305	0.397
Age Group	-0.0042	0.1530	-0.0030	-0.028
Marital Status	-0.0635	0.2328	-0.0224	-0.273
Ethnic Group	-0.0987	0.5437	-0.0138	-0.182
Qualification	0.1598	0.1367	0.1112	1.169
Length of Service	0.0166	0.0628	0.0286	0.264
Salary Level	-0.1401	0.0836	-0.1764	-1.677
<u>QWL Factors</u>				
Growth and Development	0.3122	0.1202	0.2844	2.598*
Participation Opportunities	-0.1165	0.1275	-0.1006	-0.914
Physical Environment	0.0461	0.1149	0.0345	0.401
Supervision	0.0769	0.1254	0.0679	0.613
Pay and Benefits	0.0326	0.1119	0.0276	0.291
Social Relevance	0.0148	0.1326	0.0107	0.112
Workplace Integration	-0.0769	0.1334	-0.0602	-0.576
(Constant)	2.3042	0.8407		2.741**

* p < 0.05; ** p < 0.01; *** p < 0.001

The regression equation does not achieve statistical significance, thus suggesting that, for this particular sub-sample, the variables are not good predictors of continuance commitment (high cost). Only growth and development has a significant effect (t = 2.598, p < 0.05) on this dimension of commitment.

(b) Lack of Employment Alternatives

Table 8.69 shows the results of regression analysis of demographic and QWL variables on continuance commitment (lack of alternatives) for the government sub-sample. The regression equation fails to achieve statistical significance, again indicating that the demographic and QWL variables have little effect on this dimension of organisational commitment. The results indicate that only about 9 percent of the variance in this type of commitment is accounted for by the demographic and QWL variables ($R^2 = 0.0883$, $F = 1.1759$, $p > 0.05$). It can also be observed that none of the demographic variables is significant in affecting this dimension of continuance commitment. The only QWL variable which attains significant level is supervision ($t = 2.558$, $p < 0.05$). The results suggest that, in this sub-sample, employees who perceive the presence of good supervision in their organisations are finding it difficult to find alternative employment elsewhere.

Table 8.69 Multiple Regressions: The Effects of Demographic Variables and the Perceptions about the Presence of QWL Factors on Continuance Commitment (Lack of Alternatives) -Government Department

Multiple R	0.2971
R^2	0.0883
Adjusted R^2	0.0132
Standard Error	0.7955

Analysis of variance

	<u>DF</u>	<u>Sum of squares</u>	<u>Mean squares</u>
Regression	14	10.4169	0.7441
Residual	170	107.5696	0.6328
F=1.1759			

Table 8.69 (continued)

Variable	B	SE B	Beta	T
<u>Demographic</u>				
Gender	0.0595	0.1348	0.0340	0.441
Age Group	-0.0101	0.1364	-0.0080	-0.074
Marital Status	-0.0587	0.2075	-0.0233	-0.283
Ethnic Group	0.2821	0.4845	0.0446	0.582
Qualification	0.0409	0.1219	0.0321	0.336
Length of Service	0.0372	0.0560	0.0723	0.665
Salary Level	-0.1143	0.0745	-0.1622	-1.534
<u>QWL Factors</u>				
Growth and Development	0.1286	0.1071	0.1321	1.201
Participation Opportunities	-0.1238	0.1136	-0.1205	-1.089
Physical Environment	-0.0342	0.1024	-0.0289	-0.334
Supervision	0.2859	0.1118	0.2846	2.558*
Pay and Benefits	0.0247	0.0998	0.0235	0.248
Social Relevance	0.1060	0.1182	0.0866	0.897
Workplace Integration	-0.2205	0.1189	-0.1946	-1.854
(Constant)	2.3483	0.7492		3.135**

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

3. Normative Commitment

Table 8.70 tabulates the results of regression analysis for the effects of demographic and QWL variables on normative commitment for government employees in this sample. The results show that the demographic and QWL variables account for about 26 percent of the variance in normative commitment ($R^2 = 0.2607$, $F = 4.2811$, $p < 0.001$). In this sub-sample, demographic variables have no significant effect on normative commitment. The only QWL variable which is significant is growth and development ($t = 3.285$, $p < 0.01$).

Table 8.70 Multiple Regressions: The Effects of Demographic Variables and Perceptions about the Presence of QWL Factors on Normative Commitment for Employees in Government Departments

Multiple R	0.5106
R ²	0.2607
Adjusted R ²	0.1998
Standard Error	0.5843

Analysis of variance

	<u>DF</u>	<u>Sum of squares</u>	<u>Mean squares</u>
Regression	14	20.4629	1.4616
Residual	170	58.0402	0.3414
F=4.2811***			

Variable	B	SE B	Beta	T
<u>Demographic</u>				
Gender	0.0534	0.0990	0.0375	0.539
Age Group	0.0646	0.1002	0.0624	0.645
Marital Status	-0.2621	0.1524	-0.1276	-1.720
Ethnic Group	-0.3185	0.3559	-0.0618	-0.895
Qualification	-0.0832	0.0895	-0.0800	-0.930
Length of Service	-0.0223	0.0411	-0.0532	-0.543
Salary Level	-0.0617	0.0547	-0.1073	-1.127
<u>QWL Factors</u>				
Growth and Development	0.2584	0.0787	0.3254	3.285**
Participation Opportunities	0.0441	0.0835	0.0526	0.528
Physical Environment	0.0463	0.0752	0.0479	0.615
Supervision	0.0617	0.0821	0.0752	0.751
Pay and Benefits	0.0392	0.0733	0.0458	0.535
Social Relevance	0.0364	0.0868	0.0364	0.419
Workplace Integration	0.0006	0.0873	0.0007	0.007
(Constant)	2.2716	0.5503		4.128***

* p < 0.05; ** p < 0.01; *** p < 0.001

8.2.4.3 Semi-Government Organisation

This section presents the results of multiple regression analyses for the effects of demographic and QWL variables on organisational commitment for the semi-government employees in this sample.

1. Affective Commitment

The effects of demographic and QWL variables on affective commitment for the semi-government employees in this sample are shown by the regression results in Table 8.71. The results indicate that the demographic and QWL variables explain about 52 percent of the variance in affective commitment ($R^2 = 0.5205$, $F = 15.4267$, $p < 0.001$). No demographic variable achieves statistical significance. Five QWL factors have significant effects on affective commitment: participation opportunities ($t = 2.671$, $p < 0.01$), physical environment ($t = 5.198$, $p < 0.001$), pay and benefits ($t = 2.478$, $p < 0.05$), social relevance ($t = 2.071$, $p < 0.05$), and workplace integration ($t = 2.229$, $p < 0.05$).

Table 8.71 Multiple Regressions: The Effects of Demographic Variables and Perceptions about the Presence of QWL Factors on Affective Commitment for Employees in Semi-Government Organisations

Multiple R	0.7214
R^2	0.5205
Adjusted R^2	0.4867
Standard Error	0.5665

Analysis of variance

	<u>DF</u>	<u>Sum of squares</u>	<u>Mean squares</u>
Regression	14	69.3121	4.9509
Residual	199	63.8647	0.3209
$F=15.4267***$			

Variable	B	SE B	Beta	T
<u>Demographic</u>				
Gender	0.0360	0.0842	0.0228	0.428
Age Group	-0.0663	0.0915	-0.0516	-0.725
Marital Status	0.0718	0.1167	0.0348	0.615
Ethnic Group	-0.1418	0.2639	0.0272	-0.537
Qualification	-0.0678	0.0792	-0.0519	-0.856
Length of Service	0.0090	0.0374	0.0171	0.240
Salary Level	0.0081	0.0482	0.0124	0.168

Table 8.71 (continued)

<u>QWL Factors</u>				
Growth and Development	0.0926	0.0593	0.0980	1.562
Participation Opportunities	0.1662	0.0622	0.1775	2.671**
Physical Environment	0.3703	0.0712	0.3279	5.198***
Supervision	-0.0854	0.0661	0.0919	-1.293
Pay and Benefits	0.1621	0.0654	0.1631	2.478*
Social Relevance	0.1511	0.0730	0.1268	2.071*
Workplace Integration	0.1605	0.0720	0.1643	2.229*
(Constant)	0.1610	0.4469		0.360

* p < 0.05; ** p < 0.01; *** p < 0.001

2. Continuance Commitment

(a) High Cost of Leaving

Table 8.72 displays the results of multiple regression analysis for the effects of demographic and QWL variables on continuance commitment (high cost) for employees in the semi-government organisations. The combined effects of the variables explain about 20 percent of the variation in this dimension of organisational commitment ($R^2 = 0.2025$, $F = 3.6096$, $p < 0.001$). No demographic variable achieves level of significance. Three of the QWL variables are significant in accounting for the variance in the this type of continuance commitment : physical environment ($t = 2.178$, $p < 0.05$), supervision ($t = -2.719$, $p < 0.01$), and pay and benefits ($t = 3.551$, $p < 0.001$). Of the QWL variables, supervision has an inverse relationship with continuance commitment. This inverse relationship suggests that, in this particular sub-sample, employees who perceive they have good supervisors feel that they have less to lose by leaving their organisations.

Table 8.72 Multiple Regressions: The Effects of Demographic Variables and Perceptions about the Presence of QWL Factors on Continuance Commitment (High Cost) for Employees in Semi-Government Organisations

Multiple R	0.4500
R ²	0.2025
Adjusted R ²	0.1464
Standard Error	0.8371

Analysis of variance

	<u>DF</u>	<u>Sum of squares</u>	<u>Mean squares</u>
Regression	14	35.4134	2.5295
Residual	199	139.4569	0.7008
F=3.6096***			

Variable	B	SE B	Beta	T
<u>Demographic</u>				
Gender	0.0609	0.1245	0.0336	0.489
Age Group	-0.2164	0.1353	-0.1469	-1.599
Marital Status	0.0504	0.1725	0.0213	0.292
Ethnic Group	-0.1848	0.3900	-0.0309	-0.474
Qualification	0.0550	0.1170	0.0367	0.470
Length of Service	0.1033	0.0553	0.1722	1.868
Salary Level	-0.0714	0.0712	-0.0949	-1.002
<u>QWL Factors</u>				
Growth and Development	0.0844	0.0876	0.0780	0.963
Participation Opportunities	0.1777	0.0920	0.1656	1.932
Physical Environment	0.2292	0.1052	0.1772	2.178*
Supervision	-0.2656	0.0977	-0.2492	-2.719**
Pay and Benefits	0.3432	0.0967	0.3014	3.551***
Social Relevance	-0.1040	0.1078	-0.0761	-0.964
Workplace Integration	0.0615	0.1064	0.0550	0.578
(Constant)	1.8970	0.6604		2.872**

* p < 0.05; ** p < 0.01; *** p < 0.001

(b) Lack of Employment Alternatives

The effects of demographic and QWL variables on continuance commitment (lack of alternatives) are shown in Table 8.73. As indicated by the results, demographic and QWL variables account for only about 7 percent of the variance in this form of continuance commitment ($R^2 = 0.0709$, $F = 1.0842$, $p > 0.05$). It could be inferred

from the results that, for this sub-sample, these variables have no significant effect on this type of organisational commitment.

Table 8.73 Multiple Regressions: The Effects of Demographic Variables and Perceptions about the Presence of QWL Factors on Continuance Commitment (Lack of Alternatives) for Employees in Semi-Government Organisations

Multiple R	0.2662
R ²	0.0709
Adjusted R ²	0.0055
Standard Error	0.8223

Analysis of variance

	<u>DF</u>	<u>Sum of squares</u>	<u>Mean squares</u>
Regression	14	10.2643	0.7332
Residual	199	134.5655	0.6762
F=1.0842			

Variable	B	SE B	Beta	T
<u>Demographic</u>				
Gender	-0.1440	0.1223	-0.0873	-1.177
Age Group	0.0168	0.1329	0.0126	0.127
Marital Status	0.0171	0.1694	0.0079	0.101
Ethnic Group	-0.5298	0.3831	-0.0973	-1.383
Qualification	0.0001	0.1150	0.0001	0.001
Length of Service	0.0621	0.0543	0.1137	1.143
Salary Level	-0.0299	0.0700	-0.0437	-0.427
<u>QWL Factors</u>				
Growth and Development	0.0962	0.0861	0.0977	1.118
Participation Opportunities	-0.1184	0.0903	-0.1212	-1.311
Physical Environment	-0.0559	0.1034	-0.0475	-0.541
Supervision	-0.0109	0.0959	-0.0113	-0.114
Pay and Benefits	0.1493	0.0950	0.1441	1.573
Social Relevance	-0.1916	0.1059	-0.1542	-1.809
Workplace Integration	0.1723	0.1045	0.1692	1.649
(Constant)	3.6372	0.6487		5.607***

* p < 0.05; ** p < 0.01; *** p < 0.001

3. Normative Commitment

Table 8.74 shows the results of regression analysis for the effects of demographic and QWL variables on normative commitment for the semi-government sub-sample.

The results indicate that the variables account for about 24 percent of the variance in

normative commitment ($R^2 = 0.2426$, $F = 4.5517$, $p < 0.001$). There is no demographic variable which achieve statistical significance. Of the QWL variables, two are statistically significant in explaining the variation in normative commitment: participation opportunities ($t = 2.605$, $p < 0.01$), and pay and benefits ($t = 2.805$, $p < 0.01$).

Table 8.74 Multiple Regressions: The Effects of Demographic Variables and Perceptions about the Presence of QWL Factors on Normative Commitment for Employees in Semi-Government Organisations

Multiple R	0.4925
R^2	0.2426
Adjusted R^2	0.1893
Standard Error	0.6137

Analysis of variance

	<u>DF</u>	<u>Sum of squares</u>	<u>Mean squares</u>
Regression	14	23.9997	1.7143
Residual	199	74.9484	0.3766
F=4.5517***			

Variable	B	SE B	Beta	T
<u>Demographic</u>				
Gender	-0.0310	0.0913	-0.0227	-0.340
Age Group	-0.0082	0.0992	0.0074	-0.083
Marital Status	-0.1352	0.1264	-0.0760	-1.069
Ethnic Group	-0.0436	0.2859	-0.0097	-0.153
Qualification	-0.0645	0.0858	-0.0573	-0.752
Length of Service	0.0118	0.0405	0.0260	0.290
Salary Level	0.0261	0.0522	0.0461	0.499
<u>QWL Factors</u>				
Growth and Development	0.0808	0.0642	0.0993	1.258
Participation Opportunities	0.1756	0.0674	0.2176	2.605**
Physical Environment	0.1051	0.0772	0.1080	1.362
Supervision	-0.0519	0.0716	-0.0647	-0.725
Pay and Benefits	0.1988	0.0709	0.2321	2.805**
Social Relevance	-0.0654	0.0791	-0.0636	-0.827
Workplace Integration	0.0417	0.0780	0.0496	0.535
(Constant)	1.9003	0.4842		3.925***

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

8.2.4.4 Private Organisations

This section describes the results of multiple regression analyses for the effects of demographic and QWL variables on the dimensions of organisational commitment for employees in the private sector organisations.

1. Affective Commitment

The effects of demographic and QWL variables on affective commitment for the private sector employees are shown by the results of regression analysis in Table 8.75. From the results of the regression analysis it can be seen that two of the demographic variables are significant in explaining the variance in affective commitment: gender ($t = 2.444, p < 0.05$) and age group ($t = 2.075, p < 0.05$). Of the QWL variables, four are significant in explaining the variance of affective commitment for this sub-sample : growth and development ($t = 2.962, p < 0.01$), physical environment ($t = 2.408, p < 0.05$), pay and benefits ($t = 3.056, p < 0.01$), and social relevance ($t = 2.174, p < 0.05$). The total amount of variance in affective commitment explained by the regression is about 48 percent ($R^2 = 0.4775, F = 16.8410, p < 0.001$).

Table 8.75 Multiple Regressions: The Effects of Demographic Variables and Perceptions about the Presence of QWL Factors on Affective Commitment for Employees in Private Organisations

Multiple R	0.6910
R ²	0.4775
Adjusted R ²	0.4491
Standard Error	0.5163

Analysis of variance

	<u>DF</u>	<u>Sum of squares</u>	<u>Mean squares</u>
Regression	14	62.8519	4.4894
Residual	258	68.7767	0.2666
F=16.8410***			

Variable	B	SE B	Beta	T
<u>Demographic</u>				
Gender	0.1793	0.0734	0.1270	2.444*
Age Group	0.1338	0.0645	0.1343	2.075*
Marital Status	0.0817	0.0861	0.0584	0.950
Ethnic Group	-0.0655	0.0845	-0.0381	-0.774
Qualification	-0.0103	0.0536	-0.0104	-0.192
Length of Service	0.0149	0.0355	0.0321	0.419
Salary Level	-0.0182	0.0357	-0.0403	-0.509
<u>QWL Factors</u>				
Growth and Development	0.1484	0.0501	0.1744	2.962**
Participation Opportunities	0.0880	0.0492	0.1124	1.787
Physical Environment	0.1249	0.0519	0.1348	2.408*
Supervision	0.0960	0.0610	0.1001	1.573
Pay and Benefits	0.1527	0.0500	0.1700	3.056**
Social Relevance	0.1363	0.0627	0.1358	2.174*
Workplace Integration	0.0640	0.0602	0.0662	1.064
(Constant)	0.3011	0.2541		1.185

* p < 0.05; ** p < 0.01; *** p < 0.001

2. Continuance Commitment

(a) High Cost of Leaving

The results of regression analysis for the effects of demographic and QWL variables on continuance commitment (high cost) are presented in Table 8.76. The variance of this dimension of continuance commitment accounted for by the demographic and

QWL variables is about 13 percent ($R^2 = 0.1274$, $F = 2.6916$, $p < 0.01$). For the private sector sub-sample, education is the only variable which has statistically significant effect on this type of commitment ($t = 2.112$, $p < 0.05$). The results suggest that the perceived cost of leaving one's organisation increases with increasing qualifications.

Table 8.76 Multiple Regressions: The Effects of Demographic Variables and Perceptions about the Presence of QWL Factors on Continuance Commitment (High Cost) for Employees in Private Organisations

Multiple R	0.3570
R^2	0.1274
Adjusted R^2	0.0801
Standard Error	0.8138

Analysis of variance

	<u>DF</u>	<u>Sum of squares</u>	<u>Mean squares</u>
Regression	14	24.9548	1.7825
Residual	258	170.8557	0.6622
F=2.6916**			

Variable	B	SE B	Beta	T
<u>Demographic</u>				
Gender	0.0366	0.1156	0.0213	0.317
Age Group	0.0271	0.1017	0.0223	0.267
Marital Status	0.0256	0.1357	0.0150	0.189
Ethnic Group	0.0255	0.1332	0.0122	0.191
Qualification	0.1786	0.0846	0.1481	2.112*
Length of Service	0.0987	0.0559	0.1746	1.766
Salary Level	-0.0182	0.0563	-0.0330	-0.323
<u>QWL Factors</u>				
Growth and Development	0.0843	0.0789	0.0812	1.067
Participation Opportunities	0.0320	0.0776	0.0335	0.412
Physical Environment	0.0380	0.0818	0.0336	0.465
Supervision	-0.1116	0.0962	-0.0955	-1.161
Pay and Benefits	0.1429	0.0788	0.1302	1.815
Social Relevance	0.0732	0.0989	0.0598	0.741
Workplace Integration	0.1079	0.0948	0.0916	1.138
(Constant)	1.3065	0.4005		3.262**

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

(b) Lack of Employment Alternatives

Table 8.77 shows the results of regression analysis for the effects of demographic and QWL variables on the second dimension of continuance commitment : lack of employment alternatives. These variables explain about 10 percent of the variance in this type of commitment ($R^2 = 0.0994$), and the F-ratio for the regression equation is 2.0334, which is statistically significant at the 0.05 level. The results show that only one of the demographic variables, length of service, has a significant effect on this type of commitment ($t = 3.284$, $p < 0.01$). No QWL variable achieved statistical significance. From the results it could be said that employees who have served their organisations longer perceive that they have fewer employment alternatives elsewhere, and that they are therefore more likely to remain with their present organisations.

Table 8.77 Multiple Regressions: The Effects of Demographic Variables and Perceptions about the Presence of QWL Factors on Continuance Commitment (Lack of Alternatives) for Employees in Private Organisations

Multiple R	0.3152
R^2	0.0994
Adjusted R^2	0.0505
Standard Error	0.7194

Analysis of variance

	<u>DF</u>	<u>Sum of squares</u>	<u>Mean squares</u>
Regression	14	14.7307	1.0522
Residual	258	133.5047	0.5175
F=2.0334*			

Variable	B	SE B	Beta	T
<u>Demographic</u>				
Gender	0.0419	0.1023	0.0280	0.410
Age Group	-0.0550	0.0899	-0.0521	-0.613
Marital Status	0.0219	0.1199	0.0148	0.183
Ethnic Group	-0.0270	0.1178	-0.0148	-0.229
Qualification	0.1330	0.0747	0.1268	1.780
Length of Service	0.1622	0.0494	0.3298	3.284**
Salary Level	-0.0652	0.0498	-0.1362	-1.311

Table 8.77 (continued)

QWL Factors				
Growth and Development	-0.0685	0.0698	-0.0758	-0.981
Participation Opportunities	0.0125	0.0686	0.0151	0.183
Physical Environment	0.0893	0.0723	0.0908	1.236
Supervision	-0.0906	0.0850	-0.0891	-1.066
Pay and Benefits	0.1000	0.0696	0.1047	1.436
Social Relevance	-0.0887	0.0874	-0.0833	-1.015
Workplace Integration	0.0865	0.0838	0.0844	1.032
(Constant)	2.6605	0.3540		7.516***

* p < 0.05; ** p < 0.01; *** p < 0.001

3. Normative Commitment

Table 8.78 provides the results of regression analysis for the effects of demographic and QWL variables on normative commitment for the private sector employees in this sample. The results show that the combined effects of demographic and QWL variables explain about 21 percent of the variance in normative commitment ($R^2 = 0.2115$, $F = 4.9427$, $p < 0.001$). None of the demographic variables achieves statistical significance. Pay and benefits is the only QWL variable which has a significant effect on this type of commitment ($t = 2.849$, $p < 0.01$). This suggests that employees who perceive that they are being adequately rewarded are more likely to remain with the organisations because they felt that they ought to do so.

Table 8.78 Multiple Regressions: The Effects of Demographic Variables and Perceptions about the Presence of QWL Factors on Normative Commitment for Employees in Private Organisations

Multiple R	0.4599
R ²	0.2115
Adjusted R ²	0.1687
Standard Error	0.5810

Analysis of variance

	<u>DF</u>	<u>Sum of squares</u>	<u>Mean squares</u>
Regression	14	23.3565	1.6683
Residual	258	87.0832	0.3375
F=4.9427***			

Variable	B	SE B	Beta	T
<u>Demographic</u>				
Gender	-0.0565	0.0825	-0.0437	0.684
Age Group	0.0953	0.0726	0.1044	1.313
Marital Status	0.1313	0.0968	0.1024	1.355
Ethnic Group	-0.0475	0.0951	-0.0302	-0.499
Qualification	0.0271	0.0604	0.0300	0.449
Length of Service	-0.0361	0.0400	-0.0850	-0.904
Salary Level	-0.0066	0.0402	-0.0161	-0.165
<u>QWL Factors</u>				
Growth and Development	0.1107	0.0564	0.1421	1.965
Participation Opportunities	0.0469	0.0554	0.0654	-0.847
Physical Environment	0.0251	0.0584	0.0295	0.429
Supervision	0.0652	0.0687	0.0742	0.949
Pay and Benefits	0.1602	0.0562	0.1943	2.849**
Social Relevance	0.0446	0.0706	0.0485	0.631
Workplace Integration	0.0410	0.0677	0.0463	0.605
(Constant)	1.4689	0.2859		5.138***

* p < 0.05; ** p < 0.01; *** p < 0.001

Summary

Results from the regression analyses indicate that demographic and QWL variables exhibit some significant relationships with organisational commitment dimensions. The highest percentage of variance accounted for by these variables are in the affective commitment dimension (44 - 52 percent), followed by the variance in normative commitment (20 - 26 percent). The variables do not account much for the variance in both dimensions of continuance commitment: between 10 and 20 percent of the variance in high cost, and between 3 and 10 percent of the variance in lack of employment alternatives.

The results of the regression analyses provide partial support for Hypothesis 3:

There are significant relationships between demographic and QWL variables with

3a: Affective Commitment

3b: Normative Commitment

3c: Continuance Commitment

Table 8.79 summarises the results of the regression analyses.

Table 8.79 Summary of Regression Results - The Effects of Demographic and QWL Variables on Organisational Commitment

VARIABLES	ORGANISATIONAL TYPE											
	Total Sample			Government			Semi-Government			Private		
	AC	CC1	CC2	NC	AC	CC1	CC2	NC	AC	CC1	CC2	NC
<u>DEMOGRAPHIC</u>												
Gender	*								*			
Age									*			
Marital Status												
Ethnic										*		
Qualification		*									**	
Length of Service		*	**									
Salary				**	**							
<u>QWL</u>												
Growth and Devt	***	*		***	**	*		**	**			
Participation	**			*				**	*			**
Environment	***				***		*	**	*			
Supervision		*				*		**	***			**
Pay & Benefits	***	***	*	***		***		**	**			**
Relevance	***			*	*				*			
Integration	***			**	**				*			
R ²	.44	.10	.03	.20	.47	.10	.09	.26	.52	.20	.07	.24
Adjusted R ²	.43	.08	.01	.19	.42	.02	.01	.20	.49	.15	.01	.19
Significance F	***	***	ns	***	***	ns	ns	***	***	***	ns	***

* p < 0.05; ** p < 0.01; *** p < 0.001

Notes:

- AC : Affective Commitment CC1 : Continuance Commitment (High Cost of Leaving)
- CC2 : Continuance Commitment (Lack of Employment Alternatives)
- NC : Normative Commitment

8.3 Organisational Type and the Strength of Relationships between QWL and Organisational Commitment

This section examines variations in the patterns of relationships between QWL factors and the dimensions of organisational commitment in different types of organisations. Tests for significant differences are based on the correlation coefficients between QWL factors and dimensions of organisational commitment in the three types of organisations (see Appendix L for full output of the correlation matrices). The tests were conducted using z scores. The following sub-sections present the results of the tests. The hypothesis associated with this section is:

Hypothesis Four

There are significant differences in the relationships between QWL factors and the organisational commitment dimensions among the government, semi-government and private organisations.

8.3.1 Affective Commitment

Table 8.80 shows the patterns of correlations between QWL factors and affective commitment in the three types of organisations. From the table it can be seen that the strengths of relationships of growth and development, participation opportunities, supervision, social relevance and workplace integration with affective commitment in the three types of organisations are not significantly different. There are no significant differences in the strengths of relationships between all the QWL factors and affective commitment in the government and the private sector sub-samples. For physical environment, its correlation with affective commitment in the semi-government sub-sample is significantly stronger than the correlations in both the

government ($z = -3.654$, $p < 0.01$) and private sector organisations ($z = 2.434$, $p < 0.05$). The correlation between pay and benefits and affective commitment in the semi-government sub-sample is significantly higher than the correlation in the government sub-sample ($z = -1.990$, $p < 0.05$).

Table 8.80 Comparison of Correlation Coefficients between QWL Factors and Affective Commitment

QWL Factor	Govt (N=185)	Semi- Govt (N=214)	Private (N=273)	Overall (N=672)	Sig. Diff (z)		
					G vs SG	G vs P	SG vs P
Growth and Devt	0.5520	0.4241	0.4881	0.4805	1.666	0.914	-0.880
Participation Opp.	0.4872	0.5002	0.4857	0.4742	-0.170	0.021	0.209
Physical Environ.	0.2781	0.5752	0.4067	0.4345	-3.654**	-1.523	2.434*
Supervision	0.4828	0.4082	0.4814	0.4459	0.921	0.019	-0.994
Pay and Benefits	0.3707	0.5303	0.4678	0.4590	-1.990*	-1.231	0.907
Social Relevance	0.4802	0.4498	0.4950	0.4734	0.384	-0.203	-0.634
Workplace Integ.	0.5462	0.5546	0.4807	0.5164	-0.119	0.929	1.100

* $p < 0.05$; ** $p < 0.01$

8.3.2 Normative Commitment

Table 8.81 shows the patterns of correlations between QWL factors and normative commitment in the three types of organisations. Results of the z test indicate that there is no significant difference in any of the correlations between QWL factors and normative commitment.

Table 8.81 Comparison of Correlation Coefficients between QWL Factors and Normative Commitment

QWL Factor	Govt (N=185)	Semi- Govt (N=214)	Private (N=273)	Overall (N=672)	Sig. Diff (Z)		
					G vs SG	G vs P	SG vs P
Growth and Devt.	0.4298	0.2889	0.3346	0.3469	1.604	1.164	-0.055
Participation Opp.	0.3546	0.3989	0.3269	0.3514	-0.510	0.327	0.903
Physical Environ.	0.2420	0.3076	0.2512	0.2603	-0.702	-0.102	0.660
Supervision	0.3347	0.2889	0.3213	0.3084	0.050	0.157	-0.389
Pay and Benefits	0.2895	0.4048	0.3460	0.3509	-1.299	-0.656	0.745
Social Relevance	0.2955	0.1789	0.3084	0.2444	1.223	-0.148	-1.501
Workplace Integ.	0.3063	0.3316	0.3148	0.3124	-0.278	-0.098	0.204

8.3.3 Continuance Commitment (High Cost)

Table 8.82 shows the correlations between QWL factors and continuance commitment (high cost) in government, semi-government and private organisations.

From the table, it can be observed that only the correlation between pay and benefits and continuance commitment in semi-government organisations is significantly different from the correlation in the government sub-sample ($z = -2.61, p < 0.01$).

There are no significant differences between the correlation coefficients for the other QWL factors.

Table 8.82 Comparison of Correlations between QWL Factors and Continuance Commitment (High Cost)

QWL Factor	Govt (N=185)	Semi-Govt (N=214)	Private (N=273)	Overall (N=672)	Sig. Diff. (z)		
					G vs SG	G vs P	SG vs P
Growth and Devt.	0.2478	0.2082	0.1823	0.2114	0.413	0.716	0.293
Participation Opp.	0.0954	0.2758	0.1528	0.1691	-1.853	-0.608	1.405
Physical Environ.	0.1057	0.2500	0.1307	0.1619	-1.476	-0.264	1.349
Supervision	0.1352	0.1110	0.1031	0.1102	0.243	0.340	0.087
Pay and Benefits	0.1117	0.3593	0.2116	0.2306	-2.61**	-1.071	1.754
Social Relevance	0.1353	0.1496	0.1919	0.1606	-0.144	-0.607	-0.474
Workplace Integ.	0.0991	0.2241	0.2020	0.1765	-1.271	-1.099	0.252

* $p < 0.05$; ** $p < 0.01$

8.3.4 Continuance Commitment (Lack of Alternatives)

Table 8.83 shows the patterns of correlations between QWL factors and continuance commitment (lack of alternatives) in the three sub-samples. The results of z test indicate that there are no significant differences in the strengths of relationships between QWL factors and this dimension of organisational commitment between the government and semi-government sub-samples. There are also no significant differences in the strengths of relationships between the semi-government and the private sub-samples.

Between the government and the private sector sub-samples, however, two significant differences in the relationships are observed. The first is the correlation between growth and development and continuance commitment - lack of alternatives ($z = 2.098$, $p < 0.05$), in which the relationship in the government sub-sample is significantly stronger than the relationship in the private sector sub-sample.

The other correlation which is significantly different is between supervision and continuance commitment. The correlation coefficient in the government sub-sample is significantly larger than the correlation in the private sector sub-sample ($z = 2.387$, $p < 0.05$). The relationships between supervision and continuance commitment (lack of alternative) in the two sub-samples are in opposite directions. In the government sub-sample, supervision has a positive relationship with this dimension of organisational commitment whilst, in the private sector, it has a negative relationship.

Table 8.83 Comparison of Correlations between QWL Factors and Continuance Commitment (Lack of Alternatives)

QWL Factor	Govt (N=185)	Semi- Govt (N=214)	Private (N=273)	Overall (N=672)	Sig. Diff. (Z)		
					G vs SG	G vs P	SG vs P
Growth and Devt.	0.1448	0.0854	-0.0553	0.0550	0.595	2.098*	1.534
Participation Opp.	0.0452	0.0327	0.0061	0.0098	0.124	0.408	0.290
Physical Environ.	0.0454	0.0400	0.0776	0.0568	0.791	0.054	-0.411
Supervision	0.1793	0.1009	-0.0476	0.0598	0.791	2.387*	1.602
Pay and Benefits	0.0643	0.1270	0.0879	0.0899	-0.626	-0.248	0.431
Social Relevance	0.1354	-0.0199	-0.0336	0.0192	1.544	1.771	0.149
Workplace Integ.	0.0324	0.1411	0.0555	0.0680	-1.084	-0.241	0.941

* p < 0.05; ** p < 0.01

Summary

From the results presented in this section, it may be concluded that the relationships between some of the QWL variables and dimensions of organisational commitment (except normative commitment) are, to some extent, moderated by organisational type. The relationship between physical environment and affective commitment in the semi-government organisations is significantly stronger than the relationships in both the government and the private organisations. Pay and benefits also exhibits significantly stronger relationships with two of the commitment dimensions (affective and continuance - high cost) in the semi-government sub-sample compared to the relationships in the government sub-sample. The relationships of two of the QWL factors, growth and development and supervision, with continuance commitment (lack of alternatives) are significantly stronger in the semi-government than in the private organisations. These results provide some support for Hypothesis Four:

There are significant differences in the relationships between QWL factors and the organisational commitment dimensions among the government, semi-government and private organisations.

8.4 Summary and Conclusions

This chapter presented the research results of the testing of hypotheses developed in Chapter Five. Two major statistical procedures were used in testing the hypotheses: t-test and analysis of variance (ANOVA), and multiple regressions. The t-test and ANOVA were used to test for statistical differences in the group means. The paired t-test was used to examine whether there were significant differences between the means of the preferred QWL factors and the perceived presence of those factors. Results obtained from the test indicate that, in general, employees in this sample felt that their organisations are unable to meet their expectations with regard to the provision of QWL factors. In other words, the organisations in this study were perceived by their employees as QWL-deficient.

Results from the t-test and ANOVA provided some insights into the differences in the preferred as well as the perceived level of QWL factors, compared among the various demographic variables of employees in this sample. These are summarised below:

1. Importance

- *Growth and development* : level of academic qualification
- *Participation* : gender and length of service

- *Physical environment* : gender, age, organisational type, length of service and salary level
- *Supervision* : qualification, ethnic group, and length of service
- *Pay and benefits* : gender, age, marital status, ethnic group, organisational type and salary
- *Social relevance* : organisational type and salary
- *Workplace integration* : qualification

2. Perceived Presence

- *Growth and development* : salary
- *Participation* : gender, organisational type and length of service
- *Physical environment* : gender
- *Supervision* : length of service
- *Pay and benefits* : length of service and salary
- *Social relevance* : age, marital status, ethnic group, organisational type and salary
- *Workplace integration* : its perceived presence is not significantly related to any of the demographic variables

The third part of the chapter presented the results of multiple regression analyses for the effects of demographic and QWL factors on the separate dimensions of organisational commitment, first for the total sample, and then for the three sub-samples : government, semi-government and private. The results from regression analyses provided some information on the nature of relationships between the

demographic , QWL variables and the dimensions of organisational commitment. Significant relationships of the demographic and QWL variables with dimensions of organisational commitment are summarised below:

1. Total sample

- *Affective commitment* : gender, growth and development, participation, physical environment, pay and benefits, social relevance and workplace integration
- *Continuance commitment (high cost)* : qualification, length of service growth and development, supervision and pay and benefits
- *Continuance commitment (lack of alternatives)* : length of service and pay and benefits
- *Normative commitment* : growth and development, participation and pay and benefits

2. Government

- *Affective* : salary, growth and development, social relevance and workplace integration
- *Continuance commitment (high cost)* : growth and development
- *Continuance commitment (lack of alternatives)* : supervision
- *Normative commitment* : growth and development

3. Semi-Government

- *Affective commitment* : participation, physical environment, pay and benefits, social relevance and workplace integration
- *Continuance commitment (high cost)* : physical environment, supervision and pay and benefits

- *Continuance commitment (lack of alternatives)* : none of the variables are significant
- *Normative commitment* : participation and pay and benefits

4. Private

- *Affective commitment* : gender, age, growth and development, physical environment, pay and benefits and social relevance
- *Continuance commitment (high cost)* : qualification
- *Continuance commitment (lack of alternatives)* : length of service
- *Normative* : pay and benefits

The last part of the chapter examined whether the relationships between QWL factors and the dimensions of organisational commitment dimensions are significantly different among the three types of organisations. Results of the z-test showed that some of the relationships were significantly different. The relationships of two QWL factors - pay and benefits and physical environment with both affective and continuance (high cost) commitment in the semi-government organisations - were found to be significantly stronger than the relationships in the government organisations. The relationship of physical environment with affective commitment in the semi-government was also found to be significantly stronger than in the private organisations. Growth and development as well as supervision were found to exhibit significantly stronger relationships with continuance commitment (lack of alternatives) in the semi-government than in the private sector organisations.

CHAPTER NINE

SUMMARY, DISCUSSION AND RECOMMENDATIONS

9.0 Introduction

This chapter summarises the research findings obtained from the results of statistical analyses described in the previous chapters. Implications of the findings are then discussed. Recommendations for further research as well as for practical considerations are also provided.

The chapter is divided into five sections. The first section outlines the limitations of inferences from which conclusions may be drawn from this study. The second section provides the summary of findings obtained from the study. In order to place the present study into perspective, the third section of the chapter discusses the findings in relation to previous research. The fourth section of the chapter discusses the implications of the findings for both theory and practice, and provides some recommendations for further research. Final conclusions are given in the fifth section.

9.1 Limitations on Inference

As with any survey research, limitations on the findings from this research have to be acknowledged. These limitations are described in the following categories: causal inference, generalisability and methodology.

9.1.1 Causal Inference

The correlational method adopted for the present study poses some limitations on inferring causality between variables. It was not possible for the researcher to control the possible "third factor variable" as in the case with an experimental design. It was therefore possible that the relationships between the so-called independent and dependent variables are not causal. A survey only provides information with regard to the degree of "association" or "relationship" between variables. In the present study, therefore, whilst it may be speculated that organisational commitment depends upon a set of independent variables (demographic and QWL), the research design precluded genuine claims of causality. It would be more appropriate to say that the independent variables demonstrate ability to predict organisational commitment.

9.1.2 Generalisability

Theoretically, the aim of the present study was to generalise to all non-supervisory employees in Malaysia. But weaknesses in the sample and the design of the study pose some limitations on its generalisability. Among the potential weaknesses are:

1. Owing to lack of resources, only organisations from the northern states of Malaysia (Kedah, Perlis and Penang) were selected. Organisations (and employees) in these states may possess certain unique characteristics which are different from those in the other Malaysian states.

2. Participation in the survey was voluntary. It was possible that organisations (as well as employees) which declined participation are different from those which participated.

3. Again, owing to the voluntary nature of participation in the survey, the proportion of respondents from each of the organisational type (government, semi-government and private) who participated in the survey may not reflect the true sectorial composition of non-supervisory employees in the population.

4. This research presented results obtained from a study of individuals at a specific time. The research was designed to examine subjects' current work values, needs and perceptions about their organisations. Since the individuals were not followed over time, it was not possible to describe a sequence of changes in these psychological aspects that subjects might have experienced throughout their tenure with the organisations.

5. This study was limited to the link between the seven QWL factors with organisational commitment. Although the results may be similar to those that would occur given other definitions and conceptualisations of QWL, this study was only concerned with the relationships arising from these seven dimensions. It did not attempt to deal with the concept of QWL in general (or with the wider concept of quality of life).

