

**A MODEL FOR MAXIMISING ELECTRONIC HUMAN RESOURCE  
MANAGEMENT MACRO-LEVEL CONSEQUENCES: THE ROLE OF  
ACTORS**

A  
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## DECLARATION

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## ABSTRACT

The use of electronic Human Resource Management (e-HRM) has increased phenomenally in recent years, in order to achieve various positive consequences such as lower costs, improved relations amongst and between e-HRM actors, and even gaining a strategic role for the Human Resource (HR) function. Empirical research focusing on e-HRM consequences, has however, persistently shown unintended and contradictory findings between and within prior studies conducted in the Western context. Such contradictions are detrimental to the practice of e-HRM, since the implementation of the phenomenon can no longer be defended vis-a-vis the returns from its deployment. The goal of this study was to develop a model for maximising e-HRM macro-level consequences, in the context of actors. This study adopted a partially mixed sequential dominant status explanatory design wherein the first phase, a quantitative study, studied the effect of e-HRM use on employee performance, job satisfaction, and organisational politics and subsequently on macro-level consequences. The second phase, a qualitative study to contextualise the quantitative results, studied the unexpected and non-significant results from the quantitative study. That is, a survey and narrative inquiry were used as research strategies. The sample consisted of HR professionals, line managers and IT professionals. The results indicate that there is successful partial mediation linked to employee performance, job satisfaction and organisational politics. These variables act as independent mediators, each playing a role in explaining the effect of e-HRM use on e-HRM macro-level consequences. Job satisfaction however plays a greater contributing role than the other two variables. Employee performance and job satisfaction in serial mediation, subject to complementary HR interventions, contribute to the maximisation of intended e-HRM macro-level consequences. The contribution of the thesis is in the model that may inform and help minimise the occurrence of unintended consequences and maximise the occurrence of intended consequences. A model that has employee performance and job satisfaction as mediating variables, is recommended as the most fitting, to guarantee intended consequences. For this model to work, a number of recommendations are suggested, including aligning HRM strategies and e-HRM strategies for enhanced intended macro-level consequences. It is important to realise that employee perception of e-HRM use may be different from actual use. Future studies are encouraged to explore ways of measuring both actual and perceived e-HRM use.

**Key words:** e-HRM, e-HRM use, e-HRM actors, e-HRM macro level consequences, employee performance, job satisfaction, organisational politics.

## Contents

DECLARATION .....	ii
ACKNOWLEDGEMENTS .....	iii
ABSTRACT .....	iv
LIST OF FIGURES .....	xiii
LIST OF TABLES .....	xv
ACRONYMS .....	xviii
CHAPTER 1 INTRODUCTION AND BACKGROUND .....	1
1.1 Introduction and the background to the field of study .....	1
1.1.1 Defining the thesis title and the background to the field of study.....	2
1.2 Background to the Research Problem .....	6
1.2.1 Challenges of e-HRM in developing countries .....	6
1.2.2 Electronic HRM, HPWP and Organisational performance .....	8
1.3 Theoretical and Practical Knowledge Gaps .....	9
1.4 Problem Statement .....	10
1.5 Research Argument .....	11
1.6 Study goal.....	12
1.7 The Study Objectives were to; .....	12
1.8 Study Research Questions .....	12
1.8.1 Secondary Research Questions .....	12
1.9 Research Design .....	13
1.10 Delimitations of the study .....	13
1.11 Outline of the thesis.....	13
1.12 Summary of the chapter .....	15
CHAPTER 2 SURVEY OF SCHOLARSHIP AND THEORETICAL FOUNDATIONS .....	16
2.1 Introduction .....	16
2.2. e-HRM defined.....	19
2.2.1 Information System based definitions.....	19
2.2.2 Operational consequence focused definitions .....	19
2.2.3 Relational consequence focused definitions .....	20
2.2.4 Transformational consequence focused definitions .....	20
2.2.5 e-HRM and HRIS.....	23
2.2.6 e-HRM Tools / Applications .....	25

2.3 Role and Development of e-HRM .....	26
2.3.1 <i>Strategic Human Resource Management and e-HRM</i> .....	26
2.3.2 <i>Automation of HR tasks and focus on operational consequences (1970s to 1980s)</i> .....	28
2.3.3 <i>Emergence of relational and transformational consequences (1990s)</i> .....	29
2.3.4 <i>e-HRM emerges as a separate research field and practice (2000-2010)</i> .....	30
2.3.5 <i>The strategic role and unintended consequences emphasis (2011-2015)</i> .....	33
2.4 Rationale for adopting e-HRM.....	36
2.4.1 <i>Transformational Goals (Strategic Orientation)</i> .....	36
2.4.2 <i>Operational Goals (Efficiency gains)</i> .....	37
2.4.3 <i>Relational Goals (Empowerment and Communication mechanism)</i> .....	37
2.4.4 <i>Standardisation of processes in global organisations</i> .....	38
2.4.5 <i>Organisational Image</i> .....	38
2.5 Consequences of e-HRM .....	39
2.5.1 <i>Micro-level consequences</i> .....	41
2.5.2 <i>Macro-level consequences</i> .....	45
2.6 Explaining e-HRM consequences .....	52
2.6.1 <i>Technology imperative (strict determinism) literature</i> .....	52
2.6.2 <i>Moderate determinism (contingency model) literature</i> .....	54
2.6.3 <i>Moderate voluntarism literature</i> .....	55
2.6.4 <i>Strict voluntarism (organisational imperative)</i> .....	55
2.7 Employee Performance .....	57
2.7.1 <i>Employee performance defined</i> .....	57
2.7.2 <i>Taxonomy of employee performance</i> .....	57
2.7.3 <i>e-HRM and employee performance</i> .....	58
2.8 Job Satisfaction .....	63
2.8.1 <i>Job satisfaction defined</i> .....	63
2.8.2 <i>e-HRM and job satisfaction</i> .....	64
2.9 Organisational politics.....	69
2.9.1 <i>Understanding organisational politics</i> .....	69
2.9.2 <i>Dimensions of power</i> .....	69
2.9.3 <i>e-HRM - organisational politics alignment</i> .....	73
2.9.4 <i>e-HRM and power distribution</i> .....	74
2.9.5 <i>e-HRM and Conflict</i> .....	77

2.10 e-HRM, Employee performance, Job satisfaction, Organisational politics and e-HRM macro level consequences interrelatedness .....	79
2.11 e-HRM Knowledge Gap .....	81
2.12 Summary of the chapter .....	82
CHAPTER 3 THEORETICAL FRAMEWORKS AND THE RESEARCH MODEL .....	84
3.1 Introduction .....	84
3.2 Theoretical perspectives related to e-HRM macro-level consequences.....	84
3.2.1 <i>Resource Based View</i> .....	84
3.2.2 <i>Contingency theory</i> .....	86
3.2.3 <i>Transaction cost theory</i> .....	88
3.2.4 <i>Institutional theory with sensemaking theory</i> .....	89
3.3 Theories related to employee performance .....	90
3.3.1 <i>Hackman &amp; Oldham's Job Characteristics Model</i> .....	90
3.3.2 <i>ALM Model</i> .....	92
3.4 Theory related to job satisfaction .....	93
3.4.1 <i>Hackman &amp; Oldham's Job Characteristics Model</i> .....	93
3.5 Theories related to organisational politics .....	94
3.5.1 <i>Political Perspective of Resistance Model</i> .....	94
3.5.2 <i>Information System-Conflict framework (2015)</i> .....	94
3.6 The Research Model.....	96
3.6.1 <i>Direct effect of e-HRM use on e-HRM macro level consequences</i> .....	99
3.7 Research Consistency.....	104
3.8 Summary of the chapter .....	108
CHAPTER 4 RESEARCH METHODOLOGY .....	109
4.1 Introduction .....	109
4.2 Research Philosophy .....	110
4.2.1 <i>Nature of society</i> .....	110
4.2.2 <i>Nature of Science</i> .....	110
4.3 Research Purpose .....	117
4.4 Research approach.....	118
4.5 Research Design.....	118
4.5.1 <i>Quantitative phase</i> .....	122
4.5.2 <i>Qualitative phase</i> .....	123
4.6 Population.....	123

4.7 Sampling.....	125
4.7.1 Sampling for the quantitative study .....	125
4.7.2 Sampling for qualitative study .....	126
4.8 Sample Size .....	127
4.8.1 Quantitative sample size .....	128
4.8.2 Qualitative sample size .....	131
4.8.3 Study Setting .....	131
4.9 Data Collection Instruments.....	131
4.9.1 Questionnaire .....	132
4.9.2 Scale development and measurement .....	133
4.9.3 Semi-structured Interviews .....	136
4.10 Data Collection Procedures .....	137
4.10.1 Survey phase .....	137
4.10.2 Semi-structured interviews .....	139
4.11 Approaches to data analysis .....	142
4.11.1 Quantitative data .....	142
4.11.2 Qualitative data .....	143
4.11.3 Mixing of data.....	145
4.12 Validity and Reliability .....	145
4.12.1 Quantitative Research .....	146
4.12.2 Qualitative Study .....	146
4.13 Unit of Analysis .....	149
4.14 Ethical Considerations.....	149
4.14.1 Informed consent: .....	150
4.14.2 No physical or emotional harm .....	150
4.14.3 Collection Phase: Survey Research.....	150
4.14.4 Collection Phase: Semi-structured interviews .....	150
4.14.5 Data Analysis phase: Anonymity and Confidentiality.....	151
4.15 Limitations of the study.....	151
4.16 Summary of the chapter .....	151
<b>CHAPTER 5 DATA ANALYSIS, PRESENTATION AND DISCUSSION OF RESULTS</b>	
.....	152
5.1 Introduction .....	152
5.2 Presentation of Quantitative Study Results .....	152





5.6.14 <i>Deployment of e-HRM applications to ensure consistent intended consequences</i>	206
5.7 Summary of the chapter	207
CHAPTER 6 INTERPRETATION OF THE RESULTS AND THE MODEL	208
6.1 Introduction	208
6.2 Research question 1 What is the effect of e-HRM use on employee performance, job satisfaction and organisational politics?	208
6.2.1 <i>Effect of e-HRM use on employee performance (<math>\beta = 0.1639, se=0.0503, p=0.0012</math>)</i>	209
6.2.2 <i>Effect of e-HRM use on job satisfaction (<math>\beta = 0.2350, se=0.0563, p=0.0000</math>)</i>	210
6.2.3 <i>Effect of e-HRM use on organisational politics (<math>\beta = 0.2531, se=0.0561, p=0.0000</math>)</i>	210
6.3 Research question 2 Do employee performance, job satisfaction and organisation politics variables play a mediating role in the e-HRM use and e-HRM consequences relationship?	212
6.3.1 <i>H<sub>1</sub> There exists an indirect effect of e-HRM use on e-HRM macro level consequences through employee performance only.</i>	212
6.3.2 <i>H<sub>2</sub> There exists an indirect effect of e-HRM use on e-HRM macro level consequences through job satisfaction only.</i>	213
6.3.3 <i>H<sub>3</sub> There exists an indirect effect of e-HRM use on e-HRM macro level consequences through organisational politics only.</i>	214
6.3.4 <i>H<sub>4</sub> There exists an indirect effect of e-HRM use on e-HRM macro-level consequences through employee performance and job satisfaction in serial.</i>	214
6.3.5 <i>H<sub>5</sub> There exists an indirect effect of e-HRM use on e-HRM macro-level consequences through employee performance and organisational politics (OP) in serial.</i>	215
6.3.6 <i>H<sub>6</sub> There exists an indirect effect of e-HRM use on e-HRM macro-level consequences through job satisfaction (JS) and organisational politics (OP) in serial.</i>	215
6.3.7 <i>H<sub>7</sub> There exists an indirect effect of e-HRM use on e-HRM macro-level consequences through employee performance, job satisfaction and organisational politics (OP) in serial.</i>	216
6.4 Research question 3 What is the nature of association between e-HRM use, employee performance, job satisfaction organisational politics and e-HRM macro-level consequences variables?	217
6.4.1 <i>e-HRM use and e-HRM macro-level consequences</i>	218
6.4.2 <i>Employee performance and job satisfaction</i>	218
6.4.3 <i>Job satisfaction and organisational politics</i>	219

6.4.4 <i>Employee performance and organisational politics</i> .....	220
6.4.5 <i>e-HRM use and mediating variables</i> .....	220
6.4.6 <i>Mediating variables and e-HRM macro level consequences</i> .....	221
6.5 Control variables .....	222
6.6 A model for maximising electronic human resource management macro-level consequences .....	223
6.7 Model Validation.....	225
6.8 Summary of the chapter .....	228
CHAPTER 7 EVALUATION OF THE RESEARCH, THESIS CONTRIBUTIONS AND CONCLUSION.....	229
7.1 Introduction .....	229
7.2 Recommendations from the study.....	229
7.3 Contributions of the thesis.....	230
7.3.1 <i>Theoretical Contribution</i> .....	230
7.3.2 <i>Contextual Contribution</i> .....	231
7.3.3 <i>Policy and Practice Contribution</i> .....	232
7.4 Limitations of the study.....	232
7.5 Suggested Future Research .....	233
7.6 Conclusion.....	234
LIST OF REFERENCES .....	235
APPENDICES .....	263
APPENDIX 1: QUESTIONNAIRE.....	263
APPENDIX 2: INTERVIEW SCHEDULE .....	268
APPENDIX 3: E-HRM CONSTRUCT STATISTICS .....	270
APPENDIX 4: EMPLOYEE PERFORMANCE CONSTRUCT STATISTICS.....	273
APPENDIX 5: JOB SATISFACTION CONSTRUCT STATISTICS .....	281
APPENDIX 6: ORGANISATIONAL POLITICS CONSTRUCT STATISTICS .....	284
APPENDIX 7: E-HRM MACRO CONSEQUENCES CONSTRUCT STATISTICS .....	289
APPENDIX 8: EMPLOYEE PERFORMANCE AS A MEDIATOR STATISTICS .....	294
APPENDIX 9: JOB SATISFACTION AS A MEDIATOR STATISTICS.....	296
APPENDIX 10: ORGANISATIONAL POLITICS AS A MEDIATOR STATISTICS .....	299
APPENDIX 11: PARALLEL MEDIATION- EMPLOYEE PERFORMANCE, JOB SATISFACTION & ORGANISATIONAL POLITICS .....	302

APPENDIX 12: EMPLOYEE PERFORMANCE & JOB SATISFACTION AS MEDIATORS IN SERIAL STATISTICS .....	305
APPENDIX 13: EMPLOYEE PERFORMANCE & ORGANISATIONAL POLITICS AS MEDIATORS IN SERIAL STATISTICS .....	309
APPENDIX 14: JOB SATISFACTION & ORGANISATIONAL POLITICS AS MEDIATORS IN SERIAL STATISTICS .....	313
APPENDIX 15: EMPLOYEE PERFORMANCE, JOB SATISFACTION & ORGANISATIONAL POLITICS AS MEDIATORS IN SERIAL STATISTICS .....	317
APPENDIX 16: PATH DIAGRAMS OF CONFIRMATORY FACTOR MODELS.....	322
APPENDIX 17: CODEBOOK .....	325
APPENDIX 18: ETHICAL CLEARANCE APPROVAL .....	330

## LIST OF FIGURES

Figure 1.1 e-HRM General Framework .....	3
Figure 2.1 Approach to scholarship and theoretical foundations .....	17
Figure 2.2 Scholarship and theoretical foundations framework .....	18
Figure 2.3 e-HRM Applications .....	26
Figure 2.4 HPWP and organisational performance link .....	27
Figure 2.5 Illustration of the moderating effect of e-HRM on the HRWP and performance link .....	28
Figure 2.6 Taxonomy of Employee Performance .....	58
Figure 2.7 The Technology-to-Performance Chain model .....	60
Figure 2.8 e-HRM and Employee Performance link .....	63
Figure 2.9 User Information System and Job satisfaction framework .....	66
Figure 2.10 Enterprise Resource Planning (ERP) impact on job satisfaction .....	68
Figure 2.11 DeLone and McLean Information System success model .....	74
Figure 2.12 e-HRM use and behaviour issues link .....	79
Figure 2.13 Relationship between job satisfaction, employee performance and organisational politics .....	81
Figure 3.1 Contingency framework of Information System implementation.....	87
Figure 3.2 The Job Characteristics Model .....	91
Figure 3.3 IS-Conflict Framework .....	96
Figure 3.4 Lawler & Porter Model of Job satisfaction .....	97
Figure 3.5 Christen, Lyer & Soberman model of job satisfaction, 2006 .....	97
Figure 3.6 The Research Model.....	98
Figure 4.1 Research Process Onion .....	109
Figure 4.2 A scheme for analysing assumptions about the nature of social science .....	111
Figure 4.3 Three Major Research Paradigms .....	115
Figure 4.4 Typology of Mixed Methods Research Designs .....	120
Figure 4.5 Sequential Explanatory Design Procedures .....	121
Figure 4.6 Questionnaire development stages .....	137
Figure 4.7 Interview guide development stages .....	140
Figure 5.1 Age Distribution .....	154
Figure 5.2 Positions of respondents .....	154
Figure 5.3 Distribution of respondents by sector.....	155
Figure 5.4 Tenure distribution of respondents .....	156
Figure 5.5 e-HRM Applications used .....	156
Figure 5.6 Effect of e-HRM use on e-HRM macro-level consequences .....	176
Figure 5.7 The indirect effect of e-HRM use on e-HRM macro level consequences through employee performance only.....	178
Figure 5.8 The indirect effect of e-HRM use on e-HRM macro level consequences through job satisfaction only. ....	180

Figure 5.9 The indirect effect of e-HRM use on e-HRM macro level consequences through organisational politics only .....	181
Figure 5.10 Parallel mediation of employee performance, job satisfaction and organisational politics.....	183
Figure 5.11 Employee performance & job satisfaction as mediators in serial. ....	185
Figure 5.12 Employee performance & organisational politics as mediators in serial .....	187
Figure 5.13 Job satisfaction & organisational politics as mediators in serial.....	189
Figure 5.14 Employee performance, job satisfaction & organisational politics as mediators in serial .....	193
Figure: 5.15 Participants' Age groups .....	194
Figure 5.16 Participants' employment positions .....	195
Figure 5.17 Participants' use of e-HRM applications.....	195
Figure 5.18 Analysis Codes .....	197
Figure 5.19 Relative importance of categories .....	199
Figure 5.20 Indexing of qualitative data .....	200
Figure 6.1 Relationship between e-HRM use, e-HRM macro level consequences, employee performance, job satisfaction and organisational politics.....	222
Figure 6.2 A model for maximising electronic human resource management macro-level consequences.....	224
Figure 6.3 A model for maximising electronic human resource management macro-level consequences.....	224
Figure 6.4 Path diagram of a confirmatory factor model: e-HRM use.....	322
Figure 6.5 Path diagram of a confirmatory factor model: employee performance.....	323
Figure 6.6 Path diagram of a confirmatory factor model: job satisfaction .....	323
Figure 6.7 Path diagram of a confirmatory factor model: organisational politics .....	324
Figure 6.8 Path diagram of a confirmatory factor model: e-HRM macro level consequences .....	324
Figure QA 1: A streamlined codes-to-theory model for qualitative inquiry .....	328
Figure QA 2: A screenshot from MAXQDA Analytics Pro 2020 (Release 20.2.2) software .....	329
Figure QA3 Scatterplot.....	332
Figure QA4 Normal P-P Plot.....	333

## LIST OF TABLES

Table 1.1: World Internet Usage and Population Statistics as at January 31, 2022 .....	7
Table 2.1: Evolution of e-HRM definitions .....	22
Table 2.2: Intended and Unintended e-HRM Consequences .....	31
Table 2.3: Development of e-HRM consequences .....	34
Table 2.4: Classification of e-HRM consequences .....	40
Table 2.5: Categories of consequences concepts .....	56
Table 2.6: Three dimensions of power .....	72
Table 3.1: Micro & Macro-variables .....	87
Table 3.2: Research Consistency Matrix .....	105
Table 4.1: A comparison of Nomothetic and Ideographic methods .....	113
Table 4.2: Assumptions of Research Philosophies .....	116
Table 4.3: Study Population distribution .....	125
Table 4.4: Sample of Organisations .....	126
Table 4.5: Amalgamated Sample distribution by positions .....	130
Table 4.6: Minimum Sample Size Recommendations for Most Common Quantitative and Qualitative Research Designs .....	131
Table 4.7: Advantages and Disadvantages of questionnaires .....	132
Table 4.8: Measurement of constructs .....	134
Table 4.9: Dimensions of constructs .....	135
Table 4.10: Reasons for carrying out pilot studies .....	139
Table 4.11: Trustworthiness evaluation criteria .....	145
Table 5.1: Distribution and collection of completed questionnaires .....	153
Table 5.2: Goodness of Fit Indices .....	160
Table 5.3: Pattern Matrix(e-HRM use) .....	161
Table 5.4: Goodness of Fit Indices .....	161
Table 5.5: Preliminary Pattern Matrix .....	163
Table 5.6: Employee performance communalities .....	163
Table 5.7: Final Pattern Matrix .....	164
Table 5.8: Goodness of Fit Indices .....	164
Table 5.9: Job Satisfaction Pattern Matrix .....	166
Table 5.10: Goodness of Fit Indices .....	166
Table 5.11: Organisational Politics Pattern Matrix .....	167
Table 5.12: Goodness of Fit Indices .....	168
Table 5.13: e-HRM macro-level consequences: Pattern Matrix .....	170
Table 5.14: Goodness of Fit Statistics .....	170
Table 5.15: Scales' internal consistencies .....	172
Table 5.16: Means, standard deviations and correlations for variables under study .....	174
Table 5.17: e-HRM use and employee performance .....	178

Table 5.18: e-HRM use and job satisfaction.....	180
Table 5.19: e-HRM use and organisational politics.....	182
Table 5.20: Summary of simple mediation.....	182
Table 5.21: Summary of Indirect effects of X on Y (Parallel Mediation).....	184
Table 5.22: e-HRM use and employee performance and job satisfaction as mediators in serial .....	185
Table 5.23: e-HRM use and ‘employee performance and organisational politics’ as mediators in serial .....	187
Table 5.24: e-HRM use and ‘job satisfaction and organisational politics’ in serial.....	189
Table 5.25: e-HRM use and employee performance, job satisfaction and organisational politics as mediators in serial .....	192
Table 5.26: Experience in using e-HRM applications .....	196
Table 5.27: Category distribution .....	201
Table 6.1: Effect of e-HRM use on employee performance, job satisfaction and organisational politics (arranged in order of effect) .....	208
Table 6.2: Effect of employee performance, job satisfaction and organisational politics on e- HRM macro level consequences (arranged in order of effect) .....	212
Table 6.3: Rule of thumb for interpreting relationship between two variables .....	218
Table e-HRM 1: Reliability Statistics.....	270
Table e-HRM 2: Correlation Matrix .....	270
Table e-HRM 3: KMO and Bartlett's Test.....	270
Table e-HRM 4: Anti-image matrix .....	271
Table e-HRM 5: Total Variance Explained .....	272
Table e-HRM 6: Item-Total Statistics.....	272
Table EP 1: Reliability Statistics .....	273
Table EP 2: Correlation Matrix.....	274
Table EP2: Correlation Matrix continued.....	275
Table EP 3: KMO and Bartlett's Test .....	276
Table EP 4: Anti-Image Correlations .....	277
Table EP 4: Anti-Image Correlations continued.....	278
Table EP 5: Total Variance Explained.....	279
Table EP 6: Item-Total Statistics .....	280
Table JS 1: Reliability Statistics .....	281
Table JS 2 Inter-Item Correlation Matrix (showing intrinsic factors only).....	281
Table JS 3: KMO and Bartlett's Test .....	281
Table JS 4: Anti-Image Correlation.....	282
Table JS 5: Total Variance Explained .....	283
Table OP 1: Reliability Statistics.....	284
Table OP 2: Correlation matrix.....	285
Table OP 3: KMO and Bartlett's Test.....	285



Table OP 4: Anti-Image Correlation matrix .....	286
Table OP 5: Total Variance Explained .....	287
Table OP 6: Item-Total Statistics.....	288
Table MACRO 1: Reliability Statistics .....	289
Table MACRO 2: Inter-Item Correlation Matrix .....	289
Table MACRO 3: KMO and Bartlett's Test .....	290
Table MACRO 4: Anti-Image Correlation matrix.....	291
Table MACRO 5: Total Variance Explained.....	292
Table MACRO 6: Item-Total Statistics .....	293
Table PROC 1:.....	294
Table PROC 2:.....	296
Table PROC 3:.....	299
Table PROC 4:.....	305
Table PROC 5:.....	309
Table PROC 6:.....	313
Table PROC 7:.....	317
Table QA 1: Meaning of Codes .....	326
Table QA 2: Participant – code matrix .....	327

## ACRONYMS

AML	Autor-Levy-Murnane model
AVE	Average Variance Explained
BootLLCI	Bootstrapped Lower level Confidence Interval
BootULCI	Bootstrapped Upper Level Confidence Interval
CFA	Confirmatory Factor Analysis
DV (dv)	Discriminant Validity
EFA	Exploratory Factor Analysis
E-HRM (e-HRM)	Electronic Human Resource Management
EIS	Executive Information System
ERP	Enterprise Resource Planning
ESS	Employee Self-Service
HPWP	High Performance Work Practices
HPWS	High Performance Work Systems
HR	Human Resource
HRIS	Human Resources Information System
HRM	Human Resource Management
IS	Information System
IT	Information Technology
KMO	Kaiser-Meyer-Olkin Measure of Sampling Adequacy
MIS	Management Information System
MNCs	Multinational Corporations
MSS	Manager Self-Service
NMBI	Nursing and Midwifery Board of Ireland
POPS	Perception of Organisational politics
R (r)	Correlation
R <sup>2</sup> or (R-sq)	R squared

RBV	Resource Based View
SBL	School of Business Leadership
SPSS	Statistical Package for the Social Scientists
TAM	Technology Acceptance model
TCT	Transaction Cost Theory
TPC	Technology to Performance Chain
TTF	Task-Technology Fit
UIS	User Information System
UNISA	University of South Africa
UTAUT	Unified Theory of Adoption and Use of Technology
VIF	Variable Inflation Factor
ZSE	Zimbabwe Stock Exchange

# **CHAPTER 1: INTRODUCTION AND BACKGROUND**

## **1.1 Introduction and the background to the field of study**

This thesis explains the role that electronic Human Resource Management (e-HRM) actors play in ensuring the maximisation of intended electronic human resource management (e-HRM) macro-level consequences. These actors, who are the internal customers of a human resource function, consist of human resource managers, human resource professionals, and Human Resource (HR) customers using e-HRM systems (line managers and information technology specialists). The thesis argues that the role of these actors play a pivotal role in modelling what maximises e-HRM macro-level consequences.

The workplace environment has in recent years witnessed substantial changes occasioned by a multiplicity of factors that range from globalisation, market developments to information technology. These changes have affected and influenced both the external and internal service providers within organisations. Internal service providers like the human resource management function have been forced to re-consider and redefine their traditional roles in light of these changes as well as respond to numerous organisational demands brought to bear on them. These demands are at times in sync with organisational objectives and at times contradictory to them. For example, there has been a desire to have HRM to be customer-oriented whilst at the same time a desire to make the same function to be cost-effective.

The Human Resource (HR) function faces an internal customer base whose expectations are in constant transition. To be in a position to manage these expectations better, the function needs to shift its orientation from a production orientation to a service one (Lin et al., 2016). Such a paradigm shift demands that the HR function should focus on satisfying its internal customers: all users of the e-HRM systems. The change in orientation should also see the HR function shift from a technical merit role to a user reaction one. This entails moving from a stance wherein the function appraises itself on its ability to engineer HRM policies, practices, and strategies to assessing itself on how users of these practices react and evaluate it. It is time the HR function adopts a marketing philosophy in so far as marketing and evaluating its function is concerned. Line managers are now performing more of the HR functions than they have previously done. There is need to support these line managers to perform these tasks in an equal measure as the HR professionals execute them.

In order to manage these diverse expectations from different constituencies and adopt new orientations, the HR function needs information technology tools. Information technology allows internal service providers the time and capability to supply their services to line managers and employees with a capability and degree of interaction not previously possible.

The adoption of e-HRM has however ceased to be optional. The Covid-19 pandemic has gutted economies and impacted all sectors of the economies in varying dimensions. At organisational level, the pandemic has influenced workplace processes and practices. The lockdown procedures have impacted the heartbeat of organisations (individual and organisational performance) negatively (Fraij, 2021). The Covid-19 protocols mean managers and employees face new and unusual home-based work procedures that may not be as effective as conventional working practices. Besides, any crisis will negatively impact employees' output due to stress that it is capable of causing (Favilukis et al., 2021).

To facilitate HR functions such as recruitment and selection, performance management, training and compensation management, organisations have been forced to adopt e-HRM to overcome challenges emanating from the pandemic. Not only do the applications help employees reduce personal contact and in the process reduce the chances of contracting and spreading the virus, but they also prepare employees to conduct their work from home. This forced adoption is the only option of ensuring sustained individual and organisational performance.

### *1.1.1 Defining the thesis title and the background to the field of study*

This thesis conceptualises a model wherein the e-HRM macro-level consequences are maximised. It explains the role that various e-HRM actors play in an electronic Human Resource Management framework as shown in Figure 1.1. That is, the roles that all users of e-HRM systems play as intervening variables in the e-HRM use and e-HRM macro-level consequences relationship are determined and explained.

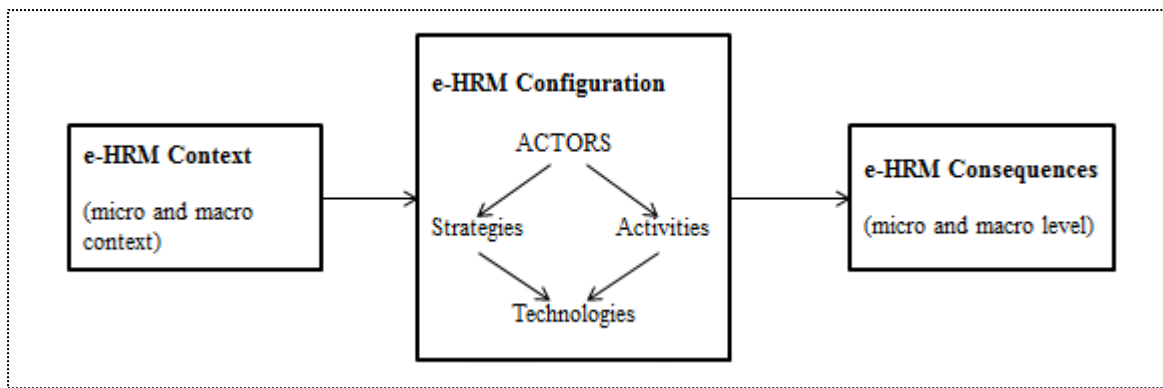


Figure 1.1 e-HRM General Framework (Source: Strohmeier, 2007: 21)

### *Electronic Human Resource Management*

Ruel, Bondarouk and van der Velde (2007: 281) defined e-HRM as “the use of web-technology based channels to support the implementation of HRM strategies, policies and practices in organisations.” It is about using web-based technology to implement HR strategies, policies and practices in organisations. It is the use of information technology to implement human resource management best practices in order to achieve organisational excellence.