9.1.3 Methodological Limitations

1. This study used a 5-point Likert scale in which respondents were asked to indicate their degree of importance of a particular work aspect, or their strength agreement towards statements concerning the perceived presence of QWL and organisational commitment items. The use of Likert scale, as pointed out by Brown (1990), may result in the possibility of patterned responses - a tendency for respondents to respond automatically to questions without paying careful attention to what the question asks. This problem arises from the interpretations different people put on numbers within the scale. Although the survey attempts to define these numbers, it is impossible to check whether all participants interpret the score definitions equally.

2. Related to the problem mentioned above is the problem of assuming that the numbers in the scales represent an interval measure and that the respondents filling out the survey would read them as such, that is they interpret the qualitative difference between any two numbers to be the same as the difference between any two others (Brown, 1990).

3. The present study employed quantitative techniques in its design and analysis. It should be noted that quantitative technique has its limitations, especially in translating people's feelings into numbers. It is suggested that qualitative technique be incorporated in future research in this area. By combining quantitative and

qualitative techniques, such as in-depth interview, the study would benefit from the strengths of both and offset the weaknesses of the other.

9.2 Summary of Findings

To recapitulate, the following sub-sections present a summary of findings obtained from this study.

9.2.1 Dimensions of QWL and Organisational Commitment

Results of factor analyses presented in Chapter Six indicated that:

1. The preference for and the perceived presence of QWL items were found to moderately representing the seven factors which have been hypothesised to represent QWL. The factors and their respective items are shown in Tables 9.1 and 9.2.

Table 9.1 Summary of Preferred QWL Factors and their respective items

QWL Factor	Items
Growth and Development	1. A job which provides opportunities for growth and development 2. A job which allows you to use a variety of skills 3. A job which is challenging
Participation	4. An opportunity to contribute your ideas and suggestions to your supervisor 5. The existence of an effective suggestion scheme in your work organisation 6. An organisation which puts employees' suggestions into operation
Physical Environment	7. An organisation which provides a safe working environment 8. An organisation which provides good physical surroundings 9. An organisation which provides convenient working hours
Supervision	10. A supervisor who has confidence in your abilities 11. A supervisor who is capable of making work together as a team 12. A supervisor who is concern about the welfare of those under him/her
Pay and Benefits	13. An organisation which offers good salary 14. A pay system which is based on merit 15. An organisation which provides good fringe benefits

Table 9.1 (continued)

Social Relevance	16. A job which allows you to contribute to the welfare of the society 17. A job which allows you to pursue other interests in life 18. A job which does not require you to violate your personal values
Workplace Integration	19. A work situation in which people work together as a team 20. Co-workers who provide support and encouragement to one another 21. A job which provides opportunities for you to get to know other people

Table 9.2 Summary of Perceived Presence of QWL Factors and their respective items

QWL Factor	Items
Growth and Development	1. My job provides sufficient opportunities for growth and development 2. My job allows me to use a variety of skills 3. My job is challenging
Participation	4. My organisation provides opportunities for me to contribute ideas and suggestions to my supervisor 5. My organisation provides an effective suggestion scheme for its employees 6. My organisation implements suggestions put forward by its employees
Physical Environment	7. The working environment in my organisation is safe 8. The physical surroundings in this organisation are good 9. The working hours in this organisation are good
Supervision	10. My supervisor has confidence in my abilities 11. My supervisor is capable of making people work as a team 12. My supervisor shows concern for the welfare of those working under him/her
Pay and Benefits	13. The salary offered by this organisation is good 14. The pay system in this organisation is based on merit 15. The fringe benefits offered by this organisation are good
Social Relevance	16. My job allows me to contribute to the welfare of society 17. My job in this organisation allows me to pursue my other interests in life 18. My job in this organisation does not require me to violate my personal values
Workplace Integration	19. Employees in this organisation work together as a team 20. My co-workers provide support and encouragement to one another 21. My work in this organisation allows me to get to know other people

2. The organisational commitment measure was found to consist of four factors.

The factors and their respective items are summarised in Table 9.3.

Table 9.3 Summary of Organisational Commitment Factors and their Respective Items

Factors	Items
Affective	<ol style="list-style-type: none"> 1. I would be happy to spend the rest of my career with this organisation 2. I enjoy discussing my organisation with people outside it 3. I feel as if this organisation's problems are my own 4. I do not think I could become as attached to another organisation as I am to this one 5. I feel like "part of family" at my organisation 6. I feel emotionally attached to this organisation 7. This organisation has personal meaning for me 8. I feel a strong sense of belonging to my organisation
Normative	<ol style="list-style-type: none"> 9. I feel that a person must always be loyal to his/her organisation 10. Jumping from organisation to organisation seems unethical to me 11. I believe that loyalty is important and therefore I feel strong sense of moral obligation to remain 12. If I got another offer for a better job elsewhere I would not feel it was right to leave my present organisation 13. I was taught to believe in the value of remaining loyal to one organisation 14. Things were better in the days when people stayed with one organisation for most of their careers 15. I think that wanting to be a "company man" or "company woman" is sensible
Continuance (High Cost)	<ol style="list-style-type: none"> 16. It would be hard for me to leave my organisation right now, even if I wanted to 17. My life would be disrupted if I decided to leave my organisation now 18. I am afraid of what might happen if I quit my job without having another one lined up 19. It would be costly for me leave my organisation now
Continuance (Lack of Alternatives)	<ol style="list-style-type: none"> 20. Right now, staying with my organisation is a matter of necessity as much as desire 21. I feel that I have few options to consider leaving this organisation 22. One of the serious consequences of leaving this organisation would be the scarcity of available alternatives 23. One of the major reasons I continue to work for this organisation is that leaving would require personal sacrifice - another organisation may not match the overall benefits I have here

9.2.2 Preferred QWL Vs Perceived QWL

Statistical analysis using paired t-test procedures in **Section 8.1.3** (Hypothesis 1) produced the following observations:

1. For the total sample and the semi-government and private organisation sub-samples, the means of all the preferred QWL factors are significantly higher than the means of the perceived presence.
2. For the government sub-sample, the means of all but one QWL factor, supervision, are significantly different at $p < 0.05$ level.

9.2.3 Relative Importance of QWL Factors

This section summarises the results obtained from **Section 7.2** of the thesis. In general, the sample of employees in this study indicated that workplace integration, supervision and physical environment are the three most important QWL factors. Social relevance, pay and benefits, and participation opportunities are the three least important factors. Growth and development is considered to be of moderate importance. Though results of Kendall's coefficients of concordance and Kendall's tau do not indicate any significant differences in the rankings of QWL between any of the groups, some variations from the general pattern could be observed. These variations, presented according to the demographic variables, are outlined in the following sub-sections:

1. Organisational Type

- Workplace integration was considered to be the most important factor by the government sub-sample, but the semi-government and the private sector sub-samples rated physical environment as the most important factor.
- The government and the semi-government sub-samples placed social relevance as a factor which is of moderate importance, but the private sector sub-sample regarded it as the least important factor.
- Pay and benefits was ranked significantly higher (5th ; $p < 0.05$) by the private sector sub-sample than the government (7th). Though the rank for pay and benefits is higher in the private sector sub-sample (5th) than the semi-government (6th) sub-samples, their means are not significantly different.

2. Gender

- Male employees regarded workplace integration as the most important factor, but the female sub-sample regarded supervision as the most important.

3. Academic Qualification

- Employees in the lowest qualification group (LCE and below) considered social relevance as moderately important (ranked 4th) but those in the higher qualification categories regarded it as the least important factor.

4. Length of Service

- Physical environment was ranked fourth by employees in four of the categories. Only one category (7-9 years length of service) ranked it as among the least important factors (6th).
- Social relevance was ranked last by three of the groups (all the groups with more than seven years of service), but was ranked fifth by two other groups (those with 6 years service or less).

5. Salary Level

- Physical environment has been ranked as one of the least important factors by one of the groups (those with RM401-RM600 salary level), but was ranked fourth (indicating that it is of moderate importance) by the other four groups.
- Social relevance was ranked fifth by those in the lowest salary level (RM400 or less) but was ranked last by the other four groups.

9.2.4 Relative Strength of Agreement About the Perceived Presence of QWL Factors

This sub-section summarises the results concerning the relative strengths of agreement about the perceived presence of QWL factors which was obtained in **Section 7.3** of the thesis. In general, employees in this sample perceived physical environment and workplace integration as the two factors which have the highest degree of presence in their working life. Variations in the mean scores of the strengths of agreement about the presence of QWL factors were examined according to the demographic characteristics of the respondents. Some of significant observations are given in the following sub-sections:

1. Organisational Type

- The most obvious variation in the rankings of QWL factors among employees in the different types of organisation is the degree of perceived social relevance. The mean scores for employees in the government and semi-government organisations are almost equal, 3.79 and 3.77, with ranks of third and second, respectively. The factor was ranked fifth by private sector employees.

2. Gender

- The rankings in the strength of agreement about the presence of QWL factors by both male and female employees are almost identical. Both groups ranked physical environment as the most and pay and benefits as the least present factors.

3. Ethnic

- The main difference in the rankings of Malays and Non-Malays in this sample is with regard to the perceived presence of social relevance in their worklife. Malays ranked it in the third position, whereas the Non-Malays ranked it in the fifth position.

4. Marital Status

- Social relevance is again the only QWL factor which produced significant difference in its rankings by married and single employees. Married employees ranked the factor in the third position, compared to single employees who ranked it in the fifth position.

5. Qualification

- In terms of its perceived presence, social relevance was ranked third by employees in the lower qualification groups (LCE and MCE) but was ranked fifth by employees with higher qualifications (HSC and above).
- Growth and development was ranked fifth by employees with LCE and MCE qualifications but was ranked third by employees in the HSC and above group.

6. Salary Level

- Employees in the highest salary level (More than RM1000) ranked growth and development, in terms of its perceived presence, in the second position. All other groups ranked it in the fifth position.

9.2.5 Demographic Factors and QWL

The relationships between the respondents' demographic characteristics and the QWL factors are summarised in the following sub-sections.

9.2.5.1 Importance of QWL factors

The following conclusions could be drawn from results obtained in **Section 8.1.4** (Hypothesis 2a) of the thesis:

1. **Gender** influences the level of preference for three of the QWL factors: participation, physical environment and pay and benefits. The female employees in this sample indicate significantly higher preference for the three factors than the male employees.
2. **Age group** influences the level of preference for two of the factors: physical environment and pay and benefits. There is a negative relationship between age and the importance of physical working environment: younger employees indicate higher importance of physical environment than older employees. Again, the pattern is about the same for pay and benefits: younger employees indicate higher importance than employees in the older age group.

3. Marital status influences the level of preference only one of the factors: pay and benefits. Single employees in this sample place higher importance of pay and benefits than the married employees.

4. Academic qualifications of the employees affect the level of preference for three factors: growth and development, supervision, and workplace integration. For the growth and development factor, the mean scores of employees with higher academic qualifications are significantly higher than the mean score of employees with the lowest qualification (LCE and below). The means for the importance of supervision of those with higher qualifications are also significantly higher than the mean score of employees with the lowest qualification. For the workplace integration factor, only the mean score of those with MCE (or equivalent) qualifications is significantly different from the mean score of employees with LCE (and below) qualifications.

5. Ethnic group influences the level of preference for two factors: supervision, and pay and benefits. The mean scores of non-Malays in this sample for the importance of both factors are significantly higher than the means of the Malay employees.

6. Organisational type affects the level of preference of three factors: physical environment, pay and benefits, and social relevance. The mean scores of semi-government and private sector sub-samples for the importance of physical environment are significantly higher than the mean score of the government sub-sample. As for the importance of pay and benefits, the mean score of the private

sector employees is the highest, and it is significantly higher than the mean of the government employees in this sample. And the mean scores for the importance of social relevance of both the government and semi-government employees are significantly higher than the mean score of the private sector employees in this sample.

7. Length of service influences the level of preference of four factors: participation, physical environment, supervision, and pay and benefits. The mean score for the importance of participation of employees in the '7-9 years' category is the lowest, and it is significantly lower than the means of all the other categories. For physical environment, the mean score of employees with the shortest length of service (3 years or less) is significantly higher than the means of employees in the longer lengths of service (those with at least 7 years). It is not significantly different from the mean of employees in the second category (4 - 6 years). For the supervision factor, though the overall ANOVA indicates significant difference in the mean scores, the Scheffe multiple range test fails to provide support for the presence of significant difference between any pairs of groups at the 0.05 level. As for pay and benefits, employees in the shorter length of service categories (3 years or less, and 4 - 6 years) indicate their higher importance than do the other categories. And the means of the two groups are significantly different from the mean of those in the '7-9 years' category.

8. Salary level affects the level of preference of two factors: physical environment and social relevance. For physical environment, the mean score of employees in the lowest salary level group is the highest. And its mean score is significantly different from the mean scores of those in the third (RM601-RM800) and the fourth (RM801-RM1000) salary groups. Though ANOVA results indicate significant difference between the means for social relevance, Scheffe multiple comparison test does not find any pair of group means which are significantly different at the 0.05 level.

9.2.5.2 Perceived Presence of QWL Factors

Results concerning the strength of agreement about the presence of QWL factors obtained from Section 8.1.5 (Hypothesis 2b) of this thesis can be summarised as follows:

1. Gender influences the perceptions of two QWL factors: the availability of participation opportunities and the presence of conducive working environment. The mean scores of female employees for both factors are significantly higher than the mean scores of the male employees.

2. Age group influences the strength of agreement about the presence of social relevance in performing the jobs. The mean score of employees in the highest age group (36 years and above) is significantly higher than the mean scores of the other two groups.

3. Marital status influences the strength of agreement about the presence of social relevance. The mean score of married employees is significantly higher than the mean score of single employees.

4. Academic qualification does not influence the strength of agreement about the presence of any of the QWL factors.

5. Ethnic group influences the strength of agreement about the presence of social relevance. The Malays' strength of agreement about the presence of social relevance in their jobs is significantly higher than the non-Malays'.

6. Organisational type influences the strength of agreement about the presence of participation opportunities and social relevance. For the availability of participation opportunities, the mean scores of both the government and the private sub-samples are significantly higher than the mean score of the semi-government sub-sample. The strengths of agreement about the presence of social relevance for both the government and the semi-government sub-samples are significantly higher than the score of the private sector sub-sample.

7. Length of service influences the strength of agreement about the presence of three factors: participation opportunities, supervision and pay and benefits. For the availability of participation opportunities, the mean score, for the strength of agreement about its presence, of employees in the first category (3 years or less) is

the highest and it is significantly different from the mean of those in the third group (7-9 years). As for the mean scores for the presence of good supervision, though overall ANOVA indicates significant difference, Scheffe multiple comparison test fails to provide support for the presence of significant difference between any two means. Similar results were also obtained for the strength of agreement about the presence of good pay and benefits.

8. Salary level influences the perception of three QWL factors: growth and development, pay and benefits and social relevance. For growth and development, the mean score of the highest salary group (More than RM1000) is the highest, and it is only significantly different from the mean score of those in the second group (RM401-RM600). The highest mean score for the perception of good pay and benefits is also obtained from employees in the highest salary group (More than RM1000), and it is significantly different the means of two other groups: first (RM400 or less) and third (RM601-RM800). For the presence of social relevance, the mean score of employees in the fourth salary level (RM801-RM1000) is the highest, and it is significantly different from the mean of employees in the first salary group (RM400 or less).

9.2.6 The Effects of Demographic and QWL Variables on Organisational Commitment

In Section 8.2.4 (Hypothesis Three) a series of regression analyses were conducted to examine the significant relationships between demographic and perceived QWL on the separate dimensions of organisational commitment. Analyses were carried

out for the total sample and for the three organisational types: government, semi-government and private organisations. The following sub-sections provide a summary of the results.

9.2.6.1 Total Sample

Significant relationships between the commitment dimensions and the demographic and QWL factors for the total sample are summarised in Table 9.4.

Table 9.4 Significant Relationships between Organisational Commitment and Demographic and QWL Factors - Total Sample

Organisational Commitment Dimensions	Demographic Variables	Nature of Relationships	QWL Variables	Nature of Relationships
AFFECTIVE	Gender (0 = Female) (1 = Male)	Positive	Growth and Development Participation Opportunities Physical Environment Pay and Benefits Social Relevance Workplace Integration	Positive Positive Positive Positive Positive Positive
CONTINUANCE (High Cost)	Qualification Length of Service	Positive Positive	Growth and Development Supervision Pay and Benefits	Positive Negative Positive
CONTINUANCE (Lack of Alternatives)	Length of Service	Positive	Pay and Benefits	Positive
NORMATIVE	-	-	Growth and Development Participation Opportunities Pay and Benefits	Positive Positive Positive

9.2.6.2 Government Department

Significant relationships between organisational commitment and demographic and QWL factors for the government sub-sample are shown in Table 9.5.

Table 9.5 Significant Relationships between Organisational Commitment and Demographic and QWL Factors - Government Department

Organisational Commitment Dimensions	Demographic Variables	Nature of Relationships	QWL Factors	Nature of Relationships
AFFECTIVE	Salary	Negative	Growth and Development Social Relevance Workplace Integration	Positive Positive Positive
CONTINUANCE (High Cost)	--	--	Growth and Development	Positive
CONTINUANCE (Lack of Alternatives)	--	--	Supervision	Positive
NORMATIVE	--	--	Growth and Development	Positive

9.2.6.3 Semi-Government Organisation

Significant relationships between organisational commitment and demographic and QWL factors are summarised in Table 9.6.

Table 9.6 Significant Relationships Between Organisational Commitment and Demographic and QWL Factors - Semi-Government Organisation

Organisational Commitment Dimensions	Demographic Variables	Nature of Relationships	QWL factors	Nature of Relationships
AFFECTIVE	--	--	Participation Opportunities Physical Environment Pay and Benefits Social Relevance Workplace Integration	Positive Positive Positive Positive Positive
CONTINUANCE (High Cost)	--	--	Physical Environment Supervision Pay and Benefits	Positive Negative Positive
CONTINUANCE (Low Alternatives)	--	--	--	--

9.2.6.4 Private Organisation

Significant relationships between organisational commitment and demographic and QWL factors are summarised in Table 9.7.

Table 9.7 Significant Relationships between Organisational Commitment and Demographic and QWL Factors - Private Organisation

Organisational Commitment Dimensions	Demographic Variables	Nature of Relationships	QWL Factors	Nature of Relationships
AFFECTIVE	Gender (0=Female) (1=Male) Age Group	Positive Positive	Growth and Development Physical Environment Pay and Benefits Social Relevance	Positive Positive Positive Positive
CONTINUANCE (High Cost)	Qualification	Positive	--	--
CONTINUANCE (Low Alternatives)	Length of Service	Positive	--	--
NORMATIVE	--	--	Pay and Benefits	Positive

9.2.7 Organisational Types and the Relationships between QWL and Organisational Commitment

Results of z-tests comparing the correlation coefficients of relationships between the perceived presence of QWL factors and organisational commitment dimensions were presented in Section 8.3 (Hypothesis 4). The results indicate that there are some significant differences in the strengths of those relationships between the three types of organisations. These are summarised below:

- The relationship between physical environment and affective commitment in the semi-government sub-sample is significantly stronger than the relationships in the government and private sector sub-samples.
- The relationships between pay and benefits and two of the commitment dimensions, affective and continuance (high cost), in the semi-government sub-sample are significantly stronger than in the government sub-sample.
- The relationships between two of the QWL factors, growth and development and supervision, with continuance commitment (lack of alternatives) are significantly stronger in the government sub-sample than in the private sector sub-sample.

- There is no significant difference in the strength of relationships between QWL factors and normative commitment among the three types of organisation.

9.3 Discussion

This section is devoted to a discussion on the major findings obtained in this study.

9.3.1 Dimensions of Organisational Commitment

The results of factor analysis for the measure of organisational commitment in this study are quite similar to those obtained by previous researchers. Two major conclusions could be drawn from these similarities:

(1) Meyer and Allen's three-component conceptualisation of organisational commitment is generally supported by the data.

(2) The Malaysian version of the organisational commitment questionnaire developed by Meyer and Allen reproduced almost the same constructs as those resulting from the English version.

The support for Meyer and Allen's conceptualisation of organisational commitment helps in the clarification of the concept. The psychometric properties of the three-component measure used in this study appear to suggest it is a reliable and valid measure of organisational commitment. The results obtained from the factor analysis

also lend support to McGee and Ford (1987) who argued that the continuance commitment scale consists of two sub-scales: one assessing the personal sacrifice associated with leaving the organisation, and the other an awareness of the lack of job alternatives. Since this study was based on the data obtained from respondents in Malaysian organisations, it may also provide an indication to the generalisability of the measure across two diverse cultures.

This study has also indicated that the translated version of the questionnaire may provide a reliable and valid measure of organisational commitment. There has been debate concerning the suitability of using “western” questionnaires in research conducted in “eastern” societies. The result of this study indicate that properly translated “western” questionnaires may be used reliably in an “eastern” culture.

9.3.2 Relative Importance of QWL Factors

The data from this study reveals that, in general, Malaysian employees regard QWL factors which reflect collectivism (workplace integration) and power distance (supervision) as among the more important ones compared to factors which reflect individualism (e.g. pay and benefits). As shown by Hofstede (1980), Malaysia is essentially a collectivist and high power distance society. Thus, it can be said that, compared to individualists, collectivists will score low on preference for the individual-based factors. Collectivists tend to have a communal orientation and are likely to view their employment situation from a "communal" point of view (Hofstede, 1991). The collectivistic nature of Malaysian employees was also

reflected in Mamman et al (1996). Their study of attitudes to pay systems found that respondents from Malaysia and Indonesia, which are both collectivist, ranked responsibility as the preferred criterion for pay systems. They do not particularly like an individualised performance appraisal system.

The lowest ranking given to pay and benefits may possibly be explained by the following observation of the Malays' (Muslims) view towards material rewards:

"The Muslim's beliefs in reward and punishment for their conduct at the day of judgement which have dominated or dictated the Moslem-Malay daily life are also brought into the workplace and organisations. These cultural and religious concerns frequently outweigh economic priorities in the workplace" (Ali, 1992).

It has also been shown that the degree of importance of the QWL factors are, in some instances, influenced by the demographic variables.

The importance of growth and development and supervision has been shown to be directly related to the level of qualification an employee has. Employees with higher qualifications tend to place greater importance on both factors. This is not unexpected, because it has been widely acknowledged that higher-qualified employees have higher expectations than employees with lesser qualifications (e.g.

Mowday et al., 1982; Steers, 1977). Employees with higher qualifications expect more challenge and autonomy in their jobs.

The importance of physical work environment has been shown to be influenced by many of the demographic variables: age , gender, organisational type, length of service and salary level. A closer examination of the results indicates that these relationships reflect the preferences of young, relatively low-paid female employees working in the private sector factories. In this sample, most of the younger employees are women who work as production operators in electronics firms as compared to the relatively older male employees who usually occupy clerical or technical positions. During the initial period of the industrialisation process in Malaysia, female employees working in electronics factories were often seized by incidents of hysteria, which were thought to be caused by "evil spirits". But what were thought to be evil spirits were actually inner psychological conflicts faced by the workers and due to clashes between their traditional values and the values of modern capitalistic management introduced by the foreign-owned factories (Ong, 1987).

The history of hysterical seizures among electronics factory workers has created a sense of psychological insecurity among the later generations of workers. It is therefore reasonable to expect that the latter place greater importance on the security of their workplace. Female factory workers are required to work 24-hour

shifts, often involving evening shifts. They therefore require protection to make them feel safe in their daily work in the factories.

Another point which merits attention is the importance of pay and benefits. The data in this research shows that employees in private organisations place a significantly greater importance on pay and benefits than their counterparts in the semi-government and the government organisations. Again this may be due to large representation of factory workers in the sample, who are relatively lowly-paid. An examination of the sample characteristics indicate that most of the private sector sub-sample (about 33 percent) are in the salary level of 'RM400 and below' or a £100 or less per month. These factory workers are, more often than not, expected to contribute part of their monthly incomes to their families who, in most cases, are poor (Ong, 1987). With such a modest income, they may find it hard to fulfil their obligations. This explains why pay and benefits is a significantly more important factor in the private sector sub-sample.

9.3.3 Perceptions of QWL

The data from this study indicates that, with regard to the presence of growth and development, and good pay and benefits, employees in the highest salary level perceive that they have greater opportunities for career development. This is not surprising because pay increases are usually associated with promotions. Employees who are in this salary group may have gained promotions in their jobs. It is therefore natural that they feel they have sufficient opportunities for growth and development.

It has also been suggested that the perceived adequacy of pay and benefits is influenced by an employee's comparison between the 'perceived personal job inputs' with 'perceived inputs and outcomes of referent others' (Lawler, 1973). The finding in this study seems to suggest that the promoted employees (who have higher pay) in this sample feel that their job inputs are greater than the job inputs of others in their organisations, thus meriting higher financial rewards.

The perceived presence of social relevance is influenced by marital status, ethnic group, organisational type, age group and length of service. A closer examination of the data reveals that this is in fact due to the characteristics of the sample in semi-government and government organisations. They are in general Malays, married, older, and have served the organisations longer. Hence the perception of social relevance may in fact be due to the organisational type: those in the public sector (semi-government and government organisations) feel that the jobs they perform enable them to make worthwhile contributions to society. Employees in public service, in the course of their work, are able to see that their jobs are making direct contributions to society, compared to those in the private sector who are only making indirect or tenuous contributions (they contribute directly to the well-being of their employers, who in most cases, are foreign investors). Furthermore, public sector employees see themselves as 'public servants' doing 'public service' and therefore as more beneficial to the society.

9.3.4 Independent Variables and Organisational Commitment : A Review of their Relationships

Results of regression analyses provide some insights into the relationships of demographic and QWL variables with the different dimensions of organisational commitment. The multiple regression results clearly show that the largest proportion of the variance accounted for is in the affective commitment dimension (44 - 52 percent), followed by the variance in the normative dimension (20 - 26 percent), continuance commitment- high cost (10 - 20 percent) and continuance commitment - lack of alternatives (3 - 10 percent). These results indicate that the independent variables, especially the QWL factors, are most useful in predicting affective commitment.

Now let us highlight the independent variables which exhibit significant relationships with the dimensions of organisational commitment.

Demographics

1. Gender

Data from this study indicates that male employees are more affectively committed than female employees. This contradicts the findings of other researchers who found that women are more committed than men (Alutto et al., 1973; Angle and Perry, 1981). One possible explanation for this contradiction is that male employees in this sample mainly occupy better positions than the female employees (clerks as compared to typists or production workers). It is therefore logical to suggest that

men are more committed than women owing to the effect of status, because status has a positive and direct effect on commitment (Marsh and Mannari, 1977).

2. Age

Age is positively related to affective commitment in only one sub-sample: the private sector. This finding is consistent with those in the literature (e.g. Angle and Perry, 1981; Arnold and Feldman, 1982 ; Mathieu and Zajac, 1990). Older workers become more committed for a variety of reasons, such as having "cognitively" justified their remaining in an organisation (Meyer and Allen, 1984). However, age is also expected to be positively related to continuance commitment, because, as observed by March and Simon (1958), " as age (and tenure) in the organisation increases, the individual's opportunities for alternative employment become more limited". But results from the present study fail to support this contention. This is probably due to the fact that another demographic variable, length of service or tenure, was also included in the regression equations, and its effects may have outweighed the effects of age. And as expected, in the total sample, length of service is positively related to both sub-dimensions of continuance commitment; and for the private sector, to one sub-dimension: lack of employment alternatives. This is in consistent with the observation by March and Simon's (1958).

3. Qualifications

Most research suggests that educational qualification is negatively related to affective organisational commitment: that is employees with less formal education

are more committed than the better educated employees (Angle and Perry, 1981; Brief and Aldag, 1980; Hrebiniak and Alutto, 1972; Mathieu and Zajac, 1990). Though the data in this study fails to support the existence of significant relationships between qualifications and affective commitment, there is a significant positive relationship between qualifications and one of the continuance commitment dimensions - high cost of leaving. This relationship is evident in the total sample as well in the private sector sub-sample. In the private sector, new employees are usually hired to perform duties at the lowest level of operation (in this case they will often start work as production operators) regardless of the academic qualifications. But those with higher qualifications have more opportunities for further training and promotions to higher levels (e.g. as line or shift supervisors). Therefore, employees who have higher qualifications perceive that to leave their present organisations would be costly because they will have to forego the opportunities for promotions.

4. Salary

In this study, for the government sub-sample, salary exhibits a significant negative relationship with affective commitment, which is contrary to what has been found by Mathieu and Zajac (1990), Alvi and Ahmed (1987) and Knoop (1994). This is quite surprising because salary or income is thought to be related to self-esteem (Mathieu and Zajac, 1990). Those with higher salary may have higher self-esteem, and therefore they are expected to be more committed. One explanation which may be offered for the negative relationship obtained in this study is that employees with higher levels of salary (in the government sector) are also those with longer service,

and they might have reached the maximum in their salary scales. They have nothing to look forward to. This may create a sense of alienation, which is opposite to commitment.

QWL Variables

1. Growth and development

This variable exhibits significant positive relationships with affective commitment in the government as well as the private sector sub-samples. For the government sub-sample, it is also positively related to continuance commitment (high cost) and normative commitment. With regard to affective commitment, the positive relationship obtained in this study is similar to other research findings on the relationships between job characteristics and organisational commitment. Mathieu and Zajac (1990) and Steers (1977) found that job scope and challenge is positively related to organisational commitment. In another study, Mottaz (1988) found that interesting, meaningful and autonomous tasks are positively related to organisational commitment. Associated with growth and development is promotional opportunities, which was also found to be positively related to organisational commitment (Mottaz, 1989; Kalleberg and Reve, 1992 and Knoop, 1994).

The positive relationship between growth and development and affective commitment may also be viewed in relation to social exchange theory. Essentially, social exchange theory suggests that an employee's inferences about the organisation's commitment to him/her contributes to the employee's subsequent

commitment to the organisation (Shore and Tetrick, 1991). Opportunities for growth and development provided by an organisation to its employees may be construed as a sign of the organisation's commitment to the employees.

Again, social exchange theory could also be used to explain the positive relationship between growth and development and continuance commitment (high cost). According to Etzioni (1961), employees become committed to an organisation because they see a beneficial or equitable exchange relationship between their contributions to the organisation and the rewards they receive. Opportunities for growth and development, such as training, may be considered as one such reward. Promotional or training opportunities provided by an organisation to its employees are, in Becker's (1960) view, forms of side bets. Side bets are investments in the organisation which serve to bind the employee to the organisation. And, as suggested by Kanter (1968), such investment is an important mechanism for producing member continuance. To the extent that such investments are seen as irreversible, they provide employees with a personal stake in the fate of the organisation as well as making leaving costly (Shore and Tetrick, 1991).

Growth and development is also positively related to normative commitment. Unfortunately, there is little in the literature with which comparison may be made concerning this relationship. It may be speculated that employees who perceive their organisations as providing sufficient opportunities for growth and development would feel obliged to remain.

2. Participation Opportunities

This factor has significant positive relationships with both affective and normative commitment in the total sample and also in the semi-government sub-sample. As participation leads to involvement in the workplace, employees who perceive that they are given such opportunities would be more committed. This finding is consistent with the results obtained by Mottaz (1988) in his study of determinants of organisational commitment.

This positive relationship could also be explained from the perspective of the communication model of organisational commitment suggested by Gorden and Infante (1991). Participation, as operationalised in this study, includes opportunities for employees to contribute ideas to their supervisors. Participation, thus defined, can be viewed as an indicator of the presence of freedom of speech which was found by Gorden and Infante to be a positive predictor of organisational commitment. Participation by employees in decisions relating to their work would also allow them to have influence over work; this was found by Knoop (1994) to be positively related to organisational commitment. Increased participation and communication would allow employees to be better informed of the goals and values of the organisation, leading to increased feelings of responsibility and job involvement (DeCotiis and Summers, 1987).

3. Physical Environment

Results of this study show that this QWL factor has significant positive relationships with affective commitment in the total sample and also in the semi-government sub-sample. For the semi-government sub-sample it is also positively related to continuance commitment - high cost of leaving. The positive relationship between physical environment and organisational commitment lends support to Lachman and Aranya (1986) and to Near (1989), who found organisational context or setting to be a significant antecedent of organisational commitment. This finding is also supportive of Knoop's (1994) study which indicated "working convenient hours" and "having pleasant working conditions" as positive correlates of organisational commitment. The physical layout of a factory or office in an organisation contributes to its attractiveness (Steele and Jenks, 1977). To the extent that the physical environment of an organisation is perceived to be favourable by its employees, a feeling of liking the organisation would develop, thus leading to commitment.

The positive relationship between this factor and continuance commitment (high cost) is not conclusive. It was evident only in the semi-government sub-sample. This may be due the fact that employees in such organisations attach an economic value to the physical environment of their organisations. It would be difficult for them to leave their present organisations for fear of not getting the same physical environment elsewhere. Leaving their organisations would require them to sacrifice

their present work arrangements (for example convenient working hours and good surroundings) for something uncertain in other organisations.

4. Supervision

The effects of supervisory behaviour on organisational commitment has been studied by a number of researchers (e.g. Ismail, 1990; Roth, 1992; Leiter and Maslach, 1988). Most of the studies found that supervisory behaviour is positively related to (affective) organisational commitment, but the data in this study is not supportive of the presence of such a relationship.

Supervision, however, has been shown to be significantly related to continuance commitment (high cost) in the total sample as well as in the semi-government sub-sample. In the government sub-sample, it is significantly related to continuance commitment (lack of alternatives). The relationship between supervision and the high cost sub-dimension (total sample and semi-government sub-sample) is negative, indicating that employees who perceive their supervisors as showing concern for their welfare or having confidence in their abilities would feel that it is not costly for them to leave the organisations. The reason for this is unclear.

The relationship between supervision and continuance commitment (lack of alternatives) in the government sub-sample is positive, indicating that employees who have good perceptions towards their supervisors would find it difficult to leave.

This relationship is consistent with findings reported in the literature (e.g. Iverson and Roy, 1994).

5. Pay and Benefits

Results in this study clearly indicate that, in the total sample, this factor is positively related to all the commitment dimensions. For the government sub-sample, it is not significantly related to any of the commitment dimensions. In the semi-government sub-sample, it is positively related to three of the commitment dimensions: affective, continuance (high cost) and normative. With regard to the private sector, this QWL factor is positively related to two dimensions: affective and normative.

The positive relationship between pay and continuance commitment (high cost of leaving) is expected because those who are satisfied with their current pay may find it costly to leave, as suggested by the "side-bet" theory of commitment (Becker, 1960). Furthermore, the Malays (who form the majority of the sample) are less tolerant of uncertainty (Friberg, 1991); hence would find it difficult to leave their present organisations for something yet uncertain in other places.

The factor's positive relationship with affective commitment could be explained from the viewpoints of 'perceived organisational support' (Eisenberger et al., 1986). The authors suggest that commitment among employees develops if they believe that their organisations value their contributions and care about their well-being. Pay

and other rewards are forms of recognition which may be seen as signs of a 'caring' organisation.

6. Social Relevance

Social relevance has been shown to be positively related to affective commitment in the total sample as well as in all the sub-samples. This relationship indicates that employees who feel they are able to make worthwhile contributions to society through their jobs would tend to be more affectively committed. This is consistent with Knoop's finding that employees who perceive they are "making a contribution to society" tend to be more committed to their organisations (Knoop,1994).

7. Workplace Integration

Results of regression analysis obtained in this study demonstrate that workplace integration has a positive relationship with affective commitment in the total sample and also in the government and semi-government sub-samples. This finding lends support to Iverson and Roy (1994), who found that "work group cohesion" is a significant predictor of organisational commitment. In another study, Maslach and Leiter (1988) found that supportive contact with co-workers is a factor in the enhancement of organisational commitment. Employees who feel that they belong to the group would tend to be more committed because "employees who have close friends at work are less likely to leave" (Iverson and Roy, 1994).

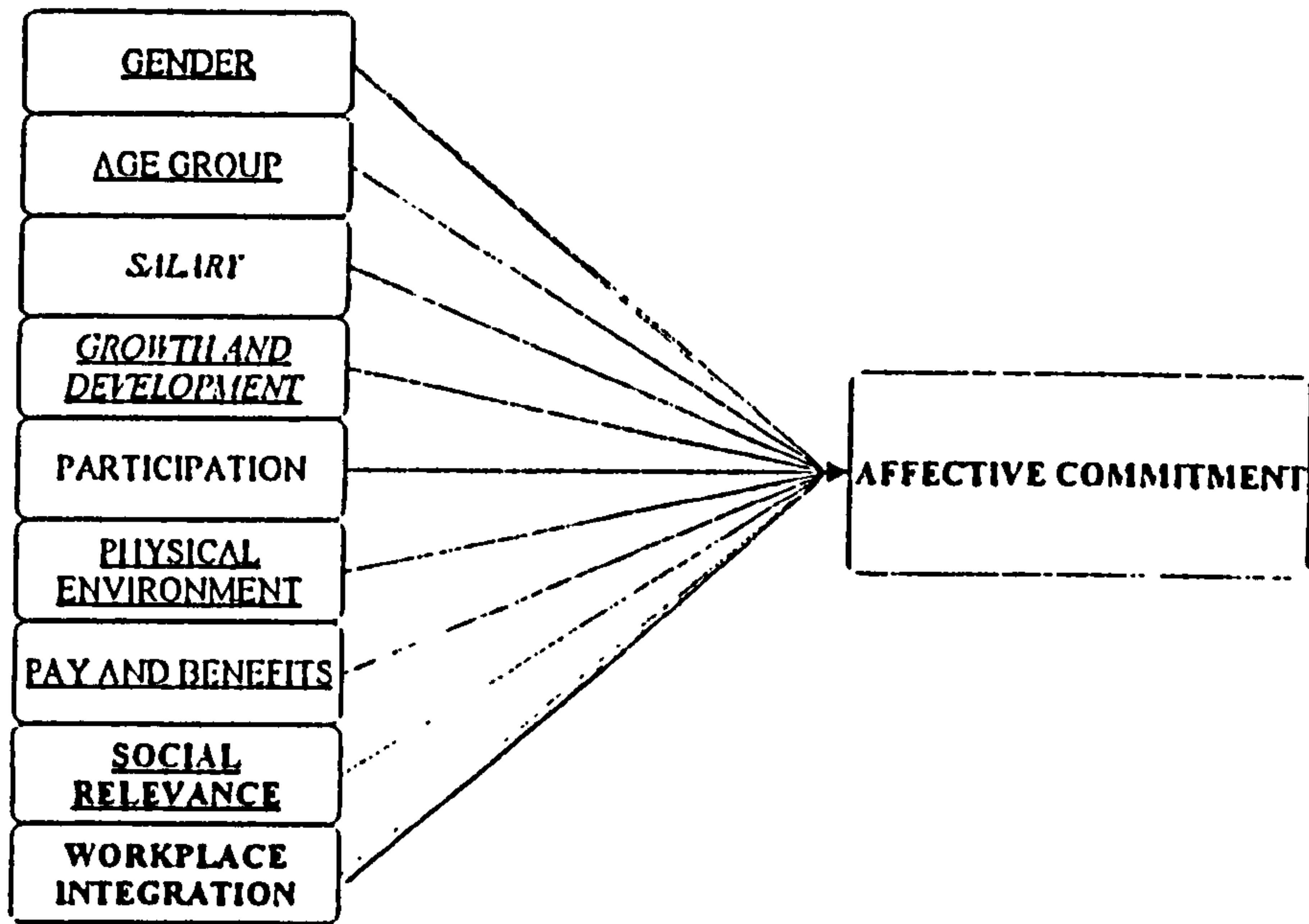
9.3.5 Proposed Models of Organisational Commitment

Based on the findings from regression analysis, the following models of organisational commitment are proposed. The models indicate significant relationships between the antecedent variables and the separate dimensions of organisational commitment. The models are shown in Figures 9.1, 9.2, 9.3 and 9.4.

1. Affective Commitment

Data from this study indicates that the antecedents of affective commitment are:

- gender
- growth and development
- pay and benefits
- age group
- participation
- social relevance
- salary
- physical environment
- workplace integration



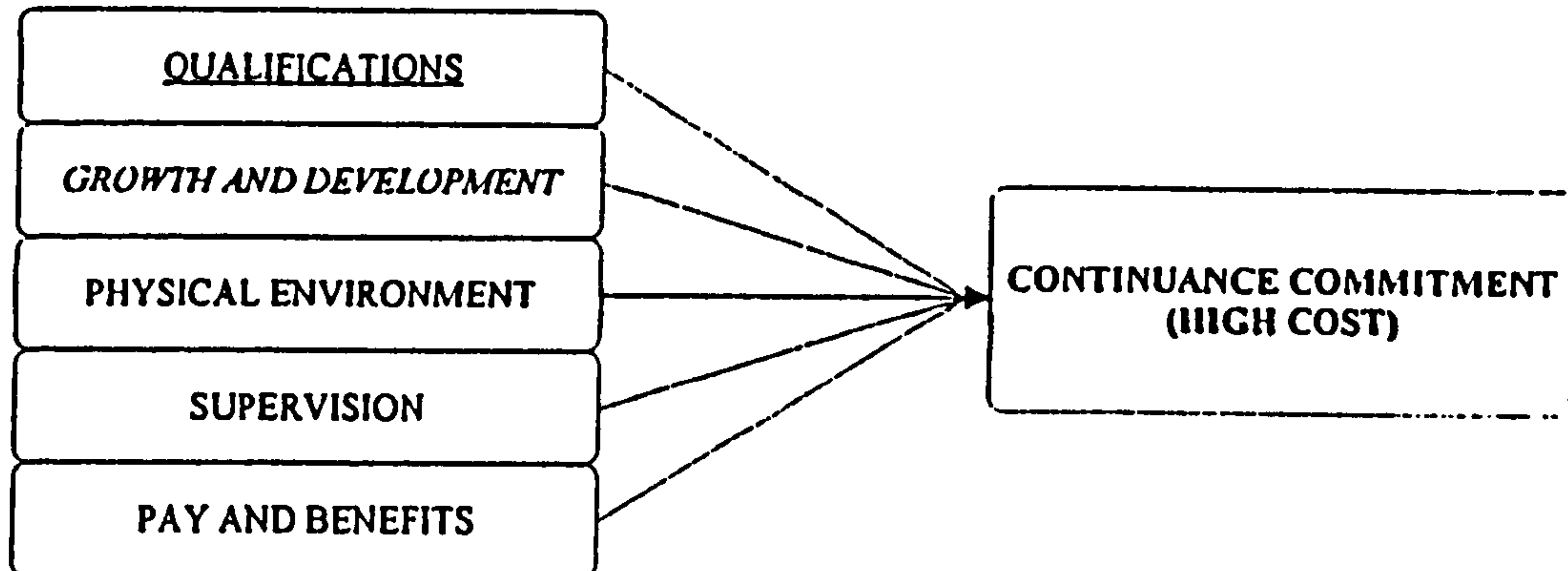
Key for prints used in antecedent variables:
 Underlined bold : all three types of organisations
 Bold: government and semi-government organisations
 Underlined regular : private organisations
 Regular : semi-government organisations
 Italic : government organisations
 Underlined italic : government and private organisations

Figure 9.1 Antecedents of Affective Commitment

2. Continuance Commitment (High Cost of Leaving)

Factors which have been shown to exhibit significant relationships with continuance commitment (high cost) are:

- qualifications
- growth and development
- physical environment
- supervision
- pay and benefits



Key for prints used in antecedent variables:

Italic : government organisations

Regular : semi-government organisations

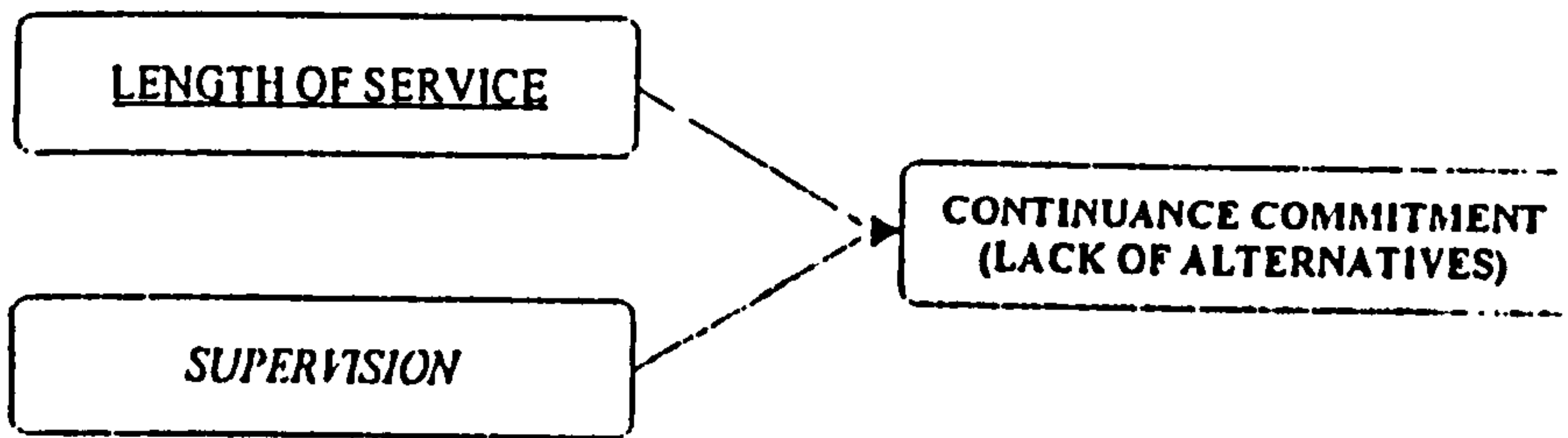
Underlined regular : private organisations

Figure 9.2 Antecedents of Continuance Commitment (High Cost)

3. Continuance Commitment (Lack of Employment Alternatives)

Factors which exhibit significant relationships with continuance commitment (lack of alternatives) are:

- length of service, and
- supervision



Key for prints used in antecedent variables:

Italic : government organisations

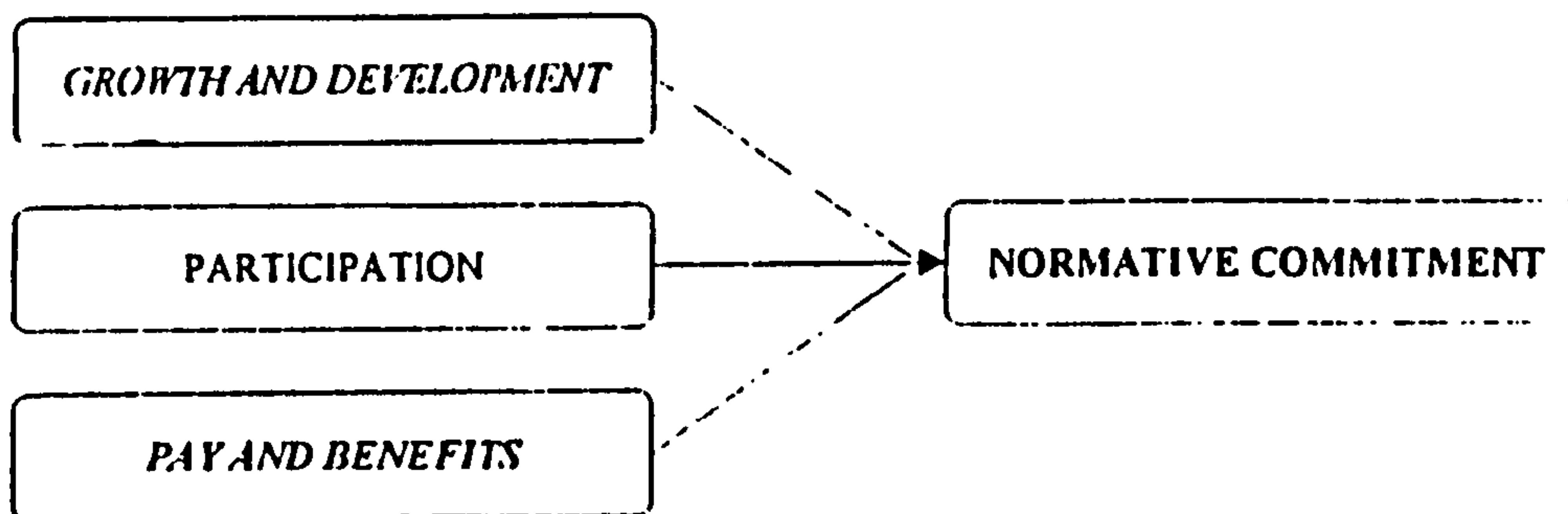
Underlined regular : private organisations

Figure 9.3 Antecedents of Continuance Commitment (Lack of Alternatives)

4. Normative Commitment

Factors which are significantly related to normative commitment are:

- growth and development
- participation
- pay and benefits



Key for prints used in antecedent variables:

Italic : government organisations

Regular : semi-government organisations

Bold italics: semi-government and private organisations

Figure 9.4 Antecedents of Normative Commitment

9.4 Implications and Suggestions for Future Research

This section is divided into three sub-sections. The first sub-section outlines some implications for the development of management theories, particularly theories of QWL and organisational commitment. The second sub-section discusses some implications for management practices particularly for organisations in Malaysia. And the third sub-section provides some suggestions for future research in the area of QWL and organisational commitment.

9.4.1 Theoretical Implications

This study was conducted in Malaysia, which is a developing country in Southeast Asia, using management concepts which originated from so-called "western culture". To some extent, the results of this study lend some support to the theory of cultural relativity in management. Malaysia's culture is predominantly collectivist, as opposed to the more individualist culture of many western countries (especially the United States and Britain). Results pertaining to the degree of importance of the QWL factors provide indications that the factor which reflects collectivism - workplace integration - was ranked among the highest.

With regard to the dimensionality of the Meyer and Allen's organisational commitment measure, there appears to be a convergence between the results of the present study and the results obtained from studies conducted in the western culture (see, for example, McGee and Ford, 1987). In terms of theoretical development this convergence indicates that, though different cultures demonstrate different work values, there are certain aspects of management which may be universally applied.

The organisational commitment model used in this study is one such aspect. This indicates that variations in work values across cultures do not necessarily preclude the presence of some attitudinal and behavioural commonality in those cultures. The concepts of "etic" and "emic", borrowed from linguistics and anthropology, are frequently used to explain the presence of such phenomena in cross-cultural research. Etic constructs are concepts with proven cross-cultural validity, whereas emic concepts, on the other hand, have culture-specific validity (Sperber et al., 1994). The concept of organisational commitment is built upon the notions of exchange, congruency of values and irrevocability. The similarities that exist between the results obtained in this study and the results obtained by western researchers indicate to some extent that the theoretical basis upon which organisational commitment is conceptualised and measured is cross-culturally valid.

9.4.2 Implications for Management Practices

The findings of this research may provide some insights into the practice of effective management in Malaysia, especially in efforts to improve the quality of working life and organisational commitment among the non-supervisory employees.

Some suggestions are presented here.

Sense of security, as represented by the physical environment dimension, seems to be one of the most important QWL factors among the respondents in this study. As discussed earlier, this is particularly important for female workers in private organisations. In view of this, management in private organisations, especially in

factories where female employees are required to work in shifts, should consider taking extra measures to improve the physical environment of their organisations. Of particular importance is the provision of hostels or transportation facilities for workers. This would reduce feelings of insecurity among the female workers who sometimes are required to be at the bus stops in early and dark hours of the morning (Lie, 1994).

Moreover physical environment has been shown in this study to be a significant predictor of affective commitment. By improving the physical environment (which includes having a safe workplace and convenient working hours), employees would be expected to be more committed to the organisation.

Workplace integration has been indicated by the respondents in this study as an important factor in determining QWL, and it is a significant antecedent of organisational commitment in the government and semi-government sub-samples. It is therefore suggested that, in order to develop a sense of commitment among the public sector organisations, efforts at providing more opportunities for the workers to establish interpersonal relationships in the workplace should be undertaken. One such effort might include team-building activities among the non-supervisory employees. Team building helps groups to improve the way they accomplish tasks and group members to enhance their interpersonal and problem-solving skills. It is a mechanism through which members' contributions and resources may be maximised, especially in solving problems related to their work.

Social relevance, which has been operationally defined to include the ability to make contributions to society, is another QWL factor which is significantly related to organisational commitment. Employees in the private sector indicated that this aspect is lacking in their organisations. Though this may not be true in reality, judging from the contributions of the private sector in the development of the country, what matters here is the perceptions the employees have about their jobs in relation to the society's welfare. Employees may not be able to see how their jobs in the private sector contribute to the betterment of their fellow citizens. It is therefore necessary that steps to correct this general misconception among lower-level employees in the private sector should be taken by management. This may be done through socialisation activities and briefings carried out at the beginning of an individual's employment with the organisation. New employees should be made aware of their roles in the organisation, not only for the attainment of the immediate organisational objectives, but also for the development of nation as a whole. These activities may help in rectifying the misconceptions that workers may have.

Pay and benefits, though it was indicated by the respondents as among the least important QWL factors, has been shown to be a significant antecedent of affective commitment in the semi-government and the private sector organisations. It is not the actual pay that matters (salary is not significantly related to affective commitment in these sub-samples) but the perceptions of the adequacy of their pay and benefits. These perceptions are formed out of the comparisons made with what their friends, with the same qualifications, are getting in other organisations.

Monthly pay is only part of the reward system. Other benefits, such as transportation, health care or accommodation facilities may be extended to employees to compensate for their willingness to work for lesser pay.

9.4.3 Suggestions for Further Research

The results of factor analyses indicate that the seven dimensions purported to represent the concept of QWL were not adequately conceptualised. Two factors from the preferred QWL measure failed to achieve the minimum eigenvalue of one (0.83 for both social relevance and workplace integration). For perceived QWL, three factors did not quite reach the minimum eigenvalue: supervision (0.99), social relevance (0.94) and pay and benefits (0.90). It is suggested that further efforts at conceptualising the QWL dimensions be undertaken. In order to adequately represent the dimensions of QWL, it is suggested that more items be generated to represent each of the dimensions.

The sample in this study comprises non-supervisory employees. The work values (with regard to QWL and organisational commitment) among all employment categories in Malaysia therefore cannot be compared. Future research should include a much wider sample. This would allow comparisons be made on the effects of QWL on organisational commitment across occupational groups.

The factor structure of QWL and organisational commitment in this study was examined by the application of exploratory factor analysis techniques. The results therefore are not conclusive. It is suggested that future research should employ

techniques of confirmatory factor analysis to examine the factor structure of the constructs.

The research design adopted for this study is cross-sectional in nature. It therefore did not examine the effects of changes in aspects of QWL that may have taken place in the organisations sampled. To examine the effects of these changes, a longitudinal study should be carried out. This approach would enable researchers to analyse the effects of organisational changes on QWL and in turn the effects of changes in QWL on organisational commitment.

9.5 Conclusions

This research studied two aspects of work-related attitudes among non-supervisory employees in Malaysia. This chapter presented a summary of the research findings obtained in this study. The following findings merit attention:

- Though the dimensions of organisational commitment are, in general, consistent with the three-component model suggested by Allen and Meyer (1990), the continuance commitment is further divided into two sub-dimensions: high cost of leaving, and perceived lack of employment alternatives. This provides support for McGee and Ford (1987).

- QWL factors account for the highest percentage of variance in affective commitment, suggesting that they are more related to affective than the other dimensions of commitment.
- The overall QWL measure developed in this study exhibits acceptable psychometric properties. It may therefore be used in future research investigating similar phenomena.

The findings were also discussed in the context of similar research reported in the literature. In general, this research has shown that some aspects of management are cross-culturally applicable, while others are more culturally specific. The factorial structure relating to the dimensions of organisational commitment obtained in this study is consistent with results obtained by researchers using other samples from other cultures. These provides support for its generalisability, irrespective of the culture.

In respect of the importance of QWL factors, cultural elements may have influenced their order of priority. Malaysia is widely regarded as a society of high collectivism (as opposed to individualism) and high power distance. This assumption seems to be supported by the data in this study. A collectivism-oriented QWL factor, workplace integration, has been found to be among the most important factors. Power distance is reflected in the high degree of importance given to supervision.

Implications for management practice and research were also presented. Suggestions were based on the more important findings of this study. Suggestions relating to improvements in the physical environment, social relevance, integration, and pay and benefits were offered. A number of suggestions were also offered for future research. The use of confirmatory factor analysis is an avenue which might be taken to obtain more conclusive evidence on the dimensions of organisational commitment. The construct and dimensions of QWL might be further refined by expanding the pool of items representing the various dimensions. A longitudinal research design, which is seldom used in organisational research, might also be adopted in future research to examine the effects of changing QWL on organisational commitment.

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APPENDIX A

Saudara/Saudari Yang Dihormati

TINJAUAN MENGENAI SIKAP TERHADAP PEKERJAAN DAN ORGANISASI

Soalselidik ini adalah sebahagian daripada kajian mengenai sikap pekerja-pekerja terhadap pekerjaan dan organisasi. Hasil kajian ini akan menambahkan kefahaman kita tentang faktor-faktor yang mempengaruhi sikap pekerja-pekerja terhadap pekerjaan mereka. Seterusnya ini dapat membantu usaha-usaha untuk mempertingkatkan kepuasan kerja di dalam organisasi.

Ini bukanlah ujian, dan tidak ada jawapan yang betul ataupun salah. Saudara/Saudari diminta memberikan jawapan yang jujur dan ikhlas terhadap soalan-soalan yang dikemukakan. Jawapan anda akan dirahsiakan. Penyelidik akan hanya menggunakan jawapan-jawapan yang anda berikan itu untuk tujuan kajian ini semata-mata. Tiada sesiapaupun, sama ada di dalam ataupun di luar organisasi anda yang akan melihat jawapan-jawapan yang anda berikan.

Sila jawab semua soalan. Kerjasama anda sangat penting di dalam menjayakan kajian ini, dan ini sangat-sangat kami hargai.

Sila kembalikan soalselidik yang telah disempurnakan kepada saya dengan menggunakan sampul surat yang disediakan.

Terima kasih.

Yang benar

ALI YUSOB BIN MD ZAIN
Pensyarah
Sekolah Ekonomi



BAHAGIAN A: BUTIR-BUTIR PERIBADI ANDA

Soalan-soalan berikut adalah berkenaan dengan latarbelakang peribadi anda. Sila tandakan pada kotak-kotak yang berkenaan.

1. Jantina anda?
 1. Lelaki
 2. Perempuan

2. Umur anda?
 1. 25 tahun ke bawah
 2. 26 - 35 tahun
 3. 36 - 45 tahun
 4. 45 tahun ke atas

3. Taraf perkahwinan anda?
 1. Berkahwin
 2. Bujang

4. Keturunan anda?
 1. China
 2. Melayu
 3. India
 4. Lain - lain

5. Kelulusan akademik tertinggi yang anda perolehi?
 1. Sijil Rendah Pelajaran (*atau setaraf*) ke bawah
 2. Sijil Pelajaran Malaysia (*atau yang setaraf dengannya*)
 3. Sijil Tinggi Persekolahan Malaysia (*atau setaraf*)
 4. Sijil Politeknik / Institut Kemahiran (*atau setaraf*)
 5. Lain - lain (*sila nyatakan*).....

6. Jenis organisasi tempat anda bekerja?
 1. Jabatan Kerajaan
 2. Badan Berkanun atau Separuh Kerajaan
 3. Swasta

7. Lamanya anda bekerja dengan organisasi sekarang?
 1. 3 tahun ke bawah
 2. 4 hingga 6 tahun
 3. 7 hingga 9 tahun
 4. 10 hingga 12 tahun
 5. 12 tahun ke atas

8. Jumlah gaji bulanan yang anda perolehi?
 1. RM 400 ke bawah
 2. RM 401 - RM 600
 3. RM 601 - RM 800
 4. RM 801 - RM 1,000
 5. RM 1,000 ke atas

BAHAGIAN B: KEUTAMAAN ANDA DALAM PEKERJAAN

Bahagian ini mengandungi soalan-soalan mengenai keutamaan-keutamaan anda di dalam pekerjaan. Sila bulatkan jawapan yang paling sesuai dengan keutamaan anda.

1. Tidak Penting Samasekali
2. Tidak Penting
3. Tidak Pasti
4. Penting
5. Sangat Penting

	Tidak Penting Samasekali			Sangat Penting	
9. Pekerjaan yang memberi peluang untuk anda memperkembangkan dan memajukan diri anda	1	2	3	4	5
10. Pekerjaan yang membolehkan anda menggunakan berbagai-bagai kemahiran	1	2	3	4	5
11. Pekerjaan yang mencabar	1	2	3	4	5
12. Organisasi yang membuka peluang untuk anda mengemukakan pendapat dan cadangan kepada penyelia anda	1	2	3	4	5
13. Organisasi yang menyediakan sistem cadangan berkesan	1	2	3	4	5
14. Organisasi yang sentiasa melaksanakan cadangan para pekerja	1	2	3	4	5
15. Organisasi yang menyediakan persekitaran pekerjaan yang selamat	1	2	3	4	5
16. Organisasi yang menyediakan persekitaran fizikal yang baik	1	2	3	4	5
17. Organisasi yang menyediakan waktu kerja yang selesa	1	2	3	4	5
18. Penyelia yang yakin dengan kemampuan dan kebolehan anda	1	2	3	4	5
19. Penyelia yang boleh mewujudkan suasana kerja berpasukan	1	2	3	4	5
20. Penyelia yang prihatin (mengambil berat) tentang kebajikan pekerja-pekerja di bawah jagaannya	1	2	3	4	5

Tidak Penting
Samasekali

Sangat
Penting

21. Organisasi yang menawarkan gaji yang baik

1 2 3 4 5

22. Sistem upah yang berdasarkan merit
(kebolehan seseorang)

1 2 3 4 5

23. Organisasi yang menyediakan kemudahan-
kemudahan sampingan yang baik

1 2 3 4 5

24. Pekerjaan yang membolehkan anda
memberikan sumbangan kepada
kesejahteraan masyarakat

1 2 3 4 5

25. Pekerjaan yang membolehkan anda
meneruskan minat-minat anda yang lain

1 2 3 4 5

26. Pekerjaan yang selaras dengan dengan
pegangan nilai hidup anda

1 2 3 4 5

27. Suasana kerja di mana setiap orang
bekerjasama sebagai sebuah pasukan

1 2 3 4 5

28. Rakan-rakan sekerja yang memberikan
sokongan antara satu sama lain

1 2 3 4 5

29. Pekerjaan yang membolehkan menjalinkan
hubungan dengan orang lain

1 2 3 4 5

BAHAGIAN C: SUASANA PEKERJAAN ANDA

Bahagian ini ingin meninjau tanggapan anda mengenai suasana pekerjaan di dalam organisasi anda. Cuba nilaikan suasana pekerjaan anda dengan seberapa tepat yang boleh. Sila bulatkan pilihan yang paling sesuai dengan tanggapan anda.

1. Amat Tidak Bersetuju
2. Tidak Bersetuju
3. Tidak Pasti
4. Bersetuju
5. Amat Bersetuju

	Amat Tidak Bersetuju			Amat Bersetuju	
30. Pekerjaan yang saya lakukan ini memberi peluang yang secukupnya untuk saya maju dan ber kembang	1	2	3	4	5
31. Tugas yang saya lakukan di dalam pekerjaan ini melibatkan berbagai-bagai kemahiran	1	2	3	4	5
32. Pekerjaan yang saya lakukan ini mencabar	1	2	3	4	5
33. Saya diberi peluang yang secukupnya untuk mengemukakan cadangan dan idea kepada penyelia saya	1	2	3	4	5
34. Organisasi ini menyediakan sistem cadangan yang berkesan untuk pekerja-pekerjanya	1	2	3	4	5
35. Organisasi ini melaksanakan cadangan-cadangan yang dikemukakan oleh pekerja-pekerjanya	1	2	3	4	5
36. Persekitaran kerja di dalam organisasi ini adalah selamat	1	2	3	4	5
37. Keadaan sekeliling organisasi ini adalah baik	1	2	3	4	5
38. Masa bekerja di dalam organisasi ini adalah memuaskan	1	2	3	4	5
39. Penyelia saya menaruh keyakinan terhadap kebolehan saya	1	2	3	4	5
40. Penyelia berupaya untuk mewujudkan suasana kerja secara berpasukan	1	2	3	4	5

Helai 4/7

Amat Tidak
Bersetuju

Amat
Bersetuju

41. Penyelia saya memperlihatkan rasa prihatin (ambil berat) terhadap pekerja-pekerja bawahannya

1 2 3 4 5

42. Gaji yang ditawarkan oleh organisasi ini adalah memuaskan

1 2 3 4 5

43. Sistem upah di dalam organisasi ini adalah berasaskan kepada merit (kebolehan pekerja)

1 2 3 4 5

44. Faedah-faedah sampingan yang diberikan oleh organisasi ini adalah baik

1 2 3 4 5

45. Pekerjaan yang saya lakukan ini membolehkan saya menyumbang kepada kesejahteraan masyarakat

1 2 3 4 5

46. Kerja saya di dalam organisasi ini tidak menghalang saya daripada meneruskan minat saya yang lain

1 2 3 4 5

47. Kerja yang saya lakukan ini selaras dengan nilai yang saya pegang

1 2 3 4 5

48. Pekerja-pekerja di dalam organisasi ini bekerja sebagai sebuah pasukan

1 2 3 4 5

49. Pekerja-pekerja di dalam organisasi ini sentiasa memberikan sokongan antara satu sama lain

1 2 3 4 5

50. Pekerjaan saya dalam organisasi ini membolehkan saya menjalinkan hubungan dengan orang lain

1 2 3 4 5

BAHAGIAN D: PERASAAN ANDA TERHADAP ORGANISASI

Bahagian ini mengandungi pernyataan-pernyataan yang menggambarkan perasaan yang mungkin dialami oleh pekerja-pekerja terhadap organisasi. Bagi setiap pernyataan, sila bulatkan pilihan terbaik yang dapat menggambarkan perasaan anda terhadap organisasi ini.

	Amat Tidak Bersetuju			Amat Bersetuju	
51. Saya berbangga kiranya dapat bekerja dengan organisasi ini sepanjang kerjaya saya	1	2	3	4	5
52. Saya merasa seronok apabila berbincang tentang organisasi ini dengan orang-orang luar	1	2	3	4	5
53. Saya menganggap masalah organisasi ini seperti masalah saya sendiri	1	2	3	4	5
54. Saya tidak fikir hati saya akan merasa terpaut dengan sebuah organisasi lain sepertimana yang saya rasai dengan organisasi ini	1	2	3	4	5
55. Saya merasa saya adalah "sebahagian dari keluarga" dalam organisasi ini	1	2	3	4	5
56. Saya merasa hati saya terpaut dengan organisasi ini	1	2	3	4	5
57. Organisasi ini memberi makna kepada hidup saya	1	2	3	4	5
58. Saya merasa perasaan kekitaan terhadap organisasi ini	1	2	3	4	5
59. Sukar bagi saya untuk meninggalkan organisasi ini sekarang, walaupun saya ingin berbuat demikian	1	2	3	4	5
60. Hidup saya akan terganggu kiranya saya mengambil keputusan untuk meninggalkan organisasi ini sekarang	1	2	3	4	5
61. Saya bimbang apa yang akan berlaku kiranya saya berhenti kerja tanpa ada pekerjaan lain sebagai ganti	1	2	3	4	5
62. Meninggalkan organisasi ini sekarang bermakna saya terpaksa menanggung kos yang mahal	1	2	3	4	5
63. Saya berada di dalam organisasi ini sekarang adalah kerana keperluan bukannya kerana keinginan	1	2	3	4	5

Amat Tidak
Bersetuju

Amat
Bersetuju

64. Saya merasakan saya tidak mempunyai banyak pilihan yang membolehkan saya berhenti kerja di sini
65. Akibat serius meninggalkan organisasi ini ialah kemungkinan menghadapi masalah kekurangan pilihan pekerjaan
66. Salah satu sebab utama kenapa saya terus bekerja dengan organisasi ini ialah kerana ia memerlukan pengorbanan untuk keluar - organisasi lain mungkin tidak dapat menandingi faedah-faedah yang saya perolehi di sini
67. Saya rasa pekerja-pekerja sekarang terlalu kerap bertukar dari sebuah organisasi ke sebuah organisasi yang lain
68. Saya rasa seseorang itu mestilah sentiasa setia kepada organisasinya
69. Pada saya, perbuatan melompat dari sebuah organisasi ke sebuah organisasi lain merupakan perbuatan yang tidak baik
70. Saya percaya bahawa kesetiaan merupakan unsur penting, oleh itu saya merasa bertanggungjawab untuk terus kekal di dalam organisasi ini
71. Sekiranya saya mendapat tawaran kerja yang lebih baik di tempat lain, saya rasa adalah tidak baik untuk saya meninggalkan organisasi ini
72. Saya diasuh untuk mempercayai pentingnya kesetiaan yang berterusan terhadap sesebuah organisasi
73. Adalah lebih baik sekiranya seseorang pekerja itu kekal dengan sebuah organisasi untuk sebahagian besar kerjaya mereka
74. Saya merasa bahawa keinginan seseorang untuk memperhambakan dirinya kepada sesebuah organisasi adalah suatu tindakan yang munasabah

1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

Terima kasih kerana sudi menjawab soalselidik ini. Sila masukkan ke dalam sampul yang disediakan dan kirimkannya kepada saya

Helain 7/7

SURVEY QUESTIONNAIRE (ENGLISH VERSION)

A SURVEY OF ATTITUDES TOWARDS WORK AND ORGANISATION

Dear Research Participant

This survey is part of a research on attitudes of employees towards their jobs and organisations. Results from this study would help us in the understanding of factors which influence employees' attitudes towards their jobs. It is hoped that the findings from this research would enable us to assist organisations in the efforts to improve job satisfaction.

This is not a test, and there is no right or wrong answer. You are requested to give frank response to each of the statements. Your responses will be treated in the strictest confidence. Your responses will be solely used for the purpose of this research. No one else will be allowed to see your responses.

You are requested to answer all questions. Your co-operation is very important for the success of this research, and is very much appreciated.

Please return the completed questionnaire directly to me using the envelope provided.

Thank you.

Yours sincerely

Ali Yusob Md Zain

Lecturer
School of Economics
Universiti Utara Malaysia

SECTION A: YOUR PERSONAL PARTICULARS

The following questions are about your personal background. Please mark your responses in the appropriate boxes.

1. Your sex?

1. Male
2. Female

2. Your age?

1. 25 years and below
2. 26 - 35 years
3. 36 - 45 years
4. 45 years and above

3. Your marital status?

1. Married
2. Single

4. Your ethnic group?

1. Chinese
2. Malay
3. Indian
4. Other

5. Your highest qualification?

1. Lower Certificate of Education (or equivalent) or less
2. Malaysian Certificate of Education (or equivalent)
3. Higher School Certificate (or equivalent)
4. Polytechnic/Trade Certificates (or equivalent)
5. Other (please specify) _____

6. Type of your organisation?

1. Government Department
2. Semi-Government
3. Private

7. Your length of service with the present organisation

1. 3 years and below
2. 4 - 6 years
3. 7 - 9 years
4. 10 - 12 years
5. More than 12 years

8. Your monthly salary?

1. RM400 and below
2. RM401 - RM600
3. RM610 - RM800
4. RM801 - RM1000
5. More than RM1000

SECTION B: YOUR WORK PREFERENCES

This section contains statements about works and organisations. Please circle the response that best describes your preference using the following scale

- 1. Not important at all
- 2. Not important
- 3. Undecided
- 4. Important
- 5. Very important

9. A job which provides opportunities for growth and development	1	2	3	4	5
10. A job which allows you to use a variety of skills	1	2	3	4	5
11. A job which is challenging	1	2	3	4	5
12. An organisation which allows you to give ideas and suggestions to your supervisor	1	2	3	4	5
13. An organisation which provides a good suggestion scheme	1	2	3	4	5
14. An organisation which puts employees' suggestion into operation	1	2	3	4	5
15. An organisation which provides a safe working environment	1	2	3	4	5
16. An organisation which provides good physical surroundings	1	2	3	4	5
17. An organisation which provides convenient working hours	1	2	3	4	5
18. A supervisor who has confidence in your abilities	1	2	3	4	5
19. A supervisor who is capable of making people work together as a team	1	2	3	4	5
20. A supervisor who is concern for the welfare of those under him/her	1	2	3	4	5
21. An organisation which offers good salary	1	2	3	4	5
22. A pay system which is based on merit	1	2	3	4	5
23. An organisation which provides good fringe benefits	1	2	3	4	5
24. A job which allows you to contribute to the welfare of society	1	2	3	4	5
25. A job which allows you to pursue other interests in life	1	2	3	4	5
26. A job which does not require you to violate your personal values	1	2	3	4	5
27. A work situation in which people work together as a team	1	2	3	4	5
28. Co-workers who provide support and encouragement to one another	1	2	3	4	5
29. A job which provides opportunities for you to get to know other people	1	2	3	4	5

SECTION C: YOUR WORKING CONDITIONS

This section seeks your opinions with regard to the working conditions in your organisation. Please be as objective as possible. Please circle the number which best describes your opinion about a particular statement, using the following scale

1. Strongly disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly agree

30. My job provides sufficient opportunities for my growth and development	1	2	3	4	5
31. My job allows me to use a variety of skills	1	2	3	4	5
32. My job is challenging	1	2	3	4	5
33. My organisation provides opportunities for me to give my ideas and suggestions to my supervisor	1	2	3	4	5
34. My organisation provides an effective suggestion scheme for its employees	1	2	3	4	5
35. My organisation implements suggestions put forward by its employees	1	2	3	4	5
36. The working environment in my organisation is safe	1	2	3	4	5
37. The physical surroundings of this organisation are good	1	2	3	4	5
38. The working hours in this organisation are good	1	2	3	4	5
39. My supervisor has confidence in my abilities	1	2	3	4	5
40. My supervisor is capable of making people work together as a team	1	2	3	4	5
41. My supervisor shows concern for the welfare of those working under him/her	1	2	3	4	5
42. The salary offered by this organisation is good	1	2	3	4	5
43. The pay system in this organisation is based on merit	1	2	3	4	5
44. The fringe benefits offered by this organisation are good	1	2	3	4	5
45. My job allows me to contribute to the welfare of society	1	2	3	4	5
46. My work in this organisation allows me to pursue other interests in life	1	2	3	4	5
47. My job in this organisation does not require me to violate my personal values	1	2	3	4	5
48. Employees in this organisation work together as a team	1	2	3	4	5
49. My co-workers provide support and encouragement to one another	1	2	3	4	5
50. My work in this organisation allows me to get to know other people	1	2	3	4	5

SECTION D : YOUR FEELINGS TOWARD THE ORGANISATION

This section contains a series of statements that represent possible feelings which individuals might have about the organisation for which they work. For each statement, circle the number which best describes your feeling, using the following scale:

- 1. Strongly disagree
- 2. Disagree
- 3. Undecided
- 4. Agree
- 5. Strongly agree

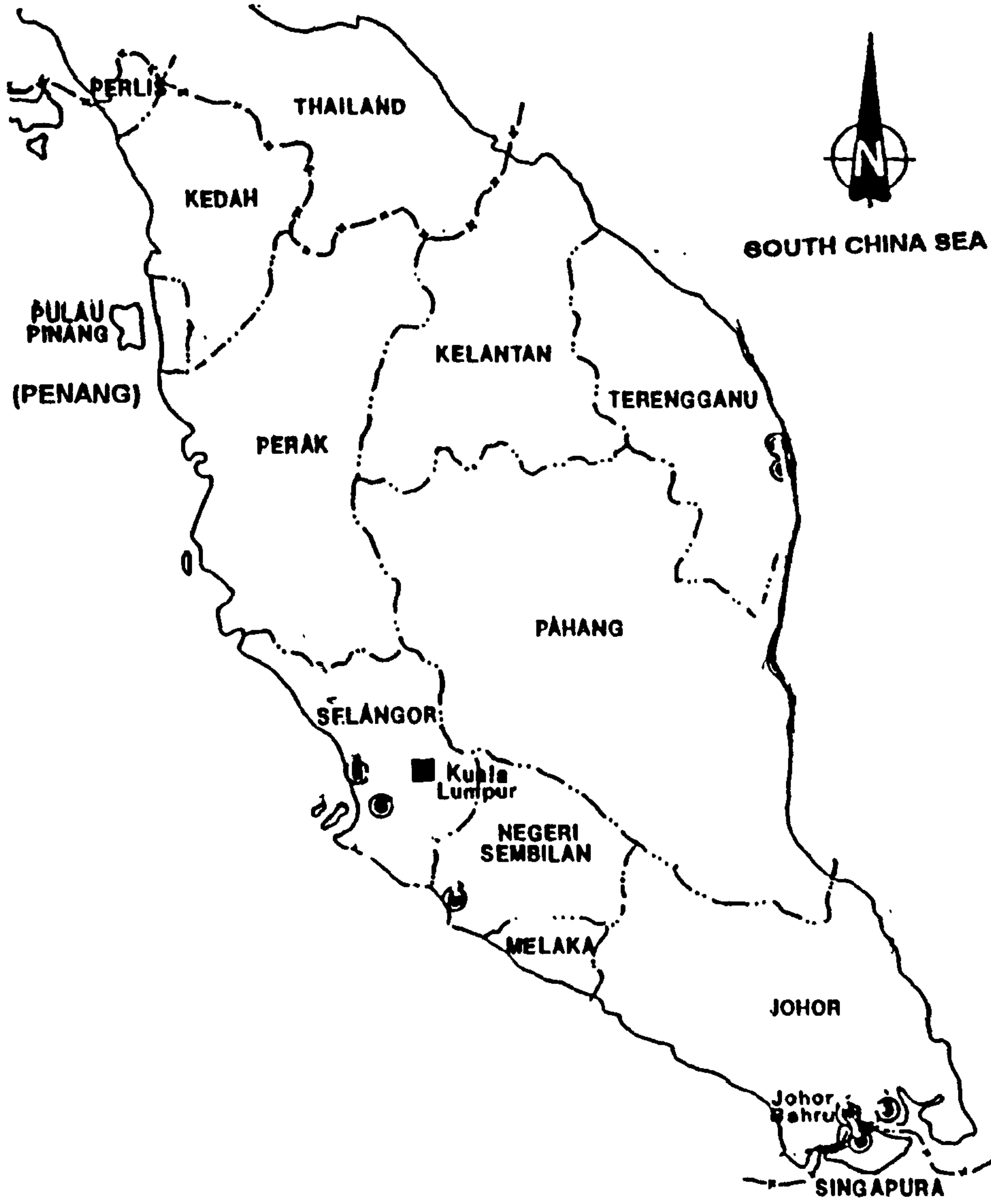
51. I would be happy to spend the rest of my career with this organisation	1	2	3	4	5
52. I enjoy discussing my organisation with people outside it	1	2	3	4	5
53. I feel as if this organisation's problems are my own	1	2	3	4	5
54. I do not think I could become as attached to another organisation as I am to this one	1	2	3	4	5
55. I feel like "part of the family" at my organisation	1	2	3	4	5
56. I am emotionally attached to this organisation	1	2	3	4	5
57. This organisation has personal meaning for me	1	2	3	4	5
58. I feel a strong sense of belonging to my organisation	1	2	3	4	5
59. It would be hard for me to leave my organisation right now, even if I wanted to	1	2	3	4	5
60. My life would be disrupted if I decided I wanted to leave my organisation now	1	2	3	4	5
61. I am afraid of what might happen if I quit my job without having another one lined up	1	2	3	4	5
62. It would be costly for me to leave my organisation now	1	2	3	4	5
63. Right now, staying with my organisation is a matter of necessity as much as desire	1	2	3	4	5
64. I feel that I have few options to consider leaving this organisation	1	2	3	4	5
65. One of the serious consequences of leaving this organisation would be the scarcity of available alternatives	1	2	3	4	5
66. One of the major reasons I continue working for this organisation is that leaving would require personal sacrifice - another organisation may not match the overall benefits I have here	1	2	3	4	5
67. I think people these days move from organisation to organisation too often	1	2	3	4	5
68. I believe that a person must always be loyal to his/her organisation	1	2	3	4	5

69. Jumping from organisation to organisation seems unethical to me	1	2	3	4	5
70. I believe that loyalty is important and therefore I feel a sense of moral obligation to remain	1	2	3	4	5
71. If I got another offer for a better job elsewhere I would not feel it was right for me to leave my organisation	1	2	3	4	5
72. I was taught to believe in the value of remaining loyal to one organisation	1	2	3	4	5
73. Things were better in the days when people stayed with one organisation for most of their careers	1	2	3	4	5
74. I think that to be a "company man" or "company woman" is sensible	1	2	3	4	5

This is the end of the questionnaire. Thank you for answering it. Please put your completed questionnaire in the envelope provided and mail it to me at your earliest convenience.