### *E-HRM macro-level consequences*

Bondarouk and Ruel (2009: 507) defined e-HRM consequences as “the value received from e-HRM. It means that either an individual employee or a Human Resource professional, the whole HR department, organisation or a net of several organisations is willing to exchange money for the value received from e-HRM.” Electronic HRM consequences consist of all outcomes that “accompany and/or follow the application of information technology, whether helpful or harmful” (Strohmeier, 2007: 2). These outcomes can be categorised into micro and macro-level. Micro-level consequences refer to individual outcomes like user satisfaction, e-recruitment, e-selection, and e-performance management. Macro-level consequences address organisational outcomes that could be differentiated into operational, relational and transformational (Strohmeier, 2007; Martin et al., 2008). Operational consequences focus on efficiency and effectiveness outcomes of e-HRM. Relational consequences are directed at enhancing the networking and interacting of different actors. Transformational consequences capacitate the HR function’s ability to contribute to organisational performance. They are the outcomes or results of implementing e-HRM in an organisation. This thesis looks at the macro-level consequences.

### *Actors*

The Human Resource function, as a service provider, has various internal customers. Not only does the HR function, engineer HR policies and practices for these internal customers, but it also has to listen and respond to their demands. As organisations continue to invest in e-HRM, the behaviour of users of information systems has become an important issue to consider (Marais & Kruger, 2005). Many information systems fail to deliver intended outcomes due to a lack of attention being given to human issues (Marais & Kruger, 2005; Kobayashi, 2018). The actors being considered in the present study are: all users of e-HRM systems, such as line managers, IT personnel and HR personnel. They are “all those who plan, implement and perform e-HRM and hence are of vital importance, as, for example, HR professionals, line managers, employees, consultants, applicants etc.: therefore different actors constitute a configurational component” (Strohmeier 2007: 21). They are also likely to make use of different e-HRM applications, and hence, have different experiences. In this study, these actors are treated as a collective entity due to the commonality of their roles in the computerisation of the HRM activities. Treating the actors individually would have meant refocusing the study to look at e-HRM micro-level consequences.

### *Role of human resource managers*

In this study, human resource managers are presented as different from Human Resource professionals. This is necessitated by their different levels of employment and subsequently their roles. Human resource managers operate at policy level in the majority of organisations, whereas, Human Resource professionals operate at the functional level. Their role is to get the HR function to be in the boardroom and participate in strategic initiatives.

Literature shows that e-HRM supports a strategic orientation of the HR function (Ruel et al., 2007; Marler, 2009). As time is freed, HR directors and managers find time to embark on strategic activities such as strategic planning, talent management and knowledge management. They promote the achievement of the organisation’s business goals by developing and implementing HR strategies that are integrated with the business strategy. These actors also ensure that a strategic approach is adopted by the HR function so as to support the business and add value. Human resource managers use e-HRM to enhance job performance and job satisfaction of human capital in an effort to add value.

### *Role of human resource professionals*

The role of HR professionals is primarily that of delivering effective HR services within their function or as members of an HR service centre (Armstrong & Taylor, 2014). While they will not be responsible for the formulation of HR strategies, they may contribute to them within their own speciality. They will need to understand the business goals of the departments or managers for whom they provide services in order to ensure that these services support the achievement of those goals. The job performance and satisfaction of these actors contribute to other actors adding value to an organisation.

### *Role of line managers*

The role of the HR function is to come up with new and innovatory policies and practices. The challenge is to get these policies and practices to work. It is the line managers who bring HR policies and practices to life through effective implementation (Armstrong & Taylor, 2014). With information technology, more responsibility is being devolved to line managers. Electronic HRM line managers therefore constitute a crucial but barely regarded category of actors (Ruel et al., 2004). E-HRM is assuming an active role for line management in implementing HRM strategies, policies and practices. As a category of organisational actors, line managers enact the environment, which both enables and constrains future actions with respect to information system use. Depending on their sensemaking, e-HRM line managers could resist information system implementation or support it (Jensen et al. 2009). Consequently, job performance and satisfaction of employees go down or up.

### *Role of information technology specialists*

Information technology experts design technology attributes (perceived ease of use, system quality, usefulness, information quality and service quality) into e-HRM systems. These attributes determine user intention to use and frequency of use. The same attributes result in system user satisfaction. The “HRM technology has predictive consequences in organisations” (Orlikowski & Scott, 2008: 439). It interacts with various aspects of organisations at different levels; individual, group, and inter-organisational to produce different outcomes. The effects of well-designed systems are increased job performance and satisfaction of e-HRM actors; line managers, IT experts, HR managers and HR professionals. These positive effects mediate the e-HRM use and e-HRM macro-level consequences relationship.



The thesis develops a model wherein e-HRM macro-level consequences are maximised. There is a realisation that e-HRM use may result in both intended and unintended consequences. The thrust should be to get as many of the intended consequences as possible whilst minimising the occurrence of unintended ones. Intended consequences are mainly positive ones whereas unintended consequences are largely negative, although positive ones have been recorded.

## **1.2 Background to the Research Problem**

This section provides the background to the research problem, which also gives the motivation for the present study. The current e-HRM challenges and key issues are discussed and subsequently the knowledge gaps are articulated. The importance of human capital in aiding organisations to achieve positions of competitive advantage is now undisputed. What is disputed is perhaps the transmission mechanism of this effect. Human Resource Management literature is abound with ‘best’ practices that if implemented are seen as leading to improved organisational performance. These ‘best’ human resource practices, also known as High Performance Work Practices (HPWP) are seen to produce desired employee behaviours, which in turn impact positively on organisational performance. These practices are seen as enhancing employee skills, motivation and commitment to work in a way that contributes to organisational excellence.

A number of studies (for example, Combs, Liu, Hall & Kitchen, 2006 & Obeisant, 2016) have shown a positive link between ‘best’ HR practices and increased sales turnover, productivity, profit margins, firm market value and productivity. HR practices are thus seen as key to a firm’s competitive advantage in a knowledge-based economy. However, this positive linkage differs from country to country. The implementation of HRM practices has in some instances not delivered improved organisational performance. Attempts have been made to explain this country-to-country variation by identifying moderating or intervening variables in the HPWP and organisational performance link. Electronic HRM has been found to moderate the HPWP and organisational performance link (Obeisant, 2016).

### *1.2.1 Challenges of e-HRM in developing countries*

The adoption and use of e-HRM by organisations has not been without challenges in most developing countries. A number of reasons have been advanced for this state of affairs.

Developing countries, especially those in Africa, have poor information technology infrastructure (software, hardware and components of the telecommunications systems necessary to facilitate efficient data transfer and management) for faster information technology adoption and implementation (Erika, 2014). This deficiency is partly caused by a lack of resources to acquire the needed infrastructure.

Secondly, developing countries lack clear policies on adoption and use of information technology. This partly explains the low penetration rate (the number of people who connect and use internet) for Africa, as shown in Table 1.1. As a result, most African countries have had to rely on information technology systems developed in the first world. This transfer of technology has however not worked as desired as there has been “a poor match of models of developed countries’ design and applications to the developing country context” (Okundaye, 2016: 17). As such, the implementation of models designed for the developed countries, their value systems, policy orientation and initiatives as well as governance structures prove difficult in developing countries’ contexts (Ejiaku, 2014).

Table 1.1: World Internet Usage and Population Statistics as at January 31, 2022

World Regions	Population (2022 Est.)	Population % of World	Internet Users (31/12/2021)	Penetration Rate	Growth 2000-2022	Internet Users (%)
Africa	1,394,588,547	17.6 %	601,327,461	43.1 %	13,220%	11.5 %
Asia	4,350,826,899	54.8%	2,790,150,527	64.1 %	2,341 %	53.1 %
Europe	841,319,704	10.6 %	743,602,636	88,4%	608 %	14,2 %
Latin America / Caribbean	663,520,324	8.4 %	433,171,730	80,4 %	2,851 %	10.1 %
Middle East	268,302,801	3.4 %	205,019,130	76.4 %	6,141 %	3.9 %
North America	372,555,585	4.7 %	347,916,694	93.4 %	222 %	6,6 %
Oceania / Australia	43,602,955	0.5 %	30,549,185	70.1 %	301 %	0.6 %
<b>WORLD TOTAL</b>	<b>7,934,716,815</b>	<b>100.0 %</b>	<b>5,251,737,363</b>	<b>66.2 %</b>	<b>1,355 %</b>	<b>100.0 %</b>

NOTES: (1) Internet Usage and World Population Statistics estimates in January 31, 2022. Copyright © 2022, Miniwatts Marke. Est: Estimate

Lastly, developing countries also lack skilled and globally recognised IT specialists. Subsequently, there is poor transfer of information technology, as it cannot be fully utilised by less skilled personnel. Despite these challenges, it is heartening to note that the internet users have grown phenomenal over the past ten years, even eclipsing some developed regions like North America. There is thus an opportunity for implementing e-HRM technology applications to best implement HRM practices (Internet World Stats, 2021).

### *1.2.2 Electronic HRM, HPWP and Organisational performance*

Information technology has revolutionised and broadened the way HRM is practiced. It has also affected the way HR practices and functions are packaged and delivered to internal customers: such as the line managers and employees. Electronic HRM surfaced as an enabler: allowing organisations to quickly avail their HR practices to their internal clients for improved organisational performance. Ruel et al. (2007: 281) defined e-HRM as “the use of web-technology based channels to support the implementation of HRM strategies, policies and practices in organisations.” Electronic HRM is thus used in the implementation of a variety of HR functions and activities such as training (learning), recruitment and selection, performance management, and compensation. Above all, e-HRM is ideal for an effective implementation of rigorous high performance work practices (Parry, 2011). At a general level the use of e-HRM presents a number of advantages (that one would also get when implementing HPWP) for organisations in the form of improved employee commitment, cost effectiveness, high employee competence, improved quality and a more strategic role for HRM (Strohmeier, 2007; Bondarouk & Ruel, 2013).

The use of e-HRM has been found to reinforce the relationship between HPWP and organisational performance (Combs et al., 2006; Obeidat, 2016). It moderates the relationship with a positive interaction effect. Although HPWP implementation alone guarantees improved organisational performance, e-HRM use is likely to reinforce performance consequences. It has been well argued that e-HRM allows for early implementation of HR practices, strategy and policies. Electronic HRM makes HR practices available to its internal customers faster and effectively. To realise the full potential of the HR function, a number of researchers have advocated for the adoption and use of e-HRM.

Questions have been raised as to the attainment of intended outcomes as a result of the implementation of e-HRM. In some instances, positive outcomes (intended) have resulted

whereas in some, unintended consequences have also resulted. Research findings have been inconclusive.

### **1.3 Theoretical and Practical Knowledge Gaps**

Organisations have upped their investment in information technology in recent years. This has been motivated by a variety of reasons ranging from efficiency gains, improved self-service to internal customers, to the shifting role of the HR function to a strategic level. These investments have also gone into human resource management information technology applications. As in any investment, reasonable returns are expected from such capital outlay. Results on the ground however point to a different picture. Whilst outcomes have been relatively more favourably at the e-HRM micro-level, it has been a different story at the e-HRM macro-level. Positive and negative outcomes have been recorded on a more consistent basis. This could be due to any of the e-HRM configuration components, which are activities, strategies, technologies, and actors.

There are noticeable theoretical gaps in terms of the theories underpinning the present study. The resource-based view (RBV) is weak in the prescriptive dimension. It does not address how employees create value in organisations. There is no mention of activities that drive RBV theory into effectiveness. This study examines the role of employee outcomes and organisational politics as partly constituting this 'black box' of activities. The contingency theory leaves out people, especially those with non-rational objectives, from its analysis. The theory does not take into account value adding activities of stakeholders who shape organisational behaviour. This study focuses on the role of actors in value creation in an attempt to explain this gap.

The transaction cost theory is an approach that describes the potential of information technology to reduce transaction costs. However, this relationship is possible only if transaction costs are lower than the costs of externalities. If this is not the case, transaction costs are likely to increase. The theory therefore, does not guarantee positive effects of information technology use, negative effects are also possible. The sensemaking theory gap lies in its failure to consider the effects of involving decision makers in report generation during organisational learning. This lack of involvement could explain the negative effects on bracketing, enactment and identity processes.

### *Gap 1: Role of actors*

Previous research has focused on all the e-HRM configuration components but actors. This study therefore sought to relate the behaviour of these actors to e-HRM use and e-HRM macro-level consequences link. It is perhaps when one has a holistic appreciation of how variables in the e-HRM configuration relate to each other, that a clear transmission mechanism could be fashioned out between e-HRM use and e-HRM macro-level consequences.

### *Gap 2: e-HRM transmission mechanism*

As posited by Marler and Fisher (2013), researchers have not yet explained the relationship between e-HRM use on one-hand and employee outcomes on the other hand. It could be that an understanding of this relationship may explain why e-HRM applications transmit HRM practices into intended macro-level consequences.

These theoretical and practical knowledge gaps are summed up as follows:

There is no known study that has looked at whether e-HRM was related to other strategic outcomes such as competitive advantage, organisational performance or improved HR outcomes such as increased human capital, reduced turnover or increased organisational commitment or job satisfaction. Instead, as revealed by the systematic literature review, most of the existing studies focus mainly on factors one-step (or more) removed from such strategic outcomes. There is no known theoretical and practical model that explains factors for maximising electronic human resource management macro-level consequences, especially within the context of the role of actors.

## **1.4 Problem Statement**

The workplace has in recent years, undergone substantial changes due to a multiplicity of factors that have been largely driven by information technology. Information technology applications have been adopted and implemented on a large scale for use in internal operations and market competition. Although the human resource management field has been slow to embrace the technological revolution, the use of e-HRM has increased over recent years with most large organisations now using related information systems.

With this development, it becomes apparent that with adequate information system support, organisations could now realise the strategic potential in human resource management.

Consequently, management invests heavily in e-HRM applications with the hope of realising a series of organisational outcomes that come with their use. However, there are still inadequate models designed to translate e-HRM use into e-HRM micro and macro-level consequences. This is despite numerous empirical studies that show that, e-HRM use results in both intended, positive consequences as well as unintended consequences. Various explanations have been advanced to explain these contradictory and unintended consequences (Strohmeier, 2009).

Systematic literature review on e-HRM use and consequence relationship shows a lack in ascertaining, in part or as a whole, the role of the behaviours of HRM actors (human resource managers, line managers, the HR professionals and IT experts). The studies did not look at other strategic outcomes such as job satisfaction, employee performance and work stress. Therefore, there is need to conceptualise a model wherein e-HRM consequences are maximised. There is a realisation that e-HRM systems alone, perhaps, cannot wholly give positive and intended consequences (Bondarouk, 2014). “Electronic HRM usage is only one aspect generating HR value; contextual facilitating factors are of great importance as well” (Ruel & der Kaap, 2012: 277).

There is a need to explain the relationship between e-HRM use on one-hand and employee outcomes on the other hand. There is also a need to explain the relationships existing between and amongst variables such as e-HRM use, employee performance, job satisfaction, organisational politics and e-HRM macro level consequences.

## **1.5 Research Argument**

The research argument for this thesis is that e-HRM is a multifaceted phenomenon. In order for it to deliver intended outcomes, there is need to explain and understand all the facets that need to be considered. One such facet that has not been studied in detail is the role and impact of the actors’ behaviour. Therefore understanding how e-HRM use affects employee performance, job satisfaction and organisation politics and subsequently e-HRM macro-level consequences through these variables is important for a comprehensive appreciation of intended and unintended consequences.

## **1.6 Study goal**

There is lack of a theoretical and practical model that explains factors for maximising electronic human resource management macro-level consequences. The goal of the study was therefore, to develop a model for maximising electronic human resource management macro-level consequences, focusing on the role of actors.

## **1.7 The Study Objectives were to;**

The research objectives are to:

- i. Explain the effect of e-HRM use on employee performance, job satisfaction and organisational politics.
- ii. Establish the extent to which employee performance, job satisfaction and organisational politics play a mediating role in the e-HRM use and e-HRM consequences.
- iii. Explain the nature of association between e-HRM use, employee performance, job satisfaction, organisational politics and e-HRM macro-level consequences.
- iv. Determine and model the factors, which are significant in maximising e-HRM macro level consequences and the role of actors.

## **1.8 Study Research Questions**

### *Primary Research Question*

What is the role of e-HRM actors in influencing factors that lead to the maximisation of e-HRM macro-level consequences as a result of e-HRM use?

### *1.8.1 Secondary Research Questions*

- i. What is the effect of e-HRM use on employee performance, job satisfaction and organisational politics?
- ii. What is the extent to which, employee performance, job satisfaction, and organisation politics play a mediating role in the e-HRM use and e-HRM consequences link?
- iii. What is the nature of association between e-HRM use, employee performance, job satisfaction organisational politics and e-HRM macro-level consequences variables?
- iv. Which factors are significant for maximising e-HRM macro-level consequences?

## **1.9 Research Design**

To enable triangulation to take place, qualitative or quantitative designs are in isolation insufficient to capture the trends and details of a research situation. As a result, this study used pragmatism as a philosophical position. A partially mixed sequential dominant status explanatory design was therefore used to facilitate comparison of quantitative and qualitative data sets to produce well-validated conclusions.

The study focused on organisations using e-HRM systems. A total of 112 organisations from 18 sectors of the Zimbabwean economy made up the population of interest, for the quantitative study. A stratified convenience sampling technique was used to draw a sample of 510 respondents. Thirty five (35) organisations from twelve (12) sectors were sampled. Individuals of interest were Human Resource Managers, other Human Resource Professionals, Line Managers and Information Technology experts. A non-probability sampling procedure was used for the subsequent qualitative study. Stratified purposive sampling was used to choose twelve (12) participants.

## **1.10 Delimitations of the study**

The present study is limited to the effect of e-HRM use on employee performance, job satisfaction, organisational politics and e-HRM macro-level consequences in organisations and the behaviour of actors. The study did not analyse e-HRM as a system nor did it study the system adoption factors and processes

## **1.11 Outline of the thesis**

The thesis is organised into seven chapters as follows:-

### **Chapter 1: Introduction and background**

This chapter introduced the thesis by providing the background to the field studied. It then gave the background to the research problem by discussing the theoretical and practical knowledge gaps. This was followed by the problem statement, study objectives and research questions.



## Chapter 2: Survey of scholarship and theoretical foundations

This chapter surveys the scholarship by reviewing the existing literature on the concepts and key terms making up the research topic. This systematic literature review conducted, informs and gives foundations for the present study.

## Chapter 3: Theoretical frameworks and the research model

The chapter presents the theoretical frameworks underpinning the study. Resource-based view, contingency theory, sensemaking theory, transaction cost theory, job characteristics model and the IS-Conflict framework are discussed. The hypotheses and the research model are then provided.

## Chapter 4: Research Methodology

The chapter explains the plan (methodology) used to do the research. The focus is on the research philosophy adopted, research purpose pursued and the research approach settled for. It explains the use of mixed methods research and in particular, the sequential research design that is quantitative dominant. Other issues looked at are the sample size chosen, research tools implemented to collect data as well as analysis tools used in the study.

## Chapter 5: Data analysis and discussion of results

The chapter involves the presentation and the analysis of survey data as well as qualitative data obtained from employing semi-structured interviews. Quantitative data is analysed first followed by an analysis of qualitative data. The mixing of the two analyses is then done.

## Chapter 6: Interpretation of the results and the model

The penultimate chapter presents a discussion of results analysed earlier in the fifth chapter. The quantitative findings are presented first with qualitative study findings being used to clarify and explain the statistical results from the first quantitative study. The discussion is augmented by citing related literature reflecting both quantitative and qualitative published studies on the topic.

## Chapter 7: Evaluation of the research, thesis contributions and conclusion

The last chapter proffers recommendations to academics and practitioners on getting consequences that are more consistent from implementing the e-HRM system. Limitations and areas for further research are also highlighted.

### **1.12 Summary of the chapter**

This chapter anchors the study. It is meant to put the research work into its contextual perspective. It further provides an overview of the research by presenting the theoretical and practical knowledge gap that the study hopes to fill. The chapter first clarifies the thesis title by breaking it into constituencies. These constituencies also provide the background to the field studied so that the reader may understand the thesis going forward. The study also states the research problem, research argument, study goal and objectives, and research question. The delimitation of the study and outline of the thesis are also outlined. The next chapter undertakes a survey of scholarship and theoretical foundations.

## **CHAPTER 2: SURVEY OF SCHOLARSHIP AND THEORETICAL FOUNDATIONS**

### **2.1 Introduction**

The current business environment could be subtly described as chaotic, fluid, difficult to fathom and unfriendly to corporates. The turbulent macro-environmental forces, largely driven by technological changes, have been at the epicentre of this fluidity. Achieving business excellence (competitive advantage) in this environment has become a mammoth challenge. Organisations have had to refocus their strategies, become flatter and more nimble to 'beat' the chaotic business order. In despair, human capital has generated interest amongst academics and practitioners as an alternative option to navigating organisations towards sustained competitive advantage. The face of HRM is now a portal. The automation of HR processes alone can no longer assure a position of competitive advantage. Organisations must instead determine how to use technology to transform HR practices. Electronic Human Resource Management (e-HRM) has been adopted and implemented by organisations in an attempt to maximise the dynamic capabilities of human capital.

The purpose of this chapter is to present an elaborate review of literature with a multi-purpose rationale. The chapter seeks to arrive at the definitions of various concepts being researched on, to link the literature review to the objectives of the study, to provide the framework for the research process as well as the methodological approach. A number of sources were used to search for literature related to information systems (IS) and / or information technology (IT) in general and e-HRM in particular. Electronic HRM is of dual parentage; (Information System and Human Resource Management) and as such peer-reviewed journal and academic conference articles in Strategic Human Resource Management, Human Resource Management, Personnel Management, Organisational Behaviour, Psychology, Information Technology, Information Management, Computer Science and Information System disciplines were reviewed.

The majority of journals were sourced from the Ebsco Business Source, InfoSci-Journals, ProQuest Business Premium Collection, UNISA Library e-resources, Google Scholar, and Emerald Insight databases. The search was done using the following terms; electronic Human Resource Management (e-HRM), HRIS, IS for HR, web-based HRM, ERP for HRM, virtual HRM, HR intranet, e-HRM, digital HRM, web-based HRM, HRM and Internet, computer

based HR, e-HRM and job satisfaction, e-HRM and employee performance and e-HRM and organisational politics (see Figure 2.1).

Over 3000 hits were a result from the search. The articles were read and analysed for relevance, with those that related to e-HRM consequences being deemed more appropriate for the study. The articles that also looked at the effect of IS, HRIS and / or e-HRM use on employee outcomes were shortlisted for review. The articles that focused on adoption of e-HRM alone were discarded from the shortlist. The time frame for these scholarly articles was put between 1970 and 2020. In total, 161 articles made the final list for this review. Figure 2.2 below summarises the approach adopted for this literature review.

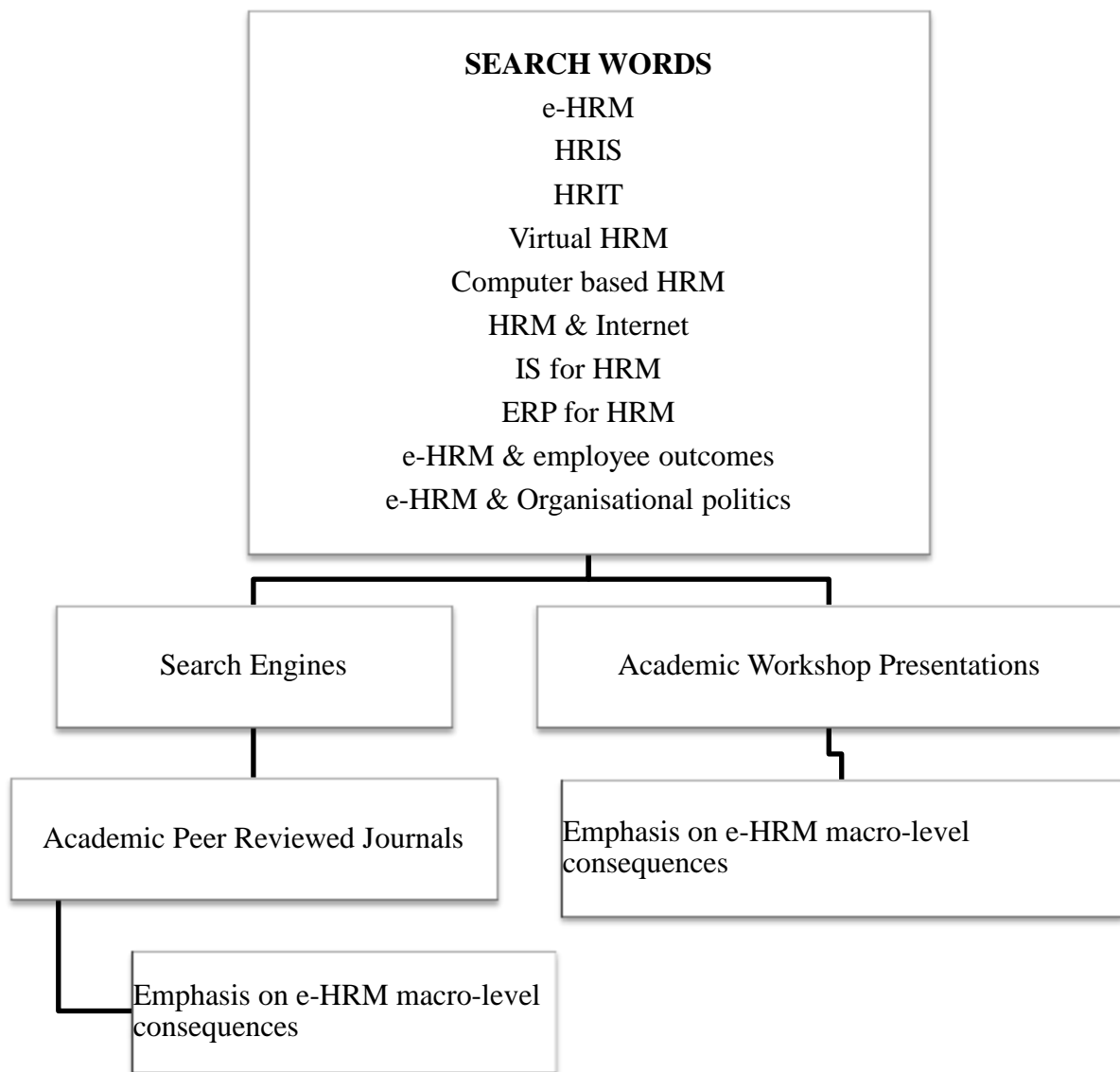


Figure 2.1 Approach to scholarship and theoretical foundations (Source: Developed for this study)

The following framework was adopted for this review:

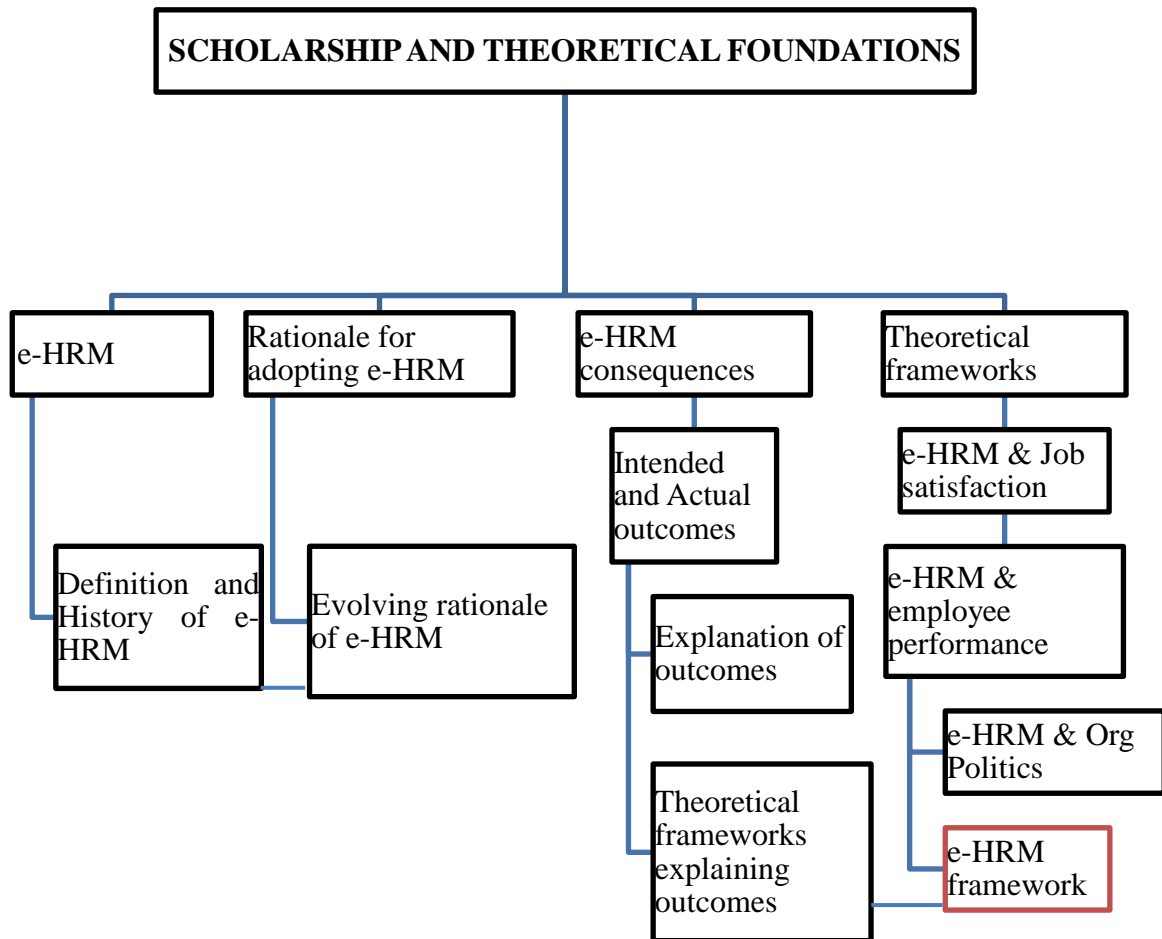


Figure 2.2 Scholarship and theoretical foundations framework (Source: Developed for this study)

## **2.2. e-HRM defined**

Over the years, researchers and scholars have not come to a common understanding of the definition of e-HRM. This lack of consensus has been defended as normal and expected due to the dual parentage of e-HRM. Electronic HRM has its origins in Information System (IS) and Human Resource Management (HRM). Consequently, various definitions have been proffered for the phenomenon. These definitions differ in orientation, focus and implication. The way e-HRM is defined is important as definitions employed have implications regarding the research direction and consequences sought for the system. It is important for all stakeholders to have a common frame of reference with regards how e-HRM is defined as any incongruence is likely to impact on intended consequences. Some definitions focus on efficiency gains whilst others emphasise on the strategic role of the phenomenon. The definitions from the Information System background focus more on efficiency gains whilst those from the HRM background address relational and transformational (strategic) consequences better. The numerous definitions available could be categorised into four classes; the information system based, operational (transactional), relational and transformational consequence focused definitions.

### *2.2.1 Information System based definitions*

Buzkan (2016: 133) defined Human Resource Information Systems “as systems that are used to collect, to record and store, to analyse and retrieve the data related to an organisation’s human resources.” HRIS is a system used to acquire, store, manipulate, analyse, retrieve and distribute pertinent information about an organisation’s human resources (Bingol, 2006). The data consists of salaries, leave days, performance appraisals, retirement, benefits and accidents. Human Resource Information System (HRIS) exists alongside other functional information systems such as Accounting Information System (A.I.S.) and Marketing Information System (M.I.S.). Most research studies that use information system based definitions see the Human Resource Information System as being used mainly for administrative purposes. These definitions do not look at relational and transformational consequences derived from introducing these systems. As such, this study does not make use of these definitions.