Thank you.

APPENDIX B : MAP OF PENINSULAR MALAYSIA



APPENDIX C

LIST OF ORGANISATIONS IN THE SAMPLING FRAME

A. GOVERNMENT

1. District Offices
2. District Councils
3. Drainage and Irrigation Department
4. Department of Agriculture
5. Registrar of Societies Department
6. Public Works Department
7. National Registration Department
8. Department of Immigration
9. Land Offices
10. Customs and Excise Department
11. Forestry Department
12. Economic Planning Unit
13. Department of the Environment

B. SEMI-GOVERNMENT

1. Lembaga Urusan dan Tabung Haji (Pilgrimage Administration and Fund)
2. Rubber Industries Smallholders Development Authority
3. Bank Pertanian (Agricultural Bank)
4. Universiti Utara Malaysia
5. Majlis Amanah Rakyat (MARA)
6. Kedah Regional Development Authority
7. Federal Land Consolidation and Rehabilitation Authority (FELCRA)
8. Federal Agricultural Marketing Authority
9. Muda Agricultural Development Authority
10. State Economic Development Corporation, Kedah
11. Malaysian Agricultural Research and Development Institute (MARDI)
12. Municipal Council, Seberang Prai, Penang

C. PRIVATE

1. Malaysian Commerce and Industrial Bank Berhad
2. Sharp Roxy Corporation
3. SDK Electronics
4. Matsushita Compressor
5. Mitsumi Electronics
6. Hong Hong Printing Company
7. Teco Industries
8. Chaun Chaun Corporation

9. Sime Tyres International Sendirian Berhad
10. Dunlop Malaysia Industries Berhad
11. Hewlett-Packard Sales Sendirian Berhad
12. Public Finance Berhad
13. Public Bank Berhad
14. Standard Chartered Bank
15. Bank Bumiputra Malaysia Berhad
16. Southern Bank Berhad
17. Malaysia French Bank Berhad
18. Ban Hin Lee Bank Berhad
19. Development and Commercial Bank Berhad
20. Permanis Sendirian Berhad
21. Tenaga Nasional Berhad
22. Pos Malaysia Berhad
23. Syarikat Telekom Malaysia Berhad
24. Perwaja Steel Sendirian Berhad
25. Overseas Chinese Banking Corporation Finance Berhad
26. Sony Electronics
27. Nippondenso
28. Hitachi Metal Electronics
29. Matsushita Electronics
30. Hitachi Semi-Conductor
31. Hong Leong Finance Berhad
32. Malayan Banking Berhad
33. MBF Finance
34. United Malaysian Banking Corporation (UMBC)
35. Inventec Electronics
36. Bank Islam Malaysia Berhad

APPENDIX D1



TO WHOM IT MAY CONCERN

Mr. Ali Yusob Md Zain is a doctoral student in Strathclyde Graduate Business School, University of Strathclyde, Glasgow, United Kingdom.

He is currently pursuing doctoral research on quality of work life and organisational commitment in selected Malaysian organisations. This research involves administration of questionnaires to selected employees in organisations. The purpose of the research is to determine the relative importance of various factors in influencing the employees' quality of working life, and to ascertain the nature of relationship of these factors with organisational commitment.

Any assistance which you may be able to give to Mr. Ali Yusob will be appreciated.

Thank you.

Yours sincerely

Professor Roger Gill
Professor of Business Administration

18 May 1994





Tuan/Puan

KAJIAN MENGENAI SIKAP PEKERJA TERHADAP PEKERJAAN DAN ORGANISASI

Saya adalah pensyarah Universiti Utara Malaysia yang sedang melanjutkan pelajaran di peringkat PhD dalam bidang Pengurusan di Strathclyde Graduate Business School, University of Strathclyde, Glasgow, UK. Pada masa ini saya sedang menjalankan suatu kajian mengenai pengaruh kualiti alam pekerjaan terhadap komitmen pekerja terhadap organisasi. Kajian ini bertujuan untuk menyediakan tesis bagi memenuhi keperluan ijazah berkenaan.

Organisasi tuan/puan telah dipilih untuk mengambil bahagian di dalam kajian ini. Kerjasama tuan/puan amatlah diperlukan untuk menjayakan kajian ini. Kajian ini melibatkan para pekerja di peringkat bukan penyeliaan (non-supervisory), iaitu mana-mana pekerja yang tidak ditugaskan untuk mengawasi pekerja-pekerja lain di dalam organisasi tuan.


Kerjasama tuan/puan di minta untuk mengedarkan soalselidik yang disertakan ini secara rawak (random) kepada pekerja-pekerja di organisasi tuan yang berada dalam kategori bukan penyeliaan yang dinyatakan. Untuk tujuan itu bersama-sama ini saya sertakan sebanyak ____ salinan soalselidik berkenaan untuk edaran di dalam organisasi tuan/puan.

Untuk maklumat tuan/puan, data-data yang diperolehi dari kajian ini akan dianggap sebagai rahsia dan saya tidak akan melaporkan sebarang maklumat yang boleh dikaitkan dengan organisasi tuan/puan ataupun dengan individu yang mengambil bahagian di dalam kajian ini. Semua maklumat akan dianalisis secara agregat, dan hanya untuk tujuan penyelidikan ini sahaja.

Saya amat berterima kasih atas kerjasama pihak tuan/puan di dalam menjayakan penyelidikan ini.

Sekian, terima kasih.

Yang benar


Ali Yusob Md Zain

(English Translation)

Dear Sir/Madam

A SURVEY OF ATTITUDES TOWARDS WORK AND ORGANISATION

I am a lecturer in Universiti Utara Malaysia, currently under study leave for a PhD degree in Management at the Strathclyde Graduate Business School, University of Strathclyde, Glasgow, UK. At present I am conducting a study on the relationships between quality of worklife and organisational commitment. This study is part of the requirement in the preparation of my PhD thesis.

Your organisation has been selected to participate in this study. Your co-operation is essential in the success of this study. The study involves employees at the non-supervisory level in your organisation, i.e. employees who are not given the responsibility of overseeing other employees in the organisation.

I seek your co-operation to randomly distribute the enclosed questionnaires to employees in your organisation who meet the criteria of 'non-supervisory' as mentioned above. I am enclosing _____ copies of the questionnaires for the purpose.

I would like to assure you that information obtained from this survey will be treated as confidential, and I will not report anything that could identify your organisation or individuals who participate in this study. All the information will be analysed in its aggregate form, and for the purpose of this research only.

Your assistance in this research is very much appreciated.

Thank you.

Yours sincerely

Ali Yusob Md Zain

APPENDIX E

RESULTS OF RELIABILITY ANALYSES

I. PREFERRED QWL

NO	ITEM	MEAN	STD DEV
1	PREFER1	4.2009	0.8243
2	PREFER2	3.9717	0.8875
3	PREFER3	3.7262	0.9437
4	PREFER4	3.8244	0.9653
5	PREFER5	3.7024	0.9663
6	PREFER6	3.6473	1.0063
7	PREFER7	4.2068	0.8478
8	PREFER8	4.0402	0.8527
9	PREFER9	4.1518	0.8550
10	PREFER10	4.0402	0.8954
11	PREFER11	4.1086	0.9512
12	PREFER12	4.2723	0.9512
13	PREFER13	4.0565	1.1025
14	PREFER14	3.5774	1.1555
15	PREFER15	3.8958	0.8927
16	PREFER16	4.0104	0.8828
17	PREFER17	3.7158	0.9367
18	PREFER18	3.8661	0.9119
19	PREFER19	4.1533	0.9210
20	PREFER20	4.2500	0.8207
21	PREFER21	4.1057	0.8765

Number of cases = 672

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
PREFER1	79.3229	128.7167	0.5265	0.4039	0.9113
PREFER2	79.5521	127.6038	0.5412	0.4250	0.9110
PREFER3	79.7976	127.9113	0.4891	0.3590	0.9122
PREFER4	79.6994	126.1539	0.5606	0.5090	0.9106
PREFER5	79.8214	124.2423	0.6530	0.5845	0.9084
PREFER6	79.8765	124.2962	0.6210	0.4725	0.9091
PREFER7	79.3170	127.1974	0.5923	0.5550	0.9100
PREFER8	79.4836	127.2009	0.5882	0.5409	0.9100
PREFER9	79.3720	128.6483	0.5085	0.3660	0.9117
PREFER10	78.4836	126.0772	0.6149	0.4572	0.9094
PREFER11	79.4152	125.3460	0.6100	0.5028	0.9094
PREFER12	79.2515	124.5969	0.6470	0.5420	0.9085
PREFER13	79.4673	124.8782	0.5895	0.4394	0.9099
PREFER14	79.9464	125.2192	0.4906	0.3385	0.9129
PREFER15	79.6280	126.5320	0.5932	0.4425	0.9099
PREFER16	79.5134	128.6317	0.4910	0.3349	0.9120
PREFER17	79.8080	129.3655	0.4224	0.3309	0.9136
PREFER18	79.6577	126.8335	0.5637	0.4248	0.9105
PREFER19	79.3705	125.4258	0.6286	0.5269	0.9090
PREFER20	79.2738	127.1410	0.6174	0.4867	0.9095
PREFER21	79.4182	131.5462	0.3446	0.2457	0.9151

RELIABILITY COEFFICIENT 21 ITEMS: ALPHA = 0.9146
 STANDARDISED ITEM ALPHA = 0.9153

PREFERRED QWL SUB-SCALES

1. GROWTH AND DEVELOPMENT

- 1. PREFER1
- 2. PREFER2
- 3. PREFER3

No	ITEM	MEAN	STD DEV
1	PREFER1	4.2009	0.8243
2	PREFER2	3.9717	0.8875
3	PREFER3	3.7262	0.9437

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
PREFER1	7.6979	2.4615	0.5483	0.3137	0.6364
PREFER2	7.9271	2.2197	0.5868	0.3506	0.5854
PREFER3	8.1726	2.2354	0.5078	0.2595	0.6875

RELIABILITY COEFFICIENT 3 ITEMS: ALPHA = 0.7243
 STANDARDISED ITEM ALPHA = 0.7269

2. PARTICIPATION OPPORTUNITIES

- 1.PREFER4
- 2.PREFER5
- 3.PREFER6

No	ITEM	MEAN	STD DEV
1	PREFER4	3.8244	0.9653
2	PREFER5	3.7024	0.9663
3	PREFER6	3.6473	1.0063

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
PREFER4	7.3497	3.1130	0.6302	0.4383	0.7496
PREFER5	7.4717	2.8725	0.7283	0.5342	0.6462
PREFER6	7.5268	3.0842	0.5927	0.3729	0.7903

RELIABILITY COEFFICIENT 3 ITEMS: ALPHA =0.8028
 STANDARDISED ITEM ALPHA =0.8036

3. PHYSICAL ENVIRONMENT

1. PREFER7
2. PREFER8
3. PREFER9

No	ITEM	MEAN	STD DEV
1	PREFER7	4.2068	0.8478
2	PREFER8	4.0402	0.8527
3	PREFER9	4.1518	0.8550

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
PREFER7	8.1920	2.1494	0.7018	0.5162	0.6432
PREFER8	8.3586	2.2095	0.6612	0.4829	0.6877
PREFER9	8.2470	2.4307	0.5443	0.3002	0.8103

RELIABILITY COEFFICIENT 3 ITEMS: ALPHA =0.7921
STANDARDISED ITEM ALPHA =0.7923

4. SUPERVISION

1. PREFER10
2. PREFER11
3. PREFER12

No	ITEM	MEAN	STD DEV
1	PREFER10	4.0402	0.8954
2	PREFER11	4.1086	0.9512
3	PREFER12	4.2723	0.9512

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
PREFER10	8.3810	2.8711	0.6019	0.3651	0.7394
PREFER11	8.3125	2.5788	0.6597	0.4355	0.6765
PREFER12	8.1488	2.6604	0.6232	0.3932	0.7172

RELIABILITY COEFFICIENT 3 ITEMS: ALPHA =0.7877
STANDARDISED ITEM ALPHA =0.7877

5. PAY AND BENEFITS

1. PREFER13
2. PREFER14
3. PREFER15

No	ITEM	MEAN	STD DEV
1	PREFER13	4.0565	1.0125
2	PREFER14	3.5774	1.1555
3	PREFER15	3.8958	0.8927

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
PREFER13	7.4732	3.0306	0.5741	0.3323	0.5929
PREFER14	7.9524	2.7101	0.5347	0.2868	0.6554
PREFER15	7.6339	3.4962	0.5352	0.2921	0.6497

RELIABILITY COEFFICIENT 3 ITEMS: ALPHA =0.7210
STANDARDISED ITEM ALPHA =0.7274

6. SOCIAL RELEVANCE

1. PREFER16
2. PREFER17
3. PREFER18

No	ITEM	MEAN	STD DEV
1	PREFER16	4.0104	0.8828
2	PREFER17	3.7158	0.9367
3	PREFER18	3.8661	0.9119

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
PREFER16	7.5818	2.5119	0.4771	0.2313	0.6394
PREFER17	7.8765	2.3171	0.5021	0.2585	0.6096
PREFER18	7.7262	2.2856	0.5474	0.2999	0.5503

RELIABILITY COEFFICIENT 3 ITEMS: ALPHA =0.6932
STANDARDISED ITEM ALPHA =0.6933

7. WORKPLACE INTEGRATION

1. PREFER19
2. PREFER20
3. PREFER21

No	ITEM	MEAN	STD DEV
1	PREFER19	4.1533	0.9210
2	PREFER20	4.2500	0.8207
3	PREFER21	4.1057	0.8765

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
PREFER19	8.3557	1.9314	0.5511	0.3784	0.5069
PREFER20	8.2589	2.1117	0.5892	0.3933	0.4689
PREFER21	8.4033	2.4377	0.3598	0.1318	0.7514

RELIABILITY COEFFICIENT 3 ITEMS: ALPHA =0.6803
 STANDARDISED ITEM ALPHA =0.6826

II. PERCEIVED QWL

NO	ITEM	MEAN	STD DEV
1	ACTUAL1	3.6086	1.0008
2	ACTUAL2	3.5476	1.0144
3	ACTUAL3	3.5268	0.9959
4	ACTUAL4	3.4940	1.0184
5	ACTUAL5	3.2827	1.0024
6	ACTUAL6	3.1280	0.9620
7	ACTUAL7	3.8214	0.8620
8	ACTUAL8	3.8318	0.8701
9	ACTUAL9	3.8333	0.8695
10	ACTUAL10	3.6220	0.8422
11	ACTUAL11	3.6071	0.9661
12	ACTUAL12	3.6116	1.0370
13	ACTUAL13	3.1726	1.0850
14	ACTUAL14	2.9673	1.0707
15	ACTUAL15	3.2679	0.9749
16	ACTUAL16	3.6994	0.9113
17	ACTUAL17	3.6875	0.9506
18	ACTUAL18	3.5863	0.8929
19	ACTUAL19	3.6071	0.9599
20	ACTUAL20	3.5774	0.9612
21	ACTUAL21	4.0327	0.8201

Number of cases = 672

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
ACTUAL1	70.9048	125.1683	0.5478	0.3815	0.8988
ACTUAL2	70.9658	124.6799	0.5619	0.4804	0.8985
ACTUAL3	70.9866	126.7107	0.4788	0.4143	0.9006
ACTUAL4	71.0193	123.9028	0.5963	0.4669	0.8976
ACTUAL5	71.2307	123.1196	0.6434	0.5971	0.8963
ACTUAL6	71.3854	124.8244	0.5902	0.5430	0.8978
ACTUAL7	70.6920	128.2433	0.4841	0.5056	0.9004
ACTUAL8	70.6815	127.5944	0.5131	0.5102	0.8998
ACTUAL9	70.6801	128.7693	0.4516	0.3412	0.9011
ACTUAL10	70.8914	127.6320	0.5305	0.4045	0.8994
ACTUAL11	70.9063	124.2490	0.6155	0.5512	0.8971
ACTUAL12	70.9018	123.0991	0.6198	0.4888	0.8969
ACTUAL13	71.3408	126.3442	0.4475	0.2432	0.9017
ACTUAL14	71.5461	127.6074	0.4003	0.2413	0.9030
ACTUAL15	71.2455	125.8875	0.5302	0.3642	0.8993

ACTUAL16	70.8140	129.6226	0.4347	0.2886	0.9016
ACTUAL17	70.8259	127.1246	0.3893	0.2181	0.9028
ACTUAL18	70.9271	123.3285	0.5117	0.3871	0.8998
ACTUAL19	70.9063	123.5158	0.6562	0.6320	0.8961
ACTUAL20	70.9360	123.6934	0.6464	0.6015	0.8964
ACTUAL21	70.4807	129.4929	0.4432	0.2611	0.9013

RELIABILITY COEFFICIENT 21 ITEMS: ALPHA = 0.9037
STANDARDISED ITEM ALPHA = 0.9039

PERCEIVED QWL SUB-SCALES

1. GROWTH AND DEVELOPMENT

1. ACTUAL1
2. ACTUAL2
3. ACTUAL3

No	ITEM	MEAN	STD DEV
1	ACTUAL1	3.6086	1.0008
2	ACTUAL2	3.5476	1.0144
3	ACTUAL3	3.5268	0.9959

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
ACTUAL1	7.0744	3.1897	0.5416	0.3043	0.7329
ACTUAL2	7.1354	2.8535	0.6550	0.4312	0.6028
ACTUAL3	7.1563	3.1067	0.5779	0.3563	0.6927

RELIABILITY COEFFICIENT 3 ITEMS: ALPHA = 0.7601
STANDARDISED ITEM ALPHA = 0.7598

2. PARTICIPATION OPPORTUNITIES

1. ACTUAL4
2. ACTUAL5
3. ACTUAL6

No	ITEM	MEAN	STD DEV
1	ACTUAL4	3.4940	1.0184
2	ACTUAL5	3.2827	1.0024
3	ACTUAL6	3.1280	0.9620

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
ACTUAL4	6.4107	3.2618	0.6106	0.3776	0.8164
ACTUAL5	6.6220	3.0045	0.7297	0.5458	0.6935
ACTUAL6	6.7768	3.2467	0.6845	0.5003	0.7420

RELIABILITY COEFFICIENT 3 ITEMS: ALPHA = 0.8199
 STANDARDISED ITEM ALPHA = 0.8206

3. PHYSICAL ENVIRONMENT

1. ACTUAL7
2. ACTUAL8
3. ACTUAL9

No	ITEM	MEAN	STD DEV
1	ACTUAL7	3.8214	0.8620
2	ACTUAL8	3.8318	0.8701
3	ACTUAL9	3.8333	0.8695

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
ACTUAL7	7.6652	2.1873	0.6615	0.4772	0.6164
ACTUAL8	7.6548	2.1847	0.6512	0.4702	0.6276
ACTUAL9	7.6533	2.5011	0.4944	0.2446	0.8004

RELIABILITY COEFFICIENT 3 ITEMS: ALPHA = 0.7670
 STANDARDISED ITEM ALPHA = 0.7671

4.SUPERVISION

1. ACTUAL10
2. ACTUAL11
3. ACTUAL12

No	ITEM	MEAN	STD DEV
1	ACTUAL10	3.6220	0.8422
2	ACTUAL11	3.6071	0.9661
3	ACTUAL12	3.6116	1.0370

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
ACTUAL10	7.2187	3.2203	0.5488	0.3112	0.7524
ACTUAL11	7.2336	2.5757	0.6706	0.4503	0.6141
ACTUAL12	7.2292	2.5107	0.6093	0.3893	0.6914

RELIABILITY COEFFICIENT 3 ITEMS: ALPHA = 0.7704
 STANDARDISED ITEM ALPHA = 0.7720

5. PAY AND BENEFITS

1. ACTUAL13
2. ACTUAL14
3. ACTUAL15

No	ITEM	MEAN	STD DEV
1	ACTUAL13	3.1726	1.0850
2	ACTUAL14	2.9673	1.0707
3	ACTUAL15	3.2679	0.9749

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
ACTUAL13	6.2351	2.8865	0.3765	0.1423	0.5471
ACTUAL14	6.4405	2.8042	0.4187	0.1813	0.4824
ACTUAL15	6.1399	3.0355	0.4315	0.1889	0.4690

RELIABILITY COEFFICIENT 3 ITEMS: ALPHA = 0.5991
STANDARDISED ITEM ALPHA = 0.6015

6. SOCIAL RELEVANCE

1. ACTUAL16
2. ACTUAL17
3. ACTUAL18

No	ITEM	MEAN	STD DEV
1	ACTUAL16	3.6994	0.9113
2	ACTUAL17	3.6875	0.9506
3	ACTUAL18	3.5863	0.8929

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
ACTUAL16	7.2738	2.3333	0.3922	0.1615	0.5420
ACTUAL17	7.2857	2.2312	0.3946	0.1627	0.5409
ACTUAL18	7.3869	2.2227	0.4641	0.2154	0.4395

RELIABILITY COEFFICIENT 3 ITEMS: ALPHA = 0.6077
STANDARDISED ITEM ALPHA = 0.6089

7. WORKPLACE INTEGRATION

1. ACTUAL19
2. ACTUAL20
3. ACTUAL21

No	ITEM	MEAN	STD DEV
1	ACTUAL19	3.6071	0.9599
2	ACTUAL20	3.5774	0.9612
3	ACTUAL21	4.0327	0.8201

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
ACTUAL19	7.6101	2.1578	0.6934	0.5605	0.5202
ACTUAL20	7.6399	2.1861	0.6771	0.5530	0.5417
ACTUAL21	7.1845	3.2088	0.3925	0.1549	0.8498

RELIABILITY COEFFICIENT 3 ITEMS: ALPHA = 0.7498

STANDARDISED ITEM ALPHA = 0.7426

III. ORGANISATIONAL COMMITMENT

NO	ITEM	MEAN	STD DEV
1	AC1	3.4777	1.0584
2	AC2	3.4494	0.9935
3	AC3	3.4792	0.9749
4	AC4	3.0714	0.9847
5	AC5	3.7083	0.9175
6	AC6	3.4360	0.9387
7	AC7	3.4985	0.9152
8	AC8	3.4182	0.8850
9	CC1	3.3170	1.0667
10	CC2	2.9360	1.0700
11	CC3	3.4598	1.2066
12	CC4	3.0432	1.2316
13	CC5	3.3065	1.1587
14	CC6	3.2068	1.1070
15	CC7	3.0372	1.0545
16	CC8	3.0625	1.0722
17	NC1	3.3244	1.0873
18	NC2	3.7738	1.0298
19	NC3	3.2485	1.1744
20	NC4	3.4926	1.0473
21	NC5	2.5551	1.1108
22	NC6	3.4286	0.9755
23	NC7	3.3363	1.1308
24	NC8	2.8973	1.1201

Number of cases = 672

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
AC1	75.4866	149.0699	0.6059	0.5516	0.8647
AC2	75.5149	154.8463	0.4051	0.4017	0.8705
AC3	75.4851	152.3962	0.5195	0.4756	0.8675
AC4	75.8929	151.4967	0.5521	0.4719	0.8666
AC5	75.2560	151.5350	0.5965	0.5850	0.8657
AC6	75.5283	150.4135	0.6321	0.6602	0.8647
AC7	75.4658	152.4578	0.5555	0.5578	0.8668
AC8	75.5461	156.1767	0.4019	0.3672	0.8707
CC1	75.6473	150.6877	0.5355	0.4247	0.8668
CC2	76.0283	148.7041	0.6131	0.5233	0.8644
CC3	75.5045	152.1848	0.4101	0.4297	0.8707
CC4	75.9211	148.6957	0.5206	0.5341	0.8670
CC5	75.6577	164.8484	0.0115	0.2087	0.8834
CC6	75.7574	156.4701	0.2944	0.4613	0.8740
CC7	75.9271	155.6266	0.3463	0.4602	0.8723
CC8	75.9018	151.6029	0.4960	0.3542	0.8679
NC1	75.6399	161.4051	0.1181	0.1322	0.8789
NC2	75.1905	153.0725	0.4598	0.3500	0.8690
NC3	75.7158	154.2365	0.3508	0.2801	0.8725
NC4	75.4717	148.8010	0.6243	0.5239	0.8642
NC5	76.4092	152.6773	0.4349	0.3151	0.8698
NC6	75.5357	153.2804	0.4810	0.3954	0.8685
NC7	75.6280	151.8674	0.4558	0.3924	0.8691
NC8	76.0670	153.0343	0.4171	0.2541	0.8703

RELIABILITY COEFFICIENT 24 ITEMS: ALPHA = 0.8743
 STANDARDISED ITEM ALPHA = 0.8788

1. AFFECTIVE COMMITMENT SUB-SCALE

1. AC1
2. AC2
3. AC3
4. AC4
5. AC5
6. AC6
7. AC7
8. AC8

No	ITEM	MEAN	STD DEV
1	AC1	3.4777	1.0584
2	AC2	3.4494	0.9935
3	AC3	3.4792	0.9749
4	AC4	3.0714	0.9847
5	AC5	3.7083	0.9175
6	AC6	3.4360	0.9387
7	AC7	3.4985	0.9152
8	AC8	3.4182	0.8850

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
AC1	24.0610	24.5730	0.6898	0.5029	0.8699
AC2	24.0893	26.0516	0.5811	0.3760	0.8808
AC3	24.0595	25.6060	0.6462	0.4361	0.8741
AC4	24.4673	25.7337	0.6234	0.4309	0.8765
AC5	23.8304	25.2976	0.7359	0.5685	0.8656
AC6	24.1027	24.8911	0.7643	0.6433	0.8625
AC7	24.0402	25.6541	0.6946	0.5365	0.8696
AC8	24.1205	27.1524	0.5417	0.3229	0.8836

RELIABILITY COEFFICIENT 8 ITEMS: ALPHA = 0.8871
STANDARDISED ITEM ALPHA = 0.8877

2. CONTINUANCE COMMITMENT

1. CC1
2. CC2
3. CC3
4. CC4
5. CC5
6. CC6
7. CC7
8. CC8

No	ITEM	MEAN	STD DEV
1	CC1	3.3170	1.0667
2	CC2	2.9360	1.0700
3	CC3	3.4598	1.2066
4	CC4	3.0432	1.2316
5	CC5	3.3065	1.1587
6	CC6	3.2068	1.1070
7	CC7	3.0372	1.0545
8	CC8	3.0625	1.0722

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
CC1	22.0521	27.4831	0.3707	0.3122	0.7869
CC2	22.4330	25.8226	0.5333	0.4780	0.7628
CC3	21.9092	24.3837	0.5813	0.4059	0.7538
CC4	22.3259	23.3914	0.6597	0.5204	0.7393
CC5	22.0625	28.5415	0.2328	0.1525	0.8093
CC6	22.1622	25.4267	0.5477	0.4350	0.7602
CC7	22.3318	25.3994	0.5886	0.4567	0.7545
CC8	22.3065	26.2367	0.4896	0.2861	0.7693

RELIABILITY COEFFICIENT 8 ITEMS: ALPHA = 0.7911
STANDARDISED ITEM ALPHA = 0.7908

3. NORMATIVE COMMITMENT

1. NC1
2. NC2
3. NC3
4. NC4
5. NC5
6. NC6
7. NC7
8. NC8

No	ITEM	MEAN	STD DEV
1	NC1	3.3244	1.0873
2	NC2	3.7738	1.0298
3	NC3	3.2485	1.1744
4	NC4	3.4926	1.0473
5	NC5	2.5551	1.1108
6	NC6	3.4286	0.9765
7	NC7	3.3363	1.1308
8	NC8	2.8973	1.1201

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
NC1	22.7321	25.0608	0.1274	0.0613	0.7823
NC2	22.2827	21.8872	0.4859	0.3121	0.7201
NC3	22.8080	21.5026	0.4360	0.2451	0.7294
NC4	22.5640	20.7232	0.6093	0.4520	0.6971
NC5	23.5015	21.8122	0.4418	0.2405	0.7279
NC6	22.6280	21.8972	0.5237	0.3754	0.7145
NC7	22.7202	20.4015	0.5825	0.3646	0.7001
NC8	23.1592	21.9344	0.4233	0.2064	0.7314

RELIABILITY COEFFICIENT 8 ITEMS: ALPHA = 0.7525
STANDARDISED ITEM ALPHA = 0.7550

IV ORGANISATIONAL COMMITMENT (REVISED : FOUR-FACTOR SCALE)

NO	ITEM	MEAN	STD DEV
1	AC1	3.4777	1.0584
2	AC2	3.4494	0.9935
3	AC3	3.4792	0.9749
4	AC4	3.0714	0.9847
5	AC5	3.7083	0.9175
6	AC6	3.4360	0.9387
7	AC7	3.4985	0.9152
8	AC8	3.4182	0.8850
9	CC1	3.3170	1.0667
10	CC2	2.9360	1.0700
11	CC3	3.4598	1.2066
12	CC4	3.0432	1.2316
13	CC5	3.3065	1.1587
14	CC6	3.2068	1.1070
15	CC7	3.0372	1.0545
16	CC8	3.0625	1.0722
17	NC2	3.7738	1.0298
18	NC3	3.2485	1.1744
19	NC4	3.4926	1.0473
20	NC5	2.5551	1.1108
21	NC6	3.4286	0.9755
22	NC7	3.3363	1.1308
23	NC8	2.8973	1.1201

Number of cases = 672

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
AC1	72.1622	144.5027	0.6202	0.5475	0.8693
AC2	72.1905	150.3839	0.4118	0.4001	0.8754
AC3	72.1607	147.8340	0.5324	0.4715	0.8722
AC4	72.5685	147.0445	0.5608	0.4719	0.8713
AC5	71.9315	147.0952	0.6052	0.5846	0.8705
AC6	72.2039	145.9539	0.6424	0.6602	0.8694
AC7	72.1414	147.9964	0.5646	0.5578	0.8715
AC8	72.2217	151.6512	0.4116	0.3657	0.8754
CC1	72.3229	146.4902	0.5336	0.4197	0.8719
CC2	72.7039	144.3637	0.6182	0.5223	0.8693
CC3	72.1801	148.1717	0.4009	0.4243	0.8761
CC4	72.5967	144.5242	0.5189	0.5340	0.8722
CC5	72.3333	160.6786	0.0210	0.2056	0.8887
CC6	72.4330	152.2697	0.2895	0.4610	0.8792
CC7	72.6027	151.4619	0.3403	0.4601	0.8775
CC8	72.5774	147.5529	0.4877	0.3441	0.8732
NC2	71.8661	148.8077	0.4592	0.3490	0.8741
NC3	72.3914	150.2415	0.3398	0.2650	0.8780
NC4	72.1473	144.4179	0.6313	0.5199	0.8691
NC5	73.0848	148.2596	0.4403	0.3129	0.8747

NC6	72.2113	148.8823	0.4861	0.3953	0.8734
NC7	72.3036	147.8153	0.4477	0.3801	0.8745
NC8	72.7426	148.8204	0.4146	0.2523	0.8755

RELIABILITY COEFFICIENT 23 ITEMS: ALPHA = 0.8789
STANDARDISED ITEM ALPHA = 0.8835

1. AFFECTIVE COMMITMENT

1. AC1
2. AC2
3. AC3
4. AC4
5. AC5
6. AC6
7. AC7
8. AC8

No	ITEM	MEAN	STD DEV
1	AC1	3.4777	1.0584
2	AC2	3.4494	0.9935
3	AC3	3.4792	0.9749
4	AC4	3.0714	0.9847
5	AC5	3.7083	0.9175
6	AC6	3.4360	0.9387
7	AC7	3.4985	0.9152
8	AC8	3.4182	0.8850

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
AC1	24.0610	24.5730	0.6898	0.5029	0.8699
AC2	24.0893	26.0516	0.5811	0.3760	0.8808
AC3	24.0595	25.6060	0.6462	0.4361	0.8741
AC4	24.4673	25.7337	0.6234	0.4309	0.8765
AC5	23.8304	25.2976	0.7359	0.5685	0.8656
AC6	24.1027	24.8911	0.7643	0.6433	0.8625
AC7	24.0402	25.6541	0.6946	0.5365	0.8696
AC8	24.1205	27.1524	0.5417	0.3229	0.8836

RELIABILITY COEFFICIENT 8 ITEMS: ALPHA = 0.8871
STANDARDISED ITEM ALPHA = 0.8877

II. CONTINUANCE COMMITMENT - HIGH COST OF LEAVING

1. CC1
2. CC2
3. CC3
4. CC4

No	ITEM	MEAN	STD DEV
1	CC1	3.3170	1.0667
2	CC2	2.9360	1.0700
3	CC3	3.4598	1.2066
4	CC4	3.0432	1.2316

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
CC1	9.4390	8.4165	0.4683	0.3058	0.7662
CC2	9.8199	7.5309	0.6432	0.4612	0.6813
CC3	9.2961	7.3473	0.5580	0.3707	0.7243
CC4	9.7128	6.8667	0.6305	0.4707	0.6833

RELIABILITY COEFFICIENTS 4 ITEMS : ALPHA = 0.7706
STANDARDISED ITEM ALPHA = 0.7713

III. CONTINUANCE COMMITMENT - LACK OF EMPLOYMENT ALTERNATIVES

1. CC5
2. CC6
3. CC7
4. CC8

No	ITEM	MEAN	STD DEV
1	CC5	3.3065	1.1587
2	CC6	3.2068	1.1070
3	CC7	3.0372	1.0545
4	CC8	3.0625	1.0722

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
CC5	9.3065	6.7077	0.3212	0.1365	0.7202
CC6	9.4063	5.6305	0.5943	0.4047	0.5399
CC7	9.5759	5.7021	0.6283	0.4368	0.5221
CC8	9.5506	6.7456	0.3740	0.1975	0.6817

RELIABILITY COEFFICIENTS 4 ITEMS : ALPHA = 0.6880
STANDARDISED ITEM ALPHA = 0.6919

IV. NORMATIVE COMMITMENT

1. NC2
2. NC3
3. NC4
4. NC5
5. NC6
6. NC7
7. NC8

No	ITEM	MEAN	STD DEV
1	NC2	3.7738	1.0298
2	NC3	3.2485	1.1744
3	NC4	3.4926	1.0473
4	NC5	2.5551	1.1108
5	NC6	3.4286	0.9765
6	NC7	3.3363	1.1308
7	NC8	2.8973	1.1201

ITEM-TOTAL STATISTICS

ITEM	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
NC2	18.9583	19.4975	0.4951	0.3107	0.7572
NC3	19.4836	19.3827	0.4157	0.2260	0.7743
NC4	19.2396	18.2152	0.6431	0.4480	0.7284
NC5	20.1771	19.2696	0.4673	0.2373	0.7627
NC6	19.3036	19.3742	0.5514	0.3745	0.7476
NC7	19.3958	18.2246	0.5756	0.3530	0.7406
NC8	19.8348	19.5956	0.4246	0.2044	0.7713

RELIABILITY COEFFICIENT 7 ITEMS: ALPHA = 0.7823
STANDARDISED ITEM ALPHA = 0.7856

APPENDIX F

Items for Preferred Quality of Worklife

Rated on the following scale:

1. Not important at all
2. Not important
3. Undecided
4. Important
5. Very important

<u>Abbreviation</u>	<u>Item</u>
---------------------	-------------

PREFER1	A job which provides opportunities for growth and development
PREFER2	A job which allows you to use a variety of skills
PREFER3	A job which is challenging
PREFER4	An opportunity to contribute your ideas and suggestions to your supervisor
PREFER5	The existence of an effective suggestion scheme in your work organisation
PREFER6	An organisation which puts employees' suggestion into operation
PREFER7	An organisation which provides a safe working environment
PREFER8	An organisation which provides good physical surroundings
PREFER9	An organisation which provides convenient working hours
PREFER10	A supervisor who has confidence in your abilities
PREFER11	A supervisor is capable of making people work as a team
PREFER12	A supervisor who is concerned about the welfare of those under him/her
PREFER13	An organisation which offers a good salary
PREFER14	A pay system which is based on merit
PREFER15	An organisation which provides good fringe benefits
PREFER16	A job which allows you to contribute to the welfare of the society
PREFER17	A job which allows you to pursue other interests in life
PREFER18	A job which does not require you to violate your personal values
PREFER19	A work situation in which people work together as a team
PREFER20	Co-workers who provide support and encouragement to one another
PREFER21	A job which provides opportunities for you to get to know other people

APPENDIX G

Items for Perceived Presence of QWL

Rated on the following scale:

1. Strongly disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly agree

<u>Abbreviation</u>	<u>Items</u>
ACTUAL1	My job provides sufficient opportunities for my growth and development
ACTUAL2	My job allows me to use a variety of skills
ACTUAL3	My job is challenging
ACTUAL4	My organisation provides opportunities for me to contribute ideas and suggestions to my supervisor
ACTUAL5	My organisation provides an effective suggestion scheme for its employees
ACTUAL6	My organisation implements suggestions put forward by its employees
ACTUAL7	The working environment in my organisation is safe
ACTUAL8	The physical surroundings in this organisation are good
ACTUAL9	The working hours in this organisation are good
ACTUAL10	My supervisor has confidence in my <i>abilities</i>
ACTUAL11	My supervisor is capable of making people work as a team
ACTUAL12	My supervisor shows concern for the welfare of those working under him/her
ACTUAL13	The salary offered by this organisation is good
ACTUAL14	The pay system in this organisation is based on merit
ACTUAL15	The fringe benefits offered by this organisation are good
ACTUAL16	My job allows me to contribute to the welfare of society
ACTUAL17	My work in this organisation allows me to pursue my other interests in life
ACTUAL18	My job in this organisation does not require me to violate my personal values
ACTUAL19	Employees in this organisation work together as a team
ACTUAL20	My co-workers provide support and encouragement to one another
ACTUAL21	My work in this organisation allows me to get to know other people

APPENDIX H

Items for Organisational Commitment

Rated on the following scale:

1. Strongly disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly agree

<u>Abbreviation</u>	<u>Items</u>
AC1	I would be happy to spend the rest of my career with this organisation
AC2	I enjoy discussing my organisation with people outside it
AC3	I feel as if this organisation's problems are my own
AC4	I do not think I could become as attached to another organisation as I am to this one
AC5	I feel like "part of the family" at my organisation
AC6	I feel emotionally attached to this organisation
AC7	This organisation has personal meaning for me
AC8	I feel a strong sense of belonging to my organisation
CC1	It would be hard for me to leave my organisation right now, even if I wanted to
CC2	My life would be disrupted if I decided I wanted to leave my organisation now
CC3	I am afraid of what might happen if I quit my job without having another one lined up
CC4	It would be costly for me to leave my organisation now
CC5	Right now, staying with my organisation is a matter of necessity as much as desire
CC6	I feel that I have few options to consider leaving this organisation
CC7	One of the serious consequences of leaving this organisation would be the scarcity of available alternatives
CC8	One of the major reasons I continue to work for this organisation is that leaving would require personal sacrifice - another organisation may not match the overall benefits I have here
NC1	I think people these days move from organisation to organisation too often
NC2	I believe that a person must always be loyal to his/her organisation
NC3	Jumping from organisation to organisation seems unethical to me
NC4	I believe that loyalty is important and therefore I feel a strong sense of moral obligation to remain
NC5	If I got another offer for a better job elsewhere I would not feel it was right to leave my organisation
NC6	I was taught to believe in the value of remaining loyal to one organisation
NC7	Things were better in the days when people stayed with one organisation for most of their careers
NC8	I think that wanting to be a "company man" or "company woman" is sensible

APPENDIX I

FREQUENCY DISTRIBUTIONS OF ITEMS IN SURVEY QUESTIONNAIRE

GENDER GENDER OF RESPONDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
MALE	1	357	53.1	53.1	53.1
FEMALE	2	315	46.9	46.9	100.0
		-----	-----	-----	
	Total	672	100.0	100.0	

AGE AGE GROUP OF RESPONDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
25 YEARS AND BELOW	1	161	24.0	24.0	24.0
26 - 35 YEARS	2	319	47.5	47.5	71.4
36 YEARS AND ABOVE	3	192	28.6	28.6	100.0
		-----	-----	-----	
	Total	672	100.0	100.0	

MARIT MARITAL STATUS OF RESPONDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
MARRIED	1	460	68.5	68.5	68.5
SINGLE	2	212	31.5	31.5	100.0
		-----	-----	-----	
	Total	672	100.0	100.0	

ETHNIC ETHNIC GROUP OF RESPONDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
MALAY	1	608	90.5	90.5	90.5
NON-MALAY	2	64	9.5	9.5	100.0
		-----	-----	-----	
	Total	672	100.0	100.0	

QUAL QUALIFICATION OF REPONDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
LCE AND BELOW	1	122	18.2	18.2	18.2
MCE/EQUIVALENT	2	383	57.0	57.0	75.1
HSC AND ABOVE	3	167	24.9	24.9	100.0
		-----	-----	-----	
	Total	672	100.0	100.0	

ORGN ORGANISATIONAL TYPE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
GOVT DEPT	1	185	27.5	27.5	27.5
SEMI-GOVT ORGN	2	214	31.8	31.8	59.4
PRIVATE ORGN	3	273	40.6	40.6	100.0
		-----	-----	-----	
	Total	672	100.0	100.0	

LSERV LENGTH OF SERVICE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
3 YEARS OR LESS	1	234	34.8	34.8	34.8
4 - 6 YEARS	2	98	14.6	14.6	49.4
7 - 9 YEARS	3	46	6.8	6.8	56.3
10 - 12 YEARS	4	99	14.7	14.7	71.0
MORE THAN 12 YEARS	5	195	29.0	29.0	100.0
Total		672	100.0	100.0	

SALARY MONTHLY SALARY OF RESPONDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
RM400 OR LESS	1	111	16.5	16.5	16.5
RM401 - RM600	2	159	23.7	23.7	40.2
RM601 - RM800	3	145	21.6	21.6	61.8
RM801 - RM1000	4	130	19.3	19.3	81.1
MORE THAN RM1000	5	127	18.9	18.9	100.0
Total		672	100.0	100.0	

PREFER1

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NOT IMPORTANT AT ALL	1	6	.9	.9	.9
NOT IMPORTANT	2	21	3.1	3.1	4.0
UNDECIDED	3	75	11.2	11.2	15.2
IMPORTANT	4	300	44.6	44.6	59.8
VERY IMPORTANT	5	270	40.2	40.2	100.0
Total		672	100.0	100.0	

PREFER2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NOT IMPORTANT AT ALL	1	9	1.3	1.3	1.3
NOT IMPORTANT	2	41	6.1	6.1	7.4
UNDECIDED	3	97	14.4	14.4	21.9
IMPORTANT	4	338	50.3	50.3	72.2
VERY IMPORTANT	5	187	27.8	27.8	100.0
Total		672	100.0	100.0	

PREFER3

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NOT IMPORTANT AT ALL	1	17	2.5	2.5	2.5
NOT IMPORTANT	2	59	8.8	8.8	11.3
UNDECIDED	3	137	20.4	20.4	31.7
IMPORTANT	4	337	50.1	50.1	81.8
VERY IMPORTANT	5	122	18.2	18.2	100.0
Total		672	100.0	100.0	

PREFER4

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NOT IMPORTANT AT ALL	1	17	2.5	2.5	2.5
NOT IMPORTANT	2	52	7.7	7.7	10.3
UNDECIDED	3	124	18.5	18.5	28.7
IMPORTANT	4	318	47.3	47.3	76.0
VERY IMPORTANT	5	161	24.0	24.0	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

PREFER5

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NOT IMPORTANT AT ALL	1	16	2.4	2.4	2.4
NOT IMPORTANT	2	59	8.8	8.8	11.2
UNDECIDED	3	170	25.3	25.3	36.5
IMPORTANT	4	291	43.3	43.3	79.8
VERY IMPORTANT	5	136	20.2	20.2	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

PREFER6

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NOT IMPORTANT AT ALL	1	25	3.7	3.7	3.7
NOT IMPORTANT	2	54	8.0	8.0	11.8
UNDECIDED	3	188	28.0	28.0	39.7
IMPORTANT	4	271	40.3	40.3	80.1
VERY IMPORTANT	5	134	19.9	19.9	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

PREFER7

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NOT IMPORTANT AT ALL	1	5	.7	.7	.7
NOT IMPORTANT	2	20	3.0	3.0	3.7
UNDECIDED	3	96	14.3	14.3	18.0
IMPORTANT	4	261	38.8	38.8	56.8
VERY IMPORTANT	5	290	43.2	43.2	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

PREFER8

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NOT IMPORTANT AT ALL	1	5	.7	.7	.7
NOT IMPORTANT	2	35	5.2	5.2	6.0
UNDECIDED	3	96	14.3	14.3	20.2
IMPORTANT	4	328	48.8	48.8	69.0
VERY IMPORTANT	5	208	31.0	31.0	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

PREFER9

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NOT IMPORTANT AT ALL	1	11	1.6	1.6	1.6
NOT IMPORTANT	2	25	3.7	3.7	5.4
UNDECIDED	3	61	9.1	9.1	14.4
IMPORTANT	4	329	49.0	49.0	63.4
VERY IMPORTANT	5	246	36.6	36.6	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

PREFER10

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NOT IMPORTANT AT ALL	1	9	1.3	1.3	1.3
NOT IMPORTANT	2	29	4.3	4.3	5.7
UNDECIDED	3	115	17.1	17.1	22.8
IMPORTANT	4	292	43.5	43.5	66.2
VERY IMPORTANT	5	227	33.8	33.8	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

PREFER11

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NOT IMPORTANT AT ALL	1	18	2.7	2.7	2.7
NOT IMPORTANT	2	22	3.3	3.3	6.0
UNDECIDED	3	97	14.4	14.4	20.4
IMPORTANT	4	267	39.7	39.7	60.1
VERY IMPORTANT	5	268	39.9	39.9	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

PREFER12

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NOT IMPORTANT AT ALL	1	12	1.8	1.8	1.8
NOT IMPORTANT	2	23	3.4	3.4	5.2
UNDECIDED	3	96	14.3	14.3	19.5
IMPORTANT	4	180	26.8	26.8	46.3
VERY IMPORTANT	5	361	53.7	53.7	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

PREFER13

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NOT IMPORTANT AT ALL	1	23	3.4	3.4	3.4
NOT IMPORTANT	2	28	4.2	4.2	7.6
UNDECIDED	3	104	15.5	15.5	23.1
IMPORTANT	4	250	37.2	37.2	60.3
VERY IMPORTANT	5	267	39.7	39.7	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

PREFER14

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NOT IMPORTANT AT ALL	1	51	7.6	7.6	7.6
NOT IMPORTANT	2	47	7.0	7.0	14.6
UNDECIDED	3	203	30.2	30.2	44.8
IMPORTANT	4	205	30.5	30.5	75.3
VERY IMPORTANT	5	166	24.7	24.7	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

PREFER15

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NOT IMPORTANT AT ALL	1	11	1.6	1.6	1.6
NOT IMPORTANT	2	43	6.4	6.4	8.0
UNDECIDED	3	111	16.5	16.5	24.6
IMPORTANT	4	347	51.6	51.6	76.2
VERY IMPORTANT	5	160	23.8	23.8	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

PREFER16

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NOT IMPORTANT AT ALL	1	12	1.8	1.8	1.8
NOT IMPORTANT	2	26	3.9	3.9	5.7
UNDECIDED	3	108	16.1	16.1	21.7
IMPORTANT	4	323	48.1	48.1	69.8
VERY IMPORTANT	5	203	30.2	30.2	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

PREFER17

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NOT IMPORTANT AT ALL	1	17	2.5	2.5	2.5
NOT IMPORTANT	2	50	7.4	7.4	10.0
UNDECIDED	3	165	24.6	24.6	34.5
IMPORTANT	4	315	46.9	46.9	81.4
VERY IMPORTANT	5	125	18.6	18.6	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

PREFER18

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NOT IMPORTANT AT ALL	1	11	1.6	1.6	1.6
NOT IMPORTANT	2	36	5.4	5.4	7.0
UNDECIDED	3	156	23.2	23.2	30.2
IMPORTANT	4	298	44.3	44.3	74.6
VERY IMPORTANT	5	171	25.4	25.4	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

PREFER19

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NOT IMPORTANT AT ALL	1	11	1.6	1.6	1.6
NOT IMPORTANT	2	28	4.2	4.2	5.8
UNDECIDED	3	91	13.5	13.5	19.3
IMPORTANT	4	259	38.5	38.5	57.9
VERY IMPORTANT	5	283	42.1	42.1	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

PREFER20

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NOT IMPORTANT AT ALL	1	6	.9	.9	.9
NOT IMPORTANT	2	20	3.0	3.0	3.9
UNDECIDED	3	67	10.0	10.0	13.8
IMPORTANT	4	286	42.6	42.6	56.4
VERY IMPORTANT	5	293	43.6	43.6	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

PREFER21

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NOT IMPORTANT AT ALL	1	7	1.0	1.0	1.0
NOT IMPORTANT	2	34	5.1	5.1	6.1
UNDECIDED	3	82	12.2	12.2	18.3
IMPORTANT	4	307	45.7	45.7	64.0
VERY IMPORTANT	5	242	36.0	36.0	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

ACTUAL1

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	22	3.3	3.3	3.3
DISAGREE	2	73	10.9	10.9	14.1
UNDECIDED	3	168	25.0	25.0	39.1
AGREE	4	292	43.5	43.5	82.6
STRONGLY AGREE	5	117	17.4	17.4	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

ACTUAL2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	23	3.4	3.4	3.4
DISAGREE	2	99	14.7	14.7	18.2
UNDECIDED	3	131	19.5	19.5	37.6
AGREE	4	325	48.4	48.4	86.0
STRONGLY AGREE	5	94	14.0	14.0	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

ACTUAL3

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	18	2.7	2.7	2.7
DISAGREE	2	98	14.6	14.6	17.3
UNDECIDED	3	165	24.6	24.6	41.8
AGREE	4	294	43.8	43.8	85.6
STRONGLY AGREE	5	97	14.4	14.4	100.0
Total		672	100.0	100.0	

ACTUAL4

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	29	4.3	4.3	4.3
DISAGREE	2	86	12.8	12.8	17.1
UNDECIDED	3	172	25.6	25.6	42.7
AGREE	4	294	43.8	43.8	86.5
STRONGLY AGREE	5	91	13.5	13.5	100.0
Total		672	100.0	100.0	

ACTUAL5

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	36	5.4	5.4	5.4
DISAGREE	2	99	14.7	14.7	20.1
UNDECIDED	3	238	35.4	35.4	55.5
AGREE	4	237	35.3	35.3	90.8
STRONGLY AGREE	5	62	9.2	9.2	100.0
Total		672	100.0	100.0	

ACTUAL6

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	40	6.0	6.0	6.0
DISAGREE	2	114	17.0	17.0	22.9
UNDECIDED	3	277	41.2	41.2	64.1
AGREE	4	202	30.1	30.1	94.2
STRONGLY AGREE	5	39	5.8	5.8	100.0
Total		672	100.0	100.0	

ACTUAL7

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	15	2.2	2.2	2.2
DISAGREE	2	26	3.9	3.9	6.1
UNDECIDED	3	152	22.6	22.6	28.7
AGREE	4	350	52.1	52.1	80.8
STRONGLY AGREE	5	129	19.2	19.2	100.0
Total		672	100.0	100.0	

ACTUAL8

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	12	1.8	1.8	1.8
DISAGREE	2	41	6.1	6.1	7.9
UNDECIDED	3	125	18.6	18.6	26.5
AGREE	4	364	54.2	54.2	80.7
STRONGLY AGREE	5	130	19.3	19.3	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

ACTUAL9

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	12	1.8	1.8	1.8
DISAGREE	2	52	7.7	7.7	9.5
UNDECIDED	3	91	13.5	13.5	23.1
AGREE	4	398	59.2	59.2	82.3
STRONGLY AGREE	5	119	17.7	17.7	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

ACTUAL10

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	14	2.1	2.1	2.1
DISAGREE	2	22	3.3	3.3	5.4
UNDECIDED	3	263	39.1	39.1	44.5
AGREE	4	278	41.4	41.4	85.9
STRONGLY AGREE	5	95	14.1	14.1	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

ACTUAL11

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	19	2.8	2.8	2.8
DISAGREE	2	65	9.7	9.7	12.5
UNDECIDED	3	188	28.0	28.0	40.5
AGREE	4	289	43.0	43.0	83.5
STRONGLY AGREE	5	111	16.5	16.5	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

ACTUAL12

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	29	4.3	4.3	4.3
DISAGREE	2	66	9.8	9.8	14.1
UNDECIDED	3	170	25.3	25.3	39.4
AGREE	4	279	41.5	41.5	81.0
STRONGLY AGREE	5	128	19.0	19.0	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

ACTUAL13

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	54	8.0	8.0	8.0
DISAGREE	2	136	20.2	20.2	28.3
UNDECIDED	3	171	25.4	25.4	53.7
AGREE	4	262	39.0	39.0	92.7
STRONGLY AGREE	5	49	7.3	7.3	100.0
Total		672	100.0	100.0	

ACTUAL14

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	73	10.9	10.9	10.9
DISAGREE	2	136	20.2	20.2	31.1
UNDECIDED	3	244	36.3	36.3	67.4
AGREE	4	178	26.5	26.5	93.9
STRONGLY AGREE	5	41	6.1	6.1	100.0
Total		672	100.0	100.0	

ACTUAL15

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	42	6.3	6.3	6.3
DISAGREE	2	89	13.2	13.2	19.5
UNDECIDED	3	226	33.6	33.6	53.1
AGREE	4	277	41.2	41.2	94.3
STRONGLY AGREE	5	38	5.7	5.7	100.0
Total		672	100.0	100.0	

ACTUAL16

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	14	2.1	2.1	2.1
DISAGREE	2	47	7.0	7.0	9.1
UNDECIDED	3	185	27.5	27.5	36.6
AGREE	4	307	45.7	45.7	82.3
STRONGLY AGREE	5	119	17.7	17.7	100.0
Total		672	100.0	100.0	

ACTUAL17

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	22	3.3	3.3	3.3
DISAGREE	2	61	9.1	9.1	12.4
UNDECIDED	3	126	18.8	18.8	31.1
AGREE	4	359	53.4	53.4	84.5
STRONGLY AGREE	5	104	15.5	15.5	100.0
Total		672	100.0	100.0	

ACTUAL18

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	17	2.5	2.5	2.5
DISAGREE	2	60	8.9	8.9	11.5
UNDECIDED	3	182	27.1	27.1	38.5
AGREE	4	338	50.3	50.3	88.8
STRONGLY AGREE	5	75	11.2	11.2	100.0
Total		672	100.0	100.0	

ACTUAL19

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	19	2.8	2.8	2.8
DISAGREE	2	73	10.9	10.9	13.7
UNDECIDED	3	160	23.8	23.8	37.5
AGREE	4	321	47.8	47.8	85.3
STRONGLY AGREE	5	99	14.7	14.7	100.0
Total		672	100.0	100.0	

ACTUAL20

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	21	3.1	3.1	3.1
DISAGREE	2	69	10.3	10.3	13.4
UNDECIDED	3	179	26.6	26.6	40.0
AGREE	4	307	45.7	45.7	85.7
STRONGLY AGREE	5	96	14.3	14.3	100.0
Total		672	100.0	100.0	

ACTUAL21

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	11	1.6	1.6	1.6
DISAGREE	2	23	3.4	3.4	5.1
UNDECIDED	3	80	11.9	11.9	17.0
AGREE	4	377	56.1	56.1	73.1
STRONGLY AGREE	5	181	26.9	26.9	100.0
Total		672	100.0	100.0	

AC1

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	33	4.9	4.9	4.9
DISAGREE	2	80	11.9	11.9	16.8
UNDECIDED	3	205	30.5	30.5	47.3
AGREE	4	241	35.9	35.9	83.2
STRONGLY AGREE	5	113	16.8	16.8	100.0
Total		672	100.0	100.0	

AC2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	32	4.8	4.8	4.8
DISAGREE	2	86	12.8	12.8	17.6
UNDECIDED	3	168	25.0	25.0	42.6
AGREE	4	320	47.6	47.6	90.2
STRONGLY AGREE	5	66	9.8	9.8	100.0
Total		672	100.0	100.0	

AC3

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	31	4.6	4.6	4.6
DISAGREE	2	74	11.0	11.0	15.6
UNDECIDED	3	177	26.3	26.3	42.0
AGREE	4	322	47.9	47.9	89.9
STRONGLY AGREE	5	68	10.1	10.1	100.0
Total		672	100.0	100.0	

AC4

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	50	7.4	7.4	7.4
DISAGREE	2	107	15.9	15.9	23.4
UNDECIDED	3	306	45.5	45.5	68.9
AGREE	4	163	24.3	24.3	93.2
STRONGLY AGREE	5	46	6.8	6.8	100.0
Total		672	100.0	100.0	

AC5

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	20	3.0	3.0	3.0
DISAGREE	2	47	7.0	7.0	10.0
UNDECIDED	3	148	22.0	22.0	32.0
AGREE	4	351	52.2	52.2	84.2
STRONGLY AGREE	5	106	15.8	15.8	100.0
Total		672	100.0	100.0	

AC6

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	24	3.6	3.6	3.6
DISAGREE	2	72	10.7	10.7	14.3
UNDECIDED	3	232	34.5	34.5	48.8
AGREE	4	275	40.9	40.9	89.7
STRONGLY AGREE	5	69	10.3	10.3	100.0
Total		672	100.0	100.0	

AC7

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	22	3.3	3.3	3.3
DISAGREE	2	61	9.1	9.1	12.4
UNDECIDED	3	219	32.6	32.6	44.9
AGREE	4	300	44.6	44.6	89.6
STRONGLY AGREE	5	70	10.4	10.4	100.0
Total		672	100.0	100.0	

AC8

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	23	3.4	3.4	3.4
DISAGREE	2	66	9.8	9.8	13.2
UNDECIDED	3	236	35.1	35.1	48.4
AGREE	4	301	44.8	44.8	93.2
STRONGLY AGREE	5	46	6.8	6.8	100.0
Total		672	100.0	100.0	

CC1

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	41	6.1	6.1	6.1
DISAGREE	2	107	15.9	15.9	22.0
UNDECIDED	3	201	29.9	29.9	51.9
AGREE	4	244	36.3	36.3	88.2
STRONGLY AGREE	5	79	11.8	11.8	100.0
Total		672	100.0	100.0	

CC2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	73	10.9	10.9	10.9
DISAGREE	2	142	21.1	21.1	32.0
UNDECIDED	3	258	38.4	38.4	70.4
AGREE	4	153	22.8	22.8	93.2
STRONGLY AGREE	5	46	6.8	6.8	100.0
Total		672	100.0	100.0	

CC3

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	52	7.7	7.7	7.7
DISAGREE	2	98	14.6	14.6	22.3
UNDECIDED	3	162	24.1	24.1	46.4
AGREE	4	209	31.1	31.1	77.5
STRONGLY AGREE	5	151	22.5	22.5	100.0
Total		672	100.0	100.0	

CC4

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	92	13.7	13.7	13.7
DISAGREE	2	128	19.0	19.0	32.7
UNDECIDED	3	202	30.1	30.1	62.8
AGREE	4	159	23.7	23.7	86.5
STRONGLY AGREE	5	91	13.5	13.5	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

CC5

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	60	8.9	8.9	8.9
DISAGREE	2	108	16.1	16.1	25.0
UNDECIDED	3	161	24.0	24.0	49.0
AGREE	4	252	37.5	37.5	86.5
STRONGLY AGREE	5	91	13.5	13.5	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

CC6

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	54	8.0	8.0	8.0
DISAGREE	2	118	17.6	17.6	25.6
UNDECIDED	3	211	31.4	31.4	57.0
AGREE	4	213	31.7	31.7	88.7
STRONGLY AGREE	5	76	11.3	11.3	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

CC7

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	58	8.6	8.6	8.6
DISAGREE	2	145	21.6	21.6	30.2
UNDECIDED	3	225	33.5	33.5	63.7
AGREE	4	202	30.1	30.1	93.8
STRONGLY AGREE	5	42	6.3	6.3	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

CC8

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	61	9.1	9.1	9.1
DISAGREE	2	136	20.2	20.2	29.3
UNDECIDED	3	222	33.0	33.0	62.4
AGREE	4	206	30.7	30.7	93.0
STRONGLY AGREE	5	47	7.0	7.0	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

NC1

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	51	7.6	7.6	7.6
DISAGREE	2	89	13.2	13.2	20.8
UNDECIDED	3	204	30.4	30.4	51.2
AGREE	4	247	36.8	36.8	87.9
STRONGLY AGREE	5	81	12.1	12.1	100.0
Total		672	100.0	100.0	

NC2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	28	4.2	4.2	4.2
DISAGREE	2	53	7.9	7.9	12.1
UNDECIDED	3	122	18.2	18.2	30.2
AGREE	4	309	46.0	46.0	76.2
STRONGLY AGREE	5	160	23.8	23.8	100.0
Total		672	100.0	100.0	

NC3

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	59	8.8	8.8	8.8
DISAGREE	2	123	18.3	18.3	27.1
UNDECIDED	3	182	27.1	27.1	54.2
AGREE	4	208	31.0	31.0	85.1
STRONGLY AGREE	5	100	14.9	14.9	100.0
Total		672	100.0	100.0	

NC4

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	31	4.6	4.6	4.6
DISAGREE	2	82	12.2	12.2	16.8
UNDECIDED	3	193	28.7	28.7	45.5
AGREE	4	257	38.2	38.2	83.8
STRONGLY AGREE	5	109	16.2	16.2	100.0
Total		672	100.0	100.0	

NC5

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	138	20.5	20.5	20.5
DISAGREE	2	185	27.5	27.5	48.1
UNDECIDED	3	218	32.4	32.4	80.5
AGREE	4	100	14.9	14.9	95.4
STRONGLY AGREE	5	31	4.6	4.6	100.0
Total		672	100.0	100.0	

NC6

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	27	4.0	4.0	4.0
DISAGREE	2	92	13.7	13.7	17.7
UNDECIDED	3	183	27.2	27.2	44.9
AGREE	4	306	45.5	45.5	90.5
STRONGLY AGREE	5	64	9.5	9.5	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

NC7

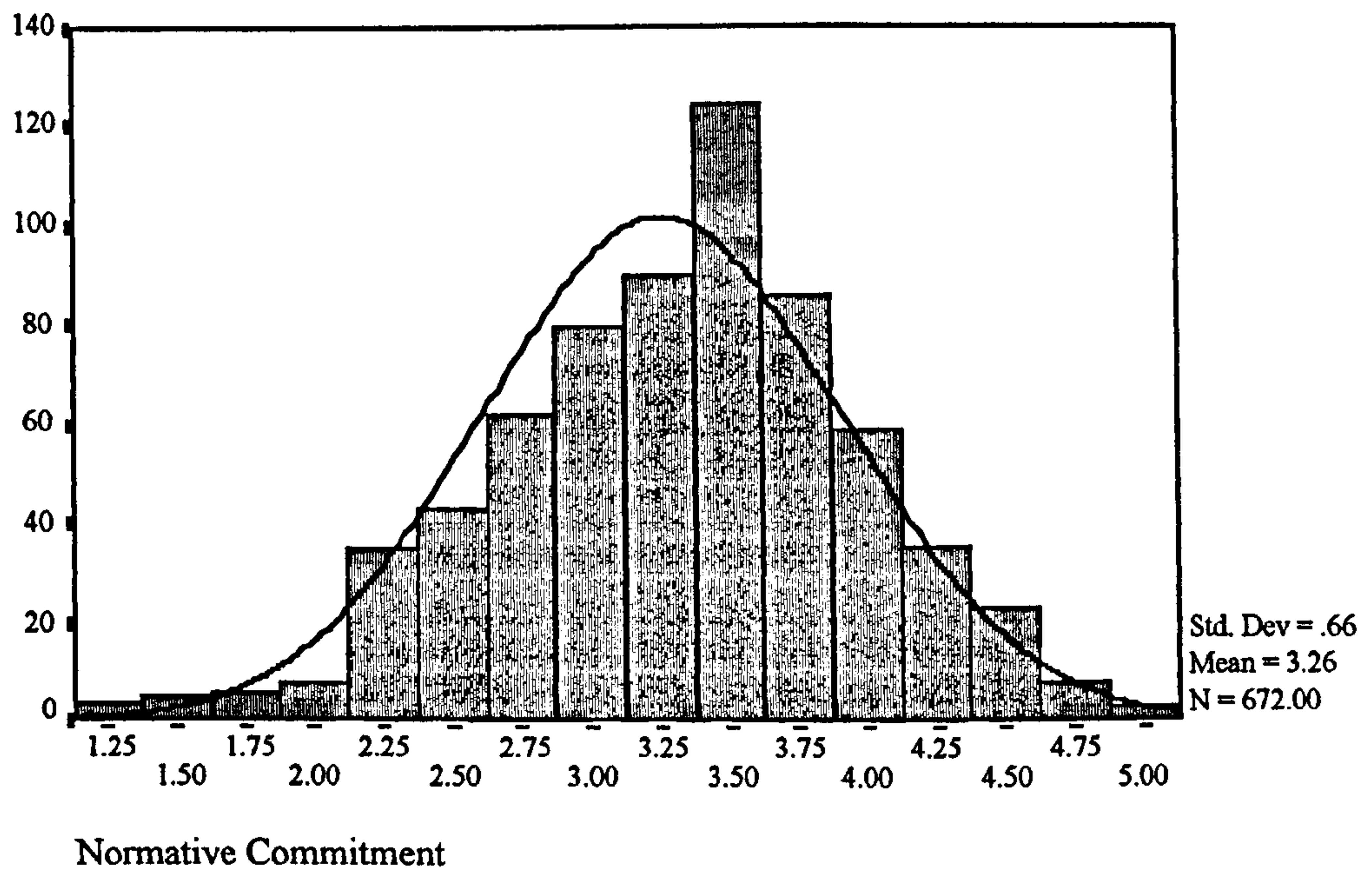
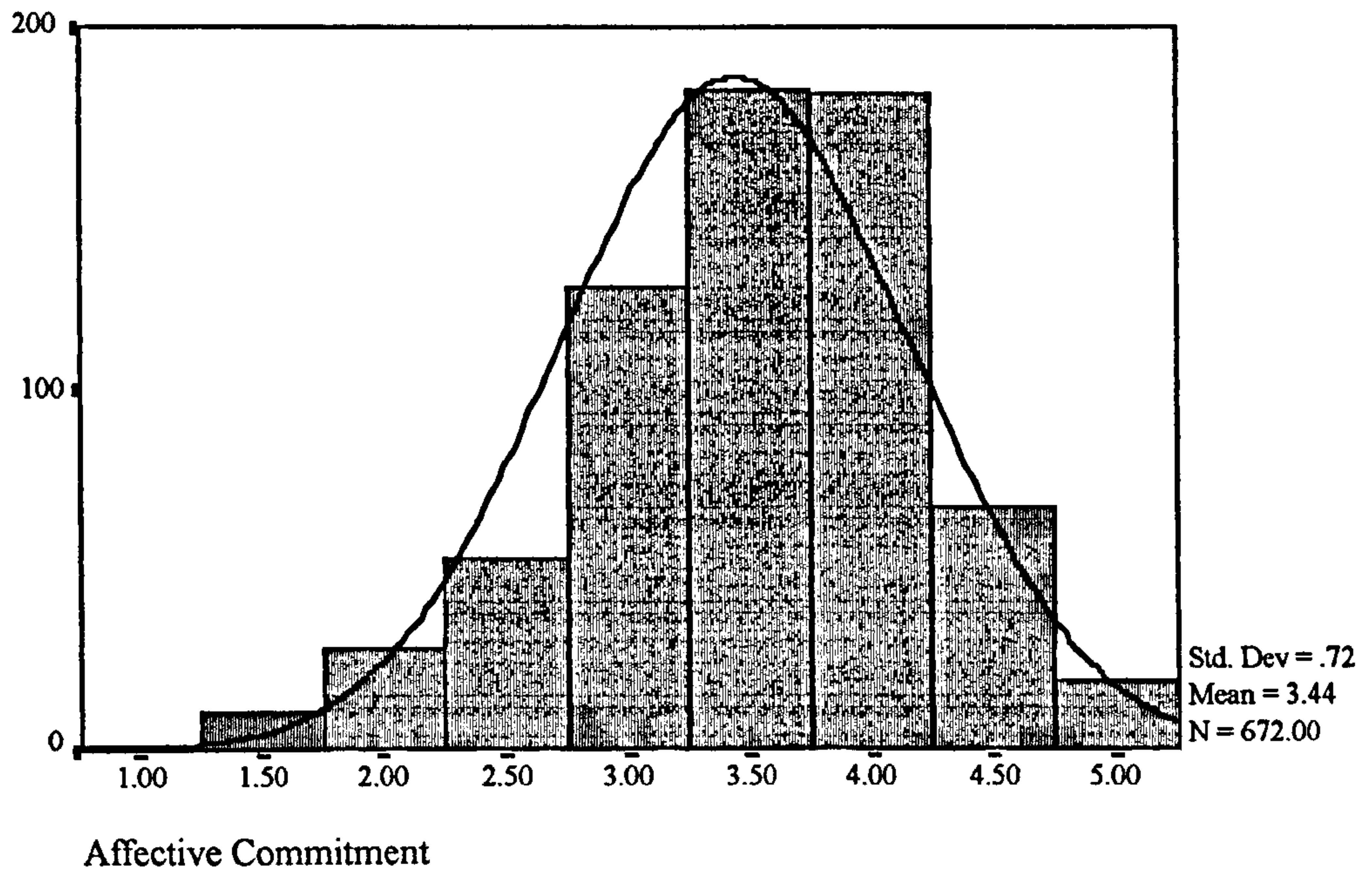
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	45	6.7	6.7	6.7
DISAGREE	2	128	19.0	19.0	25.7
UNDECIDED	3	146	21.7	21.7	47.5
AGREE	4	262	39.0	39.0	86.5
STRONGLY AGREE	5	91	13.5	13.5	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

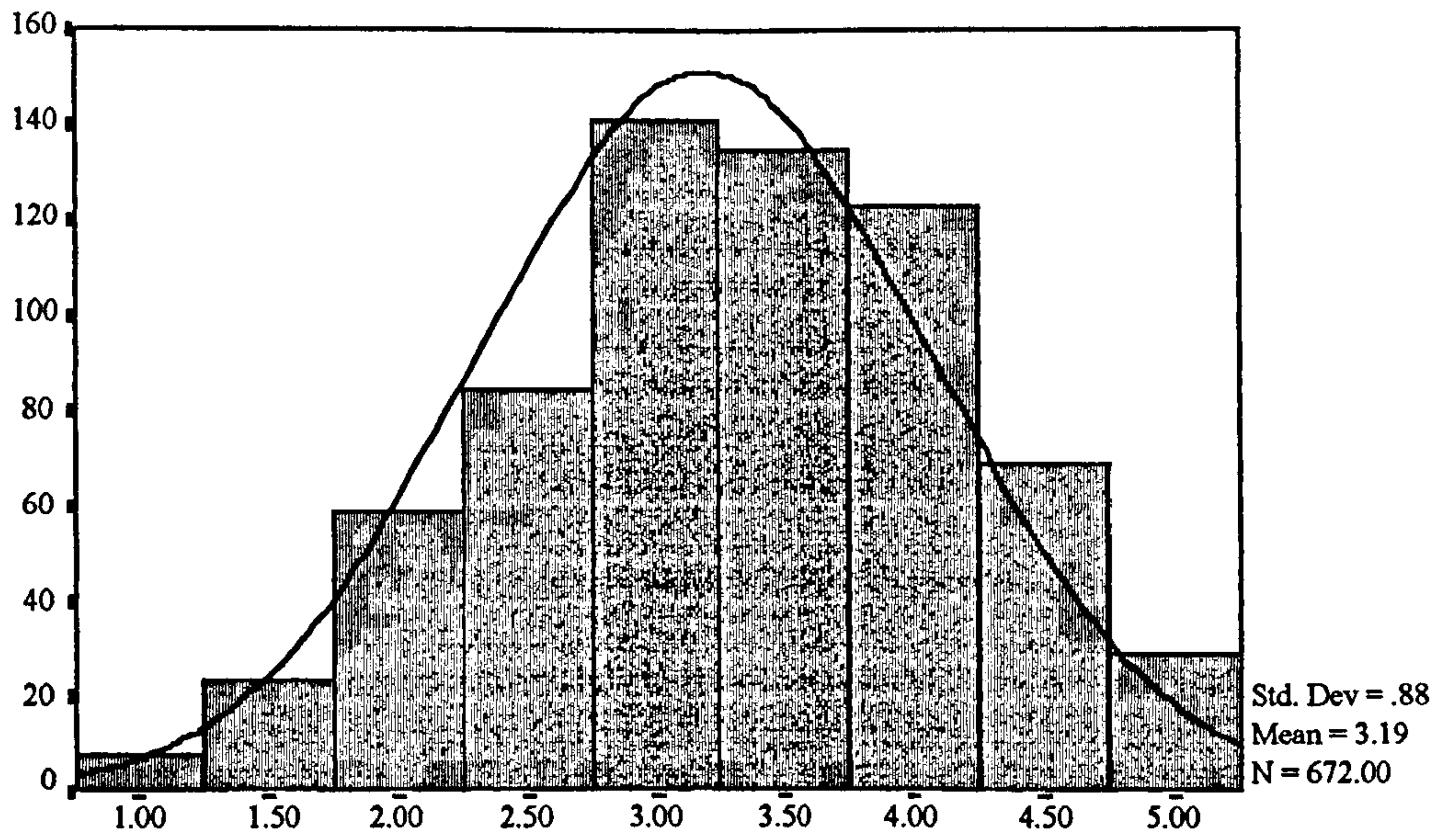
NC8

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
STRONGLY DISAGREE	1	91	13.5	13.5	13.5
DISAGREE	2	151	22.5	22.5	36.0
UNDECIDED	3	201	29.9	29.9	65.9
AGREE	4	194	28.9	28.9	94.8
STRONGLY AGREE	5	35	5.2	5.2	100.0
		-----	-----	-----	
Total		672	100.0	100.0	

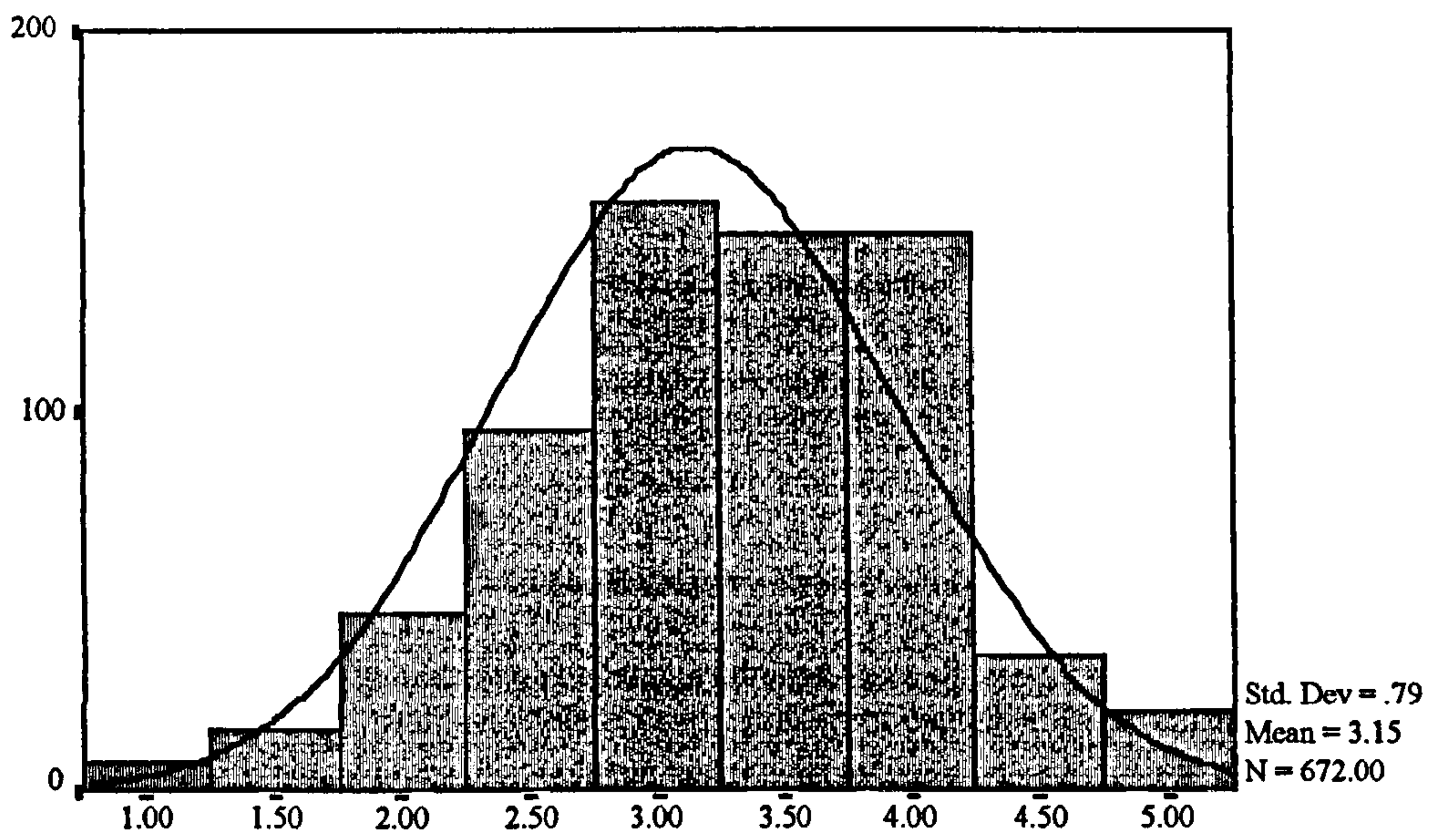
APPENDIX J

PATTERNS OF DISTRIBUTIONS OF THE DEPENDENT VARIABLES USED IN REGRESSION ANALYSES





Continuance Commitment - High Cost



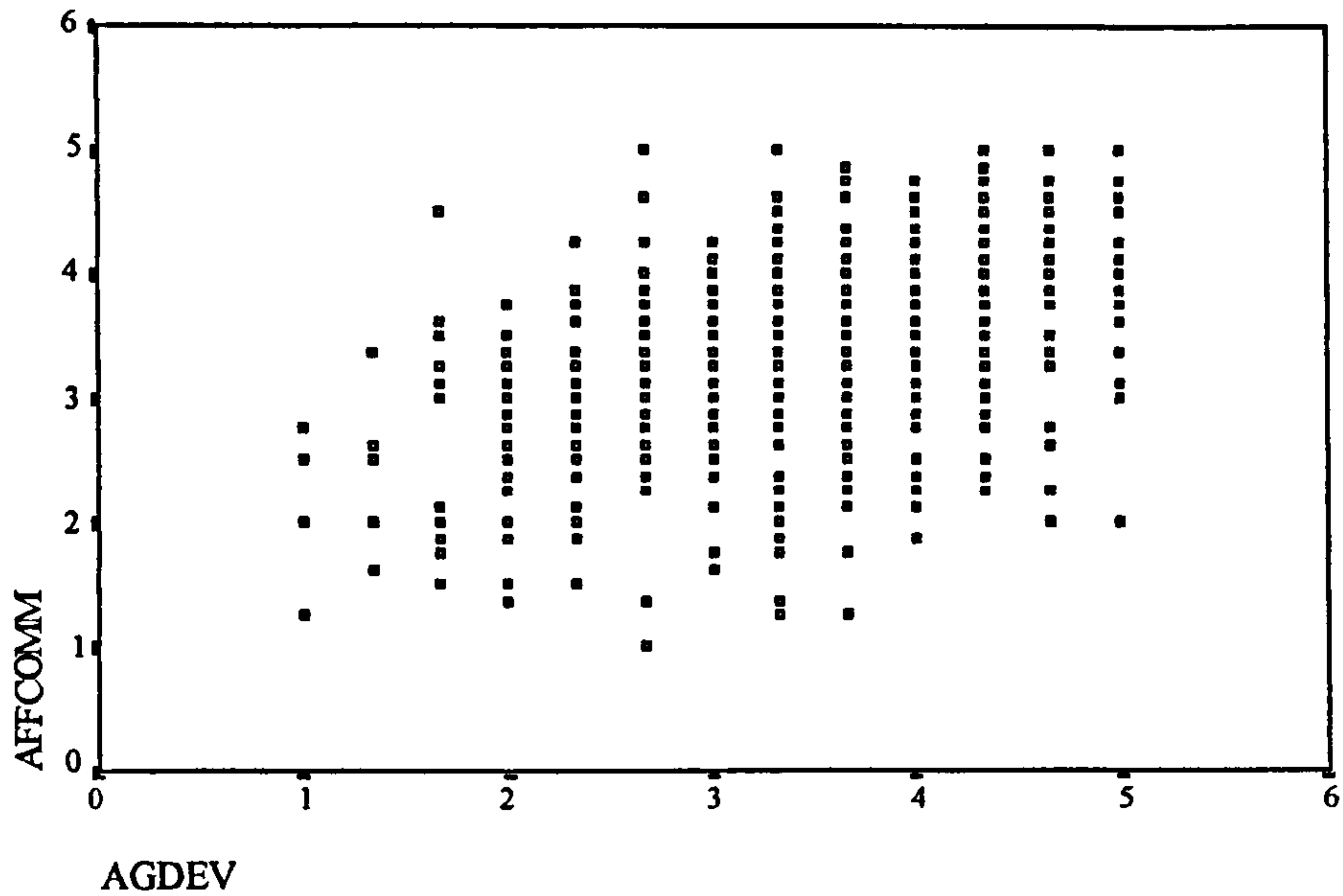
Continuance Commitment - Lack of Alternatives