### *2.2.2 Operational consequence focused definitions*

Lengnick-Hall and Moritz (2003) defined e-HRM as a process of conducting HR transactions using the internet or intranet. Voermans & Van Veldhoven (2007: 887) defined e-HRM as

“the administrative support of the HR function in organisations by using internet technology.” It is “the application of computers and telecommunication devices to collect, store, retrieve and disseminate human resources data for business purposes” (Stone, Stone-Romero & Dampney, 2015: 216). These definitions entail focusing on operational consequences only at the exclusion of relational and transformational ones. The interests of this category of definitions is that computerised HR systems increase efficiency (Bondarouk et al., 2017), reduce headcount, increase the speed of business transactions (Ruel, Bondarouk & Looise, 2004; Strohmeier, 2007; Parry, 2011; and reduce costs (Ruel et al. 2004; Parry, 2011). The majority of operational consequence focused definitions dwell on micro-level consequences. Micro-level consequences have to do with the effects of e-HRM on HRM functions such as recruitment and selection, training and development, performance management and compensation management. These definitions are restrictive. As such, they are not used in this study.

### *2.2.3 Relational consequence focused definitions*

Shilpa and Gopal (2011) defined e-HRM as web technology that allows employees and management to cooperate and play an active role in delivering out HR work. Bondarouk (2020) defined e-HRM as a system that facilitates communication between managers and employees about HR content more effectively. The expanded definition has e-HRM “as the planning, implementation and application of information technology for both networking and supporting at least two individuals or collective actors in their shared performing of HR activities” (Strohmeier, 2007: 20). These definitions focus on aiding the collaborative effort of various actors (line managers and employees) in organisations in performing HR activities without elaborating on the intended organisational outcomes of these efforts. Organisations thus introduce human resource information systems or e-HRM with specific intent to achieve desired consequences such as improving relations amongst various actors in an organisation. As such, these definitions are narrow focused and therefore they are not utilised in this study.

### *2.2.4 Transformational consequence focused definitions*

Johnson, Lukaszewski & Stone. (2016: 282) defined e-HRM as “the implementation and delivery of HR functionality enabled by a HR Information System that connects employees, applicants, managers, and the decisions they make.” Bondarouk and Ruel (2009: 507) defined e-HRM as “an umbrella term covering all possible integrating mechanisms and contents between HRM and Information Technology (IT) aiming at creating value within and across

organisations for targeted employees and management.” Electronic HRM is concerned about enabling HR practices that can be aided by IT for all organisational members. The e-HRM actors are employees, line managers, IT professionals and HR professionals. Electronic HRM consequences consist of the value received from e-HRM. It means that either an individual employee or an HR professional, the whole HR department, organisation or a net of several organisations is willing to exchange money for the value received from e-HRM.

This definition is the broadest of all definitions available in literature so far, in the sense that it allows newer technologies to be deployed in automating HR practices and processes. It embraces all modern information communication technologies that could be utilised in the field of HRM. The definition emphasises the process aspect of e-HRM; the phenomenon has to be adopted and appropriated by managers and employees to add value to an organisation. Lastly, the definition widens the benefits that accrue from the appropriation of e-HRM by organisational members. The definition has however been criticised for treating e-HRM as a phenomenon only and not as an academic discipline (Bondarouk, 2014). The definition has also been labelled vague and open to many different interpretations (Bondarouk, 2014). Despite these limitations, it nonetheless remains the most embracing of all current definitions of e-HRM as a phenomenon.

Bondarouk (2014) defined e-HRM as a discipline rather than a phenomenon. Electronic HRM is “a field of scholarly inquiry that focuses on all integration mechanisms and all HRM content shared via IT that aim to make HRM processes distinctive and consistent, more efficient, high in quality and which create long-term opportunities within and across organisations for targeted users” (Bondarouk, 2014: 13). The latest definition was proffered by Johnson, Lukaszewski and Stone (2016: 29) who defined e-HRM as “the implementation and delivery of HR functionality enabled by a HRIS that connects employees, applicants, managers and the decisions they make.” Table 2.1 below overviews the evolution of definitions encountered in e-HRM literature.



Table 2.1: Evolution of e-HRM definitions

<b>Author</b>	<b>Year</b>	<b>Definition</b>
DeSanctis	1986: 16	“A specialised information system (IS) designed to support the planning, administration, decision making and control activities of HRM.”
Broderick and Boudreau	1998	Information Technology application required to compile, store and present data for HR.
Lepak & Snell	1998: 216	“A network-supported arrangement built to help the organisation obtain, develop and set up intellectual capital.”
Adam & van den Berg	2001	The use of web based technologies for HRM.
Walker	2001	The compilation of acts, principles and best practices approach to HRM.
Kovach et al	2002	A web-technology based conduit offering managers and employees information and capabilities to finish HR related transactions.
Kettley & Reilly	2003: 3	“A computerised HRIS and consists of a fully integrated company wide network of HR related data, information, services, databases, tools and transactions.”
Lengnick-Hall & Moritz	2003	A set of HRM applications directed to help managers and employees carry out their HR tasks.
Ruel, Bondarouk & Looise	2004: 16	“An approach of executing HRM strategies, policies and practices with the full use of web technology based conduits.”
Van den Bos & van der Heijden	2005	It is a system that is used to facilitate HRM through the application of web technology.
Bondarouk & Ruel	2006	A system that facilitates communication between managers and employees about HR content more effectively.
Uman	2006	An automation procedure by which the HRM can pay attention on delivering value to the business.
Strohmeier	2007: 20	“It is the planning, execution and implementation of IT for both networking and supporting at least two people or unified actors in their shared performing of HR actions.”
Ruel et al	2007: 281	“The use of web-technology based channels to support the implementation of HRM strategies, policies and practices in organisations”
Voermans & Van Veldhoven	2007: 887	“The administrative support of the HR department in business by using internet technology.”
Shane	2009	The connection between HRM and IT.

Author	Year	Definition
Bondarouk & Ruel	2009: 507	“An umbrella term covering all possible integrating mechanisms and contents between HRM and Information Technology (IT) aiming at creating value within and across organisations for targeted employees and management.”
Shilpa & Gopal	2011	Web technology that allows employees and management to cooperate and play an active role in delivering out HR work.
Marler & Fisher	2013: 21	“e-HRM consists of configurations of computer hardware, software, and electronic networking resources that enable intended or actual HRM activities (e.g., policies, practices, and services) through individual and group-level interactions within and across organizational boundaries.”
Weeks	2013: 41	“The overall strategy that redistributes the HR functions throughout the organisation and to trusted business partners.”
Bondarouk	2014: 13	“A field of scholarly inquiry that focuses on all integration mechanisms and all HRM content shared via IT that aim to make HRM processes distinctive and consistent, more efficient, high in quality and which create long-term opportunities within and across organisations for targeted users.”
Johnson, Lukaszewski, & Stone	2016: 29	“The implementation and delivery of HR functionality enabled by a HRIS that connects employees, applicants, managers and the decisions they make.”

Source: Developed for this study

For the purposes of this study, e-HRM is defined as *the use of information technology to implement HRM best practices in order to achieve organisational effectiveness* (Ruel, 2007: 281). This definition encapsulates most of the facets of the above definitions.

### 2.2.5 e-HRM and HRIS

These two terms were part of the search words used in this study’s approach to literature review. In the Americas, researchers show an inclination towards the term Human Resource Information System (HRIS) whilst in Europe the term e-HRM is more preferred. Some authors (Ruel, Bondarouk & Looise, 2004; Voemans & Veldhoven, 2007; Gupta & Saxena, 2012; Marler & Fisher, 2013) have argued that there are fundamental differences between e-HRM and HRIS. The key differences are cited as follows:

- i. HRIS focuses on improving processes within the HR function or department for the benefit of HR professionals (Ruel et al., 2004). The system consists of HR applications used solely by HR professionals with a view to improving processes within the HRM department for the benefit of organisational members. HRIS applications help the HR function render HR services efficiently to other departments. The focus is on the production orientation of the HR function. Electronic HRM on the other hand focuses on improving access to HR services to actors outside the HR function or department, for example, employees and line managers (Ruel et al., 2004; Voemans & Veldhoven, 2007).
- ii. The target group for HRIS is HR staff whereas with e-HRM, the target group consists of multiple users (line managers, IT professionals and employees) outside the HR department (Ruel et al., 2004; Gupta & Saxena, 2012, Poisat & Mey, 2017).
- iii. Electronic HRM is a way of doing HRM whereas HRIS is about automating HR services in order to support business (Ruel et al., 2004; Poisat & Mey, 2017). Strohmeier (2007) saw e-HRM as consisting of technology directed at everyone outside the HR department. Electronic human resources management is HRIS deployed for the benefit of line managers and employees. It consists of applications that empower employees and line managers to access and use HR processes and practices.

Magalhaes and Ruel (2007) however belittled the differences between the two concepts. The two terms are considered to be more similar than different. Magalhaes and Ruel (2007: 6) considered “the term HRIS as encapsulating the whole area of IT, internet technology and HRM. The commonly used terms nowadays like e-HRM, web-based HRM, and IT based HRM are considered as developments within the area of HRIS.” The study further argued that a line should not be drawn between IT-based information systems for HR (HRIS) and internet-based HR applications (e-HRM) since they are basically similar (Ruel, Magalhaes & Chiemeke, 2011). HRIS and e-HRM are about IT for HRM activities whether these activities are performed within the HR department (HRIS) or performed outside the HR department for the benefit of line managers and employees (e-HR). This latter treatment of the two concepts is adopted for this study.

### 2.2.6 e-HRM Tools / Applications

Electronic HRM as a phenomenon consists of a number of applications. CedarCrestone (2009) cited in Foster (2009) put forward a categorisation of e-HRM applications or tools of an e-HRM system (see Figure 2.3). These are:

- i. *Administrative Applications*: These applications focus on administrative activities such as payroll, benefits and record keeping systems.
- ii. *Employee and Manager Service Delivery Applications*: They are self-service transactional services that improve service delivery, reduce costs, and enable employees, HR professionals and line managers to spend less time on administrative tasks.
- iii. *Strategic Human Capital Management (HCM) Applications*: These are applications that enable an organisation to attract, develop and reward key talent. The CedarCrestone study identified 12 applications that contribute to strategic HCM including, workforce planning, recruiting, performance management, competency management, learning management, succession planning, career planning and compensation management.
- iv. *Workforce Management*: These applications are utilised for the management of employees. They include time and attendance management, labour budgeting, forecasting, scheduling and task management.
- v. *Business Intelligence Applications*: They are applications and tools that when combined, enable an organisation to move towards metrics-based management of HR.



Figure 2.3 e-HRM Applications (Source: CedarCrestone, 2009: 18)

## 2.3 Role and Development of e-HRM

### 2.3.1 Strategic Human Resource Management and e-HRM

Strategic human resource management (SHRM) “is an approach to the development and implementation of HR strategies that is integrated with business strategies and enables the organisation to achieve its goals” (Armstrong, 2008: 1). SHRM focuses on understanding how the HR best practices lead to enhanced organisation wide outcomes (Obeidat, 2016). There is a link between human resource best practices and organisational performance. There is debate though as to whether high performance work practices are effective as individual practices or as an integrated set of practices. Combs et al. (2006) argued that best HRM practices (also known as High Performance Work Practices) as an integrated set of practices are more effective than individual practices. There are also questions as to whether this link is universal or not. Research findings do indicate the failure of this link in some circumstances (Chenevert & Tremblay, 2009).

Electronic human resource management has been adopted by organisations for a variety of reasons. Firstly, e-HRM use enhances organisational performance through impacting on employees (Ngai, Law & Wat, 2008; Bondarouk et al., 2009; Obeidat, 2016; Bondarouk, 2020). By moulding organisational citizenship behaviour in employees, a series of outcomes are realised: increased knowledge sharing, creativity and innovation, intrinsic motivation and improved employee performance. These employee outcomes ultimately result in improved organisational performance (Noe, Hollenbeck, Gerhart, & Wright, 2010). Information systems can also help “firms improve their performance by speeding up work transactions and increasing operational efficiencies” (Obeidat, 2016: 235). Secondly, e-HRM moderates the High Performance Work Practices (HPWP) and organisational performance link (see Figures 2.4 and 2.5 below). The phenomenon reinforces the implementation of HR best practices thus playing the role of an enabler in this link.

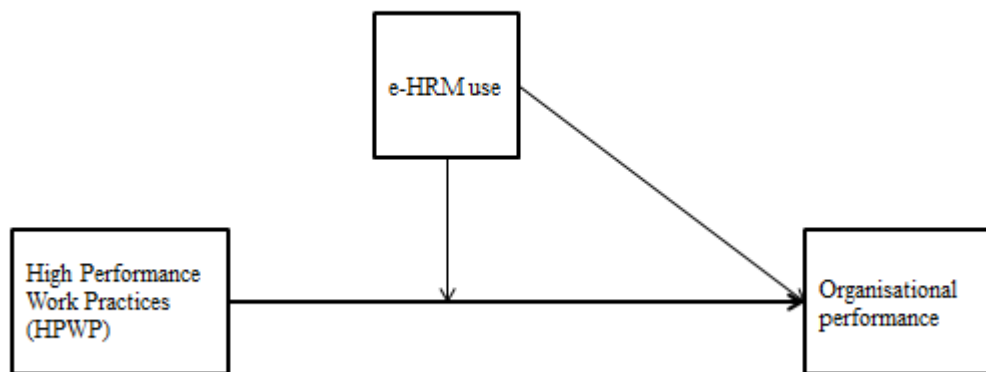


Figure 2.4 HPWP and organisational performance link (Source: Obeidat, 2016: 225)

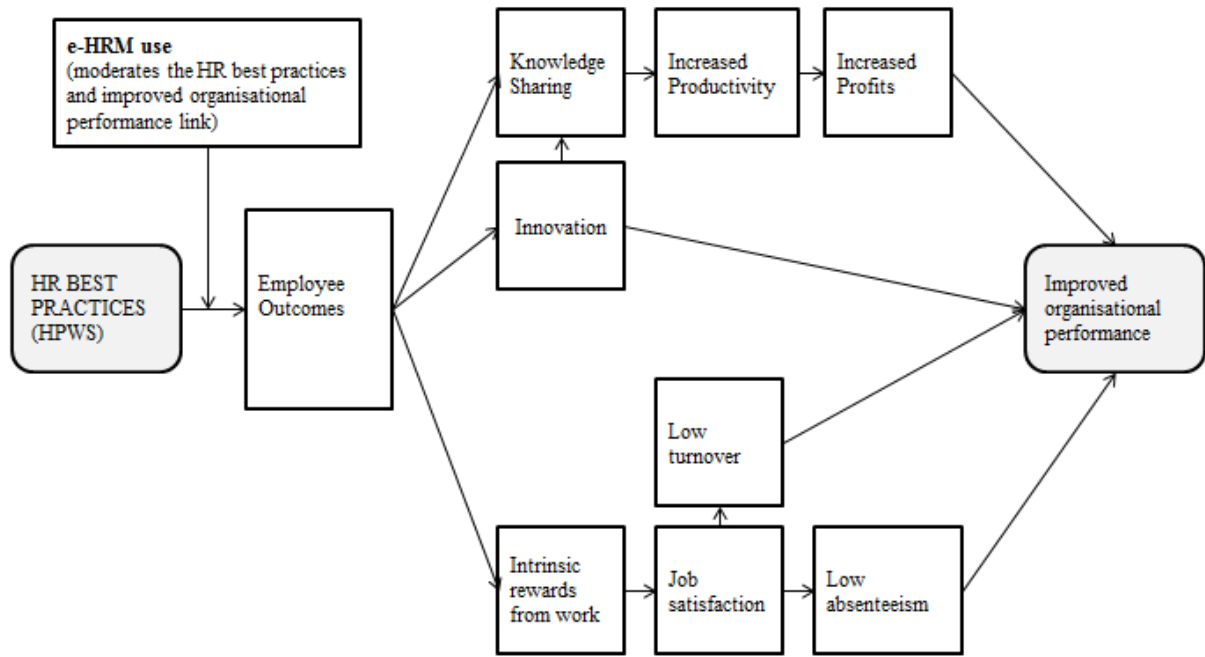


Figure 2.5 Illustration of the moderating effect of e-HRM on the HRWP and performance link (Adapted from Noe et al., 2010: 89)

### 2.3.2 Automation of HR tasks and focus on operational consequences (1970s to 1980s)

The growth of conglomerates in the United States prompted huge investments in the HR departments. Pressure mounted for the computerisation of the HR departments in order for the function to improve its operational efficiency. The aim was to improve the efficiency and effectiveness of the administrative role of the HR function in managing a growing white-collar workforce. The Human Resource Information System (HRIS) was adopted for the performance of this administrative role. The Human Resource Information System (HRIS) was inward looking as it was implemented to provide better service to HR managers and employees within the HR department. It was a system for the HR department deployed for the benefit of service departments.

Most of the research conducted during this era looked at technical factors that favoured the successful adoption and implementation of HRIS. These factors ranged from perceived ease of use, usefulness of system, information quality to system quality. If there is a fit between technological factors, the adoption and implementation of HRIS should be successful. The operational consequences were realised in the form of cost savings, headcount reduction, efficiency and effectiveness (Cronin et al., 2006; Ruel et al., 2004; Ramirez & Cantu, 2008; Marler, 2009; Bondarouk, 2020).

Early scholars (Tomeski & Lazarus, 1974; DeSanctis, 1986) studied Human Resource Information System (HRIS) in the United States. Their attention was on automation of the routine HR tasks and processes (Heikkila, 2010). DeSanctis (1986) argued for the introduction of a specialised information system in functional areas such as Accounting Information System (AIS) to interface with HRIS in order to aid HRM activities. HRIS implementation led to cost savings, positive experiences in payroll, record keeping applications and efficiency gains (Tomeski & Lazarus, 1974). The aim of introducing e-HRM was to improve efficiency and effectiveness in terms of cost reduction, service delivery and value added services (Ruel et al., 2004; Thite, Kavanagh, & Johnson, 2009; Bondarouk & Ruel, 2009; Holm, 2010; Marler & Fischer, 2013; Rao, 2010). The phenomenon thus served a wholly administrative function in the 1980s. The focus was on the technical superiority of an information system. It was argued then that this superiority would translate into desired consequences. Research conducted during this era utilised the technology acceptance theory as the theoretical framework, given the thinking that assumed that technology had predictive power.

### *2.3.3 Emergence of relational and transformational consequences (1990s)*

In the 1990s, researchers focused on Human Resource Information Systems (HRIS) to improve HR operational and administrative functions (Broderick & Boudreau, 1998; Haines & Petit, 1997). Specific attention was paid to HRIS use in compensation management and record keeping. The majority of studies were again confined to the United States. Haines and Petit (1997) identified predictors or antecedents of HRIS success. These were *system conditions* (system performance, functioning, training and support from supervisors) and *internal support* (existence of HRIS and good documentation for users). The 1990s saw more attention being turned to organisational factors, which were seen as necessary for the successful adoption and implementation of e-HRM.

HRIS applications helped organisations to score operational efficiency and effectiveness, cost reductions and control. In 1998, Lepak and Snell introduced the virtual HR concept and the three consequences of this system; namely the operational, relational and transformational outcomes. The findings established that virtual HR moved e-HRM administrative role to a new level; the strategic one. It was these consequences that gave organisations a new impetus to implement e-HRM. The bulk of research however still focused on operational and relational consequences and very little on the transformational role of the HR function.



#### *2.3.4 e-HRM emerges as a separate research field and practice (2000-2010)*

The years 2000 to 2010, saw the emergence of e-HRM as a separate field for scholarly enquiry. The phenomenon was recognised as a multilevel natured one, needing a more comprehensive definition. The majority of the research took aim at the effect of e-HRM use on individuals (micro-level) and the bigger organisation (macro-level). At micro-level, research looked at the effect of e-HRM use on HR functional areas like e-recruitment, e-learning and training. The results were mixed in terms of outcomes or consequences. At macro-level, researchers focused on why organisations should invest in e-HRM: the phenomenon was supposed to lead to positive operational, relational and transformational consequences. Organisations adopted an array of technologies to either create exchange value (Ruel et al., 2004; Marler, 2009; Heikkila, 2010; Holm, 2010; Maatman, Bondarouk & Looise 2010; Rao, 2010) or use value (Bondarouk & van Riemsdijk, 2007; Ruel et al., 2004; Bondarouk & Ruel, 2009; 2010; Marler & Fischer, 2013; Mueller & Strohmeier 2010) or both. [Use value refers to the net benefits that e-HRM confers on individual actors within an organisation and the organisation as a whole. The exchange value refers to the net monetary gains realised by an organisation as a result of e-HRM adoption and implementation]. These e-HRM technologies ranged from intranet applications, employee self-service, HR portals to interactive voice responses.

The focus during this decade was on the effect of people factors in the successful implementation of e-HRM. The HR transformational role of the HR function was the most researched of the three roles. The findings were however mixed with intended and unintended consequences being realised (see Table 2.2). The decade ended with research being focused on understanding the reasons for these unintended consequences.

Table 2.2 Intended and Unintended e-HRM Consequences

	<i>Positive</i>	<i>Negative</i>
<i>Intended</i>	<p><b>Transactional</b>                      Reduced costs of HR transactions and HR headcount reduction.                      Greater responsiveness to needs of managers and employees' needs for (real time) information and tailored HR solutions on demand.                      Increased self-efficacy among managers and employees.</p>	<p><b>Transactional</b>                      HR headcount reduction</p>
<i>Intended</i>	<p><b>Transformational</b>                      Greater accountability of managers for people management.                      Increased acceptance of self-development by employees.                      Improved talent management through self-selection, self-assessment, performance management, etc.                      Improved two-way communications leading to higher levels of organisational engagement and satisfaction with HR/management.                      Greater access to individual learning.                      Greater capability to feed forward individual learning into group and organisational learning across distributed organisations.                      Greater sense of corporate identity through uniform HR portals.                      More time for HR to focus on expert /strategic issues.                      Greater ability to work flexibly from home and other work places.</p>	<p><b>Transformational</b>                      Lack of face-to-face contact and remoteness of HR staff from clients.                      Intellectual property and data ownership transferred to outsourcing partner</p>
<i>Unintended</i>	<p><b>Transactional</b>                      Spill over of information from HR into other areas of business.</p>	<p><b>Transactional</b>                      Displacement of existing HR staff and loss of organisational knowledge.                      Lack of job satisfaction among HR staff working in shared service centres                      Manager / employee frustration over ease and</p>

		<p>value of information.</p> <p>Resistance to new ways of working through ‘benign neglect’, opposition or mild forms of sabotage.</p> <p>Increased levels of cynicism with HR / organisational change programmes.</p> <p>Increased perception by managers of ‘ doing HR’s job’ and work load</p>
<i>Unintended</i>	<p><b>Transformational</b></p> <p>Greater sense of organisational innovativeness / progress modelled through adoption of sophisticated e-HR.</p>	<p><b>Transformational</b></p>

Source: (Martin & Reddington, 2010: 1563)

### *2.3.5 The strategic role and unintended consequences emphasis (2011-2015)*

Research on the transformational role of the HR function in organisations dominated this era. The research findings however continued to report more on operational and relational consequences as outcomes of e-HRM implementation and less on transformational ones (Parry & Tyson, 2011; Panos & Bellou, 2016). Ruel and Kaap (2012) noted that e-HRM was being used to achieve ‘use value’ instead of ‘exchange value’ in many organisations. Wahyudi and Park (2014) looked at e-HRM success enablers for value creation. The study stressed the need to align HRM strategy, IT management and core business functions of an organisation in order to get intended transformational consequences.

Maier, Laumer, Eckhardt and Weitzel (2013) moved away from researching on organisational consequences to focus on the impact of e-HRM use on individual level and unintended consequences. There was a realisation that work-related outcomes should be an added dimension to HRIS success dimensions. Obeidat (2016) found that e-HRM use enhances operational and relational consequences. The study called for more “research to examine the relationship between e-HRM use and different measures of strategic outcomes, like employee productivity and better organisational performance” (Obeidat, 2016: 1294). Strohmeier & Kabst (2014) also noted that the e-HRM configuration adopted influenced organisational outcomes. There is need for a fit between e-HRM goals or e-HRM configuration and desired organisational e-HRM consequence.

Researchers continued to be fascinated with factors affecting the realisation of e-HRM consequences. There has been minimal interest on the impact of e-HRM on employee outcomes as either mediating or moderating variables. The people factors dominate the list although it must be noted that they are tied to technology, for example, training in e-HRM use, HR skills, design of the e-HRM system and familiarity with technology. Researchers are seized with the discrepancy between promised benefits of e-HRM and its realised outcomes. No definitive model has been suggested to minimise the discrepancy. Table 2.3 below summarises the research on e-HRM consequences.

Table 2.3 Development of e-HRM consequences

<b>Period</b>	<b>Factors affecting Consequences</b>	<b>Consequences</b>
1970 – 1989	<p><b>Technological</b></p> <ul style="list-style-type: none"> <li>• Number of applications comprising the HRIS</li> <li>• Duration of development of new system</li> </ul> <p><b>Organisational</b></p> <ul style="list-style-type: none"> <li>• Strategic Alignment of HR plans and Corporate Plans</li> </ul> <p><b>People</b></p> <ul style="list-style-type: none"> <li>• User involvement</li> </ul>	<p><b>Operational</b></p> <ul style="list-style-type: none"> <li>• Cost savings</li> <li>• Headcount reduction</li> <li>• Time savings</li> <li>• Faster reporting</li> <li>• Top management satisfaction with HRIS</li> <li>• Improved accuracy of reports</li> </ul>
1990-1999	<p><b>Technological</b></p> <ul style="list-style-type: none"> <li>• Ease of use</li> <li>• Usefulness</li> <li>• Availability to employees</li> <li>• Number of applications</li> <li>• Functionality of applications</li> <li>• Data characteristics</li> </ul> <p><b>Organisational</b></p> <ul style="list-style-type: none"> <li>• Size of organisation</li> <li>• Size of the HRIS department</li> <li>• Standardisation of HR processes</li> <li>• Strategic plan and HR plan integration</li> </ul> <p><b>People</b></p> <ul style="list-style-type: none"> <li>• Employees characteristics</li> <li>• Training</li> <li>• User involvement</li> <li>• Managerial support</li> <li>• Technical skills</li> </ul>	<p><b>Operational</b></p> <ul style="list-style-type: none"> <li>• Cost savings</li> <li>• Efficiency gains</li> <li>• Effectiveness gains</li> </ul> <p><b>Relational</b></p> <ul style="list-style-type: none"> <li>• Better service to stakeholders</li> <li>• Improved communication</li> </ul> <p><b>Transformational</b></p> <ul style="list-style-type: none"> <li>• Consistent HR practices throughout the organisation</li> </ul>
2000-2010	<p><b>Technological</b></p> <ul style="list-style-type: none"> <li>• Technical applications and characteristics</li> <li>• Fit of HR system with HR strategy</li> <li>• Use of in-house versus commercial applications</li> </ul> <p><b>Organisational</b></p> <ul style="list-style-type: none"> <li>• User demographics</li> <li>• User knowledge and skills</li> <li>• Organisational policies and practices</li> <li>• Implementation of system</li> </ul>	<p><b>Operational</b></p> <ul style="list-style-type: none"> <li>• Cost savings</li> <li>• Efficiency gains</li> <li>• Improved effectiveness</li> </ul> <p><b>Relational</b></p> <ul style="list-style-type: none"> <li>• Improved working relationships</li> <li>• Improved quality of HR service</li> <li>• Improved communication</li> </ul>

Period	Factors affecting Consequences	Consequences
	<p><b>People</b></p> <ul style="list-style-type: none"> <li>• Demographics</li> <li>• Feedback</li> <li>• Support and commitment</li> <li>• User involvement</li> <li>• Training and skills</li> </ul> <hr/> <p><b>Environmental</b></p> <ul style="list-style-type: none"> <li>• Country culture</li> </ul>	<p><b>Transformational</b></p> <ul style="list-style-type: none"> <li>• Alignment of HR strategy with Business strategy</li> <li>• Improved HR planning</li> <li>• Emergence of knowledge sharing culture</li> <li>• HR function as a strategic partner</li> </ul> <p><b>People</b></p> <ul style="list-style-type: none"> <li>• Employee satisfaction</li> <li>• Satisfaction with HR department</li> <li>• Employee commitment</li> </ul>
2011-2015	<p><b>Technological</b></p> <ul style="list-style-type: none"> <li>• Perception of system</li> <li>• Data characteristics</li> <li>• Technical applications and characteristics</li> </ul> <hr/> <p><b>Organisational</b></p> <ul style="list-style-type: none"> <li>• Usage behaviour</li> <li>• Use intentions</li> <li>• Organisational policies and practices</li> <li>• System quality</li> <li>• HR policy /practices consistency</li> </ul> <hr/> <p><b>People</b></p> <ul style="list-style-type: none"> <li>• User performance</li> <li>• User satisfaction</li> <li>• User involvement</li> <li>• User experience</li> </ul> <hr/> <p><b>Environmental</b></p> <ul style="list-style-type: none"> <li>• National culture</li> </ul>	<p><b>Operational</b></p> <ul style="list-style-type: none"> <li>• Cost savings</li> <li>• Efficiency gains</li> <li>• Improved effectiveness</li> <li>• Increased flexibility of HR function</li> </ul> <p><b>Relational</b></p> <ul style="list-style-type: none"> <li>• Improved working relationships</li> <li>• Improved quality of HR service</li> <li>• Improved communication</li> <li>• Enhanced team spirit</li> <li>• Employee awareness of organisational developments</li> </ul> <p><b>Transformational</b></p> <ul style="list-style-type: none"> <li>• HR function a strategic partner</li> <li>• Improved organisational performance</li> <li>• Improved employee productivity</li> <li>• Job satisfaction</li> </ul>

Period	Factors affecting Consequences	Consequences
		<ul style="list-style-type: none"> <li>• Improved employee performance</li> </ul>
2016-2020	<b>Technological, Organisational, People and Environmental (TOPE) factors</b> <ul style="list-style-type: none"> <li>• Emphasis on People and Environmental factors</li> </ul>	<ul style="list-style-type: none"> <li>• Explanation of discrepancy between intended consequences and realised consequences.</li> </ul>

Adapted from de Wit (2011)

## 2.4 Rationale for adopting e-HRM

The rationale for adopting e-HRM has been covered extensively in Human Resource Management literature. An assumption that is made in literature is that all stakeholders are of the same frame of reference with regards the rationale. This is an oversimplification, as different actors have different and sometimes selfish interests. Notwithstanding this simplification, the following five (goals) reasons are the most cited for going e-HRM.

### 2.4.1. Transformational Goals (Strategic Orientation)

The adoption of e-HRM by organisations is an attempt to push the HR function from being an administrative expert to being a strategic partner. The strategic partner role focuses on organisational change and/or achieving sustainable competitive advantage through human capital utilisation. It is about creating use value as well as exchange value; a return on investment (Ruel et al., 2004; Farndale et al., 2010). The availability of most administrative tasks on HR applications frees time for HR professionals to engage in strategic activities that ultimately result in organisations achieving positions of competitive advantage (Bondarouk & Ruel, 2012). Thus, e-HRM has the capacity to transform the HR function into a strategic partner (Ruel et al., 2004; Marler, 2009; Parry & Tyson, 2011; Bondarouk et al., 2017) and allow an “organisation to innovate itself both in private and public, in response to the demands and changes in business” (Wahyudi & Park, 2014: 84).

Electronic-HRM has resulted in the elimination of HR transactional functions (Gardner, Lepak & Bartol, 2003; Ruel et al., 2004), created time saving (Olivas-Lujan et al., 2007), increased speed in the transaction processing (Bondarouk and Ruel, 2009), automated routine HR tasks (Marler, 2009) and created more ‘free’ time for the HR staff (Bondarouk & Ruel, 2010; Farndale et al., 2010). These activities have been substituted with strategic ones.