APPENDIX K

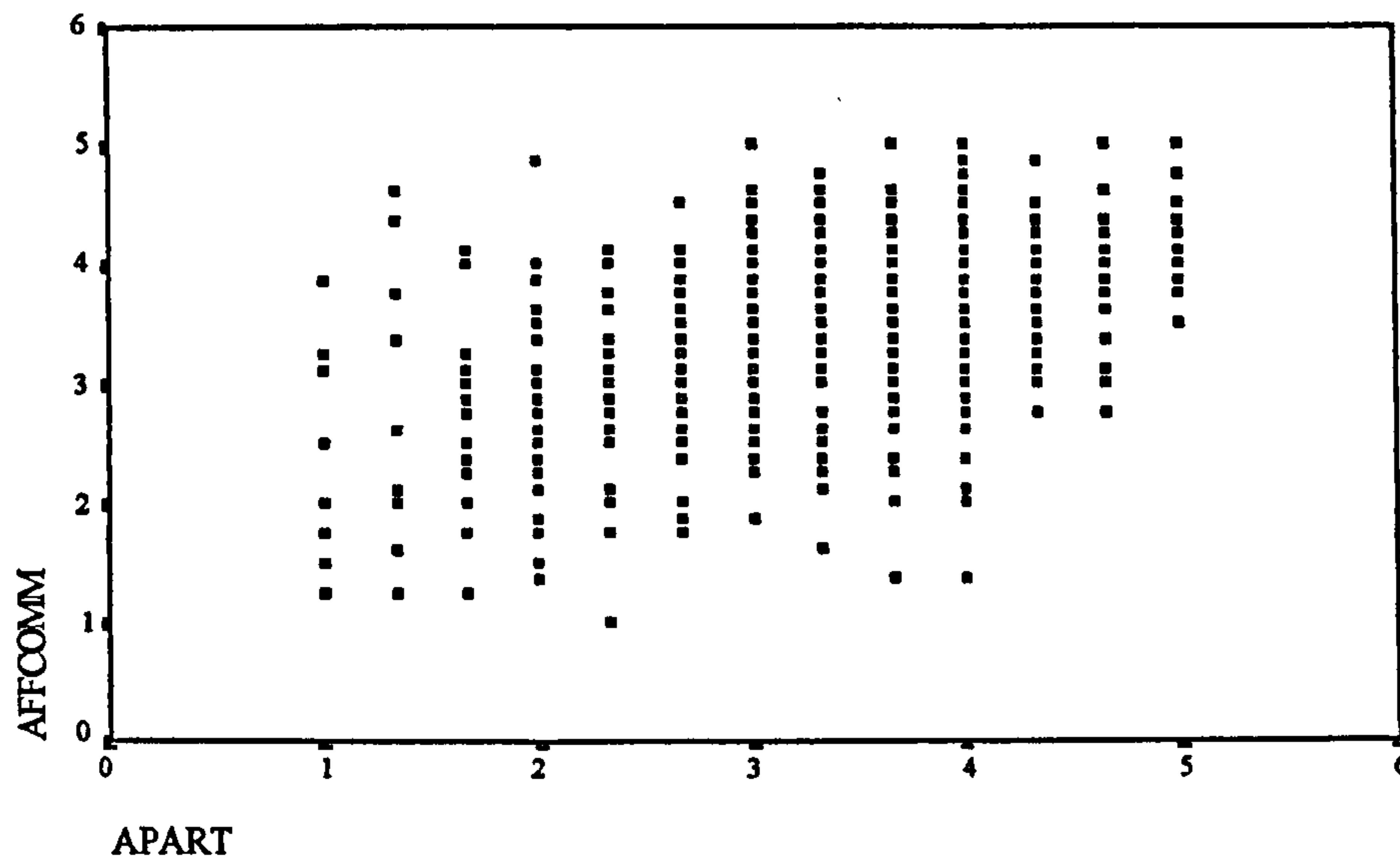
SCATTER DIAGRAMS OF RELATIONSHIPS BETWEEN THE PERCEIVED PRESENCE OF QWL VARIABLES AND ORGANISATIONAL COMMITMENT

A. AFFECTIVE COMMITMENT

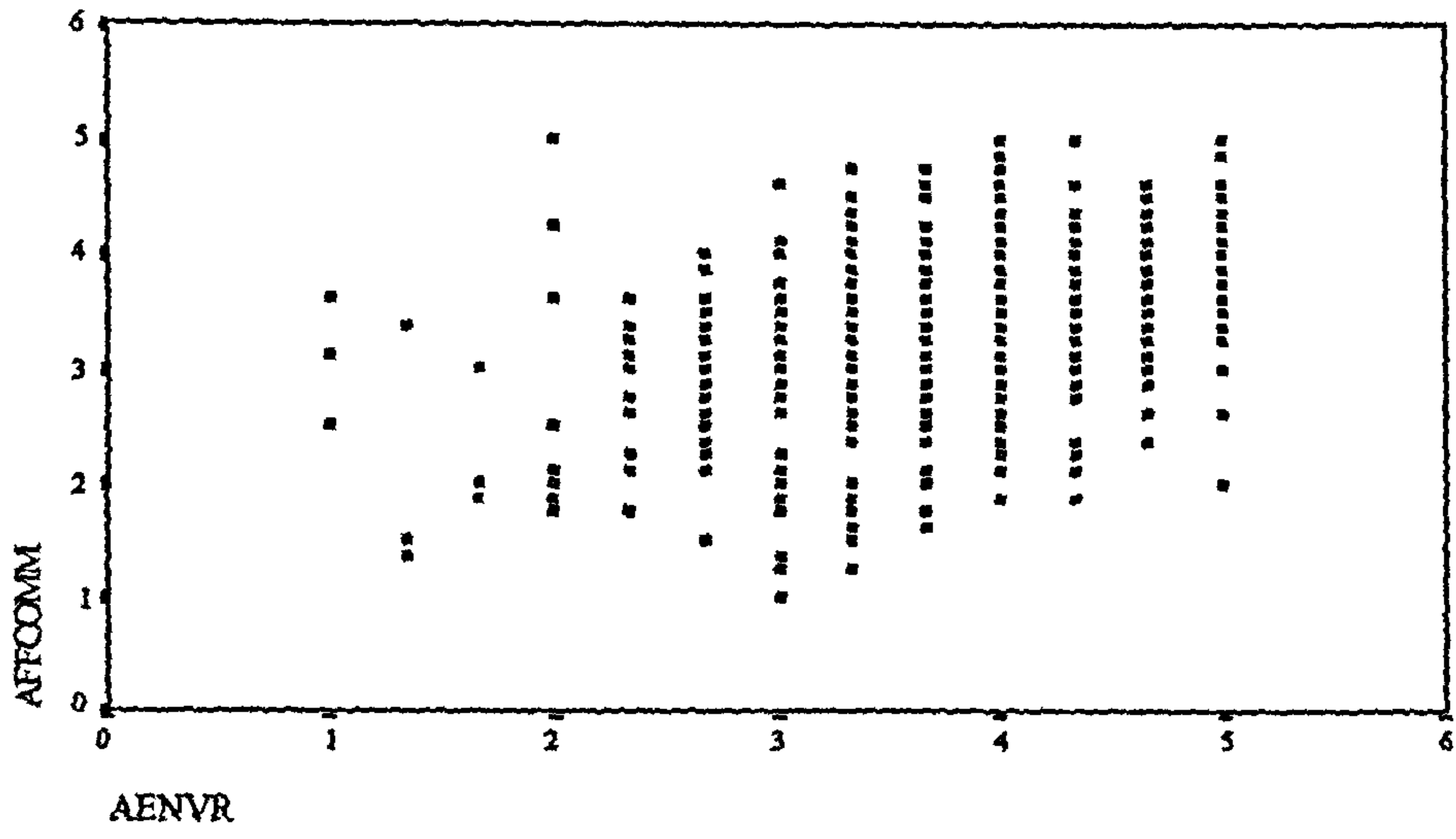
1. GROWTH AND DEVELOPMENT



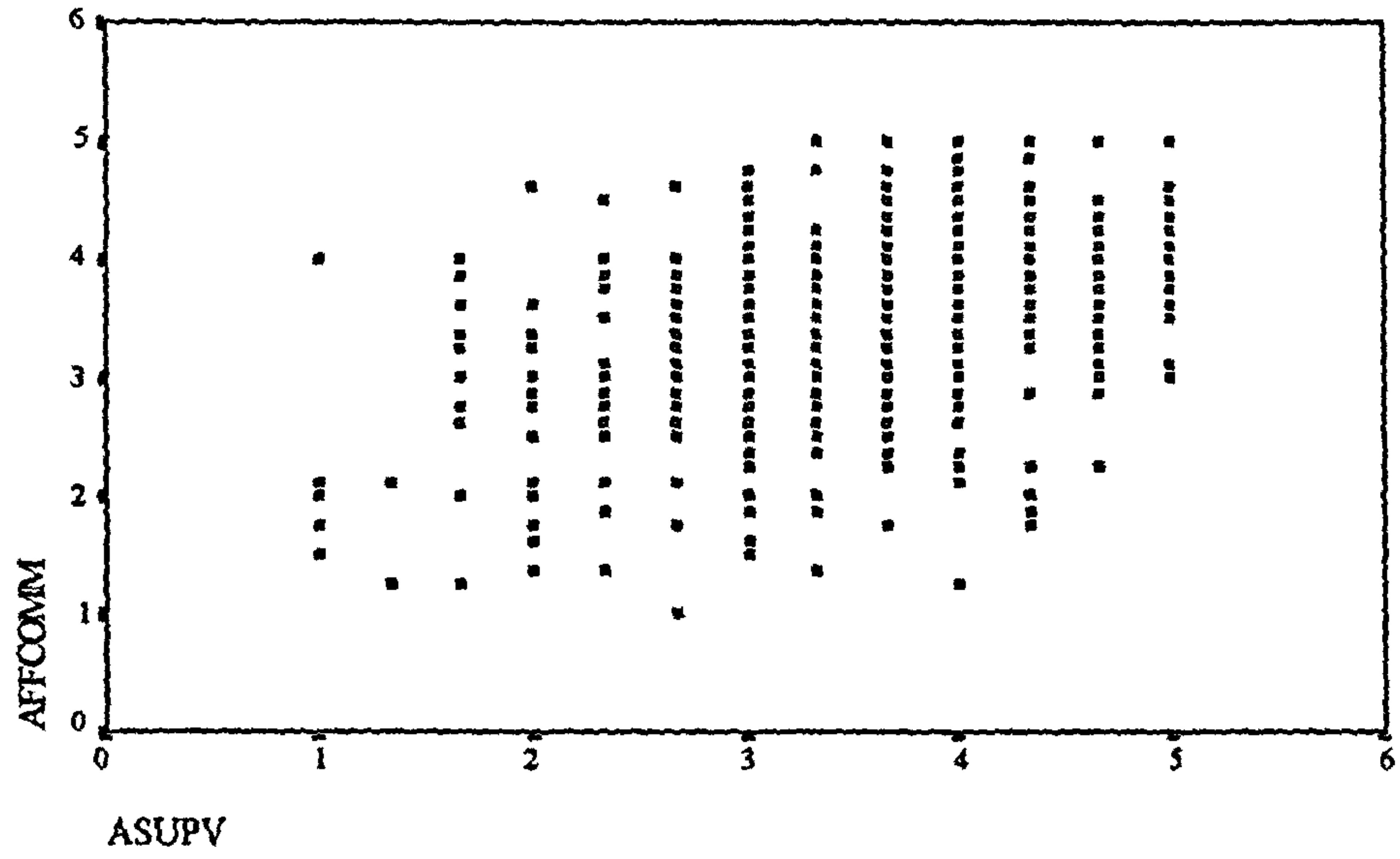
2. PARTICIPATION OPPORTUNITIES



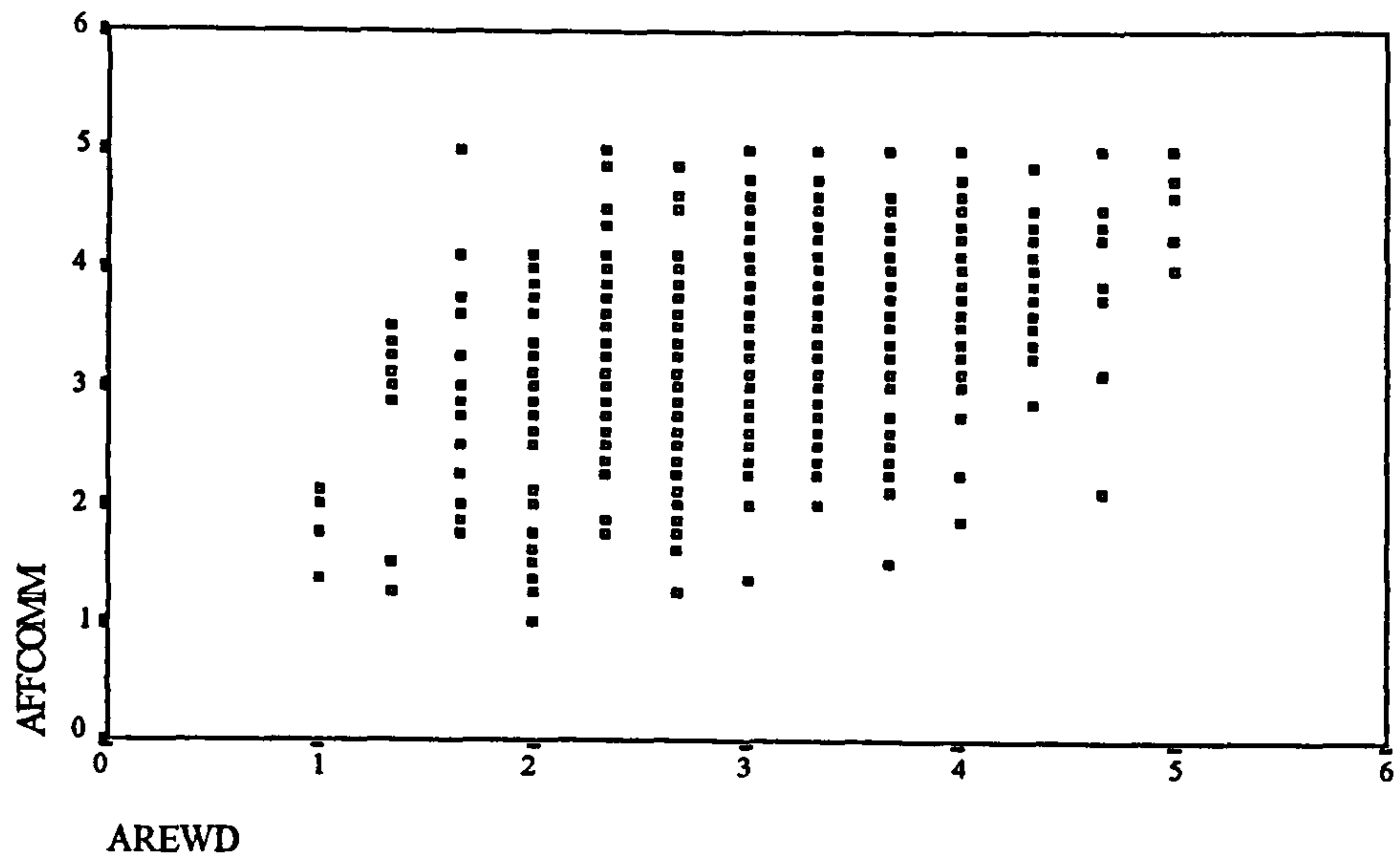
3. PHYSICAL ENVIRONMENT



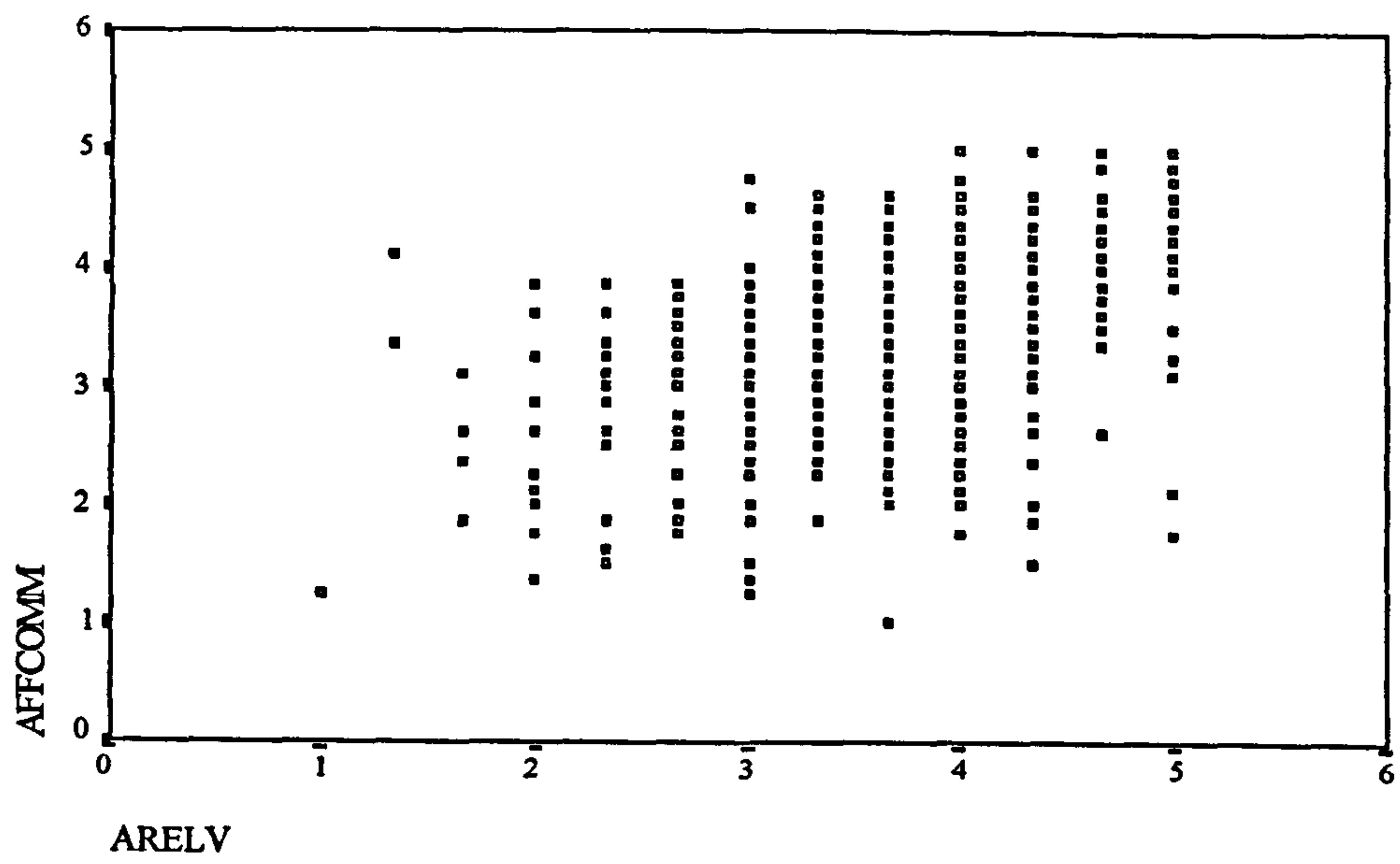
4. SUPERVISION



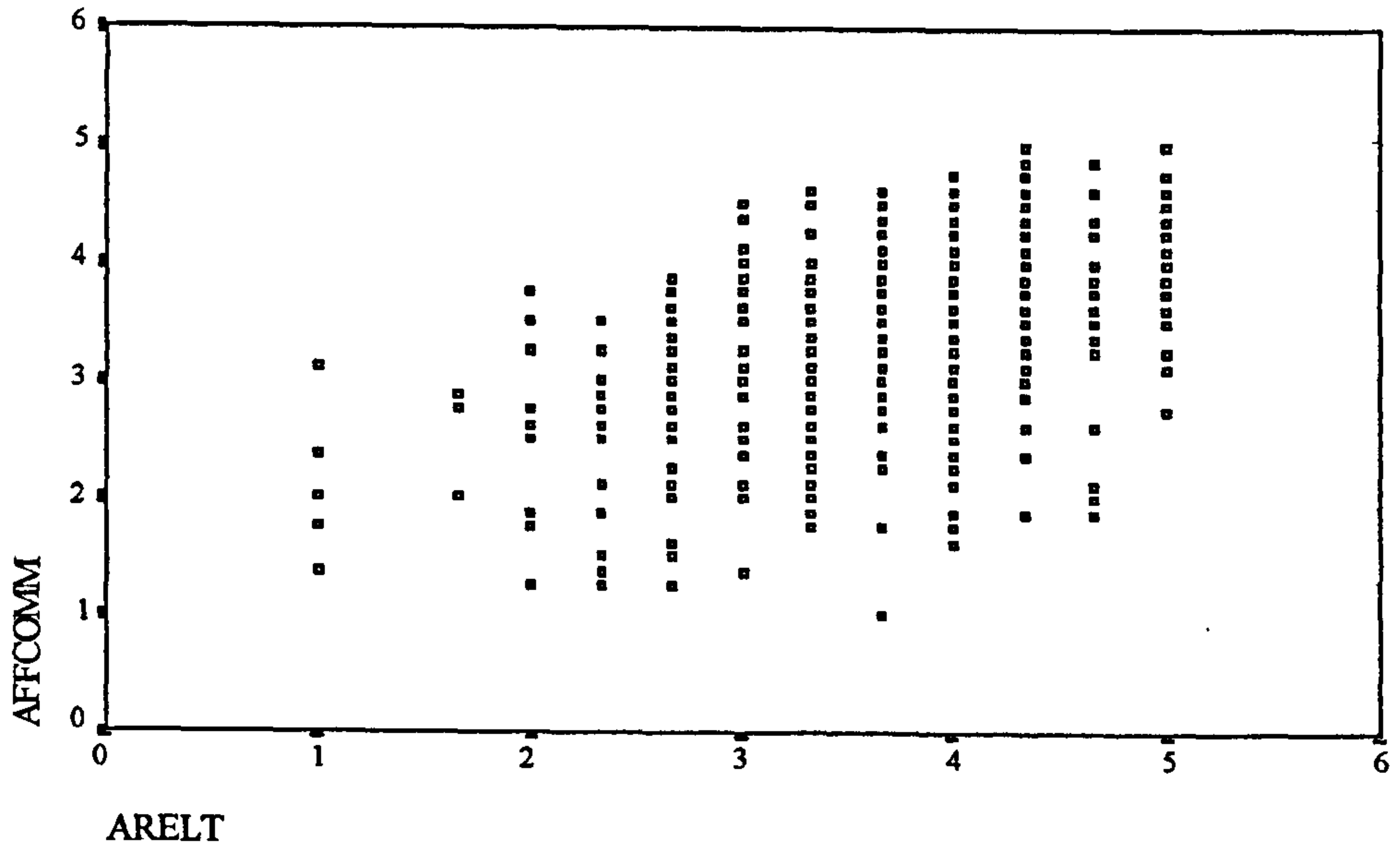
5. PAY AND BENEFITS



6. SOCIAL RELEVANCE

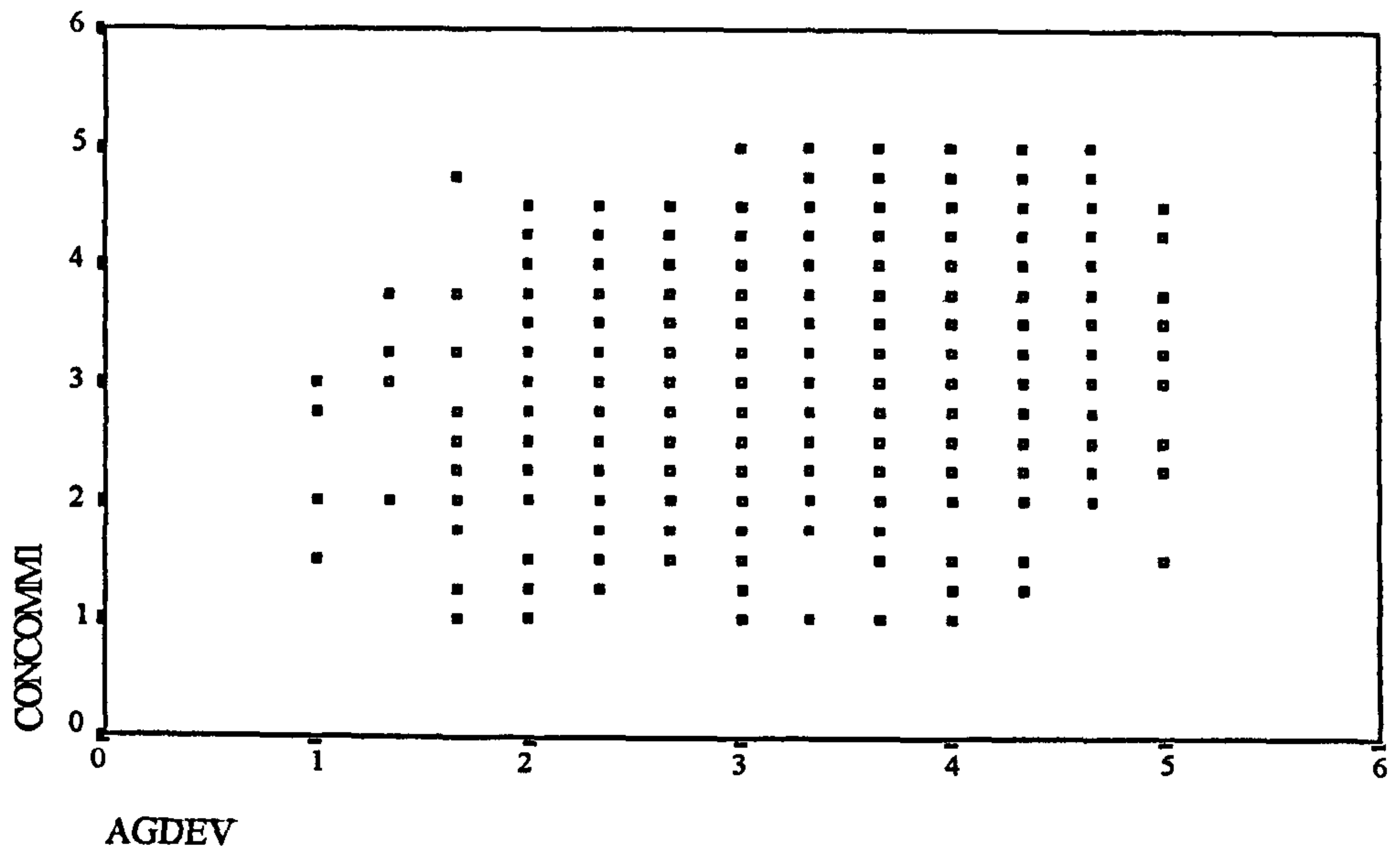


7. WORKPLACE INTEGRATION

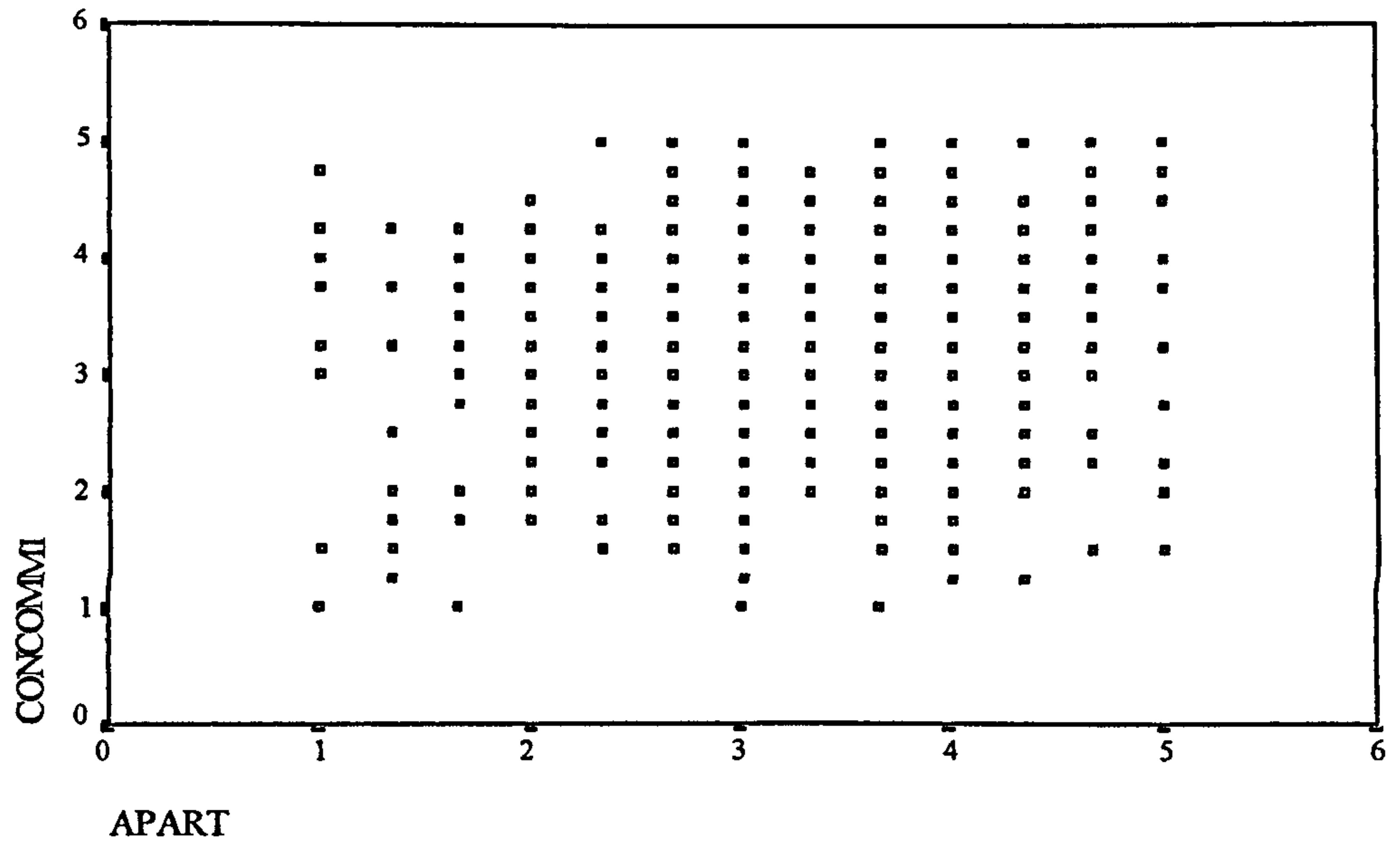


B: CONTINUANCE COMMITMENT (HIGH COST)

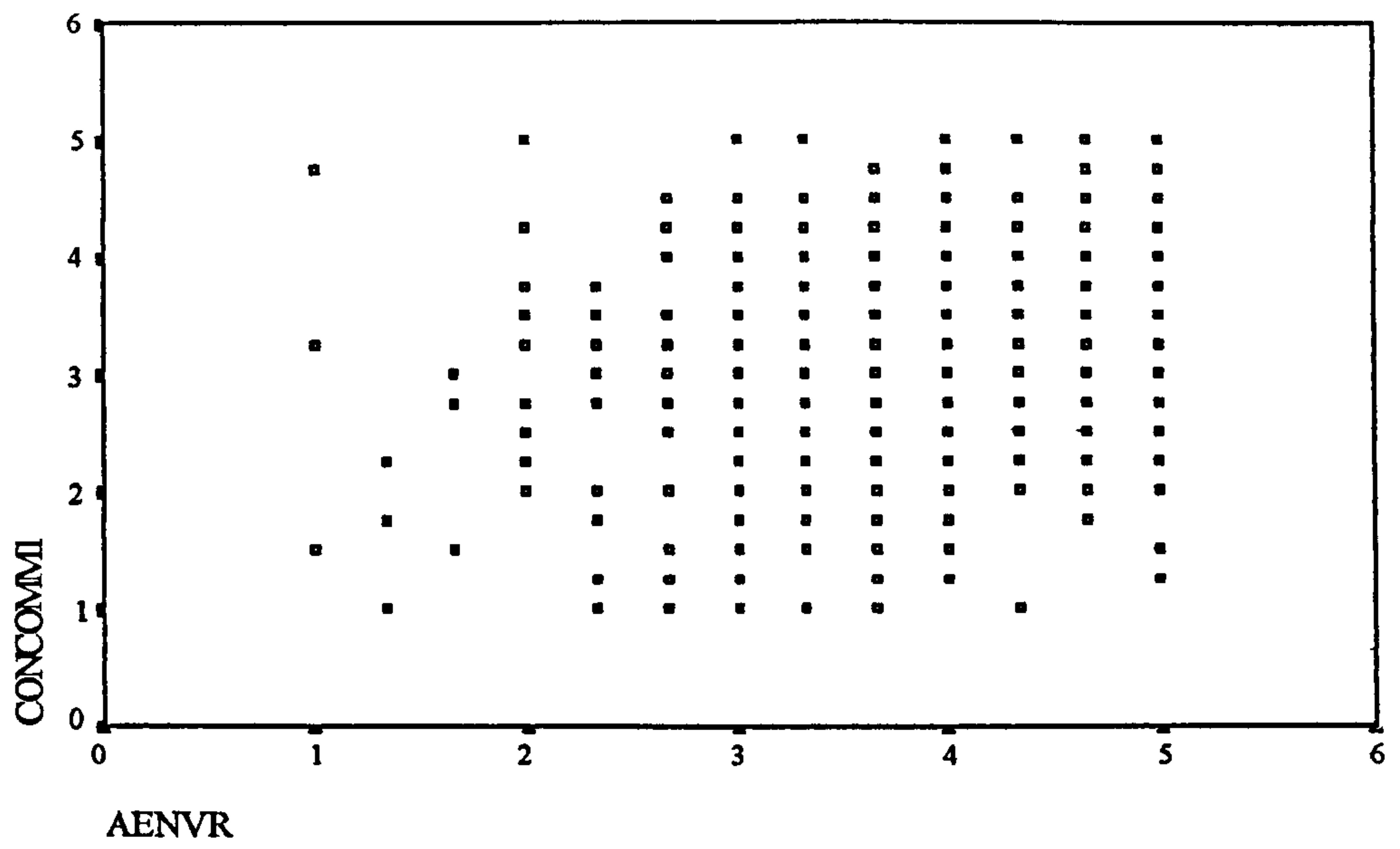
1. GROWTH AND DEVELOPMENT



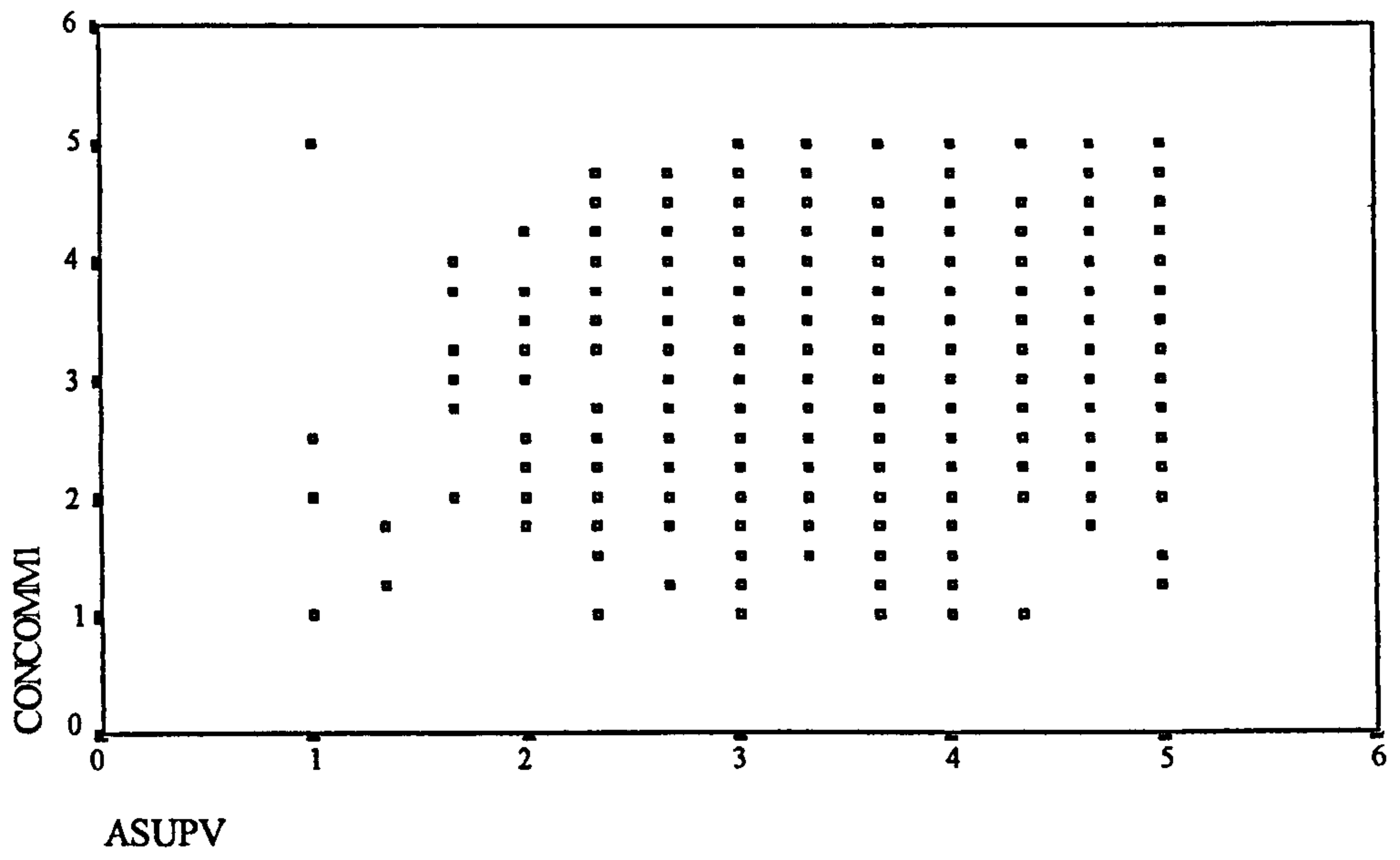
2. PARTICIPATION



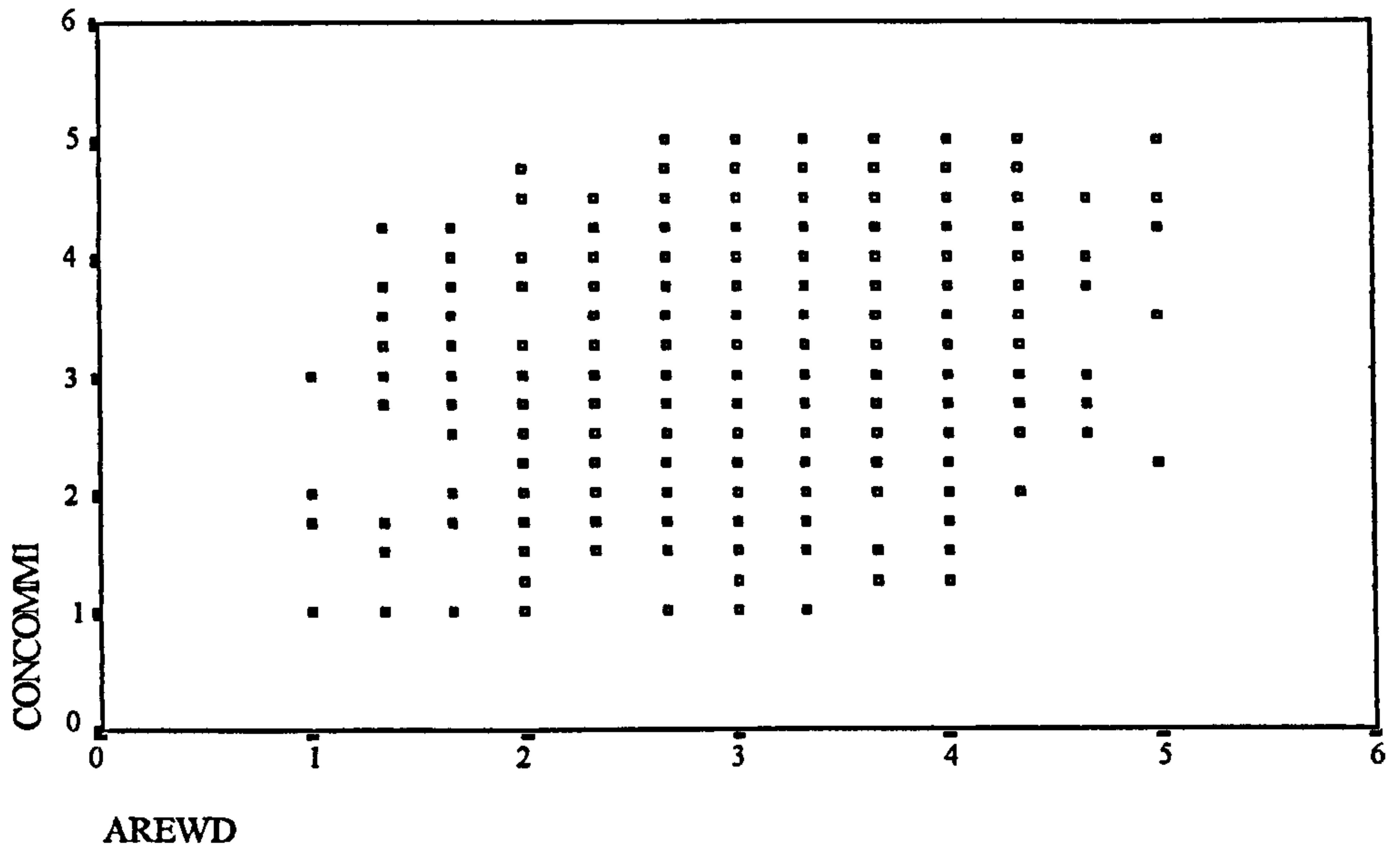
3. PHYSICAL ENVIRONMENT



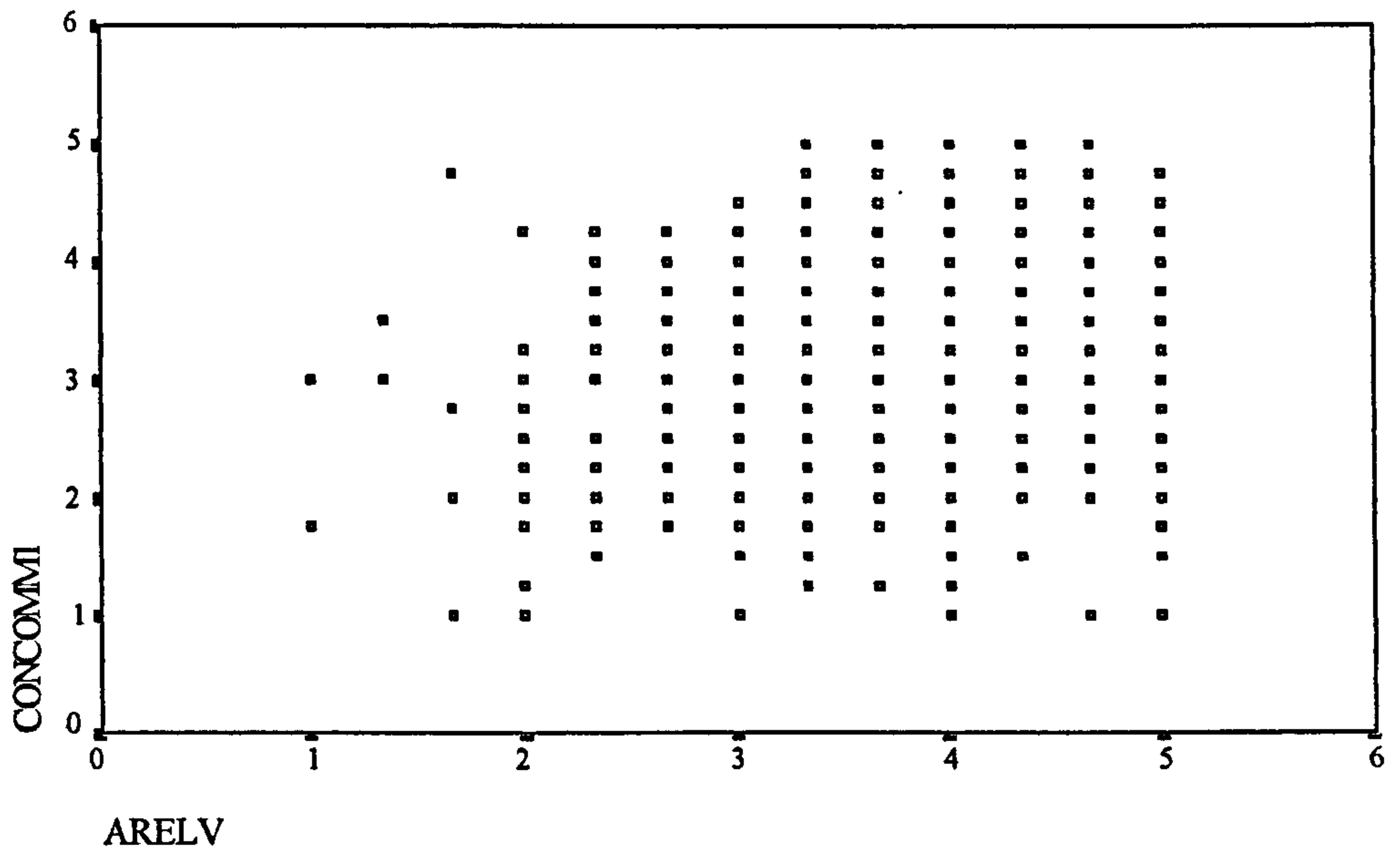
4. SUPERVISION



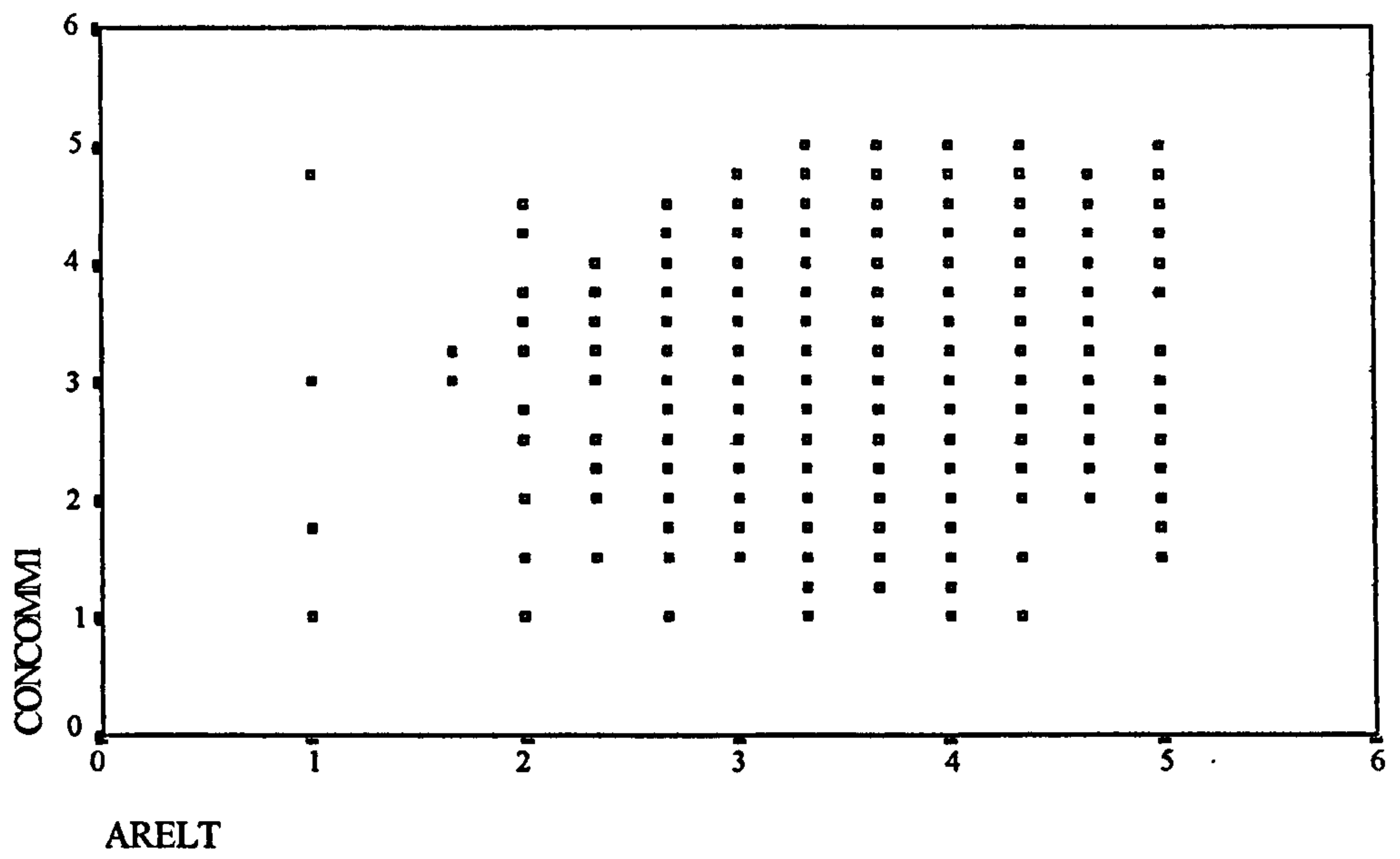
5. PAY AND BENEFITS



6. SOCIAL RELEVANCE

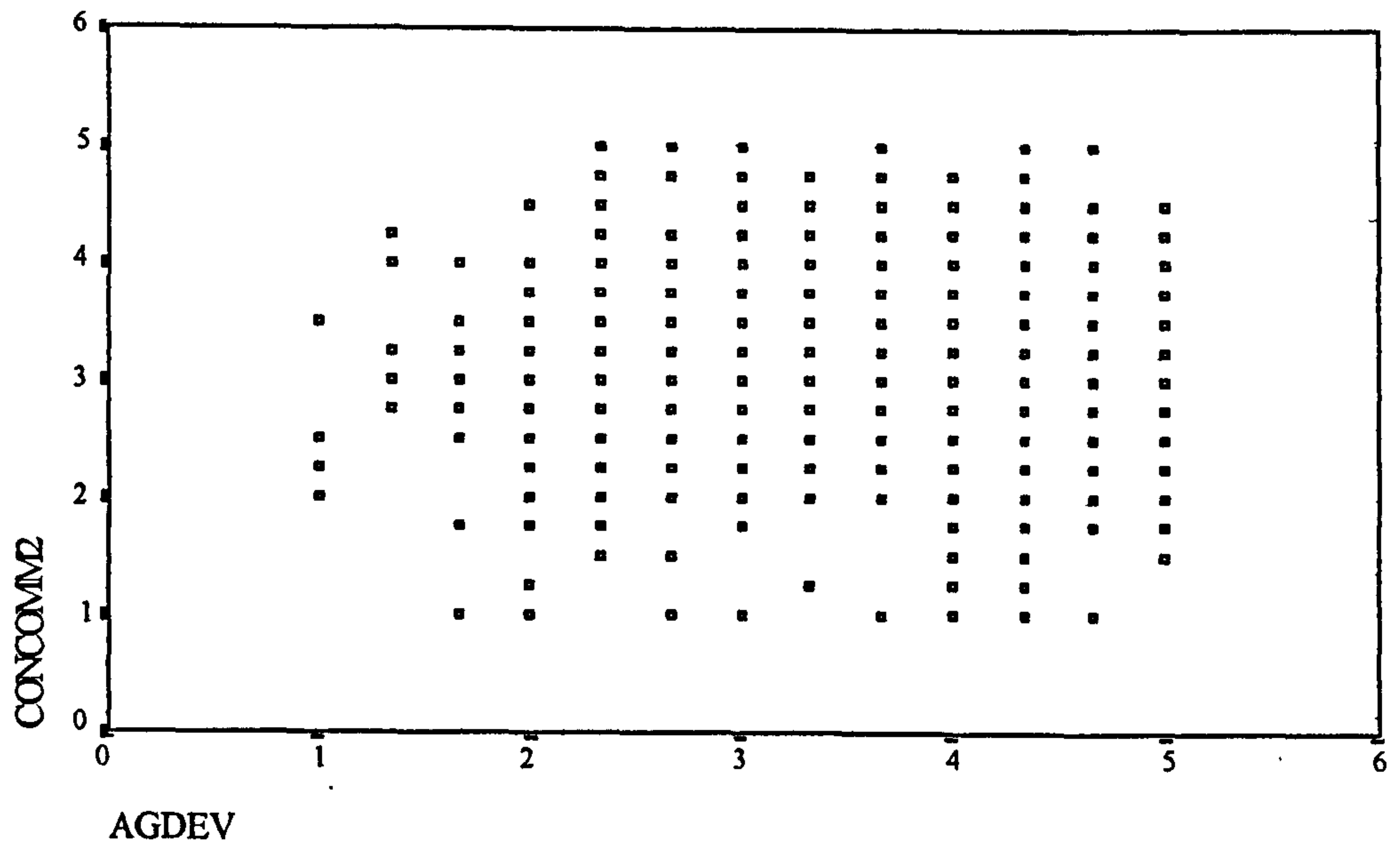


7. WORKPLACE INTEGRATION

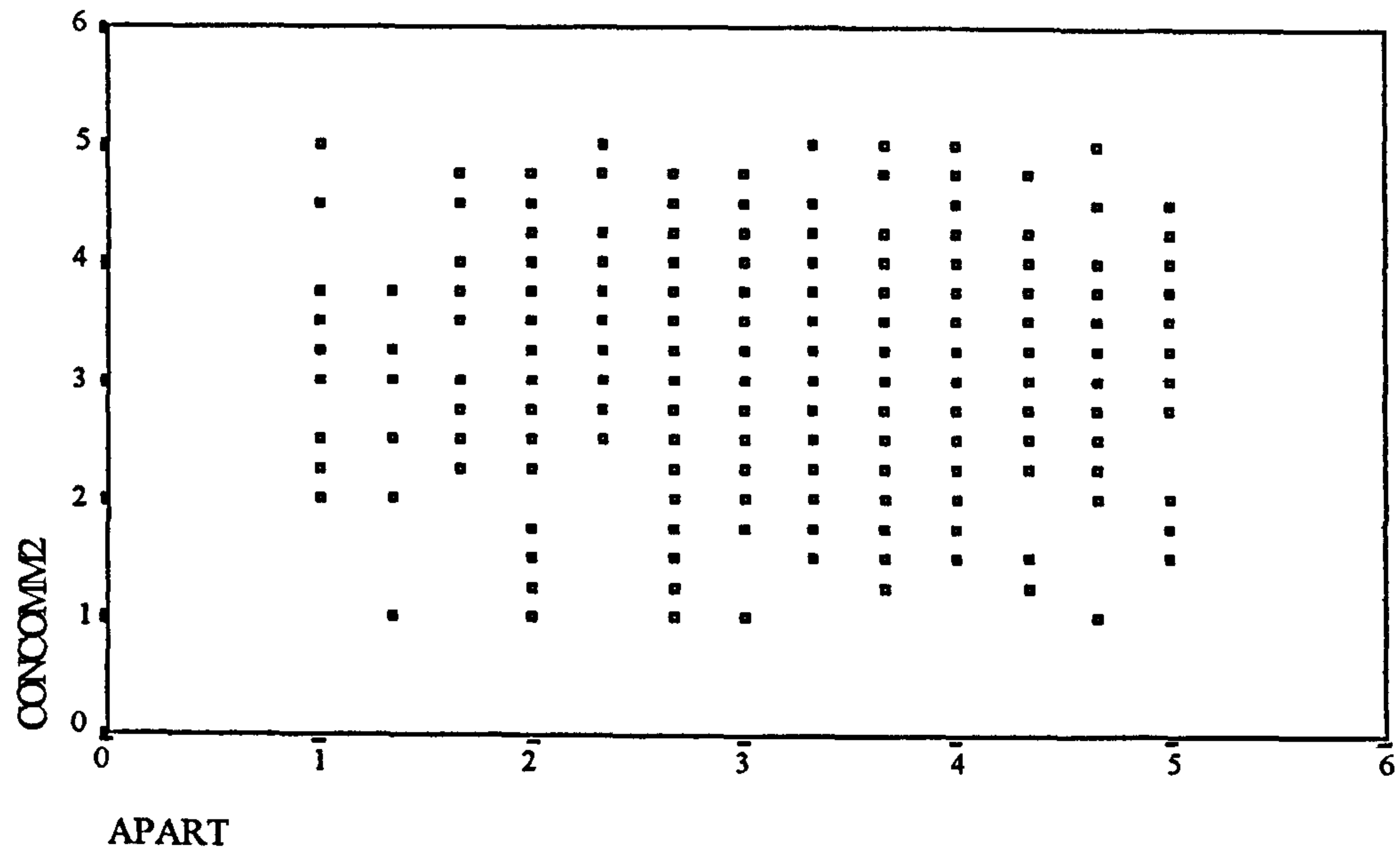


C: CONTINUANCE COMMITMENT (LACK OF ALTERNATIVES)