Information Technology has been observed to possess a strong capability for ‘automating’, as well as a capacity for ‘informating’ (Bravo et al., 2016). Informating involves generating new forms of information to help managers in general and HR managers in particular, to make informed strategic decisions. Research evidence postulated thus far, suggests that, it is unclear whether e-HRM impacts on HR function in a transformational manner given the prevalence of unintended consequences.

#### *2.4.2. Operational Goals (Efficiency gains)*

The primary justification for implementing e-HRM in organisations is efficiency gains. Electronic HRM has benefitted organisations in realising a reduction in advertising and communication costs (Holm, 2010) and costs reduction in general (Ruel et al., 2004; Forster, 2009; Heikkila, 2010; Marler & Fisher, 2013; Rao, 2010). According to Turulja & Bajgoric (2016) information technology could play a role in enhancing the HR function, resulting in increased employee commitment and satisfaction, and ultimately in improved workplace performance. These efficiency gains translate into more and better information availability to internal and external stakeholders, which ultimately lead to improved client satisfaction (Ruta, 2005). The efficiency gains also reduce workloads and times taken to accomplish tasks resulting in increased job satisfaction and reduced labour turnover.

In multinational corporations (MNCs), e-training (e-learning) is delivered to a large number of employees around the globe and in the process enjoying massive economies of scale (Marler, 2009; Martin & Reddington, 2010). Parry and Tyson (2011) confirmed that most organisations that implemented e-HRM realised efficiency gains, headcount reduction, direct cost reductions and faster HR processes. Electronic HRM involves automating the majority of routine administrative tasks and processes. It is worth noting though, that some organisations have failed to register these reported efficiency gains after implementing e-HRM.

#### *2.4.3 Relational Goals (Empowerment and Communication mechanism)*

Electronic HRM serves as a network mechanism between a company and its employees (Hutchinson, 2014). Firstly, it communicates practices and policies to all employees about the desired behaviours which are linked to improved organisational performance. Secondly, it enables employees to observe these practices and policies of the HRM system through the use of modern information communication technologies (Obeidat, 2016), and provides



information about how HR practices are internally consistent. The phenomenon also allows the HR function, line managers and employees to “connect faster and better with other parts of a company and outside organisations” (Parry & Tyson, 2011: 347). There is improved decision making as line managers and employees are empowered to perform HR activities themselves. In the same study, Parry & Tyson (2011) however found that empowerment of line managers and employees was not being realised in organisations studied in Europe.

#### *2.4.4 Standardisation of processes in global organisations*

In multinational corporations (MNCs), e-HRM has been deployed to harmonise and standardise HR policies, practices and processes across different subsidiaries. In a “control perspective, e-HRM can function as a form of bureaucratic control through creating a code of conduct on how the system is used and thus how the HRM processes are carried out” (Heikkila, Rentto & Feng (2017: 177). The phenomenon also helps integrate a multiplicity of subsidiary HRM practices into uniform practices across global organisations. Parry and Tyson (2011: 349) noted that “standardisation of processes is an outcome of e-HRM introduction even in some organisations for which this had not been an espoused goal, making this a positive unintended outcome.”

#### *2.4.5 Organisational Image*

Parry and Tyson (2011) claimed another goal for introducing e-HRM in organisations: organisational image. The study noted that some organisations adopt e-HRM so as to ‘belong’ to a class of world elite organisations. Electronic HRM is seen as a tool of maintaining a cutting edge, as well as to reflect size and world class status. This goal is the least discussed and no data has been produced to verify this in e-HRM literature (Parry & Tyson, 2011).

Strohmeier and Kabst (2014) suggested three e-HRM configurations in pursuit of these goals; the non-users, operational users and power users. The ‘non-users’ type represents those organisations without an institutionalised HRM function: have not introduced e-HRM and therefore do not report operational, relational and transformational consequences although the HR function contributes to organisational success. The operational type user (Ruel et al., 2004; Marler, 2009; Parry & Tyson, 2011) or automational HRM (Strohmeier & Kabst, 2012) or operative e-HRM (Hussain et al., 2007; Strohmeier & Kabst, 2012) employs e-HR applications but the strategic focus (transformational consequences) is missing. Focus is on

automation of administrative tasks. The ‘power users’ or strategic e-HRM (Strohmeier & Kabst, 2012) or transformational e-HRM (Parry & Tyson, 2011) achieves the three sets of e-HRM consequences; operational, relational and transformational; and has higher contributions to organisational success compared to the other two. It should be noted that Strohmeier & Kabst (2014) typology excludes relational e-HRM (informational e-HRM). The implication is that positive (intended) consequences are more likely to be realised in the ‘power users’ e-HRM configuration type.

## **2.5 Consequences of e-HRM**

Electronic HRM is a multilevel phenomenon with its consequences being analysed at many levels: at the unit level (micro-level) or at a macro-level. At micro-level, e-HRM impacts on individual actors such as individual employee reaction to Information System and applicants’ reaction to e-recruitment (Mooney, 2020). At macro-level, e-HRM impact focuses on organisational outcomes.

The adoption of e-HRM has been motivated by various positive consequences that result from its implementation. Extensive literature reviews have shown an association between e-HRM implementation and desired consequences (Strohmeier, 2007; Marler & Fisher, 2013). Research into these consequences has also persistently shown contradictory findings on almost every dimension of assumed information technology consequences (Buckley et al., 2004; Ruel et al., 2004; Parry, 2011). Electronic HRM has been found to increase and decrease efficiency, empower and disempower managers and employees, reduce and increase headcount. Such contradictions are detrimental to the adoption and implementation of e-HRM in organisations considering the investment that has gone into operationalising the phenomenon. In view of these contradictions, the phenomena can no longer be relied upon as a practice that supports organisations to achieve excellence through expected consequences. For scholars there is need to explain this contradiction.

A review of literature identifies a number of consequences ascribed to e-HRM. These are:

- i. Automation of routine HR tasks (Panayotopoulou, Vakola & Galanaki, 2007; Bondarouk & Ruel, 2012),
- ii. Branding of organisations (Parry & Tyson, 2011; Bondarouk & Ruel, 2012),
- iii. Freeing HR staff of administrative tasks in order to undertake strategic roles (Lepak & Snell, 1998; Ruel et al., 2004; Bondarouk & Ruel, 2012),

- iv. Generation of HR metrics to support strategic decision-making (Bondarouk and Ruel, 2009; Parry & Tyson, 2011; Bondarouk, 2020),
- v. Improvement of talent management through e-recruitment and e-selection, e-compensation management, e-performance management, e-training and development (Bondarouk & Ruel, 2012),
- vi. Empowerment of managers to conduct HR activities much better (Parry & Tyson, 2011; Bondarouk & Ruel, 2012), and
- vii. Transformation of the HR function from routine tasks handlers to strategic partners (Bondarouk, 2020).

A thread that emerges with regards the benefits from e-HRM is to revisit them in view of the type or level of e-HRM being utilised. This classification has e-HRM operating at three levels as shown in Table 2.4 below. The operational, relational and transformational classification of consequences is used for this study.

Table 2.4: Classification of e-HRM consequences timeline

<b>Author</b>	<b>Year</b>	<b>First Level Consequence</b>	<b>Second Level Consequence</b>	<b>Third Level Consequence</b>
Bondarouk & Ruel	2007	Operational	Relational	Transformational
Strohmeier	2007	Operational	Relational	Transformational
Martin et al	2008	Operational	Relational	Transformational
Foster	2009	Replication	Enhancement	Transformation
Strohmeier & Kabst	2014	Operational	Relational	Transformational
Marler & Parry	2016	Operational	Relational	Transformational
Bondarouk et al.	2017	Operational	Relational	Transformational
Geurts	2018	Operational	Relational	Transformational
Bondarouk	2020	Operational	Relational	Transformational

Source: (Developed for this study)

Electronic HRM consequences are all net benefits or outcomes that an organisation hopes to get as a result of implementing e-HRM: whether helpful or harmful (Strohmeier, 2007). There are three recognized types of e-HRM practices that have the potential to achieve intended consequences: operational, relational and transformational e-HRM practices (Lepak & Snell, 1998; Ruel et al., 2004; Parry & Tyson, 2011). These practices are implemented to achieve complementary consequences, with operational e-HRM practices producing e-HRM

operational consequences, relational e-HRM practices giving birth to e-HRM relational consequences and transformational e-HRM practices resulting in e-HRM transformational consequences.

### *2.5.1 Micro-level consequences*

These are the e-HRM impacts on individual actors such as employees, line managers, HR professional and applicants (Strohmeier, 2007). Research on individual consequences has so far focused on employee acceptance and satisfaction with e-HRM. Research has also stressed on the impact of technology on e-HRM functions such as e-recruiting and e-selection (Nivlouei, 2014; Mooney, 2020), e-compensation and e-benefits (Johnson et al.

, 2017) and e-health (Wynn, Gabarron, Johnsen & Traver, 2020).

#### *(a) e-HRM recruitment and selection*

Electronic recruitment is defined as consisting of activities and practices performed with the use of electronic means in order to fill vacancies in an efficient and effective manner. Positive consequences have been recorded in this HRM area. Electronic HRM is seen as expediting the recruitment process as a number of activities can be performed concurrently and with speed. This ultimately leads to a number of benefits such as time and cost savings and increased quality of candidate pool (Panayotopoulos et al., 2007; Muqaddim & Hosain, 2021). With the use of e-recruitment applications such as Web 1.0 and Web 2.0 tools, applicants (both internal and external) find it easier to get details about available positions. Other benefits mentioned are; quick and flexible responses from applicants, worldwide accessibility (Muqaddim & Hosain, 2021), efficiency and convenience for both recruiters and job seekers. The growing popularity of e-recruitment in South African tertiary education institutions is explained by cost effectiveness, ease to use and a fast means of reaching so many potentially suitable candidates (Swanepoel, Erasmus, Van Wyk, & Schenk, 2007). These benefits have ultimately contributed to organisational effectiveness (Erdogmu & Esen, 2011).

With selection also being automated (e-selection) it is now possible to schedule tests, assess scores, analyse performance, from which the results will decide whether the candidates are qualified for the job or not (Florea & Badea (2013). Despite privacy and security concerns regarding sending intimate data over the internet by applicants, a study by Florea & Badea (2013) showed no reluctance by applicants to submit personal data using electronic means.

This is explained by a number of benefits such as the perceived fairness, consistency, reduced time for a number of activities and other committal resources. The e-selection system also allows HR professionals to manage the selection process more speedily and actively. Tests can now be conducted using web-based tools away from the workplace. Automation also helps HR professionals to evaluate the effectiveness of selection tests over time with a view of adopting those tests with better predictive power (Johnson & Gueutal, 2011).

*(b) e-Compensation*

Electronic -compensation is the use of information technology (IT) to enable managers to design, administer and communicate remuneration information (Hosain, 2017). It involves the use of intranet and internet to allocate salary increases to employees. Effective management of remuneration impacts positively on employees' loyalty, commitment and performance. A good compensation policy allows organisations to attract, motivate and retain talented and competent employees. As such, there is need by HR personnel to allocate salary increases equitably across an organisation whilst staying within budget guidelines. Electronic-compensation aids this practice. It consists of two sets of applications: the manager self-service (MSS) and the employee self-service (ESS).

The manager self-service (MSS) application allows compensation and rewards to be managed more effectively and with less effort (Dede, 2020). Managers are able to reduce the amount of HR administrative workload in implementing employee compensation choices. Management could also utilise e-compensation to win the war of talent by creating tailored remuneration systems. Electronic compensation is also used to tailor rewards to individual employees' needs thereby resulting in satisfaction with remuneration offered. The employee self-service (ESS) application allows employees to electronically select preferred benefits thereby reducing the time HR personnel spends trying to implement these choices (Dede, 2020). The system allows HR employees to make decisions about their perks such as life insurance, medical aid, and other benefits.

*(c) e- Performance management*

A web-based performance management system is one that uses internet and intranet to “effectively evaluate the skills, knowledge and the performance of the employees which reduces money” (Nivlouei, 2014: 152). Technology impacts positively by helping managers to conduct performance appraisals online through intranet. Research findings have shown that e-performance allows HR professionals to facilitate or measure employees' performance

levels beyond their task performance (Cardy & Miller, 2003). This practice presents a number of benefits to organisations such as:

- Increases the efficiency and consistency of the performance management process,
- Helps managers to track the performance of employees,
- Transmits performance related data and progress to both employees and managers (Jarrar & Schiuma, 2007),
- Promotes (facilitates) quick feedback to employees (Cardy & Miller, 2003),
- Permits comparison of performance appraisals amongst employees and across units or departments (Al-Raisi, Amin & Tahir, 2011),
- Allows employees to manage their own personal goals based on performance appraisal results, and
- Produces records of past evaluations for future use in career development and training planning (Cardy & Miller, 2003; Maatman et al., 2010; Al-Raisi, Amin & Tahir, 2011).

Maatman et al. (2010) noted three levels of electronic performance: operational, relational and transformational e-performance. In operational e-performance, technology supports the administrative process by offering managers online performance evaluation forms. Relational e-performance facilitates communication between managers and employees as transparency is essential in the exercise. Transformational e-performance aids an organisation develop human capital in order to win the war of talent and subsequently achieve organisational excellence.

#### *(d) e-Learning*

Electronic learning has been defined as consisting of information and communication technology supported activities that are aimed at learning (Poor et al., 2020). Learning can be done through intranet or / and internet. Literature has the following benefits being attributable to e-learning:

- It introduces flexibility. Electronic learning allows learners to choose the time and place of learning as long as the place has internet connection. (Mhouti et al., 2018),
- The application leads to cost reductions with regards to travel and opportunity costs and ultimately cost savings for organisations (Mhouti, Erradi & Nasseh, 2018; Poor et al., 2020),

- It is a human resource strategy of talent attraction and retention (employees stay longer within organisations because they believe such organisations have their needs at heart as well as allowing them to improve their competencies through self-study to climb their career ladders) (Mhouti et al, 2018; Poor et al., 2020), and
- Electronic learning also enhances the employees' knowledge and subsequently grows organisations' human capital (Frayne & Geringer, 2005; Mhouti et al, 2018).

Automating training and development processes increase the efficiency and effectiveness of the training and development function. This effectiveness is however depended on the national and cultural context in which learning is adopted. Organisations embrace e-learning to reap three types of benefits: streamlined learning processes, improved quality of learning and motivation of talented employees.

Streamlining of learning processes entails organisations achieving cost savings (instructional costs, opportunity costs, administrative costs, travel costs, scalability resulting from the repeatability of courses or modules). "Cost reduction and flexibility can be achieved in many ways, mainly by choosing the level of interactivity and cooperation of a learning experience and its synchronicity or asynchronicity." (Comacchio & Scapolan, 2004:174).

Quality and effectiveness of learning involves having flexibility (just in time access to knowledge/information) and by "tailoring time, methods and content of courses to work requirements and learning by doing" (Comacchio & Scapolan, 2004:174).

Motivation and retention of talented staff is created by allowing employees to learn at their own time and the freedom to choose those courses that increase their marketability in the labour market (Hartley, 2004; Mhoujti, Erradi & Nasseh, 2018). The delivery of online courses fitting personal learning styles seems to enhance the learning experiences. Learning on demand and free choice of courses may also develop employees' employability.

#### *(e) e-Communication*

Electronic communication involves the use of information communication technology such as intranet and internet to share organisational information for the benefit of an organisation. A better flow of information leads to an efficient and effective conduct of HR functions. It also enables suggestion schemes, leading to better creative thinking and team briefings. Reddick (2009) saw e-communication as helping organisations achieve relational consequences. It resulted in better understanding and communication of HR policies across

organisations. There are also improved working relations with top managers, colleagues and other stakeholders (Oiry, 2009). Electronic HRM results in better “information quality, more efficient access to information and productivity improvement” Ruel & der Kaap, 2012: 270). Research findings have posted a positive relationship between e-communication and job satisfaction (Kianto, Vanhala & Heilmann, 2016) although contrary findings have also been noted (Koseoglu et al., 2010).

In summary therefore, e-HRM has been reported as an accepted way of running the people affairs of organisations and in more instances preferred to manual HRM practices (Strohmeier, 2007). In as much as there are unintended micro-level consequences of e-HRM, there has been a consensus about the positive effects of e-HRM implementation.

### *2.5.2 Macro-level consequences*

The macro-level consequences are generally discussed under three categories, namely; operational, relational and transformational consequences (Strohmeier, 2007; Bondarouk et al., 2017; Bondarouk, 2020). These consequences are organisation-wide.

#### *(a) Operational Consequences*

These are efficiency and effectiveness related gains that result from deploying e-HRM in an organisation. These consequences were of interest to many researchers in the 1970s to 1980s as ‘electronisation’ of the HR function gained ground. A number of operational positive (intended) consequences await organisations upon e-HRM implementation. These are categorised as organisational and people consequences:

##### *(i) Organisational Consequences*

- *Cost reductions (savings)*

Electronic HRM results in the automation of several administrative HR activities and processes. This frees time and resources from these tasks. Freed time and resources find their way into better deployment, culminating in increased productivity and ultimately cost savings (Ruel et al., 2004; Panayotopoulou et al., 2007; Oiry, 2009; Bondarouk et al., 2017), reduced administrative costs (Ruel et al., 2004; Berber et al., 2018) and cost effective record keeping (de Wit, 2011). The e-HRM applications in e-recruiting, e-selection and e-learning have recorded massive cost savings (Buckely et al., 2004; Foster, 2009; Holm, 2010; Rao, 2010; Marler & Fischer, 2013; Heikkila et



al., 2017) due to efficiencies realised from more efficient screening processes (Buckley et al., 2004; de Wit, 2011; Berber et al., 2018).

Electronic HRM has also seen organisations record cost savings of administrative activities and record keeping (Panayotopoulou et al., 2007; Berber et al., 2018) and of direct expenses of outsourcing. In contrast though, other findings reveal that e-HRM applications partially met the expectations of saving time and work. The findings also show that HR staff have not realised reduced work commitments on routine work but more time on information technology (IT) related activities. Electronic HRM applications thus merely redistribute workloads, shifting HR activities from HR professionals to other actors (Lepak & Snell, 2002; Gardner et al., 2003). There has been no research support for e-HRM leading to a paperless environment and lower HR operating costs (Reddick, 2009).

- *Efficiency gains*

Automating HR tasks and processes lead to a decrease in demand for some HR professionals as technology replaces employees. Electronic HRM applications such as employee self-service (ESS), offer “incremental leaps in efficiency. These applications allow the HR function to better organise efforts of its staff” (Weeks, 2013: 37). Technology helps cut repetitive work, whilst simultaneously speeding the pace at which manual processes are managed and ultimately improving employees’ productivity. Panayotopoulou et al. (2007) observed that HR departments are expected to grow as organisations adopt e-HRM although respondents did not specify why they thought an expansion would take place. This observation however contradicts the general view that e-HRM results in a reduction in head count.

Berber et al. (2018) and Marler and Fisher (2010) recorded three efficiency gains as a result of HRIS implementation; time savings, faster reporting capability and reduced headcount. Electronic HRM has freed time for HR staff to increase their productivity and perform far more important tasks (Hawking et al., 2004; Buckley et al., 2004; Panayotopoulou et al., 2007). It has also resulted in faster reporting capability of the HR function due to HRIS speed. The increased efficiency of the HR function (Reddick, 2009) and the information system ability to absorb an increased workload have led to reduced headcount. This has aided decision making and timely response to customer and stakeholder concerns. Electronisation of the HR function has also led to

an automation of routine work and with it efficiency gains (Buckley et al., 2004; Reddick, 2009; Girisha & Nagendrababu, 2020) diagnosis of HR problems (Hawking, Stein & Foster, 2004; Cronin et al., 2006).

There were mixed feelings on this outcome with some findings noting that stakeholders were happy with e-HRM applications and others noting a lack of appeal of the same (Bondarouk & Ruel, 2009; Forster, 2009). Reddick (2009) found no support for some of the efficiency gains attributed to HRIS, such as reduced headcount and reduced bureaucracy. Other contradictory consequences concerned the argument that e-HRM merely shifted administrative tasks away from the HR department to line managers (Reddick, 2009; Martin & Reddington, 2010).

- *Effectiveness gains*

Electronic HRM consequences range from improved data accuracy (Cronin et al., 2006) improved information provision (Cronin et al., 2006) to increased HRM effectiveness (Ruel et al., 2007; Panayotopoulou et al., 2007; Ruta, 2009). The other recorded consequences are improved accuracy of administrative activities (H; Reddick, 2009) and increased information responsiveness by the HR department to line department needs (Gardner et al., 2003). For MNCs, e-HRM has seen the standardisation of HR processes and practices across subsidiaries (Cronin et al., 2006).

- (ii) *People consequences*

- *Management satisfaction with the e-HRM system*

The adoption and implementation of HRIS has resulted in positive people outcomes. Top management and personnel department staff are said to be satisfied with HRIS systems (Buckley et al., 2004; Berber et al., 2018) due to efficiency gains realised. The information system also empowered employees as their system skills and working knowledge increased (Buckley et al., 2004).

Three factors were seen to be driving these consequences: technological, organisational and people factors. *Technological factors* were in the main responsible for explaining the consequences. The number of HRIS applications available on the main, explained the existence of operational outcomes being realised. The *organisational factors* needed to be attended to for desired outcomes to be achieved

(Buckley et al., 2004). Incongruence between business plans and HR plans frustrated HRIS outcomes. There was need for a fit between these two sets of plans for desired outcomes to result. The *people factors* pertain to user involvement. Berber et al., (2018) noted that a lack of user involvement during system development would cause HRIS to falter. Overall, the findings concerning operational consequences have been mixed. There have been intended (positive) and unintended (contradictory) findings (see Table 2.3).

#### (b) Relational Consequences

These consequences refer “to the new and extended possibilities of interactions between actors, leading to heterogeneous networks” (Strohmeier, 2007: 28). Relational e-HRM practices concern “systems specifically designed and implemented to manage and sustain relationships with employees by improving HR services and directly empowering employees” (Parry & Tyson, 2011 cited in Bissola & Imperatori, 2014: 378). The examples of relational e-HRM practices directly implemented by employees are web-based recruitment, e-learning and e-performance management (Ruel et al., 2004; Payne et al, 2009). These activities support employees’ personal life and work life, communicate support and transparency of the HR department (Bissola & Imperatori, 2014: 379). Kovach et al., (2002) cited in Bondarouk, Harms and Lepak (2017: 1333) defined relational e-HRM practices as “experiences (intangibles) provided by HR specialists for internal customers (line managers and employees).” Implementation of e-HRM is poised to result in an increase in HRM service quality (Bondarouk & Ruel (2012; Marler & Fisher, 2013). Electronic HRM thus helps the HR function to provide a better service to its internal customers; the line managers and employees. This it does through the mechanism of process simplification, accurate data provision and enhancing the perceptions of line managers and employees of HRM services (Gardner et al., 2003; Bondarouk & Ruel, 2012).

Researchers emphasised on these consequences in the 1980s as HRIS was prevalent then. Gardner et al. (2003) reported increased relations between HR professionals as a result of e-HRM implementation. HR professionals were also able to network with HR professionals in other organisations through HR professional bodies. In global organisations, e-HRM implementation has resulted in the integration of HR activities that were localised due to cultural and language barriers. Subsidiaries of global organisations have been able to standardise policies due to networking effects amongst HR professionals (Ruel et al., 2004).

At the same time, Ruel et al (2007) found that e-HRM resulted in the decentralisation of HR activities from the HR departments to the line managers and employees.

Ruel et al (2004) showed how e-HRM empowered employees to choose career paths that knocked positively on organisational image and performance. It has also been noted that in large organisations, e-HRM grooms a flexible internal labour market as well as nurturing differential talent. Reddick (2009) observed that e-HRM improves communication, relationships and employee awareness. Panayotopoulou et al (2007) also confirmed positive relational consequences in the form of employee satisfaction with HR processes and the function itself. Since e-HRM positively impacted on the corporate image, employee attraction and retention were impacted upon positively as well (Bissola & Imperatori, 2014). Electronic HRM introduction has allowed line managers to work closely with HR professionals and subsequently appreciate the contribution of the HR function. Lepak and Snell (1998) suggested that e-HRM was being used to devolve HR tasks to line managers. Panayotopoulou et al. (2007) endorsed the positive relational consequence of e-HRM, stating that e-HRM tools such as employee self-service (ESS) and managerial self-service (MSS) increase the involvement and participation of employees and managers in HR practices.

Parry (2014) confirmed that e-HRM use leads to HR service improvements. Improvements noticed in the study were in the “form of increased accuracy of the data entered into the HR systems due to the removal of the need for duplicate information keying” (Parry, 2014: 597). Another consequence noted was information availability for line managers to enable them to make informed decisions.

In the same research, Parry (2014) reported that some managers however saw negative effects of e-HRM on the standard of HR service delivery in that it depersonalises the offering. Parry (2014) suggested the following moderating factors in getting positive relational consequences:

- Willingness by line managers to take on HR activities: If line managers are willing to take on HR activities this could help e-HRM achieve positive relational consequences,
- Usability of technological tools: if the new system is explained and simplified to users this will encourage usability leading to recognition of positive relational consequences, and

- Level to which managers and employees have bought into the use of such technology: if managers have accepted e-HRM technology as a new way of doing work, positive relational consequences are likely to be realised.

Other researchers have rejected the assertion that the adoption of relational e-HRM practices always enhances HRM services and subsequently relational consequences (Ruel & van der Kaap, 2012; Stone et al., 2015). Instead of freeing up time from administrative duties, e-HRM simply leads to more technology related tasks and does not improve HR services (Gardner et al., 2003). Electronic HRM technology is seen as primarily being used to support routine administrative HRM tasks and less in supporting relational HRM services. The failure to realise relational outcomes in these instances was attributed to a lack of IT training, a lack of customer involvement in the development of e-HRM, poor feedback on the performance of e-HRM and a lack of internal marketing of e-HRM.

Achieving relational consequences is dependent on an organisation adopting a ‘power users’ e-HRM configuration. Relational e-HRM practices increase the trust that employees have in the HR departments. The activities and criteria supporting HR activities become much clearer (transparent) to employees. Of the three macro-level consequences of e-HRM, this is the least researched area in e-HRM research. This study sought to understand the causes of such unintended consequences as a result of implementing e-HRM (see Table 2.3).

#### (c) Transformational Consequences

These are outcomes that “concern the overall changes of the HRM function that centrally aim at the role the HRM plays in company performance and strategy support” (Strohmeier, 2007: 28). These consequences have attracted the most debate and have been the most inconclusive. Ruel et al. (2004) concluded that e-HRM transforms the HR function into one that is more strategic (involves the HR function in the strategic management of the business). The ‘electronisation’ of HRM frees time for HR practitioners to subsequently invest in strategic activities (Ruel et al., 2006). Ruel et al. (2004) and Olivas-Lujan, Ramirez & Zapatu-Cantu (2007) show a link between e-HRM use on one hand and the integration of the HR function with an organisation’s strategy on the other. Caldwell (2003) reported that the implementation and use of HRIS enables a transformation of the HR function from a largely administrative role to that of being a strategic partner.

Strohmeier (2007), Bondarouk and Ruel (2009) also confirmed the link between e-HRM and positive transformational consequences. Panayotopoulou et al (2007) acknowledged that e-HRM transforms the HR professionals into strategic partners, focusing more on strategic and value adding activities. “Less administrative and paperwork allows the HR professionals to develop other, more strategic functions of their profession” (Panayotopoulou et al., 2007: 281). Marler & Fisher (2013) claimed that if duly moderated by a number of variables, e-HRM is capable of transforming the HR function into a strategic partner. The moderating variables are:

- the culture of an organisation,
- technology used,
- organisational structure,
- competencies of people in the HR function, and
- processes used to deliver HR outcomes.

Marler (2009) went further and proposed that the impact of e-HRM use on the HR function depended on the nature of that function in the first place. Administratively oriented HR functions are likely to have efficiency related goals for e-HRM whilst strategically oriented HR functions are likely to have transformational related goals for e-HRM.

On the downside, Gardner et al. (2003), Marler (2009) and Parry and Tyson (2011) and Njoku et al. (2016) claimed that e-HRM has not yet succeeded in transforming the HR function into a strategic partner. The scholars noted that the HR function was still meshed in administrative tasks rather than a focus on the strategic role. Parry (2014) also noted that survey findings are mixed, with consequences being a hit and miss. Intended transformational consequences are likely to be moderated by HR practitioners’ skills and experience as well as information and time availability to the HR team. If e-HRM increases information and time available to the HR function this would result in the function adopting a strategic role. If the HR team equips itself with skills needed to perform transformational activities, then the function will become a strategic partner with accompanying transformational consequences (Parry, 2014). Wahyudi and Park (2014) too, did not find any relationship between e-HRM and strategic orientation of the HR function. “e-HRM is not perceived as a key trigger for changing the HRM function to be more strategic” (Wahyudi & Park, 2014: 107). Table 2.3 shows the frequently cited relational consequences.

What is worrying about the phenomenon is the presence of contradictory consequences as a result of its use. This grey area needs further clarification. “None of the studies have looked at whether e-HRM was related to other strategic outcomes such as competitive advantage, organisational performance or improved HR outcomes such as increased human capital, reduced turnover or increased organisational commitment or job satisfaction. Instead the existing studies focus on factors one step (or more) removed from such strategic outcomes” (Marler & Fisher, 2013: 47). This study seeks to explore this gap.

## **2.6 Explaining e-HRM consequences**

Electronic HRM literature presents four approaches relating to explaining e-HRM consequences: the technology imperative, moderate determinism, moderate voluntarism and strict voluntarism (Orlikowski & Scott, 2008; Strohmeier, 2009). Technological and moderate determinism approaches focus on technology as the main originator of consequences. Moderate and strict voluntarism streams dwell on the organisation (employees) as the origin of consequences. Actors have multiple interests that interact to create outcomes that are not entirely predictable.

### *2.6.1 Technology imperative (strict determinism) literature*

The majority of research has come from the Information System (I.S.) approach where information technology is treated as an independent variable and consequences a dependent variable (Strohmeier, 2009). Technology is seen as the sole source of consequences. Most Information Systems research has concentrated on outcomes relating to the information system being introduced into an organisation rather than outcomes for the organisation into which the system is introduced. The design and implementation of computerised information systems has thus been considered to be a purely technological issue, that is technology installation (Collins, 2021) with emphasis on ensuring that technology meets user requirements (DeLone & McLean, 2003). Information systems are exogenous variables or forces which determine or strongly constrain the behaviour of individuals and or groups.

The focus has been to create sound information systems meeting the technical criteria set by designers, with a tendency to overlook human and organisational factors. The introduction of information systems in organisations should be considered as going beyond technological change. An information system is a socio-technical system. Its implementation should focus

on both technical system adjustments as well as social aspects, for the system to be a success. The role of an information system is to provide managers and employees with information so that all can cope better with variances arising from their production technologies and from the external units that supply inputs to and distribute outputs from the core technology (Gonzalez & Geovany, 2021).

“HRM technology has predictive consequences in organisations” (Orlikowski & Scott, 2008: 439). It interacts with various aspects of organisations at different levels; individual, group, organisations and inter-organisational to produce different outcomes. These outcomes are; line managers’ satisfaction, HR function effectiveness and HR function’s support of organizational strategy. At the micro-level, outcomes of interest are: individual perceptions of HRM's strategic effectiveness, intention to use e-HRM, attitude toward e-HRM and improved recruiting outcomes. Technology is a causal factor that is expected to create predictable and intended consequences. The bulk of this literature adopts the technology acceptance model; (TAM) and the unified theory of adoption and use of technology (UTAUT) theoretical frameworks. Information Technology use is measured in terms of perceived usefulness and its ease of use, how it affects individual attitudes and behaviour. Automating HRM can lead to specific strategic benefits which are wholly dependent on technology intervention. The use of e-HRM applications such as web based applications and interactive voice response should result in the same effects on dependent variables (consequences).

Bondarouk and Ruel (2007) used the technology acceptance model (TAM) to investigate whether e-HRM contributes to HRM effectiveness. Using a quantitative study, the study established that the use of the e-HRM applications positively led to an increase in HRM effectiveness. It showed that positive “use of e-HRM applications got along with more positive perceptions of HRM effectiveness. Easiness and quality of e-HRM correlate significantly with strategic and technical HR effectiveness” (Bondarouk & Ruel, 2007: 12). Using a technology acceptance model, Bondarouk et al. (2009) examined the relationship between e-HRM and the perceived technical and strategic effectiveness of HRM. The study observed that the overall perception of HRM effectiveness was affected by the appreciation of e-HRM applications and differences in e-HRM usage by line managers and employees.

Ngai et al (2008) reviewed literature with a view to identifying critical success factors in the adoption and implementation of an enterprise resource planning (ERP) system. The authors identified numerous common factors that were critical in the success of an ERP system



implementation. These factors, if positive, enable technology to predict outcomes. The factors ranged from top management support, organisational characteristics, effective communication to national culture.

Adli, Gharib and Hakaml (2014) examined the relationship between e-HRM activities of recruitment, training, communication, compensation, performance appraisals and job satisfaction. The study observed that these e-HRM activities were positively related to employee satisfaction. Employee satisfaction was in turn positively related to HRM productivity and HRM cost efficiency. Wahyudi and Park (2014) sought to understand the key success factors and enablers in the adoption of e-HRM and to explore if usage of I.T. led to HRM benefits. Perceived usefulness of an IT system was found to be a strong predictor of e-HRM usage. E-HRM usage was established to be a strong predictor of the creation of a strategic role for the HRM function. This calls for an alignment and integration of HRM strategy and I.T. management if I.T. is to create value for the HR function.

The focus of this imperative is on the role of technology and the technical aspects of its implementation. Technology is seen as “a given material substance with tangible technical properties and services that have to be used by the targeted employees” (Bondarouk, 2011: 7). Electronic HRM is thus perceived as resulting in intended e-HRM consequences and user satisfaction. A wide body of literature however shows that this approach has failed to explain away contradictory consequences of e-HRM use. The failure by this imperative to explain persistent divergent consequences is leading many researchers to question its empirical relevance.

#### *2.6.2 Moderate determinism (contingency model) literature*

The moderate determinism or contingency approach states that technology largely explains e-HRM consequences (Strohmeier, 2009). There are a number of contingent factors though, that moderate the effect of technology on consequences. These contingent factors explain divergent consequences. These contingent factors are:

- Organisational size,
- Human usage of technology and
- Technology itself (Strohmeier, 2009).

Employing e-HRM in big organisations could result in cost reductions as economies of scale are realised whereas if the same system were applied in small organisations different consequences would result. Adequate and well-versed usage of an information system could

result in intended consequences being realised. Inappropriate and underutilisation of technology could give different consequences. Information technology “is no longer seen as a monolithic set of basically comparable information systems, but is broken down into various system types” (Strohmeier, 2009: 53). A range of different types of information systems will thus result in different consequences. This approach offers a more appropriate explanation of consequences than the strict determinism approach.

### *2.6.3 Moderate voluntarism literature*

The second stream of literature comes from the moderate voluntarism approach. Literature from this stream is in the minority with few researchers adopting an approach wherein divergent outcomes are acceptable as a result of the mediating role of many actors. This literature identifies multiple actors with multiple interests that interact to create outcomes that are not entirely predictable. Electronic HRM could fail to achieve intended outcomes because employees that would be affected negatively by e-HRM implementation may deliberately sabotage the practices. For example, senior management could introduce e-HRM in order to save costs through HR headcount reduction. HR professionals could be more interested in safeguarding their jobs. The implementation of e-HRM could lead to complex interactions.

Undesired and unexpected usage of technology causes undesired and unexpected consequences. Usage changes of technology over time could also explain divergent consequences. The dynamic purpose and usage of technology could lead to undesired and unexpected e-HRM consequences. Technology is seen as a process that is influenced by a number of actors located in the e-HRM configuration. This approach is more plausible than the strict determinism and strict voluntarism approaches in explaining e-HRM consequences (Strohmeier, 2009). This study makes use of this approach.

### *2.6.4 Strict voluntarism (organisational imperative)*

This approach postulates that “organisations constitute the sole origin of consequences” (Strohmeier, 2009: 532). Information Technology is seen as a dependent variable that is influenced by a combination of organisational and individual behaviours: it is purposefully designed, implemented and applied in order to achieve organisational goals. Electronic HRM consequences are therefore a result of organisational purposes and actions. Information systems are thus developed and implemented differently in order to meet different organisational purposes. As such the consequences are likely to be divergent. This approach

looks at divergent consequences as acceptable. Like strict determinism, the approach, presents an overly simplistic and overly optimistic view of information technology and its consequences. Table 2.5 summarises the four approaches to explaining e-HRM consequences.

Table 2.5 Categories of consequences concepts

	<b>Strict determinism</b>	<b>Moderate determinism</b>	<b>Moderate voluntarism</b>	<b>Strict voluntarism</b>
Origin of consequences	Technology	Technology & contingent factors	Technology & Organisations	Organisation (Actors)
Explanation of consequences	Causal	Contingent causal	Teleological	Teleological
Divergence of consequences	Impossible	Possible	Likely	Likely
Unexpectedness of consequences	Initially possible	Possible	Possible	Not likely
Undesirability of consequences	Possible	Possible	Possible	Possible
Manageability of consequences	Impossible	If contingent factors are manageable	Limited possible	Entirely possible
Researchability of consequences	Simple	Complex	Complex	Complex
Dynamic change of consequences	Impossible	If contingent factors change	If purposes / usage changes	If purposes change

Source: (Strohmeier, 2009: 534)

In summary, e-HRM is a multilevel concept. Research on this concept has thus focused on various levels and variables but actors. Much of the research has focused on information technology (IT) as an independent variable supposed to give birth to the intended and consistent consequences. Less research has focused on human and organisational contexts determining e-HRM consequences. New research is starting to focus on moderate voluntarism, wherein technology is a process, with outcomes a result of technology and the interactions by various actors in the workplace. This study adopts a moderate voluntarism approach in suggesting a model that maximises e-HRM macro level consequences by focusing on the role of actors.

## **2.7 Employee Performance**

### *2.7.1 Employee performance defined*

Employee performance (job performance) (Vigoda-Gadot & Kapun, 2005) is a multidimensional and complex construct (Sonnetag, Volmer & Spsychala, 2008). The construct is defined as “the total expected value to the organization of the discrete behavioural episodes that an individual carries out over a standard period of time” (Motowidlo, 2003: 39). There are two key implications of this definition. Firstly, this definition implies that employee performance is behaviour indexed or a ‘property of behaviour’ (Motowidlo, 2003). “In particular, it is an aggregated property of multiple, discrete behaviours that occur over some span of time” (Motowidlo, 2003: 39; Robbins & Judge, 2017). A second implication is that the property of behaviour to which performance refers, is its expected value to the organisation. Thus, the employee performance construct by this definition is a variable that distinguishes between sets of behaviours carried out by different individuals and between sets of behaviours carried out by the same individual at different times. The distinction is based on how much the sets of behaviours (in the aggregate) are likely to contribute to or detract from organizational effectiveness. Variance in performance is variance in the expected organisational value of behaviour (Motowidlo, 2003; Robbins & Judge, 2017). It is a function of “three variables: abilities, motivation and opportunities. The abilities and motivation, (in particular intrinsic motivation) are employee characteristics which an employee totally controls. Opportunities on the other hand, reside in the external environment far from employee control.

### *2.7.2 Taxonomy of employee performance*

Campbell, McCloy, Oppler and Sager (1993) articulated two types of employee performance: task and contextual performance. Task performance is that performance that focuses on attaining job specific tasks and subsequently gets rewarded for by an organisation. Contextual performance addresses the discretionary performance: that aspect of performance by employees that is not demanded by the job description of the job incumbent and hence not rewarded by an organisation. A third aspect of performance, adaptive performance, has since been added to the employee performance construct (Park & Park, 2019). This is the ability of employees to adapt or handle uncertainties as the macro-environment becomes more complex

and chaotic. Adaptability is a-must-have behaviour in employees in order to manage today's environment.

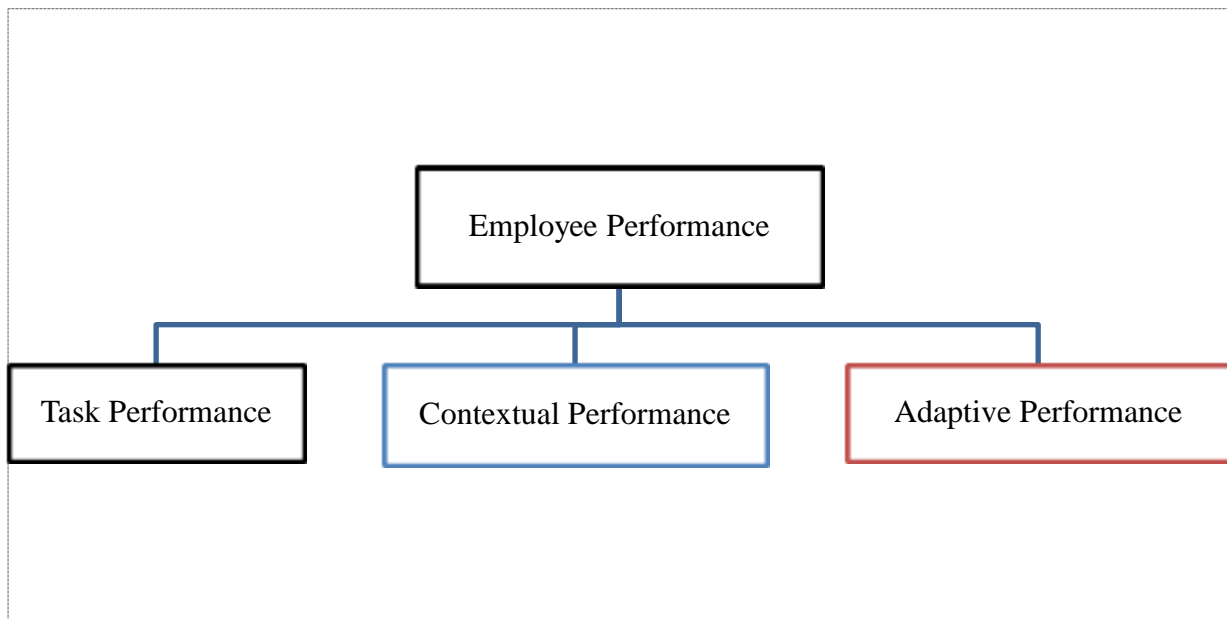


Figure 2.6 Taxonomy of Employee Performance (Source: Developed for this study)

Employee performance as used in this research focuses on the behavioural aspect: what an employee does at work (the action itself). Employee performance is that behaviour that is goal oriented. This research embraces the result of an employee's behaviour: the outcome aspect of employees' behaviours. *The research focuses on the effect of e-HRM use on task and contextual aspects of employee performance.*

### 2.7.3 e-HRM and employee performance

Early literature posited that there were mediating variables linking information technology use and employee performance. This literature produced three information technology – performance link models; the Utilisation approach (1975-1991), Task-Technology Fit (TTF) (1995) and the Technology to Performance Chain (1995) model.

#### (a) Utilisation model (1994)

The utilisation model is the most widely used model to link the introduction of information technology and individual performance. It assumes that if information technology is widely and heavily utilised due to user positive attitudes, individual performance will improve (Al-Kofahi et al., 2020). Increased utilisation of an information system will lead to positive

performance impact (effectiveness, productivity and individual performance). The critique of the model has focused on the existence and use of an involuntary information system. An involuntary system could be widely and heavily used, not out of interest but out of lack of options. The utilisation of such a system would not lead to increased performance. Heavy utilisation of a poor system will not result in improved employee performance (Goodhue et al., 2006).

*(b) Task-technology fit model (2006)*

The task-technology fit model (2006) is the less widely used of the two models advanced by Goodhue et al. (2006). When information technology provides features and support that fit the requirements of a task, performance impacts will result (Goodhue & Thompson, 2006). In this regard, the task-technology fit thus determines performance. However, the fit alone will not give increased performance as increased performance is out of utilisation of a system in the first place.

*(c) Technology-to-Performance Chain (1995)*

The third model, the Technology-to-Performance Chain (TPC) model by Goodhue & Thompson, (1995) cited in Staples and Seddon (2005) integrates the utilisation and task-technology fit models. The model maps the way information systems impact on individual employee performance. The study found that task and system (technology) characteristics moderately support users' evaluation of technology-task fit. Utilisation and task-technology fit (TTF) models independently explain an improvement in job performance whereas TTF and utilisation models combined significantly explain employee effectiveness, productivity and performance in their jobs (Staples & Seddon, 2005).

Tasks characteristics refer to activities carried out by employees to convert inputs into outputs. The presence of routine activities would compel users to rely more on an information system to process such tasks. The presence of non-routine tasks would demand less of information system use. The technology characteristics refer to system attributes as well as user support services that are designed to assist users in their use of information technology to execute given tasks. The better the system attributes and availability of support services, the higher are the chances that employees will employ such technologies to address given task challenges. The technology should provide features that fit the requirements of tasks at hand. The same technology should aid employees who possess skills, the motivation and experience (individual characteristics) to perform set tasks. The task-technology fit model

thus calls for a fit between employee characteristics, task characteristics and supporting information system characteristics. The task-technology fit model (1995) allows organisations to record improved employee performance out of utilisation of the existing information system once such a fit is achieved (see Figure 2.7).

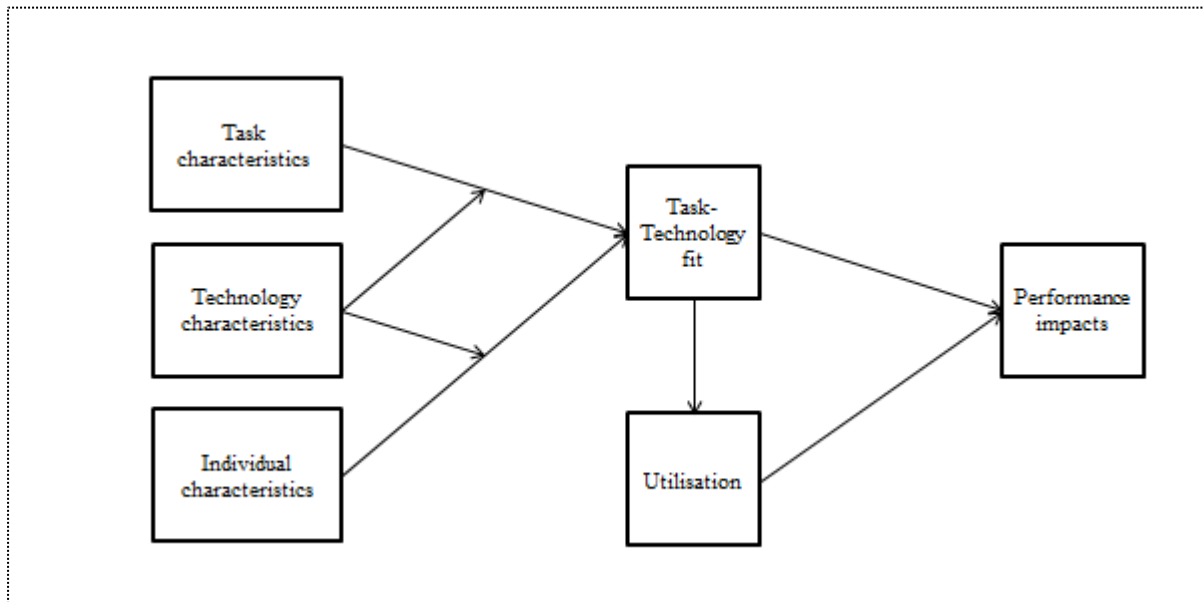


Figure 2.7 The Technology-to-Performance Chain model (Source: Goodhue & Thompson, 1995: 217)

*(d) Employment tenure stages*

Nye et al (2021) postulated two stages that employees go through during their employment tenure: the transition and maintenance stages. In the transition stage, employees are new in their jobs or alternatively there are changes taking place in their jobs. The possession of cognitive skills is key to improving employee performance. During e-HRM introduction and implementation, employees find themselves in need of cognitive skills to improve their performance. If employees lack these skills, unintended consequences could result. The maintenance stage occurs when employees have mastered their jobs. Ability, motivational and personality factors become important in affecting employee performance. At this stage lack of skills cannot therefore explain e-HRM failure in the long-term.

*(e) Task model*

The latest literature is based on the Autor-Levy-Murnane (ALM) model / Task model (2003). The model divides jobs into two categories: the routine and non-routine tasks. “Routine jobs have a higher probability of being automated whereas non-routine jobs are more difficult for technology to absorb” (Melian-Gonzalez & Bulchand-Gidumal, 2016: 2160). Computers

have substituted workers who perform tasks that can be reduced to programmed rules. There is thus bound to be heavy investment in sectors that employ routine labour as computers substitute blue-collar jobs. At the same time, information technology complements workers in performing non-routine tasks. The non-routine jobs are those jobs demanding creativity, flexibility, complex communication and decision making capabilities (Autor et al., 2003). Consequently, investment in information technology is likely to be lower.

The implementation of any information system alters work processes, information flows and introduces new technical applications that employees have to utilise. “Employees frequently find such technology enabled organisational change to be a major challenge” (Sykes, Venkatesh, & Johnson, 2014: 51). A dip in job performance is usually observed in the short-run as employees adapt to the new technology and change work habits, processes and organisational routines (Tafti, Mithas & Krishnan, 2007). Improved job performance though is likely to be recorded in the long-run.

The ALM model (2003) presents two information system-employee performance links; the *occupation based approach* and the *task based approach*. The occupation-based approach suggests that jobs (occupations) are affected by information technology changes. The task-based approach on the other hand suggests that it is the tasks and activities that compose the jobs that are affected by information technology changes. These two approaches, posited that routine jobs have a higher probability of being automated whilst non-routine jobs are more difficult to automate (Akcomak, Kok & Rojas-Romagosa, 2013; Melian-Gonzalez & Bulchand-Gidumal, 2016; Frey & Osborne, 2017). “Information technology is said to assume or replace routine jobs whilst failing to substitute tasks that involve “social intelligence and creativity” (Melian-Gonzalez & Bulchand-Gidumal, 2016: 2161). It is jobs that can easily be automated and tasks that cannot be executed without information technology that are likely to be affected by information technology introduction. For those jobs that need information technology support for employees to do them well, e-HRM introduction will see satisfactory performance result. Without information technology, workers would have difficult performing these tasks. If employees do not depend on information technology to perform their tasks, then e-HRM introduction would not have a positive impact on employee performance.

An effective HRIS is “an active tool in aiding employees to interact more easily among themselves and with their units and organisations and thereby has added to their productivity



and work performance. This amicability “has added to their productivity and work performance” (Kaygusuz, Akgemci & Yilmaz, 2016: 47). For an information system to impact positively on employee performance, the system must be harmonised with all basic HR functions such as selection, compensation management and performance management. The information systems make employees perform more challenging and exciting tasks with better career prospects. Exposure to information systems is critical to their ability to change jobs to other organisations. In summary, an increase in the frequency and duration of information system use leads to an improvement in performance in four ways:

- i. Task process (with e-HRM use, employees perform tasks quickly and easily),
- ii. Knowledge acquisition (e-HRM use increases the ability of employees to acquire new knowledge, skills, attitudes and become more innovative),
- iii. Communicates quality (e-HRM improves interpersonal relations and communication between employees, between employees and clients, facilitate employee discussions and enhance service delivery), and
- iv. Improves quality of the decision-making process and decisions (employees utilise IT to brainstorm scenarios, identify problems and make quality decisions (Isaac et al., 2017)).

Research findings have thus established a relationship between IT use and increased employee performance (Hou, 2012; D’Ambra et al., 2013). Khayun & Ractham (2011) however found no technology-performance link. The variation could be explained by different research settings or the use of different measurements of variables (Isaac et al., 2017). The transmission mechanism through which e-HRM impacts on employee performance is illustrated in figure 2.8.

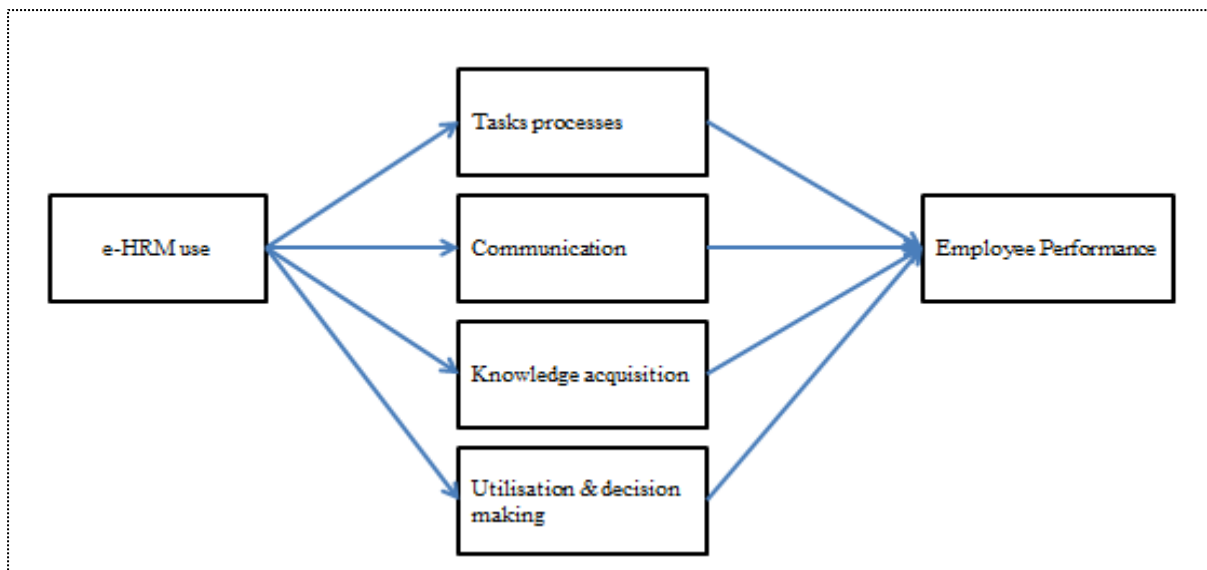


Figure 2.8 e-HRM and Employee Performance link (Source: Developed for this study)

This study assumes that by imparting positively on job performance of actors, e-HRM use will lead to intended e-HRM consequences on a more consistent basis.

## 2.8 Job Satisfaction

### 2.8.1 Job satisfaction defined

The meaning of job satisfaction varies from a consideration of feelings, attitudes, state of mind to a reaction. It refers to a state in which employees take pleasure from their work. Job satisfaction “represents feelings that workers have about their jobs” (Fritzche and Parrish, 2005: 185). It is also defined as an effective reaction to a job wherein employees compare the desired outcomes to actual outcomes. It is a function wherein one compares what one wants from a job to what one perceives the job is offering. It is a pleasurable or positive emotional state resulting from the appraisal of one’s job or job experience. Job satisfaction is an attitudinal construct reflecting one’s evaluation of his or her job (Judge, Zhang & Glerum, 2020). There are three important dimensions to job satisfaction in early literature:

- i. Job satisfaction is an emotional response to a job situation which can only be inferred.
- ii. It is mainly determined by how well results meet or exceed expectations. Job satisfaction results from balancing effort that employees expend on tasks versus rewards they get for the effort.

- iii. Job satisfaction represents several related attitudes which are the most important characteristics of a job to which employees have effective responses. The attitudes are work itself, pay, promotion opportunities, supervision and co-workers (Amin, 2021).

Smith et al (2015) and Singh (2016) divided influences on job satisfaction into internal satisfactory factors related to the work itself (feeling of achievement, feeling of independence, self-esteem, feeling of victory, feeling of feedback, feeling of control and other related feelings) and the external satisfactory factors not directly related to work itself (praise from the manager, good relationship with peers, good working environment, high salary, good welfare and utilities). Locke & Schattke, (2019) indicated that the main factors influencing job satisfaction are the worker him/herself, work and organisational characteristics. Chang, Li, Wu, & Wang (2010) cited personality traits and the environment as the major factors affecting job satisfaction. The employee and the work are thus the two important factors affecting job satisfaction (Chen, 2008).

The two antecedents of employee job satisfaction are job autonomy and job challenge (Bontis, Richards, & Serenko, 2011) wherein job autonomy is the “degree to which the job provides substantial freedom, independence and discretion to the employee in scheduling the work and in determining the procedures to be used in carrying it out” (Hackman & Oldham, 1975: 162). This study uses the Job Characteristics Model (Hackman & Oldham, 1980) as the theoretical lens to apprehend factors affecting job satisfaction (Devadoss & Pan, 2007 & Morris & Venkatesh, 2010; Yuen et al., 2018; Locke & Schattke, 2019). Literature has generally validated the positive link between job characteristics and job satisfaction and other work outcomes such as employee performance (Farrington & Lillah, 2018; Yuen et al., 2018; Locke & Schattke, 2019; Husain et al., 2020).

### *2.8.2 e-HRM and job satisfaction*

Cavapozzi et al (2015) noted that in general, computer usage in research related functions tends to increase work satisfaction across the board, whereas extensive usage in administrative functions only seems to have a positive effect on employees with longer tenure regardless of their status. A Human Resource Information System is established to affect work performed and in the process creates favourable working conditions.

Bravo et al. (2016) postulated two views about the impact of information technology on individual employees. Firstly, there is automating technology. This technology robs jobs of

enriching elements. Technology deskills jobs to produce employee dissatisfaction, alienation and reduced motivation to perform work. Secondly, there is informing technology that liberates people (Gardner et al., 2003; Bravo et al., 2016), removes monotony and enriches jobs. Information technology removes repetitive mindless tasks from work.

Researchers have endorsed the view that computer based information systems are positively correlated with end user satisfaction. Because information systems revolutionise employee work in a positive way, employees with the greatest involvement in computer usage tend to become more satisfied with their work (Cavapozzi et al 2015). Hwang et al. (2016) also saw a relationship between the number of years of computer usage and job satisfaction.

Human Resource Information Systems change the tasks, work routines, competences and capabilities of HR employees. HRIS implementation results in job satisfaction increasing with an opposite decline in the grievances. Wang, Wang, Zhang & Ma, (2020) researched on the relationship between user information satisfaction (the extent to which users believe the HRIS available to them meets their information requirements) and job satisfaction and how HRIS background affects user information satisfaction (UIS) and job satisfaction. The research found no relationship between HRIS background and job satisfaction. Job satisfaction was found to be positively related to organisational positions and managerial/non-managerial users. Improving user knowledge of IS, quality of service provided by the MIS department and quality of output delivered by IS improves user information satisfaction (Kaygusuz et al., 2016).

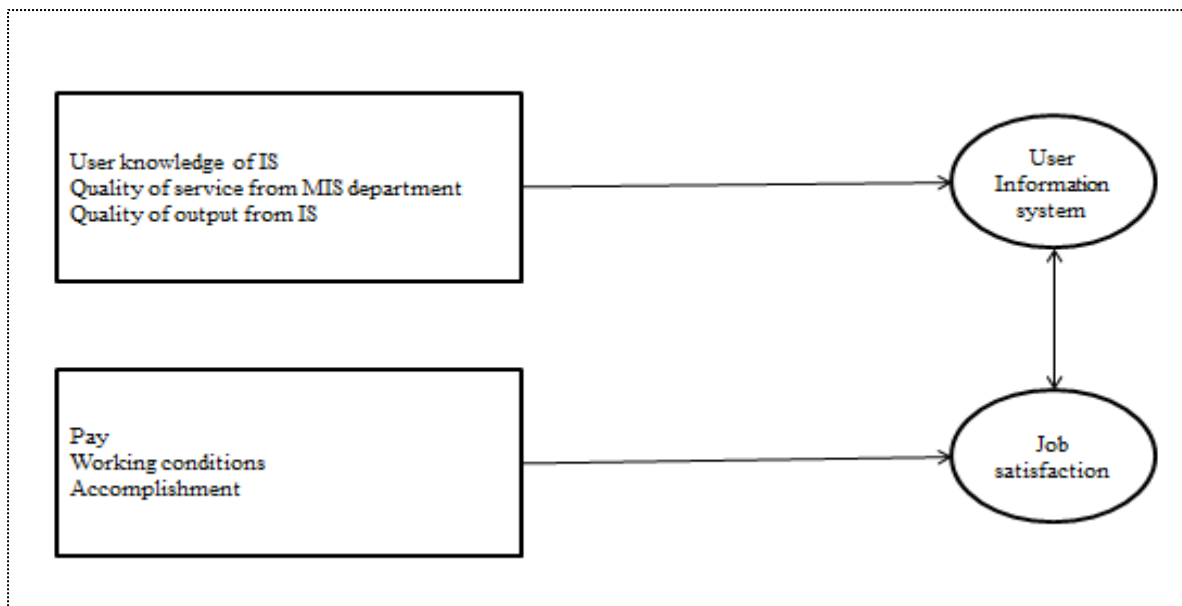


Figure 2.9 User Information System and Job satisfaction framework (Source: Wang, Wang, Zhang & Ma, 2020: 181)

Employees who are knowledgeable about HRIS tend to be in greater control of their job situation. This feeling of control could be indirectly translated into higher confidence in their job advancements prospects or at least greater satisfaction with the working environment (Kaygusuz, Akgemci and Yilmazi., 2016).

Research by Kaygusuz et al., (2016) showed that Human Resource Information Systems improve the efficiency and effectiveness of employees in organisations. Kaygusuz et al. (2016) reiterated that job satisfaction amongst workers is lower in non-HRIS organisations. The possible explanation is that they regard themselves as less competitive in looking for a better job in the future. The perceived use of Executive Information System (EIS) is an indication of management competence, a learning organisation, more competitive and better image in society (Kaygusuz et al, 2016). An information system has a direct impact on the overall levels of job satisfaction and organisational commitment of employees. The existence of Information System enhances employee efficiency and effectiveness at work resulting in job satisfaction and organisational commitment.

The ‘electronisation’ of HRM affects employees’ perspectives of their jobs and organisation (Bondarouk & Ruel, 2009). In essence, e-HRM is an organisational change object; and any change programme is known to sometimes threaten employees’ job satisfaction. Its implementation may create an uncomfortable working environment that is dissatisfying for

employees (Cunningham, 2006). It is the employees' perceptions of e-HRM that impact on job satisfaction and other employee outcomes through the following three channels:

1. *Poor communication*: e-HRM may be introduced as a programme that would result in costs reduction rather than a change effort that will facilitate employee work. In the event this happens, employees may resist its implementation. Not only may there be resistance to change but employees could see e-HRM as alien to their interests. When they are forced by management to implement such a programme, job satisfaction is likely to drop and in the process performance too. If costs reduction and automation of administrative processes are communicated as pivotal reasons for e-HRM implementation, fears of lays-off could set in with negative consequences on job satisfaction levels in employees (Konradt et al., 2003).
2. *Difficult to use*: if e-HRM applications are difficult to use, job satisfaction will drop. A new change effort demands a new set of competencies from employees. If employees perceive acquisition of these competences as challenging, demotivation then sets in and ultimately job satisfaction levels drop (Cunningham, 2006; Tafti et al., 2007; Sykes et al., 2014; Marangunic & Granic, 2015; Rahmi, Birgoren & Aktepe, 2018).
3. *Work habits*: e-HRM applications may affect employees' work habits leading to either an increase or decrease in job satisfaction. Learning new routines and practices creates more work and additional stress. Stress and job satisfaction are negatively correlated (Gonzalez & Geovany, 2021; Cunningham, 2006; Tafti et al., 2007; Sykes et al., 2014).