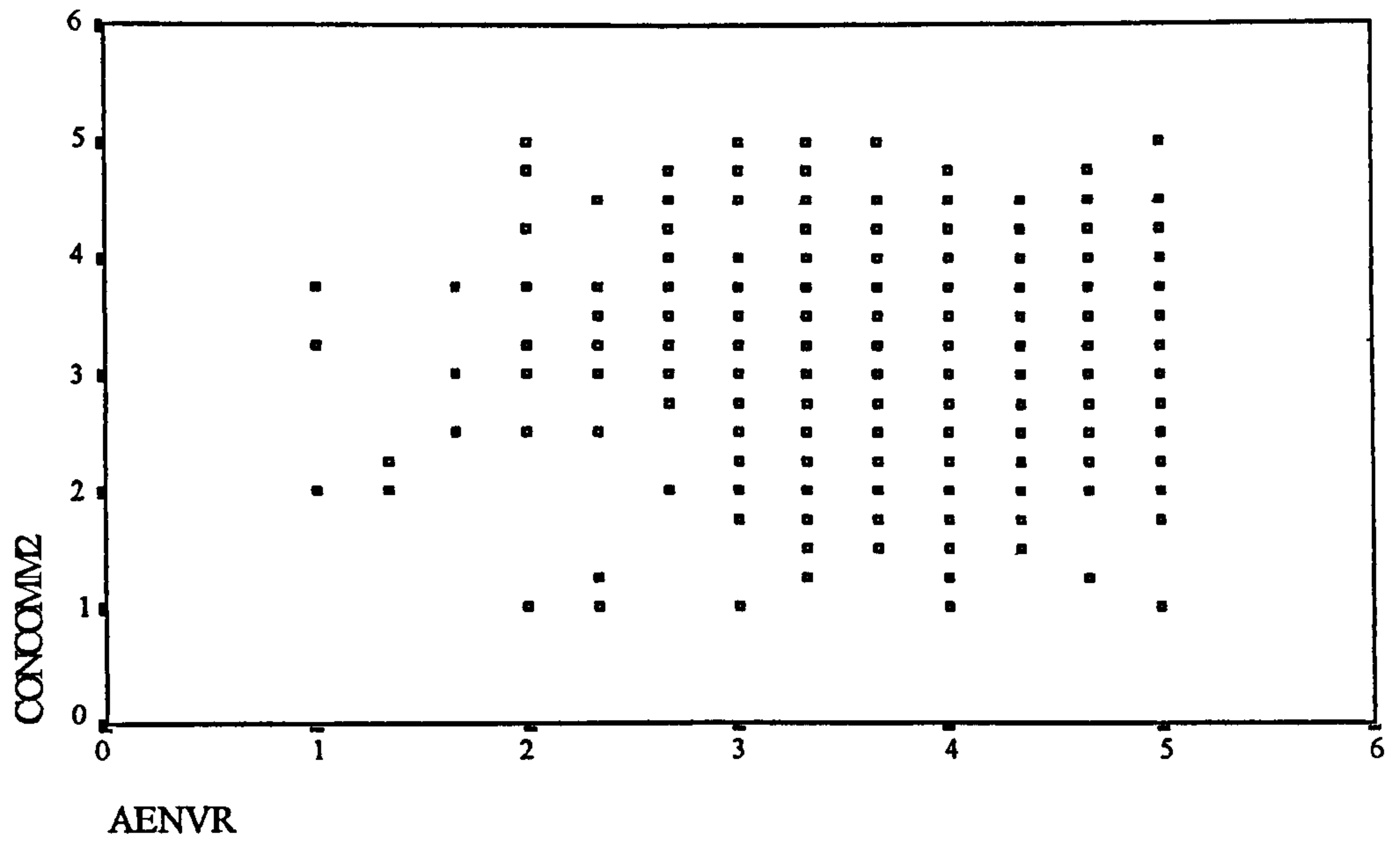
1. GROWTH AND DEVELOPMENT



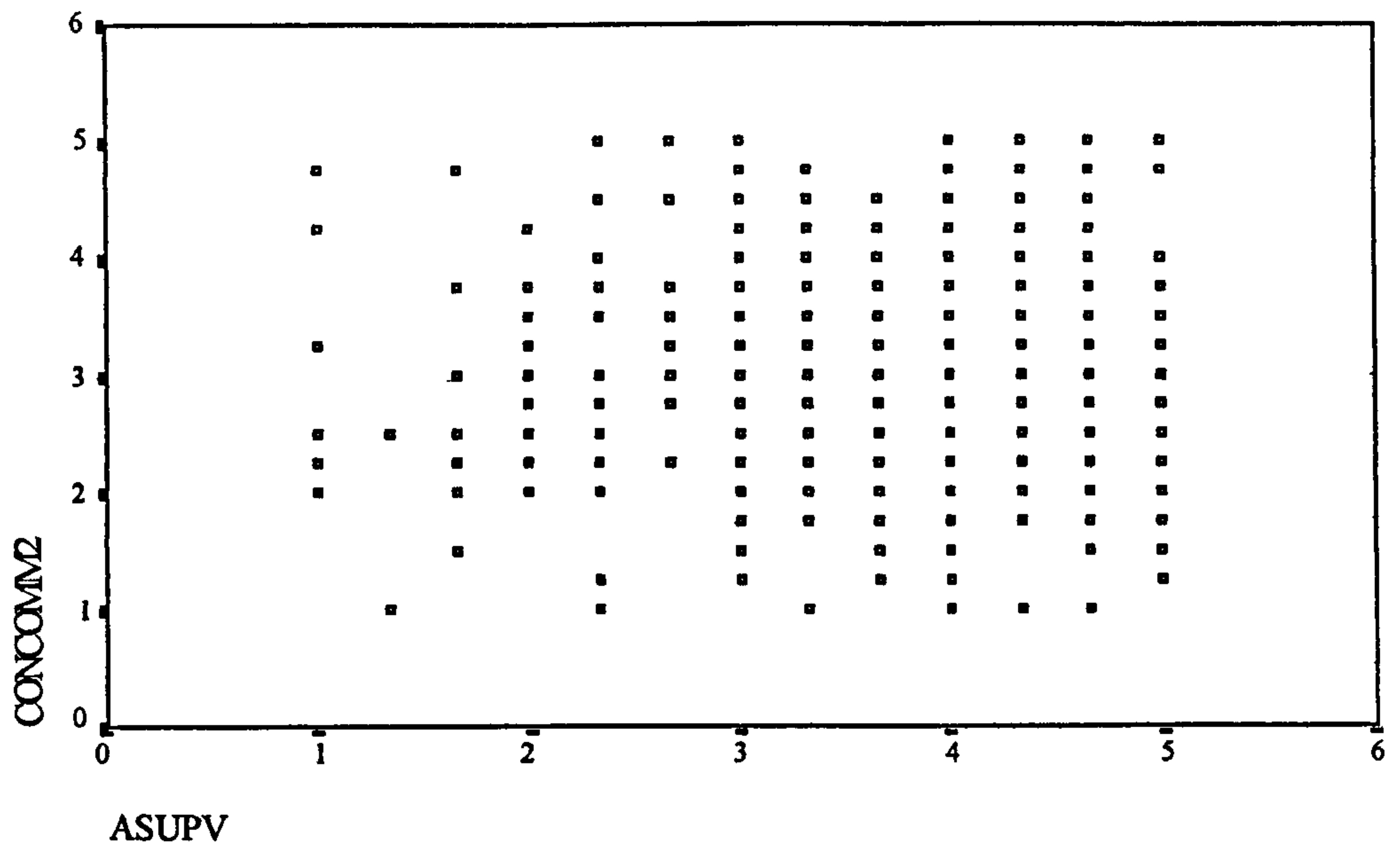
2. PARTICIPATION



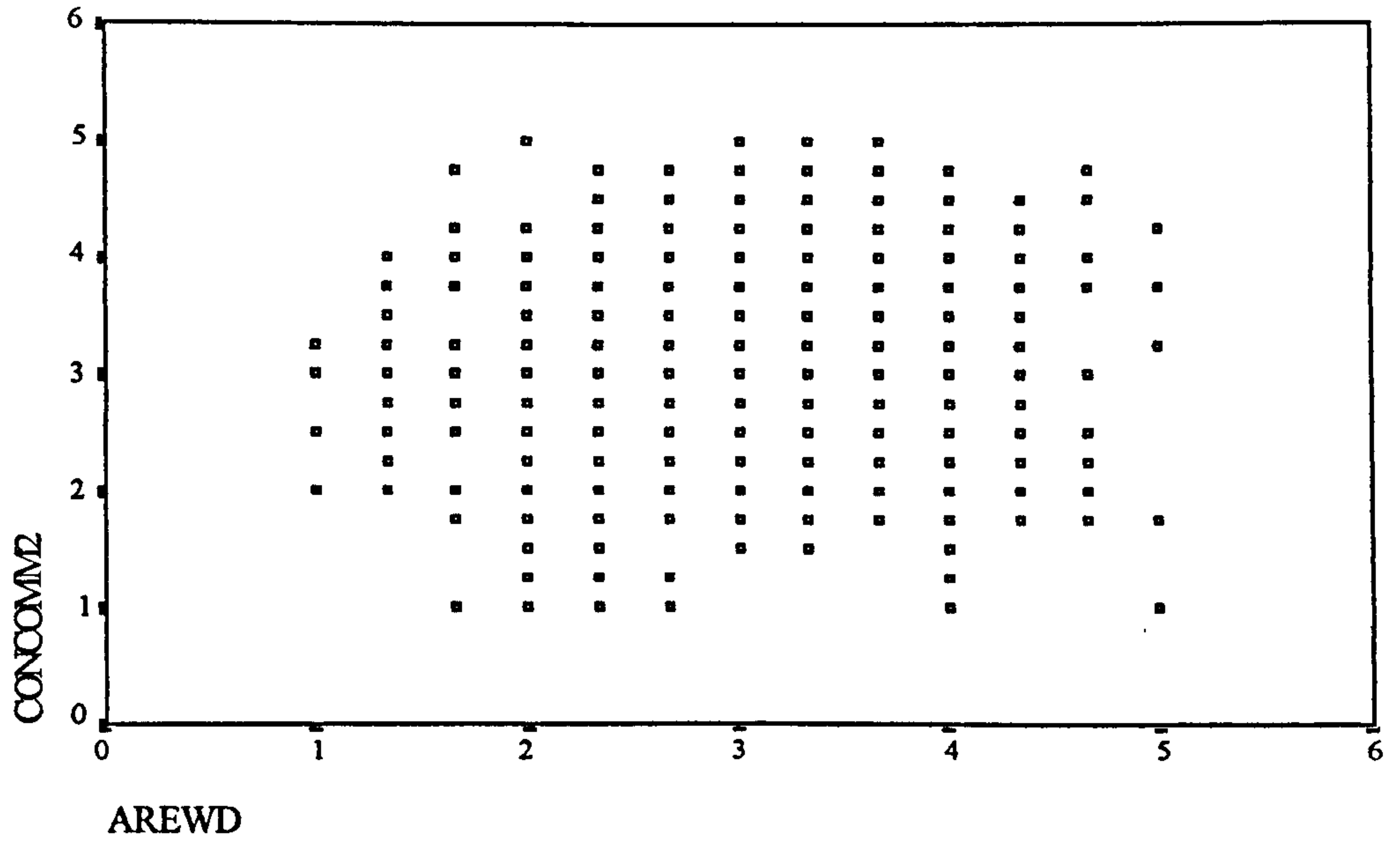
3. PHYSICAL ENVIRONMENT



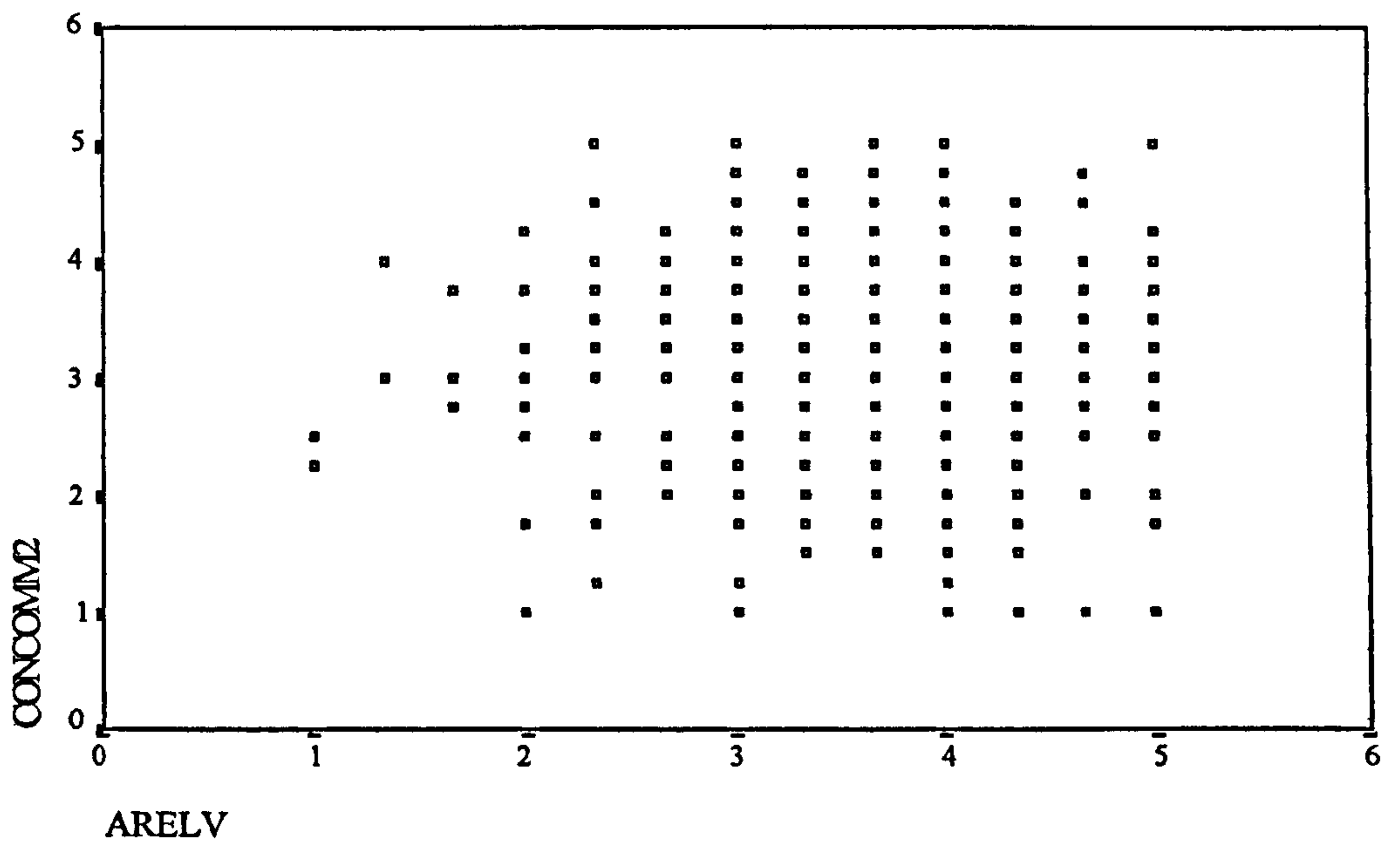
4. SUPERVISION



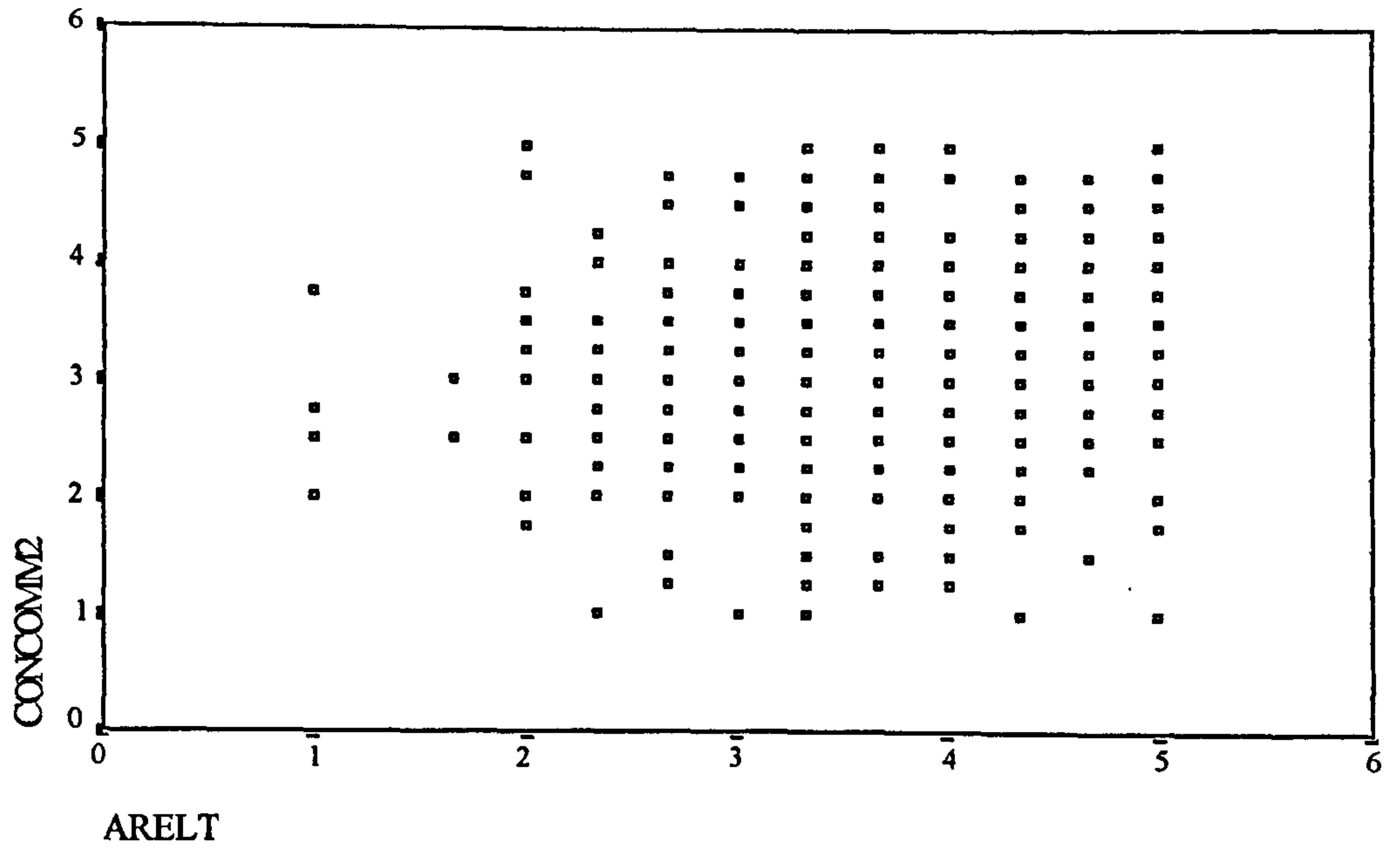
5. PAY AND BENEFITS



6. SOCIAL RELEVANCE

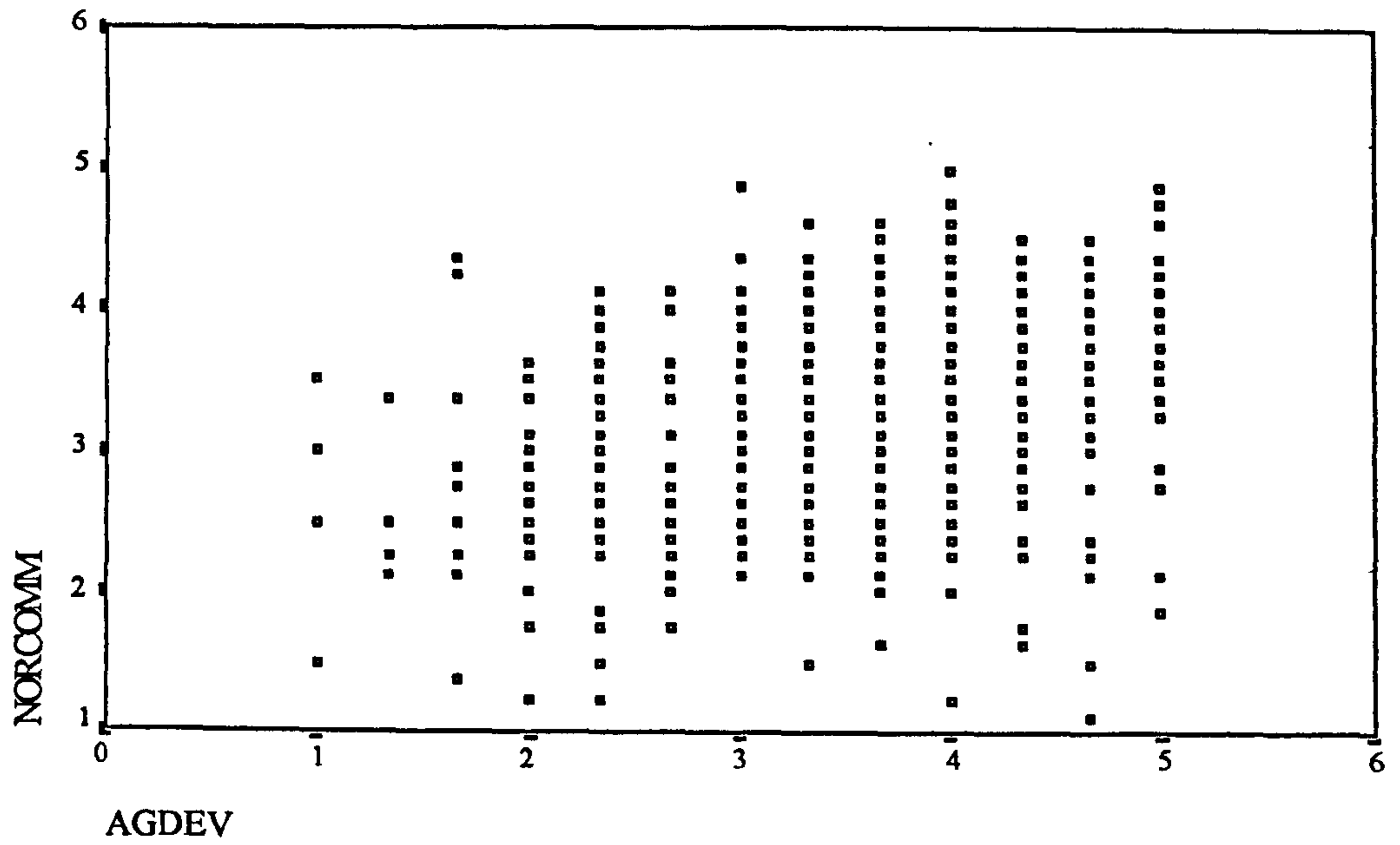


7. WORKPLACE INTEGRATION

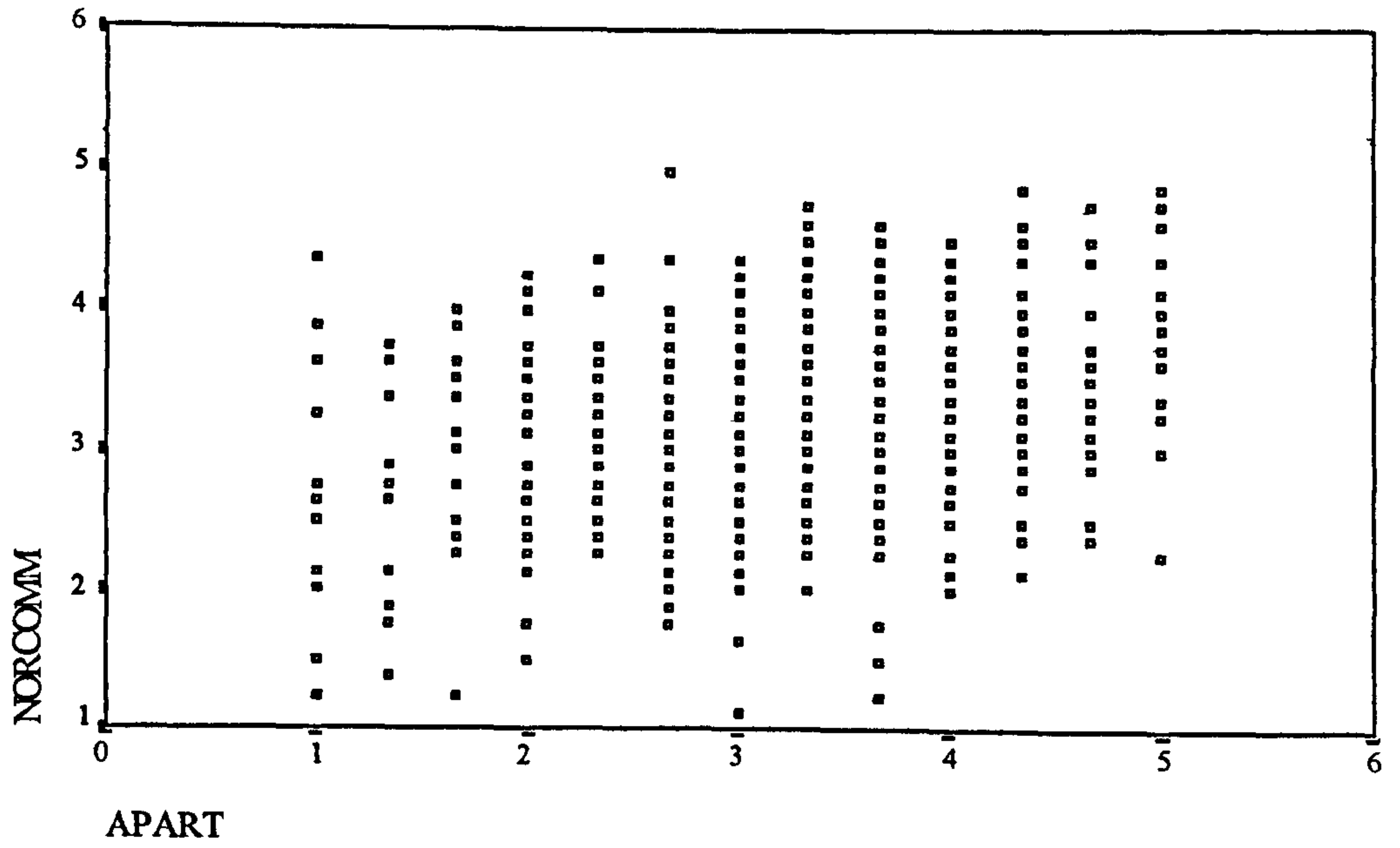


D : NORMATIVE COMMITMENT

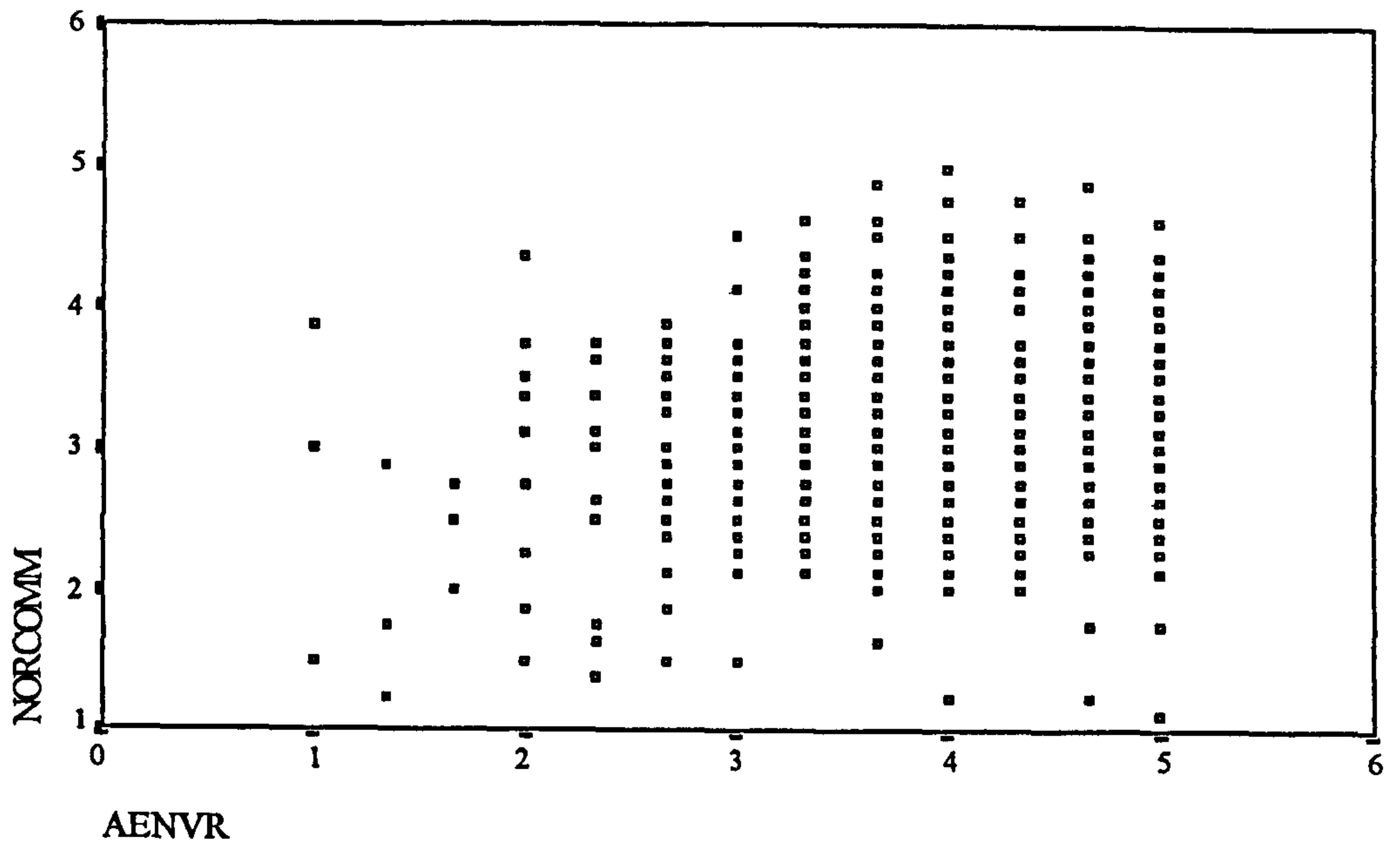
1. GROWTH AND DEVELOPMENT



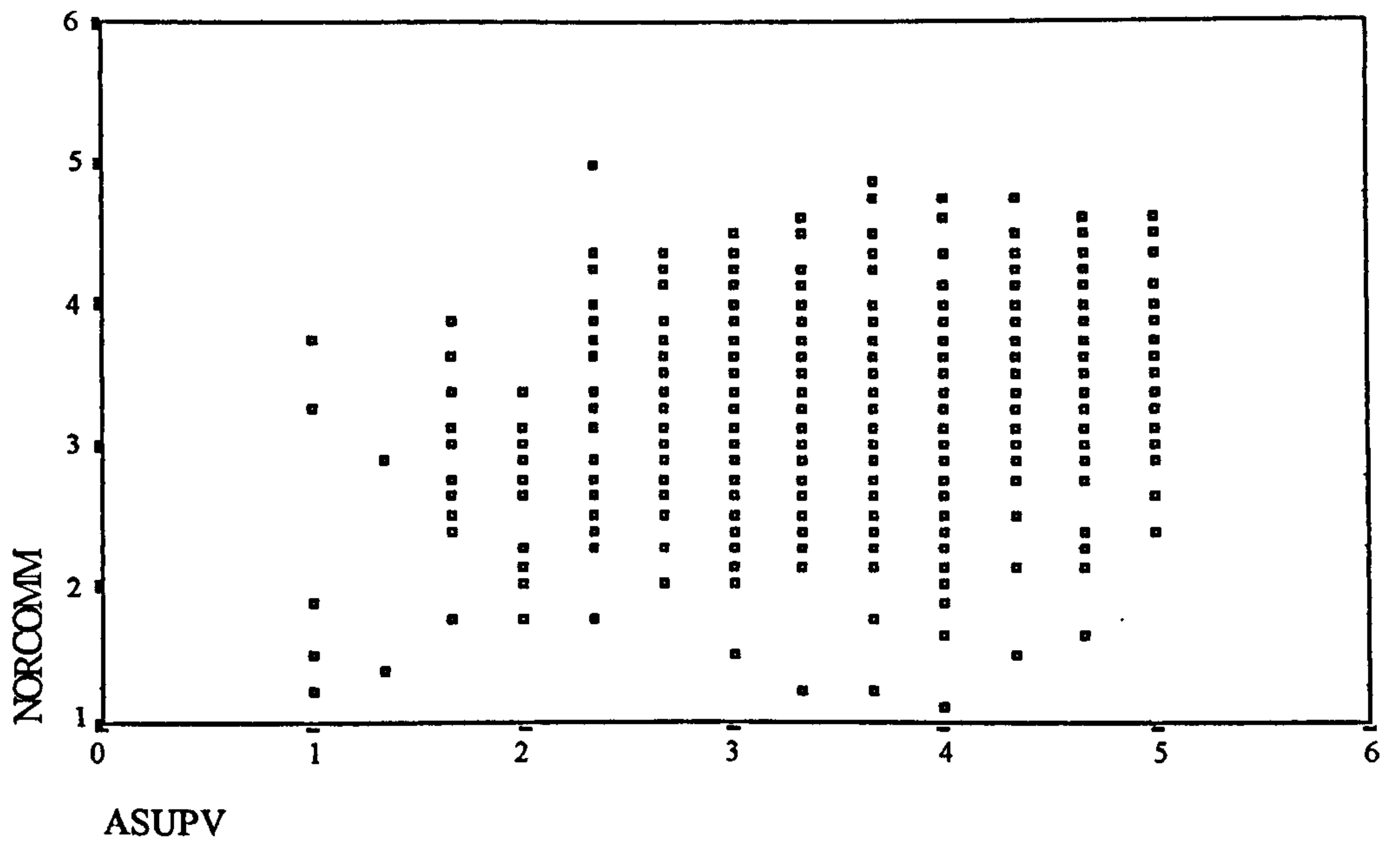
2. PARTICIPATION



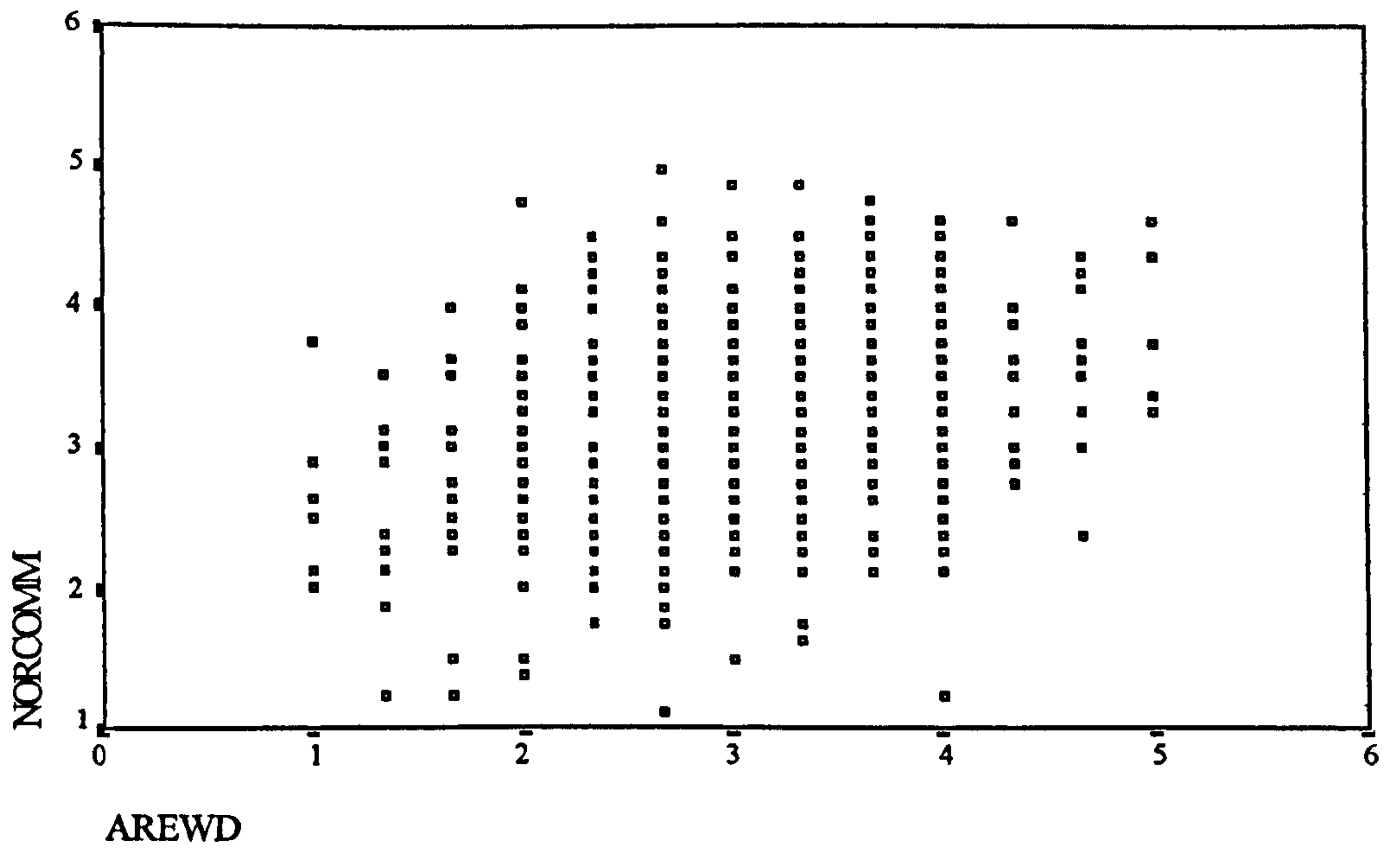
3. PHYSICAL ENVIRONMENT



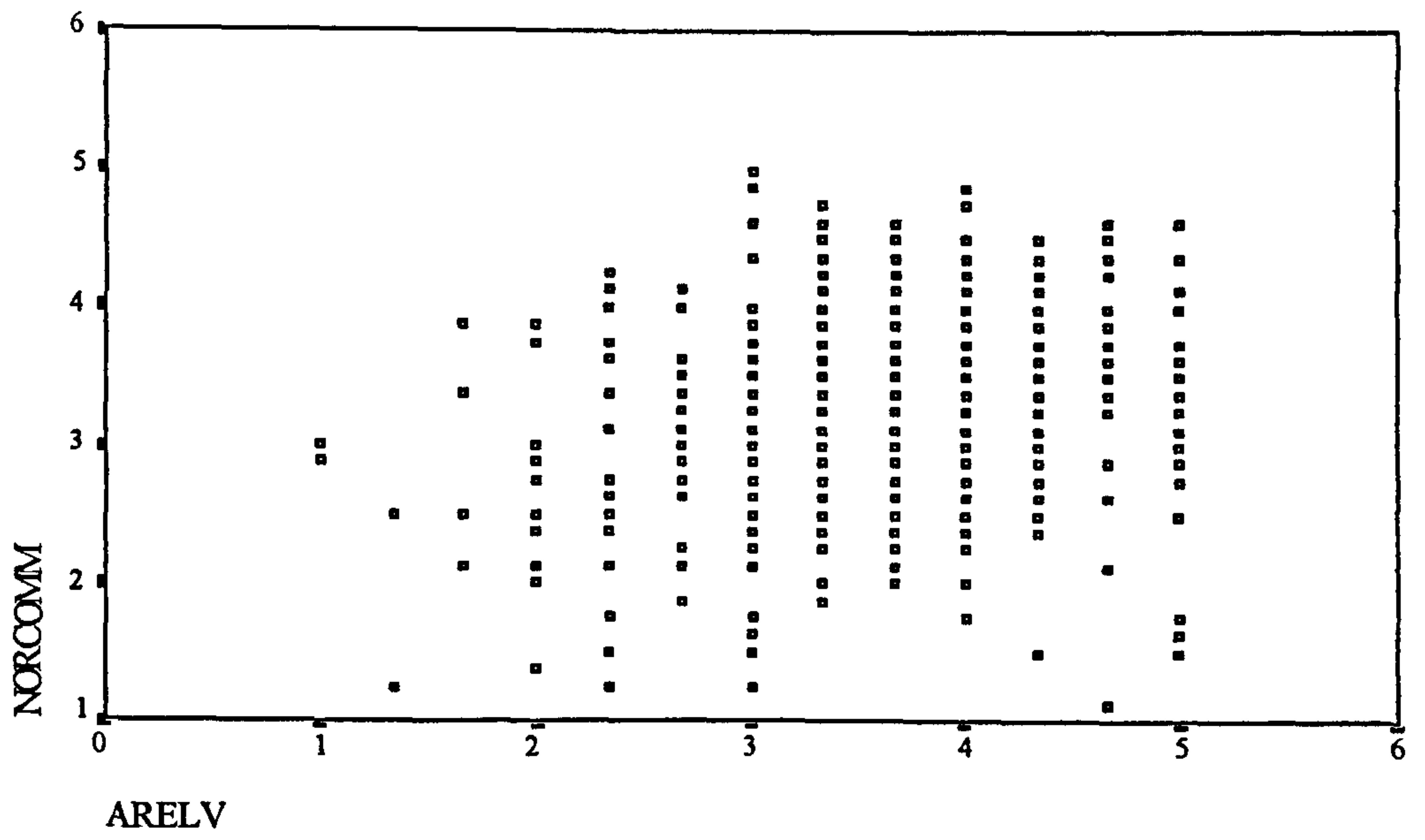
4. SUPERVISION



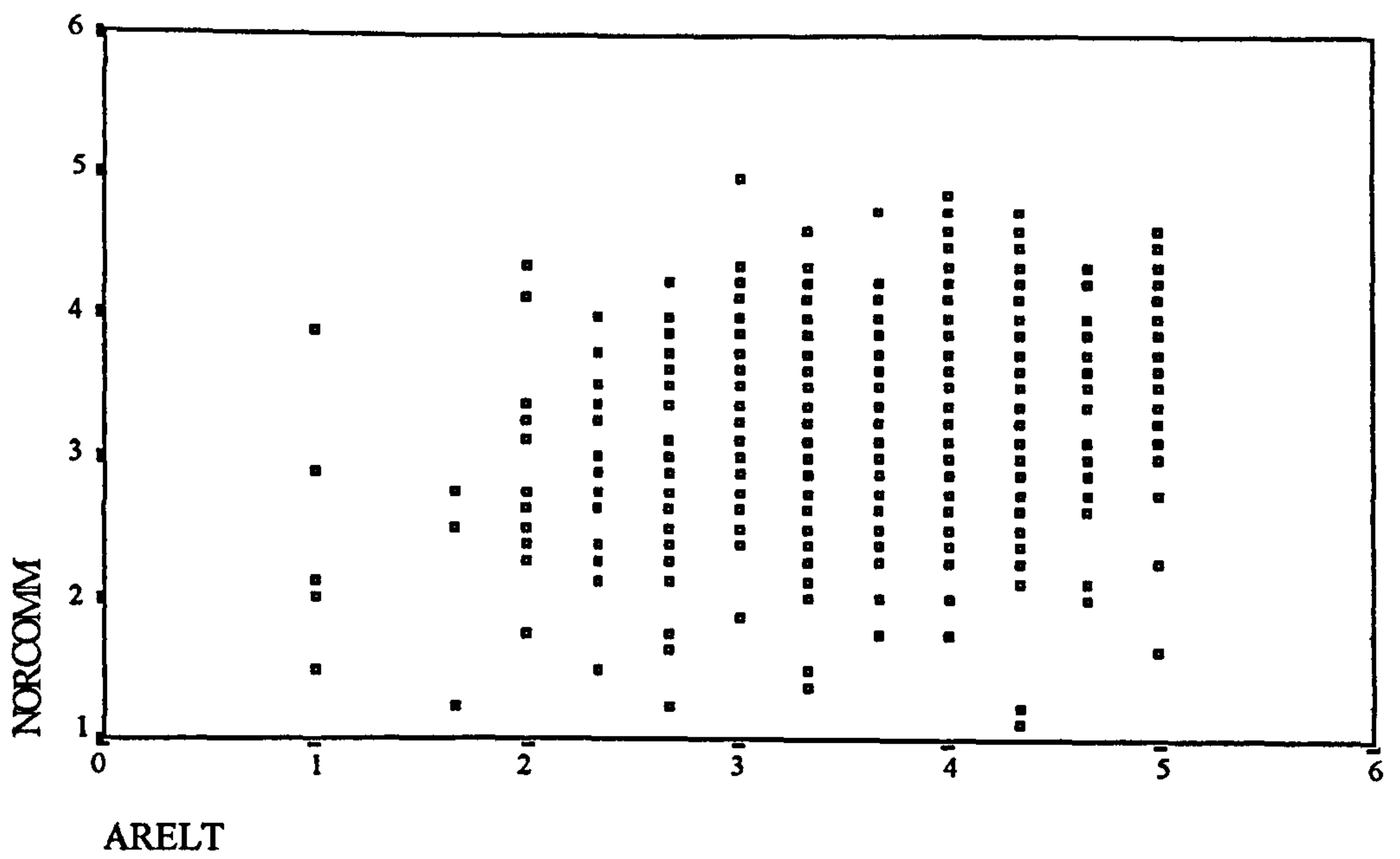
5. PAY AND BENEFITS



6. SOCIAL RELEVANCE



7. WORKPLACE INTEGRATION



APPENDIX L

CORRELATIONS BETWEEN INDEPENDENT AND DEPENDENT VARIABLES USED IN REGRESSION ANALYSES

CORRELATIONS BETWEEN INDEPENDENT VARIABLES (DEMOGRAPHIC AND QWL) AND DIMENSIONS OF ORGANISATIONAL COMMITMENT - TOTAL SAMPLE

Variables	Affective	Normative	Continuance (High Cost)	Continuance (Low Alternatives)
Gender	0.0815*	-0.0262	0.0432	-0.0018
Age	0.1296***	0.0071	0.0248	0.0385
Marital Status	0.0956*	-0.0268	0.0584	0.0558
Ethnic Group	0.0437	-0.0129	0.0250	0.0084
Qualification	-0.0490	-0.0398	0.0705	0.0285
Length of Service	0.1117**	-0.0119	0.0760*	0.1020**
Salary	0.0942*	0.0212	0.0661	0.0354
Growth & Development	0.4805***	0.3469***	0.2114***	0.0550
Participation Opportunities	0.4742***	0.3514***	0.1691***	0.0098
Physical Environment	0.4345***	0.2603***	0.1619***	0.0568
Supervision	0.4459***	0.3084***	0.1102**	0.0598
Pay and Benefits	0.4590***	0.3509***	0.2306***	0.0899*
Social Relevance	0.4734***	0.2444***	0.1606***	0.0192
Workplace Integration	0.5164***	0.3124***	0.1765***	0.0680

* p < 0.05; ** p < 0.01; *** p < 0.001

CORRELATIONS BETWEEN INDEPENDENT VARIABLES (DEMOGRAPHIC AND QWL) AND DIMENSIONS OF ORGANISATIONAL COMMITMENT - GOVERNMENT DEPARTMENT

Variables	Affective	Normative	Continuance (High Cost)	Continuance (Low Alternatives)
Gender	0.0443	0.0470	0.0563	0.0646
Age	-0.0045	-0.0613	-0.0926	-0.0334
Marital Status	-0.0889	-0.1658*	-0.0609	-0.0283
Ethnic Group	-0.0050	-0.0806	-0.0049	0.0568
Qualification	-0.0553	-0.0667	0.0875	-0.0062
Length of Service	0.0072	-0.0752	-0.0640	0.0063
Salary	-0.0767	-0.0723	-0.0763	-0.0743
Growth & Development	0.5520***	0.4298***	0.2478**	0.1448*
Participation Opportunities	0.4872***	0.3546***	0.0954	0.0452
Physical Environment	0.2781***	0.2420**	0.1057	0.0454
Supervision	0.4828***	0.3347***	0.1352	0.1793*
Pay and Benefits	0.3707***	0.2895***	0.1117	0.0643
Social Relevance	0.4802***	0.2955***	0.1353	0.1354
Workplace Integration	0.5462***	0.3063***	0.0991	0.0324

* p < 0.05; ** p < 0.01; *** p < 0.001

CORRELATIONS BETWEEN INDEPENDENT VARIABLES (DEMOGRAPHIC AND QWL) AND DIMENSIONS OF ORGANISATIONAL COMMITMENT - SEMI-GOVERNMENT ORGANISATIONS

Variables	Affective	Normative	Continuance (High Cost)	Continuance (Low Alternatives)
Gender	0.0220	-0.0470	-0.0030	-0.0735
Age	0.1094	0.0516	-0.0351	0.0462
Marital Status	0.0472	-0.0464	0.0227	0.0082
Ethnic Group	-0.0664	-0.0165	-0.0078	-0.0863
Qualification	-0.0536	-0.0361	0.0056	0.0111
Length of Service	0.0868	0.0646	0.0644	0.0980
Salary	0.1420*	0.1183	0.0246	0.0530
Growth & Development	0.4241***	0.2889***	0.2082**	0.0854
Participation Opportunities	0.5002***	0.3989***	0.2758***	0.0327
Physical Environment	0.5752***	0.3076***	0.2500***	0.0400
Supervision	0.4082***	0.2889***	0.1110	0.1009
Pay and Benefits	0.5303***	0.4048***	0.3593***	0.1270
Social Relevance	0.4498***	0.1789**	0.1496*	-0.0199
Workplace Integration	0.5546***	0.3316***	0.2241**	0.1411*

* p < 0.05; ** p < 0.01; *** p < 0.001

CORRELATIONS BETWEEN INDEPENDENT VARIABLES (DEMOGRAPHIC AND QWL) AND DIMENSIONS OF ORGANISATIONAL COMMITMENT - PRIVATE ORGANISATIONS

Variables	Affective	Normative	Continuance (High Cost)	Continuance (Low Alternatives)
Gender	0.1493*	-0.0121	-0.0884	0.0512
Age	0.2143***	0.0951	0.1580**	0.1196*
Marital Status	0.1795**	0.0997	0.1473*	0.1426*
Ethnic Group	0.0732	0.0288	0.0439	0.0226
Qualification	-0.0492	-0.0219	0.1057	0.0621
Length of Service	0.1847**	0.0464	0.2156***	0.2340***
Salary	0.1371*	0.0399	0.1811**	0.1096
Growth & Development	0.4881***	0.3346***	0.1823**	-0.0553
Participation Opportunities	0.4857***	0.3269***	0.1528*	0.0061
Physical Environment	0.4067***	0.2512***	0.1307*	0.0776
Supervision	0.4814***	0.3213***	0.1031	-0.0476
Pay and Benefits	0.4678***	0.3460***	0.2116***	0.0879
Social Relevance	0.4950***	0.3084***	0.1919**	-0.0336
Workplace Integration	0.4807***	0.3148***	0.2020**	0.0555

* p < 0.05; ** p < 0.01; *** p < 0.001

APPENDIX M

INTER-CORRELATION OF VARIABLES USED IN REGRESSION ANALYSES

INDEPENDENT (DEMOGRAPHIC AND QWL)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
2		.34***												
3		.28***												
4		.11**	.29***											
5		.02	-.03	-.11**										
6		-.24***	-.41***	-.28***	-.04									
7		.25***	.58***	.19***	-.08	-.42***								
8		.28***	.36***	-.02	.35***	-.20***	.58***							
9		.04	.02	-.02	.07	.03	.04	.13**						
10		-.09*	-.04	-.01	-.09*	.04	-.04	-.01	.47***					
11		-.08*	.04	.05	-.00	-.08	.00	.01	.30***	.40***				
12		-.03	-.06	-.02	.01	-.01	.02	.09*	.47***	.57***	.45***			
13		-.01	-.00	.06	-.05	.05	.03	.13**	.40***	.49***	.40***	.45***		
14		-.07	.13**	.13**	-.04	-.19	.13**	.11**	.49***	.38***	.39***	.38***	.38***	
15		-.02	.07	.01	-.06	-.02	.04	.03	.46***	.54***	.43***	.59***	.46***	.48***

* p < 0.05; ** p < 0.01; *** p < 0.001

Variables:

- | | | |
|------------------------|---------------------------|---------------------------|
| 1. Gender | 7. Length of Service | 13. Pay and Benefits |
| 2. Age | 8. Salary | 14. Social Relevance |
| 3. Marital Status | 9. Growth and Development | 15. Workplace Integration |
| 4. Ethnic Group | 10. Participation | |
| 5. Qualification | 11. Physical Environment | |
| 6. Organisational Type | 12. Supervision | |

CORRELATION MATRIX OF THE ORGANISATIONAL COMMITMENT DIMENSIONS

Variables	Affective	Cont. (HC)	Cont. (LA)
Cont. (HC)	.44***		
Cont. (LA)	.06	.46***	
Normative	.50***	.41***	.22***

* p < 0.05, ** p < 0.01, *** p < 0.001

APPENDIX N

INTER-ITEM CORRELATIONS

I. PREFERRED QWL

Items	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1																				
2	5253																			
3	4176	4676																		
4	4246	4013	3218																	
5	3690	3916	3567	6533																
6	3730	3426	3344	4777	6000															
7	3222	2970	2311	3285	3955	4385														
8	3553	3284	2322	2729	3817	4021	6812													
9	2443	2453	2307	2400	2911	3135	5241	4740												
10	3384	3390	3675	3444	4290	4111	3719	3746	3950											
11	2687	3320	3104	3746	4520	3842	3177	3584	3224	5601										
12	3502	3092	2276	4400	4450	4773	4290	4329	3541	5121	5866									
13	3346	3036	2283	3075	3600	4029	4083	4065	3671	3789	3851	4792								
14	2661	2310	2449	3061	3276	3407	2902	2698	2355	3463	3496	3692	4854							
15	2958	2785	2279	2485	3752	3838	4460	4441	4015	4266	3802	4757	4913	4355						
16	2408	3066	3379	2645	3566	2642	2540	2726	2822	2729	3199	2717	2411	2045	3304					
17	1841	3561	3181	1887	2703	1987	2412	2681	1954	2535	2471	2308	2417	2510	2925	3803				
18	2996	3728	3210	2543	3437	3090	3251	3864	3090	3589	3484	2930	3246	2743	3600	4386	4701			
19	2990	2788	2764	4058	4717	4588	3678	3603	3262	3702	5049	4864	4510	3564	3620	3500	1750	4095		
20	3244	3084	2809	3809	4059	4209	3946	3668	3281	4021	4233	5121	4241	2734	4058	3234	2186	3734	6057	
21	2099	2242	2927	1822	2079	1961	1872	1439	1953	2092	1685	1478	1259	1251	1379	3395	2399	3422	3067	3403

Note:

Decimals omitted

2. PERCEIVED QWL

Items	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1																				
2	5300																			
3	4314	5785																		
4	3391	3465	3455																	
5	3645	3693	2999	5899																
6	3137	3450	2826	5316	6903															
7	2609	2143	1219	2382	3327	3116														
8	2495	2058	1660	2823	3348	3213	6673													
9	2555	2084	1549	2160	2952	2233	4573	4455												
10	3264	3264	3106	4439	3421	3155	2128	2568	2618											
11	3710	3521	2448	4460	4349	3572	3040	3486	3176	5334										
12	3530	3399	2835	4232	4427	4308	3291	3949	3000	4527	6046									
13	2517	2295	2191	2531	2524	2872	2497	2723	2817	2770	2652	2994								
14	2439	2402	2119	2663	3238	3542	1842	1812	1654	1961	2555	2892	3063							
15	3077	2930	2336	3048	4271	3591	3461	3079	2180	1834	2923	4038	3197	3782						
16	2548	3476	3537	2726	2661	2343	2142	2068	2376	2711	1704	2027	2003	1594	2468					
17	2112	2643	2245	2367	2289	1791	1937	1976	2452	2860	2118	2032	2185	1027	2432	2819				
18	3672	3805	3292	2906	2641	2023	2389	2671	3698	2614	2778	2382	3092	1635	2918	3707	3724			
19	3579	3636	2573	3970	4765	4176	3167	3579	2821	3340	5597	4753	2970	2760	3897	2498	2752	4204		
20	3561	3218	2578	4222	4614	4421	3297	3818	2490	3638	5190	4630	2872	2863	3945	2818	2499	3499	7388	
21	2499	2955	3091	2804	2443	2251	2381	2437	2041	2402	3041	2848	2147	1031	2369	3502	2330	2627	3761	3560

Note:
Decimals omitted

3. ORGANISATIONAL COMMITMENT

ITEMS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1																								
2	54																							
3	48	49																						
4	53	39	46																					
5	55	47	58	50																				
6	62	44	52	61	67																			
7	52	44	48	44	60	66																		
8	38	34	41	38	46	45	51																	
9	37	28	35	41	41	43	38	40																
10	38	27	31	40	39	42	37	28	54															
11	14	02	13	14	15	13	12	05	32	41														
12	25	11.	18	26	22	26	21	09	32	56	59													
13	-16	-19	-11	-14	-13	-17	-15	-07	-01	00	19	16												
14	11	-05	02	01	02	04	-03	-03	13	22	39	41	34											
15	12	00	04	07	07	06	05	01	17	28	39	42	32	61										
16	28	19	17	24	25	23	24	14	27	37	28	42	11	35	43									
17	-05	-01	-06	-00	00	-01	01	-04	11	04	16	10	11	10	12	17								
18	28	16	31	24	35	36	33	17	21	23	18	17	-05	11	11	22	08							
19	16	09	18	20	13	19	09	06	14	19	17	15	-02	16	15	20	18	30						
20	44	28	38	36	40	43	38	23	31	41	22	29	-09	16	18	37	03	51	42					
21	35	19	19	35	26	35	27	17	19	32	11	22	-05	02	07	22	01	22	29	36				
22	36	22	31	31	36	33	34	25	23	28	13	19	-10	04	06	19	02	42	20	50				
23	35	22	22	24	27	30	28	18	24	21	09	16	-09	04	06	20	16	32	31	43	37	47		
24	27	17	29	26	21	28	21	15	18	23	17	24	-01	13	11	20	09	26	19	32	30	29	39	

Notes:

1. Decimals omitted

2. Rounded up to two decimal places

Items:

1	AC1	9	CC1	17	NC1
2	AC2	10	CC2	18	NC2
3	AC3	11	CC3	19	NC3
4	AC4	12	CC4	20	NC4
5	AC5	13	CC5	21	NC5
6	AC6	14	CC6	22	NC6
7	AC7	15	CC7	23	NC7
8	AC8	16	CC8	24	NC8