The HR role and employees' work routines will change due to e-HRM implementation. If these changes are not liked, job satisfaction levels will drop whereas if liked, job satisfaction levels will increase. Electronic HRM has seen unintended consequences partly due to job satisfaction levels. If e-HRM is annoying to employees, negative employee behaviour will be triggered leading to unintended e-HRM consequences. If e-HRM is evaluated positively by its clients, positive employee behaviours such as job satisfaction and ultimately positive consequences will result. A positive image of e-HRM as a phenomenon should thus precede its implementation as this image impacts positively on employee behaviours which ultimately influence positive organisational consequences.

Morris and Venkatesh (2010) reported a positive relationship between task identity and task significance on one hand and job satisfaction with or without Enterprise Resource Planning (ERP) intervention. Utilising the Job Characteristics Model (1980), the study found a weak relationship between skills variety, autonomy and feedback on one hand and job satisfaction without ERP intervention. The implementation of an information system strengthens the positive relationship between the relevant job characteristics of skills variety, autonomy and feedback and job satisfaction (Figure 2.10). Morris and Venkatesh (2010) found that ERP system moderated the positive relationship between skills variety, autonomy and feedback. This was more so in the short-term than in the long-term due to the challenges presented by the new information system on implementation. Organisations need to “put organisational mechanisms, such as training and reward systems, in place to help the organisation and employees navigate the shakedown phase quickly, the sooner employees, teams, and the organisation as a whole are likely to realise the potential benefits that ERP systems offer” (Morris & Venkatesh, 2010: 156).

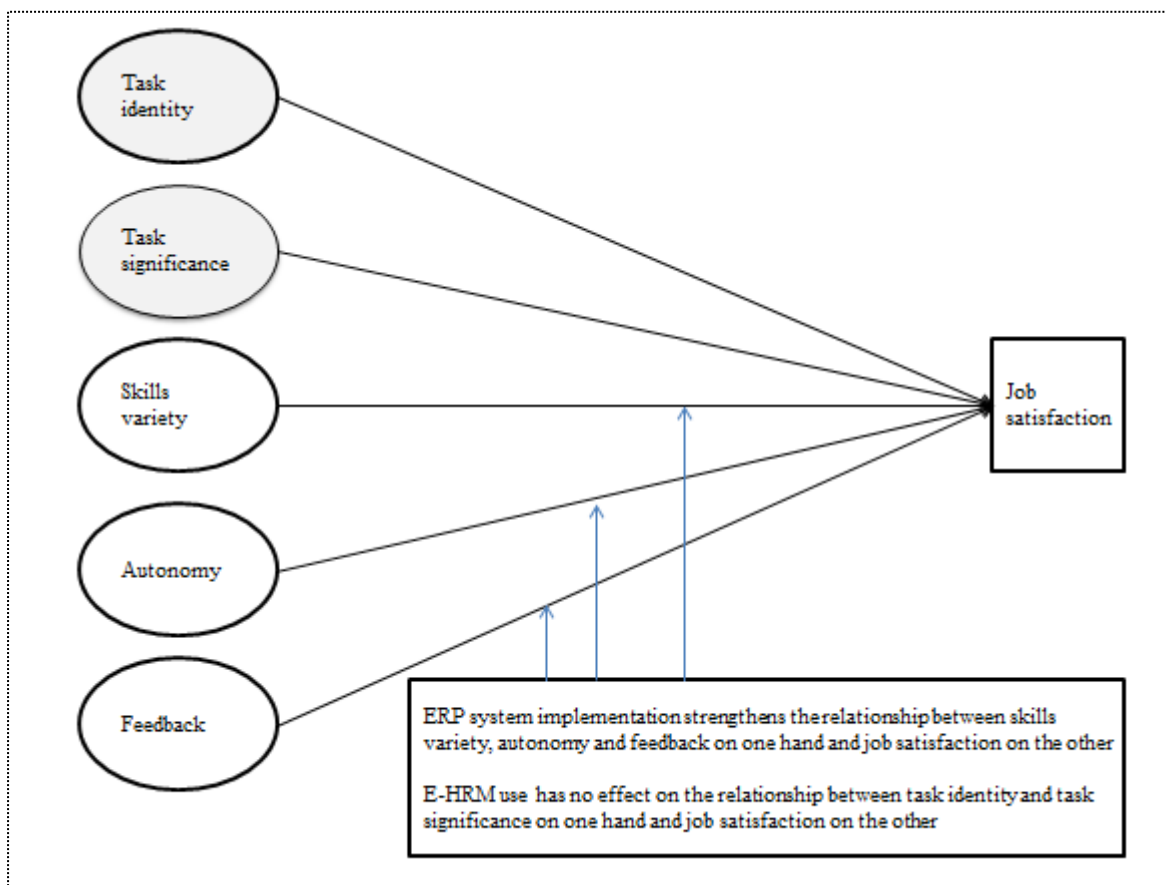


Figure 2.10 Enterprise Resource Planning (ERP) impact on job satisfaction (Source: Morris & Venkatesh, 2010: 146)

In summary, e-HRM use is seen as either having a direct or indirect impact on job satisfaction. The research findings are inconclusive though with regards the nature of this impact. Some findings show that e-HRM use has led to increased job satisfaction whilst reduced job satisfaction levels have also been recorded in others (Konradt et al., 2003; Cunningham, 2006). In this study, job satisfaction of actors is assumed to be a mediating variable in the e-HRM use – e-HRM macro-level consequences relationship.

## **2.9 Organisational politics**

### *2.9.1 Understanding organisational politics*

Organisational politics occurs when other organisational members are made use of, as resources in competitive situations. It is a social influence process in which behaviour is strategically designed to maximise short-term or long term self-interest, which is either consistent with or at the expense of others' interests (Ferris, Harris, & Russel & Maher, 2018). The construct involves the tactical use of power to retain and obtain control of resources. Organisational politics and power are inextricably linked. The construct consists of activities through which power is used to obtain certain desired outcomes or results (Pettigrew, 2014). It is when "others (individuals) are made use of as resources in competitive situations" (Burns, 1961: 257). It is a process through which employees give meaning to their environment after organising and interpreting their sensory impressions (Robbins et al., 2013).

Organisational politics is not a concrete and objective construct. As such employee behaviours are a response not to organisational politics which is actual Chang et al., 2009) but to their perception of what they think organisational politics is like at the time. *This study, makes use of Richardsen, Traavik & Burke, (2016) definition of organisational politics which is seen as 'an attitude that strategically escalates self-interest and challenges the combined organizational goals'.*

### *2.9.2 Dimensions of power*

A review of literature identifies four dimensions of power within organisations (Sheehan, De Cieri, Cooper & Brooks, 2014). Power is seen as residing in organisational resources,



decision making processes, different meanings within organisations and organisational systems.

*(a) Organisational resources based power*

Power is seen as residing in organisational resources. It is exercised by actors to “influence decision outcomes and bring about desired behaviour through the deployment of key resources on which others depend such as information, expertise, political access, credibility stature and prestige, access to higher echelon members, the control of money, rewards and sanctions” (Hardy, 1996: S7). This power modifies behaviour. Those with these resources are able to get those without, to do what is wanted by them. Actors make use of such resources (especially the information resource) to influence decision making by defeating opposition (Sheehan et al., 2014; Gonzalez & Geovany, 2021). Its impact is however limited since employees over whom power is exercised may engender a backlash.

*(b) Organisational decision making processes*

Another body of research saw power as residing in organisational decision making processes in the form of procedures that could be used to prevent some from fully participating in the process (Robalo & Moreira, 2020). Powerful actors determine outcomes from behind the scenes through the use of procedures and political routines. Subordinates are prevented from participating fully in decision making. It is managers who are involved in profit generating processes that find themselves playing a dominant role over other stakeholders (Pettigrew, 2014).

*(c) Meaning power*

Groups of actors use different meanings to legitimise their own decisions and demands while de-legitimising others (Pettigrew, 2014; Fenwick, 2021). These meanings are institutionalised in organisations. Power may be used to “shape perceptions, cognitions and preferences so that individuals accept the status quo because they cannot imagine any alternative” (Hardy, 1996: S8). Decisions are imbued with meaning or justification as legitimate, rational, desirable or unavoidable. As such information system success comes about when systems are institutionalised.

*(d) Power resides in the values, traditions, cultures and structures of an organisation*

This is the power of the status quo. It lies in “the unconscious acceptance of the values, traditions, cultures and structures of a given institution and it captures all organisational

members in its web” (Hardy, 1996: S8). This power is beyond the reach of organisational members. Employees make decisions within the context of this power (Kolkowska & Dhillon, 2013).

A number of researchers have argued that focus should be on the first three dimensions of power since the fourth dimension is beyond the reach of tampering by organisational members (Gonzalez & Geovany, 2021; Sheehan et al., 2014). This study adopts Sheehan et al., (2014) and Hardy (1996) three dimensions of power. Successful information system implementation will occur as a result of effectively leveraging power that resides in resources, processes and meaning (Table 2.6).

Table 2.6: Three dimensions of power

	<b>Power of resources</b>	<b>Power of processes</b>	<b>Power of meaning</b>
Source of power	Ability to hire and fire, rewards, punishments, funding, authority, expertise, etc.	Decision-making processes, participants and agendas, etc.	Symbols, rituals, language, etc.
Action of power	Principles of behaviour modification are used to influence specific actions	New awareness is created by opening up processes to new participants, issues and agendas	Change is given new meaning, making it appear legitimate, desirable, rational or inevitable
Limits to power	Continual use of 'carrot' or 'stick' is required to ensure continued change; repeated use of the stick may be counter-productive	New awareness helps sustain new behaviour as long as it remains within existing values and norms	Change in some underlying values and norms may be possible but specific changes in behaviour will be difficult to effect

Source: (Hardy, 1996: S7)

### *2.9.3 e-HRM - organisational politics alignment*

Literature is abound with instances detailing the importance of power and organisational politics for the successful Information System development and implementation (Bondarouk, 2011). The bulk of information system literature has focused on outcomes for the information system being introduced into an organisation (Doherty and King, 2005) and not on outcomes for the organisation into which Information Systems are being introduced. The evaluation of information systems tends to focus more on what the system produces for itself instead of what it should be producing for organisations. Markus' (1983) argument is that Information Systems are introduced for their impact at micro and macro-levels within organisations. Information systems are introduced into organisations purely for their net benefits: "the extent to which Information Systems are contributing to the success of individuals, groups, organisations, improved decision making, improved productivity, increased sales, cost reductions, improved profits and market efficiency" (Petter, Delone & Mclean, 2008: 239).

DeLone and McLean's Information System success model (2003) shown in figure 2.11 encapsulates the IS success dimensions that Peszynski (2012) call a misdirection of how IS success should be evaluated. In the technology determinism approach, information technology attributes (system quality, information quality and service quality) determine intention to use and ultimate use of information systems. The same attributes result in system user satisfaction. The deployment of an information system, working through a number of intervening variables, results in net benefits; such as improved organisational performance, employee commitment, flexibility and job satisfaction.

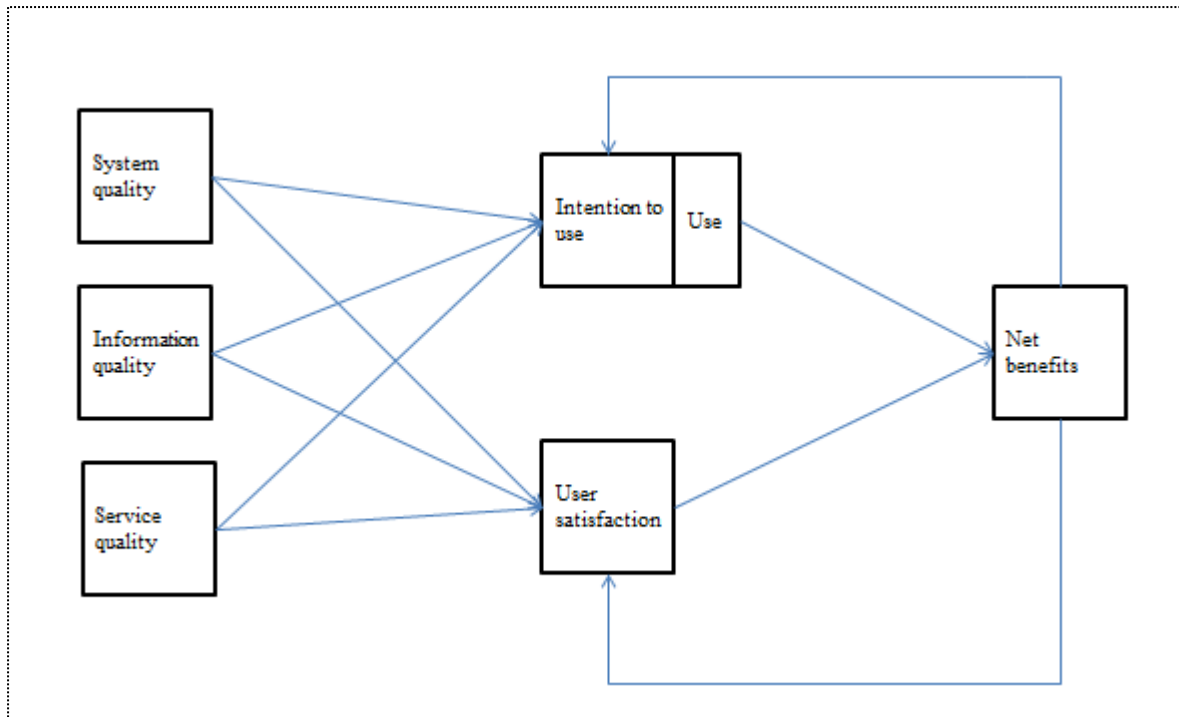


Figure 2.11 DeLone and McLean Information System success model (2003: 24)

Human Resource Information Systems design and implementation literature has concentrated on the technical aspects of the system. The impact of these information systems are seen as direct and predictable. Developers, design systems, that they are sure would be deployed in organisations to produce intended outcomes. There is now a realisation that information systems represent a sociotechnical system with human, structural, cultural and organisational implications. Doherty and King (2005) emphasised on the need to align information system with the culture, strategy, structure and power distribution of organisations. A mismatch or misalignment is assumed to result in e-HRM failure whilst an alignment enhances its chances of success. A number of variables are at play when an Information System succeeds or fails. These variables range from purely technical to organisational ones. One of these less studied organisational variables is organisational politics.

#### 2.9.4 e-HRM and power distribution

An introduction of e-HRM affects its clients in two different ways; to some it confers more power and to others it reduces their power. When a system gives power to its clients, these participants are likely to engage in behaviours that show acceptance, such as:

- Frequent use,

- Satisfaction with the Information System,
- Lower labour turnover,
- Improved performance, and
- Job satisfaction in general (Randolph & Main, 2005; Tafti et al., 2007; Peszynski, 2012; Gonzalez & Geovany, 2021).

Participants who are disadvantaged by an information system are unlikely to accept it; neither would participants who have benefited from a system resist it. Any information system will be double barreled; it will result in power loss to some and power gain to others. Perceptions of organisational politics explain resistance as a consequence of the loss of power which results from not using an information system as it is designed or intended.

An information system like e-HRM will redistribute power in one way or the other. Researchers have shown that the introduction of a Human Resource Information System results in the absorption of middle management into the ranks of senior management (Randolph & Main, 2005; Gonzalez & Geovany, 2021). These changes shift the locus of power to senior management. Other researchers however reject this assertion, arguing instead that the introduction of information systems replace routine tasks at lower and middle level of management, resulting in decentralisation of power (Peszynski, 2012). Whether centralisation or decentralisation results from information system introduction, the main point is that there is redistribution of power, with those losing it resisting e-HRM implementation, and subsequently resulting in unintended consequences.

Gonzalez & Geovany, (2021) argued that information systems tend to increase the propensity to share common data that enhances the performance of sequentially linked subunits thereby reducing competition amongst them. This equalises power across units and subsequently reduces dysfunctional behaviour that is an outcome of mistrust and insufficient information. “Organisational power is one of the important variables that should be understood well and leveraged in order to ensure Information System implementation success” (Robalo & Moreira, 2020). The mere possession of organised data, rather than using it for decision making may be an aspect of power (Travica, 2005). The majority of information systems lead to centralisation of power with important political implications; (Doherty & King, 2005; Peszynski, 2012; Robalo & Moreira, 2020; Gonzalez & Geovany, 2021) with individuals and groups who obtain access to centralised information being capable of enlarging their power bases. The ability to cope with uncertainty is cited as a key determinant of power.

Information systems are designed in ways that distribute non-randomly, the information required for coping with uncertainty, thus reallocating power. The impact of Information System thus depends to some extent on the choices that people make about using it.

Clients of an information system are capable of altering it, in order to prevent the realisation of intended outcomes and intended power distributions. This alteration comes in various forms such as:

- Sabotaging the system because it does not empower them,
- Not using the system at all and in the process, denying it of its intended and desired outcomes,
- Providing inaccurate data to the system so as to get the unintended outcomes, and
- Circumventing the intention of a system so as to undo the desired outcomes (Robalo & Moreira, 2020).

Gonzalez & Geovany, (2021) suggested that every employee in an organisational hierarchy has a power base to affect the final outcomes of an information system. The study claimed that all employees in organisations seek to build power for themselves although in different ways and proportions. All employees share this common characteristic; they will not voluntarily give up power they have garnered over time.

The information output from an information system is distributed in a non-random manner (some groups have more access than others). Those members of an organisation with more information have more power. Information is a resource that bestows power, status and authority on those that have it and shapes their relationships with peers and organisational members. An information system distributes power; empowering a section of the organisation whilst disempowering another. Those organisational members who lose power from an information system introduction are likely to resist its introduction whilst those who gain more information and consequently power are more likely to support such organisational change. Information systems redistribute data and are sometimes intended to break up monopolies (Gonzalez & Geovany, 2021). The information is distributed vertically and / or horizontal within an organisation. “Implementation of e-HRM is “a negotiated treaty amongst various stakeholders” (Bondarouk, 2015: 9). Electronic HRM projects may therefore not achieve intended consequences due to political bargaining that ensures during information system implementation process.

### *2.9.5 e-HRM and Conflict*

Information System conflict “is one that is related to the introduction or use of an information system that is perceived as inappropriate and as a threat to tasks, competences, processes, values and power relationships of individuals, groups or organisations” (Boonstra & Vries, 2015: 7). The introduction of information systems in organisations represents an important organisational change effort designed to facilitate the transmission of information through formal communication channels. It is a major change effort as it relates to the management and distribution of information which is seen as a valuable resource necessary for the performance of daily activities. It is a type of change that “often leads to open or hidden conflicts” (Boonstra & Vries, 2015: 5). Information system use involves the introduction of new and maybe unfamiliar work processes as well as new structural, political and cultural changes.

Information system development and implementation is a highly political process where users and developers may be more concerned about furthering their self-interests than about contributing to the organisation (Al-Okaily, Al-Okaily, Shiyab, & Masadah, 2020.). Users are premised as having ulterior motives and hidden agendas. For organisations to realise positive outcomes, implementers have to face political machinations within actors in the HRM field. Ultimately it is the more powerful stakeholders who get what they want from an information system (even if this is contrary to organizational goals) whilst politically passive actors are mere bystanders. This results in Information System related conflict.

There are two perspectives to viewing conflict with regards Information System projects; the rational view and the political view. The rational view sees conflict in information system development as undesirable and short-term, as actors “harmoniously cooperate to achieve the enterprise information systems’ objectives (Boonstra & Vries, 2015: 7). The political view sees participants as having different goals and willing to use organisations to achieve organisational as well as their personal goals. Information system implementation is seen as affecting or influencing the balance of power between organisational members leading in many occasions to competition amongst stakeholders. In this regard, information systems conflict leads to unintended consequences. Electronic HRM conflict is thus a natural consequence of implementation.

According to Robalo & Moreira (2020) information system implementation results in a twofold change; a change in methods used to process information and a change in the



political structure of organisations (decision making processes). Any information system development and implementation is thus a fertile ground for power conflict aimed at advancing selfish interests and frustrating resultant power structures. In as much as Information Systems offer a number of advantages, they also undermine existing power structures leading to structural conflict. “Organisational actors stake their agendas on new Information System, and compete (fight) for controlling it. Winners gain information based power” (Travica, 2005: 215) and losers resist the implementation process.

Jemine, Pichault and Dubois (2020) claimed that in organisations where power distribution was concentrated; a technologically related change programme will be considered a threat and will be resisted, probably leading to failure. The mere possession of organised data, rather than using it for decision making may be an aspect of power. Research has shown that information systems failure can be due to individuals and groups who deliberately obstruct implementation when the system threatens their parochial interests such as increasing their workload or reducing their autonomy.

Liu et al. (2009) noted the presence of an increasing probability of failure in situations where the level of conflict increased and vice versa. The study further revealed that where conflict has not been speedily resolved, the probability of Information System project success decreased even further. “Information systems projects involving centralisation or integration of information resources that would change the way these resources would be controlled in an organisation are more frequently associated with conflict than other types of IS” (Boonstra & Vries, 2015: 15). Most Information System evaluations follow positivist assumptions. For example, the technological imperative approach classifies Information System failure from an engineering perspective. If the technical system is sound, Information System failure is due to user resistance and the lack of user involvement (Dwivedi et al., 2015).

The political approach to organisations recognises the interplay of interests and conflicts of different coalitions in organisations. Power is a valuable resource in organisations (Peszynski, 2012) and is unequally distributed. Information System embodies a certain distribution of power, as information and control yield power and any change in Information System implementation could result in changes in power relations. Changes in power distribution “trigger resistance among those who are losing it. Organisational politics and power are considered to be of high impact on failure or success” (Bartis & Mitev, 2008: 114). Robalo & Moreira, 2020) argued that the inability to understand power relationships during systems

analysis, design and implementation has serious implications and thus it is a key factor in Information System projects failure. It is time organisational behaviour issues are investigated as possible factors behind Information System project failure or success. This study involves examining the effect of e-HRM use on organisational politics through a number of organisational behaviour variables as illustrated in figure 2.12

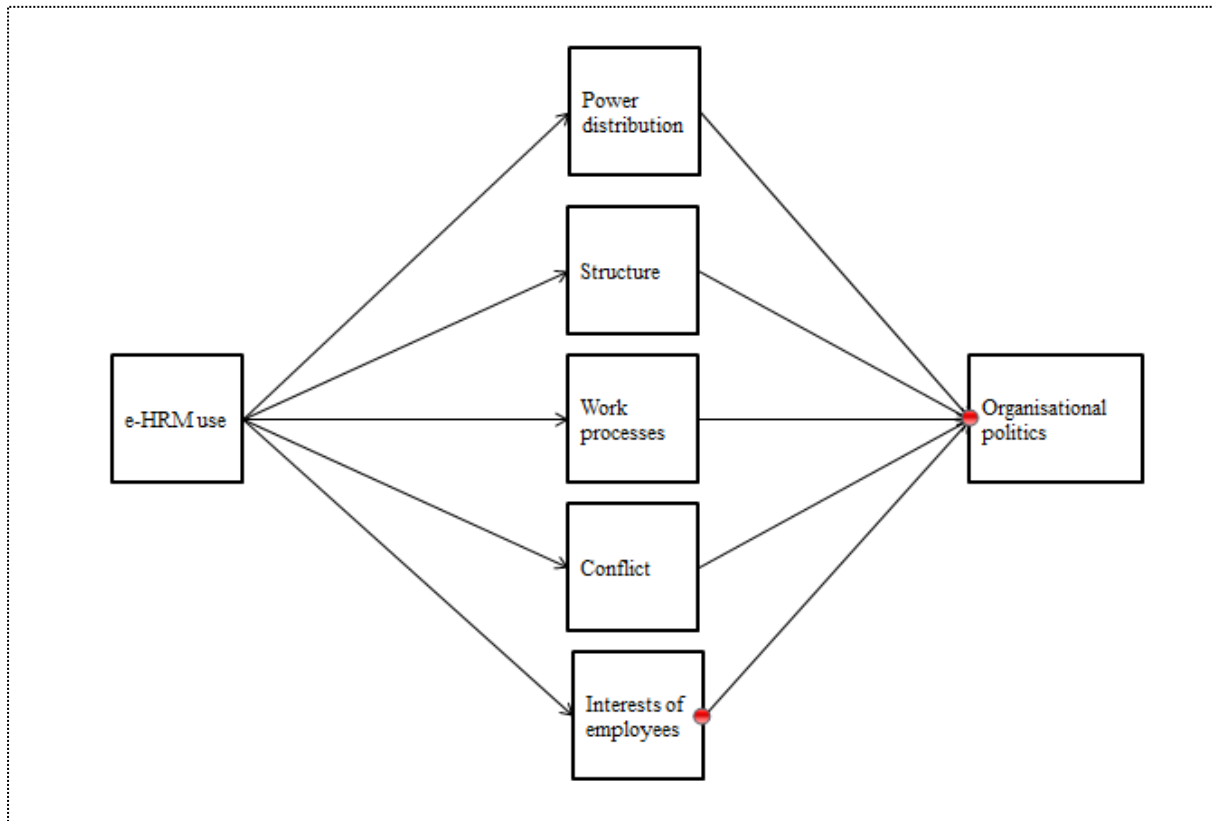


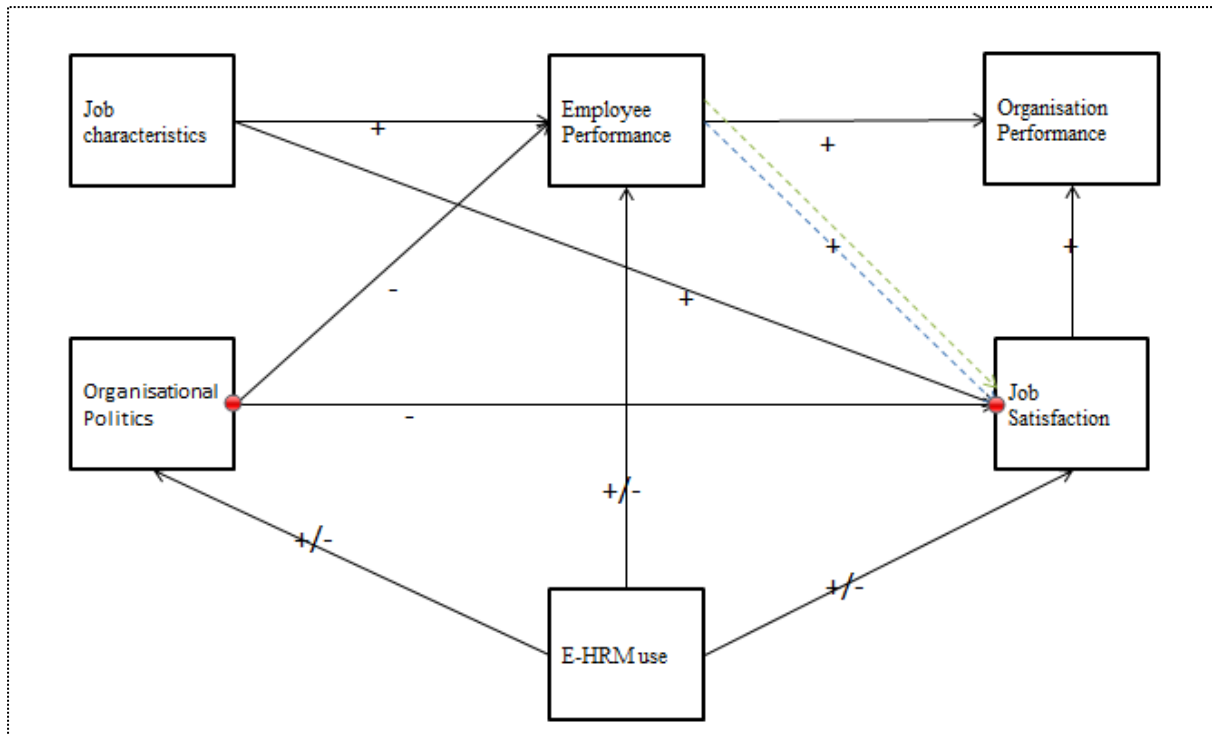
Figure 2.12 e-HRM use and behaviour issues link (Source: Developed for this study)

### 2.10 e-HRM, Employee performance, Job satisfaction, Organisational politics and e-HRM macro level consequences interrelatedness

The bulk of empirical evidence shows a weak correlation between job satisfaction and employee performance at individual employee level of analysis (Christen et al., 2006; Pugno & Depedri, 2009; Aziri, 2011; Kappagoda, 2012; Indernum and Bayat, 2013; Armstrong & Taylor, 2014; Awan & Asghar, 2014; Alromaihi et al., 2017). Managers and researchers could have observed that morale of workers seemed to be high in effective organisations and concluded that this relationship held for individual measures of job satisfaction and job performance (Alromaihi et al., 2017).

Other researchers have refuted this assertion, claiming instead, that there is a stronger relationship between job satisfaction and employee performance at organisational level but not at individual level (Vigoda-Gadot & Kapun, 2005; Bodla & Danish, 2012; Abdirahman, 2018). Christen, Iyer and Soberman (2006) have argued that this insignificant or weak relationship between employee performance and job satisfaction is due to the definition and measurement of employee performance as a construct. The study observed that most research output have defined effort and employee performance as one construct. If effort is costly for an employee, it should have a negative, direct effect on job satisfaction. This implies that there is a conflict of interest between the employer, who wants the employee to work hard, and the employee, who wants the salary with the minimum possible effort (Peszynski, 2012). Effort is an input in the work process whereas employee performance is work output. If effort is excluded from employee performance, it is argued that employee performance is positively related to job satisfaction. The effect of job performance on the manager's job satisfaction is positive and highly significant (Peszynski, 2012).

Political work environments are usually seen by employees as unfair and unjust and hence motivating job dissatisfaction, low employee performance and low organisational commitment (Butt, Mahmood, Kanwal & Bajwa, 2019; Vigoda-Gadot & Kapun, 2005; Atshan et al., 2021). As such, organisational politics is premised to have a negative impact on job satisfaction and employee performance (Miller, Rutherford & Kolodinsky, 2008). Figure 2.13 below summarises the interrelationship between these variables. Using the job characteristics model (1980) the way jobs are designed impact positively on job satisfaction and employee performance. These two employee outcomes ultimately impact positively on organisational performance. Organisational politics is seen in most instances as impacting negatively on job satisfaction and employee performance. The use of e-HRM is seen as having both positive and negative effects on employee performance, job satisfaction and organisational politics and ultimately mixed organisational consequences.



Key: - negative relationship between variables  
 + positive relationship  
 +/- negative and positive relationship

Figure 2.13 Relationship between job satisfaction, employee performance and organisational politics (Adapted from Christen et al., 2006: 138)

### 2.11 e-HRM Knowledge Gap

Strohmeier (2007) developed a general framework that is considered appropriate to structure relevant topics in e-HRM research. The framework recognises the multilevel nature of the phenomenon. It recognises e-HRM micro and macro context, e-HRM micro and macro configuration (consisting of actors, activities, strategies and technologies) and the e-HRM micro and macro e-HRM consequences. The micro and macro context consists of the micro and macro-environments that influence the adoption of e-HRM by organisations, for example, attitude of employees and organisational culture. In the e-HRM configuration, actors consist of employees, line managers, HR staff and applicants that are clients of e-HRM. Activities are HRM practices that are deployed to get the intended organisational outcomes. Strategies consist of courses of action taken upon implementation of e-HRM. Technologies consist of e-HRM tools and applications such as e-recruiting, e-performance appraisals and e-selection. Electronic HRM micro and macro consequences consist of

intended outcomes of e-HRM implementation such as user satisfaction with the information system and efficiency gains.

This research focuses on actors (HR managers, HR professionals in the HR department, IT professionals and line management). “The impact e-HRM has on different stakeholders is “underexplored and yet these stakeholders are key clients of e-HRM use” (Heikkila et al., 2017: 175).

Electronic HRM gives employees and line managers an active role in implementing HRM activities (Heikkila et al., 2017). Yet in e-HRM research, so much attention has been given to HRM activities, HRM strategies, HRM technologies and the contextual factors needed for the successful adoption of information systems. Actors in information systems have been largely ignored. With e-HRM, the “target group is not the HR staff but people outside this department: the employees and management” (Alshibly, 2014: 108). This research focuses on these key clients’ behaviours as intervening variables in the e-HRM use – e-HRM macro level consequences relationship.

## **2.12 Summary of the chapter**

Much of the research regarding the deployment of e-HRM has focused on technology and users than the customers of its services. This chapter has shown the bulk of the research has assumed the deterministic model in explaining e-HRM macro-level consequences. This approach has failed to explain the negative e-HRM macro-level consequences. Few studies have assumed the reverse determinism and moderate voluntarism approaches which examine the role of e-HRM actors in explaining e-HRM intended consequences.

The review traced the development of e-HRM close to five decades. The phenomenon has moved from HRIS, internet based e-HRM to e-HRM. The factors that influence the adoption and implementation of e-HRM are grouped into technological, organisational, people and environmental categories. Most of the determinants of e-HRM success have come from the technology emphasising frameworks. These frameworks have failed though, to explain the contradictory consequences emanating from e-HRM implementation. The e-HRM systems have failed to deliver intended consequences on a consistent basis. It is now suggested that people factors could offer an explanation with regards this failure.

The goals and consequences of deploying e-HRM systems were also discussed. The overriding focus in decades has been increased individual and organisational performance. In the last two decades, focus has however started to shift towards using e-HRM applications for putting the HR function at board level. The strategic partner role is seen as elevating the function to a level that creates value for an organisation.

The proposed mediating variables of employee performance, job satisfaction and organisational politics were introduced and discussed. Much attention was devoted to explaining the relationship between e-HRM use and the three variables. Literature reviews show a positive association between e-HRM use and employee performance, job satisfaction and organisational politics. There are studies as well, that show a negative effect of e-HRM use on these variables. The next chapter presents the theoretical framework that underpins the study whose purpose is to explain the role of e-HRM actors in a framework that maximises e-HRM consequences.

## **CHAPTER 3: THEORETICAL FRAMEWORKS AND THE RESEARCH MODEL**

### **3.1 Introduction**

The bulk of e-HRM and Information System research has drawn on theories from a multiplicity of disciplines such as organisational behaviour, human resource management, computer science and psychology (Strohmeier, 2007; Van Geffen, Ruël & Bondarouk, 2013; Assensoh-Kodua, 2019). As such, there are many theories at the disposal of researchers studying the use of information technology in implementing human resource management practices, policies and strategies. In an attempt to arrive at a model for maximising e-HRM macro-level consequences, a number of theories are looked at next:

### **3.2 Theoretical perspectives related to e-HRM macro-level consequences**

A number of theories and models form the foundation of the research model for the present study. Of these theories and models, there are four main theoretical frameworks that are related to e-HRM macro-level consequences. These are the resource based view (Barney, 1991; Louw & Venter, 2019), Contingency theory (Werbel & DeMarie, 2005; Reinking, 2012), transaction cost theory (Williamson (1985) and the New Institutional Theory with sensemaking theory (Ruel et al., 2007, Strohmeier, 2007; Jensen, Kjaergaard & Svejvig, 2009; Lewis, Cardy & Huang, 2019).

#### *3.2.1 Resource Based View*

The Resource Based View (1995) asserts that it is the organisations' unique resources which enable organisations to achieve sustainable competitive advantage and superior long term performance. Information systems provide organisations with information technology related resources and capabilities that can contribute to organisation wide performance (Barney, 1991; Taher, 2012). These resources could be categorised into:

- human resources: such as IT skills,
- technology resources: such as hardware and software,
- relationship resources: such as top management support, and

- information technology processes: the market responsiveness of the information system (Taher, 2012).

Of all these resources at the disposal of organisations, human resources are argued to be the resource with the most value, rareness, inimitability and non-substitutability. These resource characteristics allow employees to make a contribution towards organisations' sustained competitive advantage (Dede, 2020). As such, the human resources provide organisations with sustainable competitive advantage (Armstrong & Taylor, 2014; Assensoh-Kodua, 2019). Schwartz (2021) looked at human resources as falling into two categories; generic and differential labour. Generic labour performs routine tasks and its use does not offer organisations, competitive advantage. Differential labour offers uniqueness and hence competitive advantage. Such human resources are therefore, claimed to be a source of above normal returns rather than tradable assets (Schwartz, 2021). Competitive advantage only occurs when two conditions exist. First organisations should have heterogeneous resources (must possess a bundle) of them rather than have a lot of only one. Secondly, these resource endowments should be immobile between organisations.

The Resource Based View (1995) helps explain the relationship between e-HRM configuration (strategies, actors, activities and technology) and e-HRM macro-level consequences. The human resources (actors) in organisations, if well regarded, allow competitive advantage to be achieved. For success, organisations need to look inside rather than outside. Excellence is embodied in these resources. The implication of this theory is that human resources are a powerful means of achieving excellence (Strohmeier, 2007). However, for resources to be key to such success, they need to be supported by a corresponding or aligned organisation. A corresponding or aligned organisation, in this case, means that management needs to nurture organisations that attach great importance to human capital as a source of competitive advantage. Organisations who appreciate the importance of human capital, in competing to stay ahead, imply that human resources could be allowed to play a strategic partner role and consequently explain transformational consequences for e-HRM (Strohmeier, 2007). The Resource Based View (1995) is therefore a theory that upholds the importance of employees in organisations to an extent of allowing the HR function to play a strategic role.

Information Technology is seen as an enabler, capable of assisting people resources in achieving competitive advantage (Olah et al., 2018). Information technology can leverage



differential labour and other resources to achieve organisational excellence (Peng & Zhang, 2020; Awamleh & Ertugan, 2021). Ravichandran and Lertwongsatien (2002) argued that there is complementarity between Information Technology and non-Information Technology firm capabilities in achieving corporate excellence. Since there is a realisation that information technology plays an auxiliary role vis a vis other resources, an appreciation of the role that human capital management plays in organisations is paramount in understanding e-HRM transformational consequences. The Resource Based View (1995) justifies investing in people to achieve competitive advantage and ultimately in having this resource play a transformational role too. Consequently, it is important to acknowledge the importance of e-HRM actors' behaviour and the role it (behaviour) plays in explaining e-HRM macro-level consequences.

### *3.2.2 Contingency theory*

The contingency theory has been used in a wide range of information system areas, from system design and development to system implementation and performance, among others (Reinking, 2012). In this study, the contingency theory is applied in information system implementation and performance areas. The theory is premised on the presence of contingent factors that influence the design and function of organisations for success (Khazanchi, 2005; Lengnick-Hall et al., 2009; Mueller & Hancock, 2018). There is no single information system that is universally applied to all organisations in all situations. There are several ways to 'construct' an effective information system. These 'best' ways are contingent on a number of environmental variables (Mueller & Hancock, 2018).

There is, however, no unanimity on what these factors are. Ruel & van der Kaap (2012) claimed that these factors, upon which e-HRM is contingent for success, are classified into two: micro and macro environmental variables (Table 3.1). There should be a fit between the micro, macro variables and organisational structure in order to achieve intended e-HRM macro-level consequences. Ginzberg (1981) cited in Reinking (2012) meanwhile focused on four groups of characteristics that are interrelated to produce successful information system implementation. These characteristics are system designer characteristics, system user characteristics, system characteristics, and organisational characteristics. These interrelate to produce system success or failure (Figure 3.1). Khazanchi (2005) identified four different contingent factors that predicted information system success, namely: business and

technological environment, organisational readiness for information system, financial impact of information system introduction and implementation, and workflow productivity.

Table 3.1: Micro & Macro-variables

Micro-variables	Macro-variables
Employee skills	Size of organisation
Employee behaviour	Organisational culture
HRM practices	Duration of existence of e-HRM system
Support from managers & colleagues	Computer experience
Management compulsion to use e-HRM	Cross functional teams

Source: (Ruel & van der Kaap, 2012: 267)

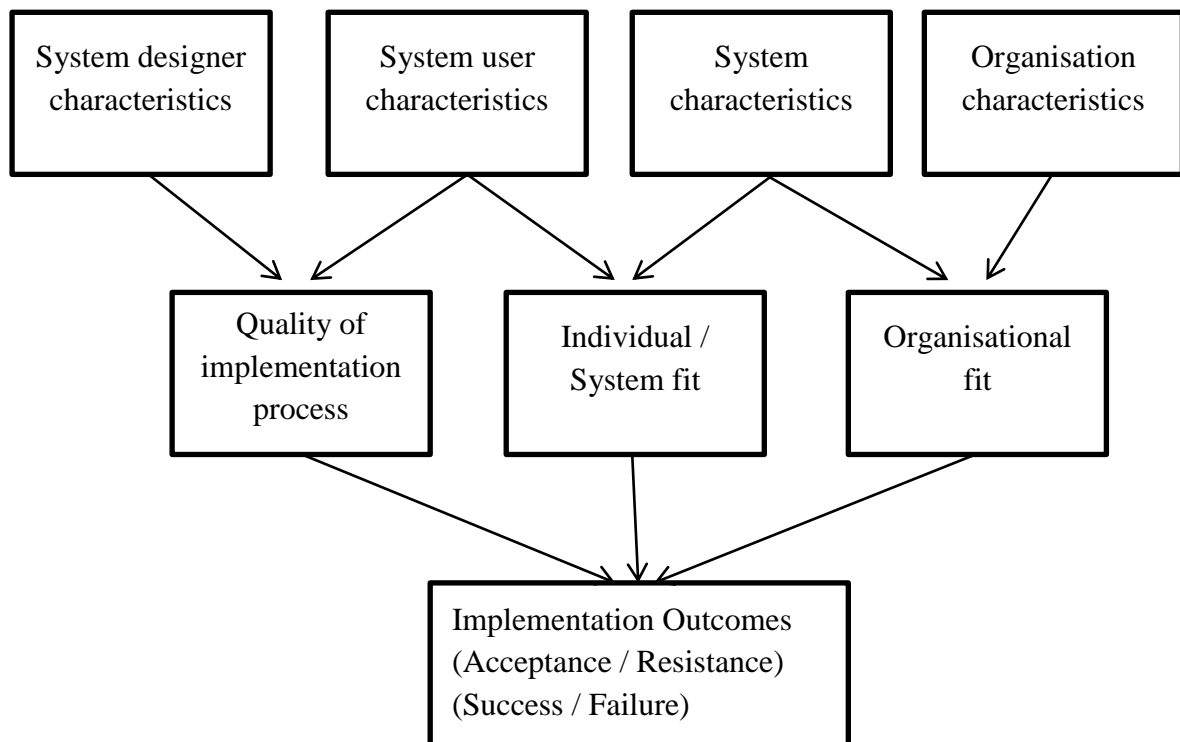


Figure 3.1 Contingency framework of Information System implementation  
(Source: Reinking, 2012: 255)

Haines and Petit (1997) saw no significant association between the macro contingency factors of organisational size and computer experience on one hand and HRIS user satisfaction on the other. Ruel et al. (2007) however saw a significant relationship between support from top management and colleagues, and the perceived e-HRM applications success.

Hussain et al (2007) noted that organisational size influences the degree to which HR managers feel required to invest in HRIS in order to improve their strategic capabilities. Electronic HRM can create value if e-HRM applications are ultimately used by end-users. The applications have to be used in line with the goals and intentions of developers. Usage of e-HRM in certain contexts, thus, adds value to organisations.

The contingency theory is of great importance in dealing with the complexities of information systems and organisations (Boudreau & Robey, 2005). Contrary to technological determinism, the contingency theory contends that there is no one way or blueprint for success in organisational change. There are situations specific for each Information System that will determine success or failure and hence strategies for success (Quaosar, 2018).

This study makes use of Reinking's (2012) contingency framework of information system implementation. The variable worth pointing out is the people variable (individuals). This has been underrepresented in previous research work. This study seeks to exploit the role of actors in the e-HRM framework.

### *3.2.3 Transaction cost theory*

The transaction cost theory (1994) states that e-HRM adoption and use in organisations is motivated by a desire for cost-minimisation. Poisat and Mey (2017: 2) claimed that cost saving "is the driving force behind organisations' complex, partially outsourced, partially decentralised and partially delegated e-HRM systems." Information systems are seen as lowering transaction costs because technology allows information to be communicated in real-time and at much lower costs thereby reducing the costs that are required in order to find a particular good or product (Cordella, 2006).

The transaction cost theory advocates for the adoption of institutional arrangements that are cost effective. Deploying e-HRM systems involves major configurational changes with "new assignments of HR tasks to heterogeneous networks" (Strohmeier, 2007: 29). Information technology provides HR with a powerful and cost effective integration mechanism. The cost minimisation motivation offers explanations concerning the configuration and its relationship with the economic consequences of e-HRM. The theory largely explains the operational motive of introducing e-HRM systems.

#### 3.2.4 Institutional theory with sensemaking theory

The institutional theory deals with the “pervasive influence of institutions on human behaviour including the processes by which structures as, for example rules, routines and norms guide social behaviour” (Jensen et al., 2009: 346). Organisational pressures, professional habits and institutional constraints affect the implementation of information system. Sensemaking theory is a theory that focuses on cognition and action in organisations. It addresses mechanisms for dealing with change such as the introduction of technology. Sense making is required in situations where organisations face new and unexpected situations. These situations in most cases have a high degree of uncertainty or ambiguity. Information system implementation is seen as interrupting ways in which employees work. This interruption causes ‘shock’ that triggers an intensified period of sensemaking (Anderson, 2006). When technology is introduced into an organisation, employees have to make sense of it, and in this sensemaking process, they develop particular assumptions, expectations and knowledge of the technology which then serve to shape subsequent actions towards it (Davidson, 2006).

The theory consists of three constructs: *bracketing*, *enactment* and *identity* “to highlight the micro-level mechanisms at play when implementing information systems in organisations” (Jensen, Kjaergaard & Svejvig, 2009: 344). Bracketing occurs when employees interact with technology and try to make sense of it. Different employees interpret the same technology differently. Employees are thus likely to respond differently to information system implementation. Enactment refers to employees’ ability to create meaning of information system being implemented. The e-HRM macro-level consequences are partly a result of how employees create meaning of e-HRM use. The third construct is identity. “Who employees think we are as organisational actors, shape what we enact and how we interpret changes” (Jensen et al. 2009: 346). Organisational actors enact the environment which both enables and constrains future actions with respect to information system use. Depending on their sensemaking, e-HRM actors could resist information system implementation or support it. The sensemaking theory partly explains the occurrence of unintended and negative consequences of e-HRM use.

### **3.3 Theories related to employee performance**

The employee performance construct was looked at from the Job Characteristics Model (1980) and Autor, Levy & Murnane (ALM) model (2003).

#### *3.3.1 Hackman & Oldham's Job Characteristics Model*

Hackman & Oldham's Job Characteristics Model (1980) is used in this study as the theoretical lens to better comprehend factors affecting both employee performance and job satisfaction. According to the model, there are five job characteristics (skill variety, task identity, task significance, autonomy and feedback from the job) that impact on employees' performance and job satisfaction. These job characteristics then prompt three psychological states in individual employees (meaningfulness of work, responsibility for outcomes of the work and knowledge of actual results of work activities). These critical psychological states, moderated by knowledge and skill, growth need strength, and context satisfaction produce positive personal outcomes such as high general satisfaction, high internal work motivation, high growth satisfaction, and high work effectiveness.

The five job dimensions have been defined as follows:

- Skill variety: the degree to which a job requires a variety of skills for its performance.
- Task identity: the degree to which a job requires completion as a whole rather than in parts. A meaningful chunk must be performed from start to finish.
- Task significance: the degree to which a job has substantial impact on the lives of other workers and the organisation.
- Autonomy: the degree to which a job incumbent is given substantial freedom, independence and discretion, to perform a task.
- Job feedback: the degree to which a job provides the doer with clear information about his/her performance.

According to the model, (Figure 3.2), employees experience meaningfulness of work if jobs have skills variety, task identity, and task significance. Employees also experience responsibility for work outcomes if jobs give them autonomy. For workers to have knowledge of results of their work activities, feedback must be introduced. Work outcomes of high internal work motivation, high growth job satisfaction, high general job satisfaction, and high work effectiveness are a result from jobs so designed to prompt employees to experience the three psychological states. This high work effectiveness translates into high

job performance. The model has been validated by a number of studies (such as DeVaro et al., 2007; Ali et al., 2014; Blanz, 2017; Hussein, 2018).

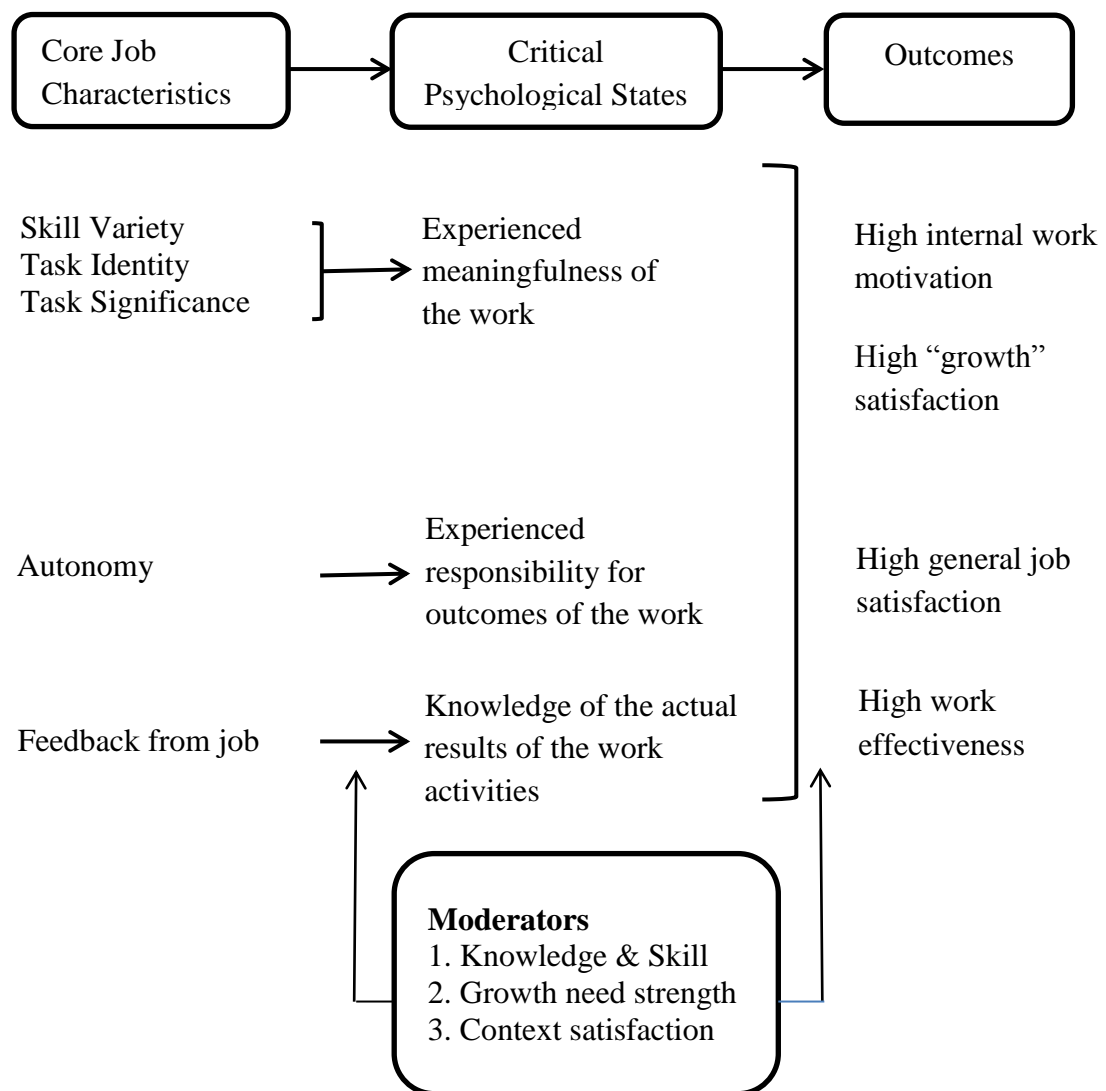


Figure 3.2 The Job Characteristics Model (Source: Hackman & Oldman, 1980: 90)

In terms of the Job Characteristics Model (1980), employee performance is seen as a result of a number of dimensions such as:

- Job characteristics
- Rewards,
- Organisational citizenship and
- Risk taking.

Task identity, task significance skill variety, autonomy and feedback are seen as imparting positively on employees. A number of outcomes result from positive job characteristics such as high work effectiveness and high internal work motivation. These in turn lead to enhanced

employee performance. If tasks are meaningful and easier to perform, employee morale improves and with it employee performance.

Positive organisational rewards also have a complementary role in improving employee performance and job satisfaction. Rewards are given for the attainment of specific tasks. The rewards-motivation link is undisputed now; more rewards mean high internal work motivation and subsequently enhanced employee performance (Vandenberghe & Trembley, 2008; Ahsan et al., 2009; Chahal & Mehta, 2010; Ahmed et al., 2012). Rewards thus increase task performance by employees. An environment that promotes organisational citizenship behaviour has also been seen to increase employee performance. Such an environment allows employees to increase employee performance for discretionary tasks (Bergeron, 2007; Tsai & Shih-Wang Wu, 2011). Research findings have also shown that allowing employees to engage in discretionary behaviour or flexibility at work results in growth in satisfaction. Employees feel motivated by 'making a difference' to an organisation (Ahmed et al., 2004; Park & Park, 2019). Electronic HRM is thus hypothesised as promoting organisational citizenship which subsequently impacts on job characteristics and ultimately on outcomes.

### *3.3.2 ALM Model*

The ALM model (2003) distinguishes between routine and non-routine tasks. Computers are seen as substituting workers carrying out routine manual or routine cognitive tasks. Computers are more efficient than human resources in performing such tasks. The deployment of information technology is seen as increasing productivity in organisations whose tasks are predominantly routine-manual. Computers however struggle in performing non-routine tasks. These are tasks that involve problem solving, creativity or complex decision-making and motor skills. The ALM model (2003) suggests that information technology will complement workers performing non-routine tasks. Computers help skilled employees performing non-routine tasks improve performance. Information technology could thus be deployed to complement human capital resulting in improved employee performance. Information technology, therefore, impacts positively on employee performance. The impact of e-HRM use is therefore assumed to be greater in instances where employees perform routine-manual tasks.

### 3.4 Theory related to job satisfaction

#### 3.4.1 Hackman & Oldham's Job Characteristics Model

A number of studies such as Anderson, (1984), Said and Munap, (2010), Coelho and Augusto, (2010), and Adli et al. (2014) have established that the five job dimensions in the Job Characteristics Model (1980) represent the motivating potential of a job. These job characteristics contribute to job satisfaction directly or as being moderated by a host of factors including e-HRM. Electronic HRM is seen as providing five 'I's in the workplace, namely:

- i. *Interesting work*: the use of technology in HRM is seen as removing repetitive tasks in addition to liberating employees. Ultimately, employees are motivated by good jobs (Gardner et al., 2003; Bravo et al., 2016).
- ii. *Information* on how well employees are performing tasks (feedback): information technology allows employees to quickly get feedback on how well they are performing given tasks as well as how well a company is performing or vice versa. An improvement in this job dimension increases two way communication and subsequently levels of motivation. An improvement in two-way communication also leads to higher levels of engagement and satisfaction with the HR function. The phenomenon also increases the flexibility at work thereby promoting innovation, motivation and employability.
- iii. *Involvement of employees*: this results in levels of commitment increasing, and with that, the ease of managing change. Involvement of staff in decision making also reduces resistance to change.
- iv. *Independence (Autonomy)*: the use of technology in HRM enables professional HR personnel to be more autonomous in handling HR related information. Electronic HRM use enhances the impact of autonomy on job satisfaction (Gardner et al., 2003; Ruel, 2004; Bondarouk et al., 2009; Morris & Venkatesh, 2010). Electronic HRM use helps employees to manage information, access it directly and update it to suit their needs. This increases motivation of staff too.
- v. *Increased visibility*: Electronic HRM use affords managers the opportunity to give employees new opportunities to perform, learn and grow. The organisation is able to share employees' successes with peers. This practice has an effect of motivating staff too (Hafez, 2011; Ghazzawi, Al-khoury & Saman, 2014).



An acceptance of e-HRM is seen as leading to improved attitude from employees and ultimately a good feeling. Employees are excited to give good outcomes and are therefore motivated to work. Job satisfaction is the ultimate endpoint. Electronic HRM is shown as affecting positively the job dimensions of autonomy, feedback and skill variety. Desired outcomes are a result of this positive impact.

### **3.5 Theories related to organisational politics**

#### *3.5.1 Political Perspective of Resistance Model*

Markus (1983) and Randolph and Main (2005) claimed that employees are likely to exhibit any of the two behaviours during the implementation of an information system: they are inclined to use a new system if they believe that it will support their power positions and resist it if it threatens them. Resistance is not viewed as an undesirable outcome: it has both positive and negative effects. Resistance is viewed as positive if it stalls the implementation of an information system that would negatively impact on organisational performance, productivity, labour turnover and increase employee stress. It is dysfunctional if it generates conflict that would ultimately consume resources for its solution.

Resistance is a result of interaction of system features with the intra-organisational distribution of power (Maier et al., 2013). Any perceived loss of power would result in employee resistance. The strength of the resistance is seen as related to the size of the loss of power, and its perceived importance. The strength of the support is also seen as moving positively in relation to size of the power gain and perceived importance of that gain.

Employee resistance to information system implementation partly explains the unintended consequences of e-Human Resource Management, whilst support, partly explains the intended macro-level consequences. This study assumes that it is the behaviour of actors during e-HRM implementation that partly explain the presence of unintended macro-level consequences. Without fathoming the behaviour of these actors, it would be difficult to arrive at a model that maximises the e-HRM macro-level consequences.

#### *3.5.2 Information System-Conflict framework (2015)*

An information system framework developed by Boonstra and Vries (2015) is bi-dimensional with one dimension focusing on the impact of the conflict and the second one being the reach

of the information system conflict. The existence of conflict, if not well managed, partly explains the unintended consequences due to employee resistance. The impact of the conflict could be cognitive or affective. Cognitive conflict relates to disagreements that focus on hard parts of a system such as tasks, processes, goals and its effects on structural issues. The affective conflict is relational in nature such as system threats perceived by actors. In terms of consequences, information system conflict could be direct (have immediate effects) or have wider organisational (deeper) consequences.

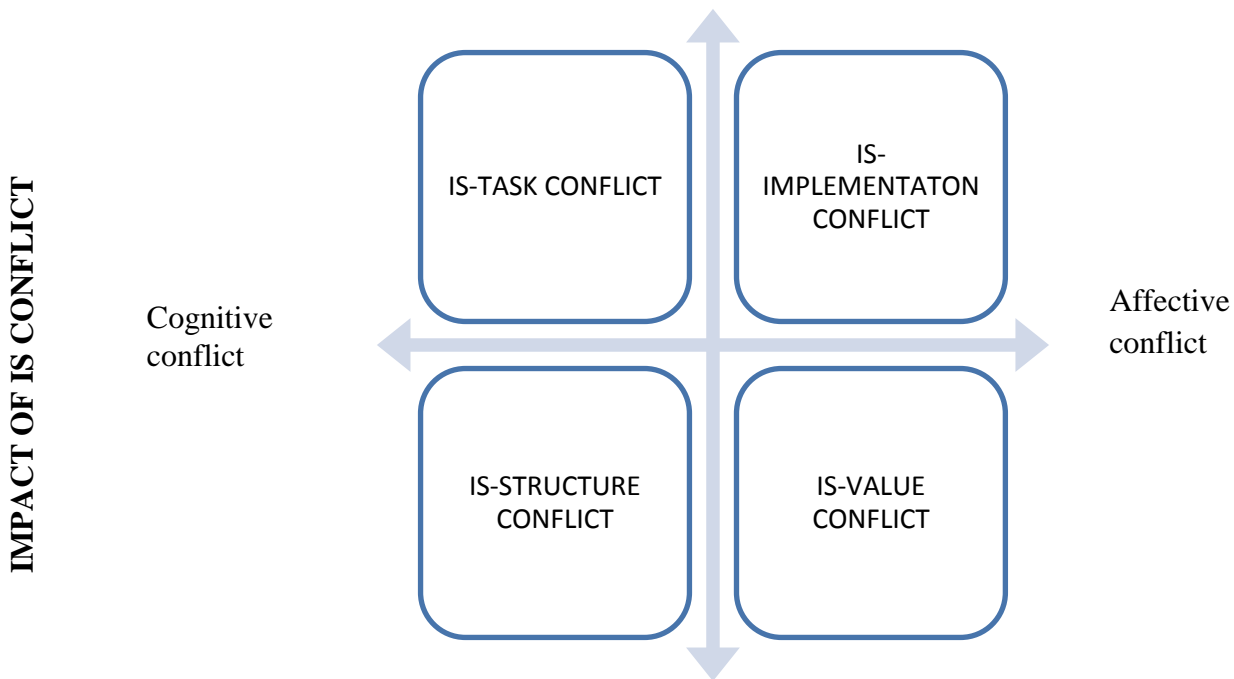
The model portrays four categories of conflict emanating from information system adoption and implementation (see Figure 3.3). These are:

- i. IS-TASK conflict,
- ii. IS-IMPLEMENTATION conflict,
- iii. IS-STRUCTURE conflict and
- iv. IS-VALUE conflict.

- i. IS-Task Conflict: This conflict pertains to disagreements about the technical design, functions and ease of use of a system. It is about information technology personnel's failure to liaise with users at design stage.
- ii. IS-Implementation Conflict: This conflict involves disagreements centred on process of design and methodology of implementation. The disagreements normally emanate from a lack of consultation and involvement of users during the design stage.
- iii. IS-Structure conflict: It relates to disagreements about how information system will affect structure and power redistribution. Actors lose power or gain more control of work practices.
- iv. IS-Value Conflict: it is about the effects of a system on shared beliefs, values and culture. Electronic HRM use could cultivate a culture of secrecy, mistrust and suspicion amongst actors.

## REACH OF INFORMATION SYSTEMS CONFLICT

(Direct effects of an information system)



(Wider context effects of information systems)

Figure 3.3 IS-Conflict Framework (Source: Boonstra & Vries 2015: 12)

This study focuses on three forms of conflict during e-HRM use: the IS - Structure conflict, IS – Implementation conflict and the IS - Value conflict. Resistance is the ultimate outcome, possibly resulting in unintended outcomes. These three levels of conflict have employees either supporting organisational change or resisting it, with success or failure being the ultimate result.

### 3.6 The Research Model

The idea that employee performance affects job satisfaction is consistent with several psychological theories such as intrinsic motivation theory (Robbins & Judge, 2017). Literature posits a significant relationship between employee performance and job satisfaction. Employee performance is theorised to influence job satisfaction (Markus, Iyer & Soberman, 2006; Aziri, 2011; Vermeeren, Kuipers & Steijn, 2014; Inuwa, 2016; Robbins & Judge, 2017; Alromaihi et al., 2017). It is theorised that employee performance influences job

satisfaction as shown in figure 3.4 (Christen, 2006; Aziri, 2011). Markus, Iyer and Soberman (2006) model of job satisfaction showed job satisfaction and employee performance as having common antecedents: job factors and problems with role perceptions. Employee performance influences job satisfaction (Figure 3.5).

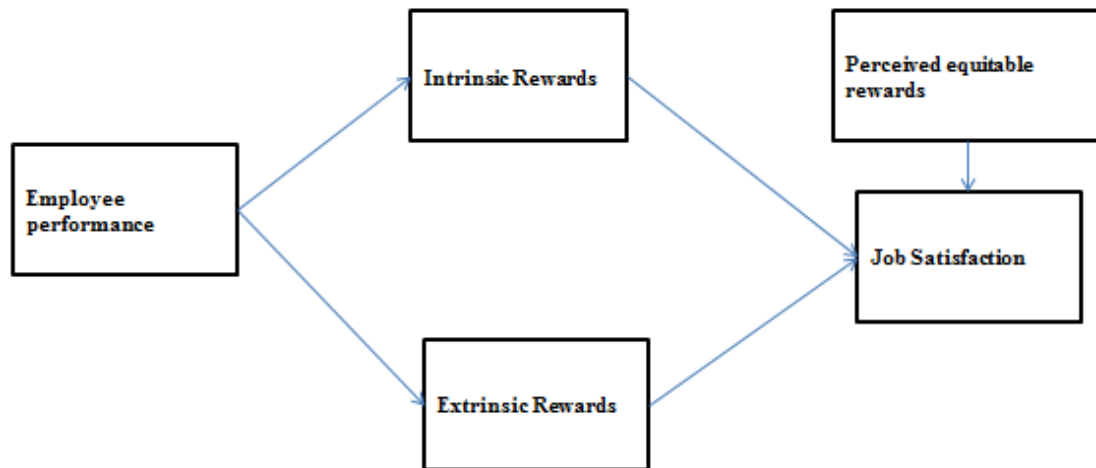


Figure 3.4 Lawler & Porter Model of Job satisfaction (Aziri, 2011: 80)

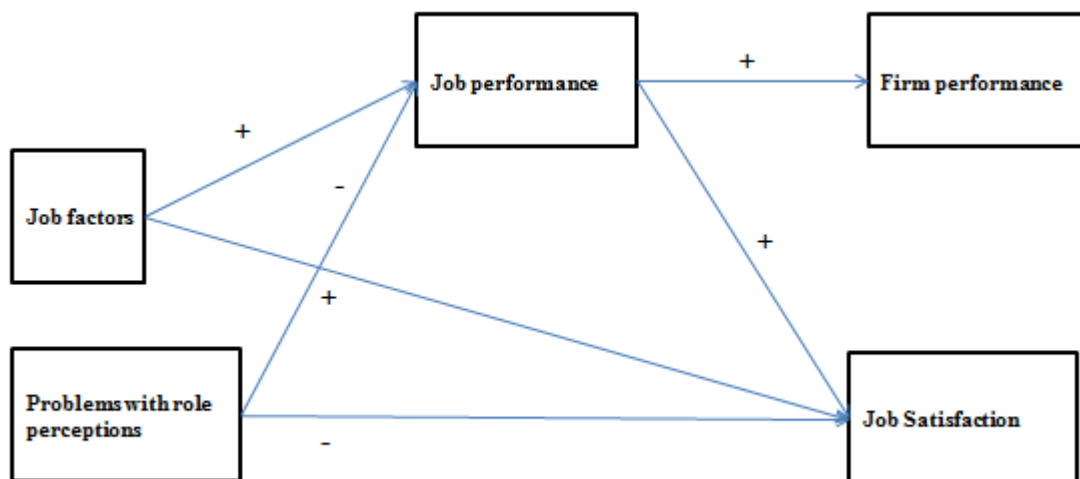


Figure 3.5 Christen, Lye & Soberman model of job satisfaction, 2006 (Aziri, 2011: 79)

Key: + Positive effect  
- Negative effect

Job satisfaction is theorised to influence organisational politics. Lumley et al. (2011) identified pay, promotion, and procedures as some of the facets that contribute to job satisfaction. The same facets contribute to the employees' perception of organisational

politics. The employees' feelings about pay and promotion policies form their perception of organisational politics (Jensen et al. 2009). If employees are satisfied with their jobs in so far as pay and promotional policies are concerned, this is likely to shape employees' perception of organisational politics. Durnali and Ayyidiz (2019) studied the predictive power of job satisfaction. The regression result demonstrated that the intrinsic and extrinsic job satisfaction dimensions significantly and positively predicted the perception of organisational politics subscale.

This present study sought to develop a model that maximises e-HRM macro-level consequences by focusing on the role of e-HRM actors: HR professionals, line managers and IT professionals herein referred to as actors. Figure 3.6 illustrates a research model encompassing proposed relationships among five variables: e-HRM use, employee performance, job satisfaction and organisational politics and effects on e-HRM macro-level consequences.

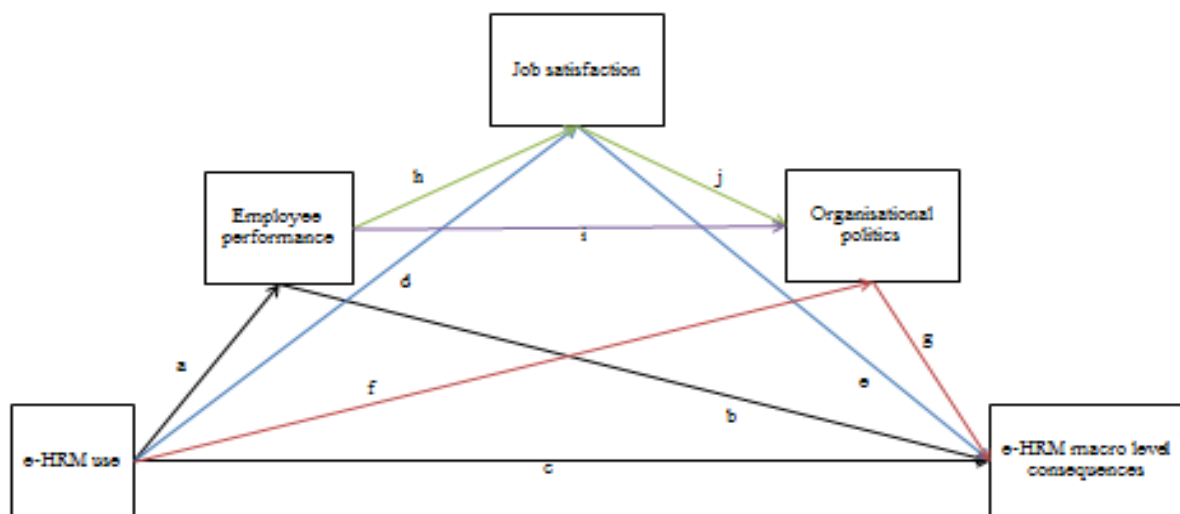


Figure 3.6 The Research Model

### *3.6.1 Direct effect of e-HRM use on e-HRM macro level consequences.*

Strategic human resource management research has established a significant relationship between high performance work systems (HPWS) and organisational performance (Combs et al., 2006; Marler, 2009; Parry, 2011; Obeidat, 2016). Effective use of HPWS is likely to result in a supportive environment being provided for employees, fair and just remuneration, regular and unbiased performance feedback. In return, employees are likely to develop an affective bond with an organisation expressed in affective commitment (Florea & Badea (2013). Affective commitment results in a number of employee behaviours such as low absenteeism, job satisfaction and increased employee performance. The use of e-HRM is meant to reinforce this relationship between HPWS and desired employee outcomes.

There exists a wide body of literature of the view that the deployment of e-HRM improves the efficient and effective delivery of HR activities. Suggestions have been made that e-HRM use leads to reduced costs as well as increased speed of human resource processes (Lepak & Snell, 1998; Njoku et al., 2019). When viewed as a way of performing HR administrative tasks, e-HRM use could lead to lower HR staff headcount as generic labour is replaced by information technology. The phenomenon thus has the capacity of streamlining the transactional HR processes culminating in increased efficiency and effectiveness.

Literature also shows that e-HRM supports a strategic orientation of the HR function (Ruel et al., 2007; Marler, 2009; Bondarouk et al., 2017; Njoku, Ruel, Rowlands, Evans & Murdoch, 2019; Bondarouk, 2020). As time is freed, HR professionals find time to embark on strategic activities such as strategic planning, talent management and knowledge management for competitive alignment of organisations. Some authors have however disputed this claim, arguing that e-HRM has failed to re-orient the HR function in a strategic way (Burbach & Dundon, 2005; Marler and Fisher, 2013; Marler & Parry, 2016)

Reviews of extant literature indicate that the use of e-HRM use in organisations has come to be associated with polarised pairs of consequences: flat and tall structures (Gao, Chen & Fang, 2009); downsizing of the staff in the HR department (Ruel et al., 2004) and increase in staff (Girisha & Nagendrababu, 2020), increased and decreased costs (Ruel et al., 2004; Strohmeier, 2009; Berber et al., 2018; Skudiene, Vezeliene & Stangej, 2020; ), lower headcount and increased headcount in the HR department (Girisha & Nagendrababu, 2020). In organisations employing e-HRM, it could be argued that the HR functions would be more efficient and effective so as to add value to the bigger organisation. It is assumed that this

relationship obtains in developing economies as well. In this study e-HRM use is treated as an independent variable. Electronic HRM macro level consequences variable is treated as dependent variable in this study.

Employees prefer using HRM technology if that same technology helps them increase their task performance (Kaygusuz et al., 2016). It is argued that if HRM technology does not benefit employees in one way or the other, they would not use it unless if it is mandatory. Various actors adopt information systems if they do believe that technology would assist them to achieve desired outcomes (Amoako-gyampah & Salam, 2004). Goodhue et al. (2006) argued that information technology is likely to impact positively on individual employee performance if the capabilities of information technology matched the tasks that need to be performed.

Information technology use produces a myriad of benefits that include increased task performance and job efficiency (Alshibly, 2014). Effective use of e-HRM should, thus, be positively related to employee performance (Rajan & Baral, 2015; Bravo et al. (2016). Other researchers have however challenged the existence of this relationship due to the presence of technostress caused by technology implementation systems (Rathore, Qaiser, & Sherazi, 2019). There has been little research on the impact of e-HRM use from a human factor perspective, that is, research that has linked e-HRM use and organisational and individual outcomes (Marler & Fisher, 2013). The first hypothesis is, therefore:

*H<sub>1</sub>: There exists an indirect effect of e-HRM use on e-HRM macro level consequences through employee performance only. (path ab in figure 3.6)*

The information system literature suggests that information technology has the potential to alter the relative influence of job characteristics on job satisfaction. Increased utilisation of information technology, in the long run, impacts on job satisfaction positively (Davidson, 2006; Boudreau & Robey 2005; Morris & Venkatesh, 2010; Wang, Wang, Zhang & Ma, 2020; Hazi az et al., 2021). Such a view is echoed in the job challenge literature, which suggests that job redesign resulting from significant organizational changes may create overwhelming challenges for some employees, leading to lower job satisfaction in the short run (Sykes, Cha et al., 2009; Venkatesh, & Johnson, 2014; Olaskoaga et al., 2019). When employees acquire cognitive skills in the long run, these challenges are overcome leading to job satisfaction. The second hypothesis is therefore:

*H<sub>2</sub>: There exists an indirect effect of e-HRM use on e-HRM macro level consequences through job satisfaction only. (path de in figure 3.6)*

Electronic HRM literature suggests a plethora of reasons that explain failure of information systems in organisations. Reviews of information system failure have concentrated on technical aspects of information systems at the exclusion of people, task and structure issues. From a technical aspect, intended consequences are designed into systems. Thus according to the deterministic approach, a system should always yield intended consequences designed into it. However, intended consequences have not always occurred because organisations are systems with several subsystems. The other cited cause of failure is lack of cognitive skills on the part of e-HRM actors. This causes a decline in employee performance due to improper use of systems. Management has also not explained the reasons for introducing information systems. This has created resistance to change. Gonzalez & Geovany (2021) supplemented these causes with the politics of data. Information systems in general redistribute power within organisations. People who lose power will resist its implementation. The resistance takes several forms:

- ‘e-HRM actors sabotage the system,
- There is system reinvention (use of a system in such a way that it reverses the implied power distribution and at the same time yields unintended consequences), and
- The actors stop using the system altogether (Dhillion, 2004; Randolph & Main, 2005; Doherty & King, 2005).

It is the responsibility of management to manage information system projects such that unintended consequences are not realised. With adequate monitoring of these projects, unintended consequences should be realised at infancy and managed out. The third hypothesis, therefore, is:

*H<sub>3</sub>: There exists an indirect effect of e-HRM use on e-HRM macro level consequences through organisational politics only. (path fg in figure 3.6).*

The literature presents a mixed picture on the relationship between employee performance and job satisfaction. Empirical evidence shows a weak relationship between the two constructs at individual level, but with a strong relationship being found to exist at organisational level (Vigoda-Gadot & Kapun, 2005; Markus et al, 2006; Bodla, Danish & Nawaz, 2012; Abdirahman, 2018).



HRIS is seen as forcing employees to adapt to new work habits and changed work flows (Dery, Grant, & Wiblen, 2009). If employees find it difficult to acquire new skills that suit new work habits, system resistance and job dissatisfaction could result (Konradt et al., 2003; Ngai et al., 2008). Electronic HRM implementation success should thus be partly measured in terms of its effect on job satisfaction. If e-HRM use results in job satisfaction going down then the system implementation is classified as a failure. Electronic HRM implementation success should either have no effect at all or increase employee job satisfaction (Maier, Laumer, Eckhardt & Weitzel, 2013). Is there a relationship between e-HRM use and employee performance and job satisfaction and between job satisfaction and e-HRM macro-level consequences? Does information technology use increase or limit employee performance and job satisfaction (Al Haziazi et al., 2021)? The fourth hypothesis is:

*H<sub>4</sub>: There exists an indirect effect of e-HRM use on e-HRM macro-level consequences through employee performance and job satisfaction in serial. (path ahe in figure 3.6)*

Organisations are arenas wherein multiple parties or actors have different roles and interests. These actors' interests are sometimes aligned and sometimes misaligned (Dhillion, 2004). Where there is alignment, conflict is avoided, and, it is safe for one to assume that e-HRM use should lead to intended macro-level consequences. Where misalignment exists, it (misalignment) creates tension that energises efforts of different actors to oppose each other in an attempt to transform organisations (Boudreau & Robey 2005). These opposing forces account for outcomes that are inherently contradictory. These forces cancel out the predictive power of e-HRM use with regards the macro-level consequences.

Empirical evidence has illustrated the dysfunctional impact of organisational politics on intended consequences of information system use (Bartis & Mitev, 2008; Bondarouk, 2011; Richardsen, Traavik & Burke, 2016; Abbas & Awan, 2017; Robalo & Moreira, 2020). There is need for an information system to be aligned to an organisation's culture and power distribution (Doherty & King, 2005). Information technology is malleable technology that is capable of serving the interests of various stakeholders (Read et al., 2015; Al-Okaily et al., 2020). Its use has resulted in operational efficiencies in such a way that the previously dominant individuals and groups simply reclaimed their positions. Information System use could result in two possible outcomes: if information system use "coincides with opportunities for organisational change, workers could become empowered and enriched by

new skills, and more meaningful work could result” (Travica, 2005: 213). If there are no foreseen opportunities, employees feel disempowered and ultimately demotivated leading to change resistance.

Electronic HRM actors are seen as staking their agenda on new information system and wrestling each other for its control (Randolph & Main, 2005). Electronic HRM affects the power structures in organisations either positively or negatively or both. If e-HRM use disempowers the ‘stronger’ bargaining party, its intended consequences will be frustrated. The fifth hypothesis examines the roles of ‘employee performance and organisational politics’ in the e-HRM use and e-HRM macro-level consequences link.

*H<sub>5</sub>: There exists an indirect effect of e-HRM use on e-HRM macro-level consequences through employee performance and organisational politics (OP) in serial. (path aig in figure 3.6)*

The sixth hypothesis is:

*H<sub>6</sub>: There exists an indirect effect of e-HRM use on e-HRM macro-level consequences through job satisfaction (JS) and organisational politics (OP) in serial. (path djg in figure 3.6)*

The literature presents a mixed picture on the relationship between employee performance and job satisfaction. Empirical evidence shows a weak relationship between the two constructs at individual level, but with a strong relationship being found to exist at organisational level (Vigoda-Gadot & Kapun, 2005; Markus et al, 2006; Bodla, Danish & Nawaz, 2012; Abdirahman, 2018). Perception of organisational politics is seen as impacting on both job satisfaction and employee performance in a consistent manner. An unfair and unjust organisation political environment is seen as impacting negatively on job satisfaction and employee performance. What role do these three variables play in the e-HRM use and e-HRM consequences relationship? A fit between job satisfaction, employee performance and functional organisational politics is hypothesised to result in intended outcomes. The seventh hypothesis is:

*H<sub>7</sub>: There exists an indirect effect of e-HRM use on e-HRM macro-level consequences through employee performance, job satisfaction and organisational politics (OP) in serial. (path ahjg in figure 3.6)*

### **3.7 Research Consistency**

To ensure that the research methodology was thorough, the research model, research questions/hypotheses, the research instrument, as well as the data analysis tools were aligned using a research consistency matrix. The correct alignment helps translate the research problem into sub problems, which are then aligned to research questions (Table 3.2).

Table 3.2: Research Consistency Matrix

Literature Review	Research Questions	Research Instruments Questions	Variable Type	Analysis to answer research Question
<p>i. Task-Technology Fit (Goodhue et al., 2006)</p> <p>ii. Technology-Performance Chain model (Staples &amp; Seddon, 2005)</p> <p>iii. Taxonomy of employee performance (Charbonnier-Voirin &amp; Roussel, 2012; Tabiu et a., 2016)</p>	<p><b>Research Question 1 (a):</b> What is the effect of e-HRM use on employee performance?</p>	<ul style="list-style-type: none"> <li>• Contextual performance: (Questions EP1-EP7).</li> <li>• Contextual Performance (Consciousness) (Questions EP8-EP 16).</li> <li>• Task performance: (Questions EP17-EP25).</li> </ul>	<ul style="list-style-type: none"> <li>• Contextual performance: Ordinal</li> <li>• Contextual Performance (Consciousness) Ordinal</li> <li>• Task performance: Ordinal</li> </ul>	<p>Mediation analysis with Structural Equation Modeling</p>
<p>i. Job Characteristics Model (1980)</p> <p>ii. User Information System (UIS) &amp; Job Satisfaction model (Wang et al., 2020)</p>	<p><b>Research Question 1 (b):</b> What is the effect of e-HRM use on job satisfaction?</p>	<ul style="list-style-type: none"> <li>• Intrinsic job satisfaction items (Questions JS1-JS4, JS7-JS11).</li> <li>• Extrinsic job satisfaction items (Questions JS5-6, JS12-14, JS17-19).</li> </ul>	<ul style="list-style-type: none"> <li>• Intrinsic job satisfaction: Ordinal</li> <li>• Extrinsic job satisfaction: Ordinal</li> </ul>	<p>Mediation analysis with Structural Equation Modeling</p>
<p>i. Institutional theory with sensemaking theory (Weick et al., 2005; Jensen et al., 2009)</p> <p>ii. Information System-Conflict framework (Boonstra &amp; Vries,</p>	<p><b>Research Question 1(c):</b> What is the effect of e-HRM use on organisational politics?</p>	<ul style="list-style-type: none"> <li>• General Political behaviour: (Questions OP1-OP3).</li> <li>• Go along to get ahead: (Questions OP4-OP9)</li> <li>• Pay &amp; Promotion</li> </ul>	<ul style="list-style-type: none"> <li>• General Political behaviour: Ordinal</li> <li>• Go along to get ahead: Ordinal</li> <li>• Pay &amp; Promotion policies: Ordinal</li> </ul>	<p>Mediation &amp; Moderation analysis with Structural Equation Modeling</p>

Literature Review	Research Questions	Research Instruments Questions	Variable Type	Analysis to answer research Question
2015)		policies: • (Questions OP10-OP15)		
i. Task-Technology Fit (Goodhue et al., 2006) ii. Technology-Performance Chain model (Staples & Seddon, 2005) iii. Taxonomy of employee performance (Charbonnier-Voirin & Roussel, 2012; Tabiu et a., 2016) iv. Job Characteristics Model (Hackman & Oldman, 1980) v. Sensemaking theory (Weick et al., 2005) vi. Information system-conflict framework (Boonstra & Vries, 2015)	<b>Research Question 2:</b> What roles do employee performance, job satisfaction and organisation politics variables play in the e-HRM and e-HRM consequences link	The summated construct scores were be used in SEM modeling	Ordinal	Mediation analysis with Structural Equation Modeling.
i. Relationship between e-HRM and employee outcomes (Christen et al.,2006)	<b>Research Question 3:</b> What is the relationship between e-HRM use, employee performance, job satisfaction, organisational politics and e-			Correlation analysis

Literature Review	Research Questions	Research Instruments Questions	Variable Type	Analysis to answer research Question
	HRM macro-level consequences?			
	<b>Main Research Question:</b> What is the nature of the model that maximises e-HRM macro-level consequences?	The summated construct scores were used in SEM modeling	<ul style="list-style-type: none"> <li>• Ordinal</li> </ul>	Structural Equation Modeling

### **3.8 Summary of the chapter**

A number of theories covering e-HRM macro-level outcomes, employee performance, job satisfaction and organisational politics were reviewed in this chapter. The RBV theory (1995), contingency theory (2012), institutional theory with sensemaking theory (2009), the Job Characteristics model (1980), the task theory (2003), Markus' Political perspective of resistance model (1983) and the IS-Conflict framework (2015) were utilised to better understand the variables under study. These theories allowed the study to address the research gaps identified in the scholarship and theoretical foundations section. The next chapter presents the research strategy of the study.

## CHAPTER 4: RESEARCH METHODOLOGY

### 4.1 Introduction

This chapter presents the research methodology followed to execute this study. A number of issues that constitute research methodology are examined, namely: the *research philosophy* adopted, the *research approach* chosen, the research strategy utilised and the *research design*. The research philosophy spells the two philosophical assumptions made by the researcher with regards the *nature of society* and *nature of science* dimensions. The research approach constitutes the reasoning of the research that is influenced by the philosophical stance taken (Gill & Johnson, 2002). The research approach could be placed on a continuum of increasing rigour from deductive to inductive methods. The research purpose focuses on *why research* is carried out in the first place. Research may be carried out to explore, describe or explain some phenomenon. A research design is a logical structure of the study or enquiry. A design specifies the evidence needed to answer the specified research questions. An alignment of these issues is ideal for validation of research findings as shown in a research onion diagram (Figure 4.1).

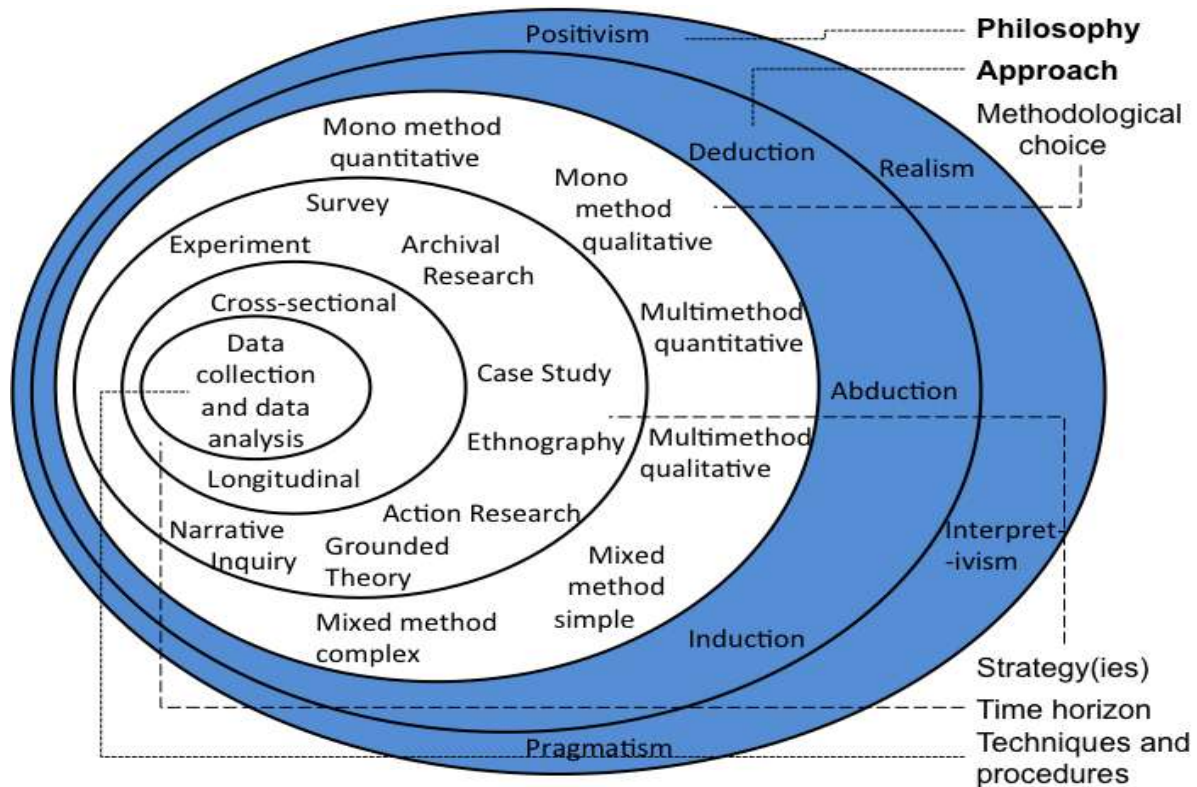


Figure 4.1 Research Process Onion (Source: Saunders, Lewis & Thornhill, 2012: 128)



## 4.2 Research Philosophy

The research philosophy represents the spectacles or lens through which a researcher sees reality. This in turn influences how research work is done. The philosophical choice made “influences our subsequent choice of particular ‘modes of engagement’ and what we see as warranted in research” (Gill & Johnson, 2002: 126). It represents the assumptions made with respect to two dimensions: the nature of society and nature of science.

### 4.2.1 Nature of society

On the nature of society, Burrell and Morgan (1979) declared that researchers need to select between two sociological views: *the radical* or *regulatory change*. These views relate to how society evolves. The radical change perspective views society as being in a state of constant conflict. This is caused by humans struggling to free themselves from the domination of societal structures (Ragab & Atisha, 2018). The sociology of radical change is the basis of post-modernism. Post-modernism views a researcher as being an observer. Society constructs interpretations of the world. These interpretations are not absolute, neither are they universal. The regulatory change theory assumes that society is unified and cohesive and that it evolves in a rational manner. This perspective has its basis on modernism. Modernism posits a world that exists independent of the researcher, a reality with already existing answers to questions. The answers to questions are absolute and have universal applicability. *In this present study, the regulatory change view of society is assumed.* Information technology as a discipline is regarded as focusing on practical research, theory and practical implications. As such, modernism allows for the research questions to be better answered.

### 4.2.2 Nature of Science

The other dimension concerns the nature of science. The nature of science perspective describes the objective or subjective approach to research. Sutrisna, (2009) coined the two approaches as positivism (objectivism) and phenomenology (subjectivism). Gill and Johnson (2002) have the two approaches as positivism and interpretive alternative. Lincoln and Guba (2003) declared that positivism has the following precepts to research:

- “The phenomenon of interest (e-HRM in this case) is single, tangible and fragmentable, and there is a unique, best description of any chosen aspect of the phenomenon,
- The researcher and object of inquiry are independent,

- Nomothetic statements, i.e. law like generalisations independent of time or context are possible, implying that scientific concepts are precise, having fixed and invariants meanings,
- There exists real, uni-directional cause-effect relationships that are capable of being identified and tested via hypothetic-deductive logic and analysis, and
- Inquiry is value free.”

The subjectivism philosophy premises research on a reality and knowledge that are products of society. Reality cannot be understood independent of the social actors that make sense of this reality. The world is not made up of fixed elements or objects but “an emergent social process - as an extension of human consciousness and subjective experience” (Burrell & Morgan, 1979: 253). *In this study, positivism philosophy is adopted due to the practical nature of the research output.*

A number of philosophical assumptions underlie these two research approaches. Each approach has its unique assumptions as shown in Figure 4.2.

The objective-subjective dimension

OBJECTIVISM	ASSUMPTIONS	SUBJECTIVISM
Realism ←	<b>Ontology</b> →	Nominalism
Positivism ←	<b>Epistemology</b> →	Anti-Positivism
Determinism ←	<b>Human Nature</b> →	Voluntarism
Nomothetic ←	<b>Methodology</b> →	Ideographic

Figure 4.2 A scheme for analysing assumptions about the nature of social science (Source: Burrell & Morgan, 1979: 3)

### *Ontology*

Ontology represents the philosophical study of the nature of reality or worldview (Bisman, 2010). Literature identifies *objectivism (realism)* and *constructivism (nominalism)* as the most popular positions in an objective-subjective continuum of ontology (Sutrisna, 2009). Ontological beliefs have to do with how actors view the empirical world; that is whether it is assumed to be objective and independent of humans or is it subjective, having an existence only through the actions of human in creating and recreating it (Emamjome, Gable, Bandara & Gable, 2018; Al-Ababneh, 2020). In realism, the e-HRM researchers assume that the world

is real. The role of a researcher is to discover relationships between variables by crafting precise measures that will detect and gauge those dimensions of reality that are of interest (Emamjome, Gable, Bandara & Gable, 2018; Al-Ababneh, 2020). Adopting a realism ontological position would entail studying the effect of e-HRM use on employee outcomes in an objective and independent reality. The employee outcomes being studied are seen as being rational and intentional. In nominalism, the e-HRM researchers assume that there is no real world, but one that is produced and reproduced “by humans through their action and interaction” (Emamjome, Gable, Bandara & Gable, 2018; Al-Ababneh, 2020). Adopting nominalism position would entail studying the effect of e-HRM use on employee outcomes in a subjective manner and reality whose meaning is determined by human beings in it. The ontological assumptions become the basis of all other research assumptions. *Realism ontological assumptions are adopted for this study.* This choice depends on the philosophical orientation about nature of society and type of knowledge sought.

### *Epistemology*

The second assumption about the nature of science is epistemology: a study of the nature of knowledge and how it is gained. Epistemological positions of researchers lie in a continuum between positivism and anti-positivism (interpretivism). Putnam (1983) cited by Lincoln and Guba (2003) claimed that positivists work in a deductive manner to discover unilateral, causal relationships that are the basis of generalised knowledge; that is, that can predict patterns of behaviour across situations. In this study the relationships or links between e-HRM use and employee performance, job satisfaction and organisational politics are there to be ‘found out’, leading to the creation of sound knowledge. The anti-positivists insist that meaning is obtained by getting inside the world of those generating it (Emamjome, Gable, Bandara & Gable, 2018; Al-Ababneh, 2020). Interpretive researchers posit circular or reciprocally interacting models of causality with the intention of understanding actors’ views of their social world and their role in it (Emamjome, Gable, Bandara & Gable, 2018). With regards to this study, what is the nature of the truth about the effect of e-HRM use on employee performance, job satisfaction and organisational politics (positivism) or how can the effect of e-HRM use on employee performance, job satisfaction and organisational politics be interpreted (interpretivism)?

A researcher’s ontological position has a direct bearing on the epistemological position taken. For example, if a researcher adopts an objective ontological position (realism), a supportive

epistemological position to adopt has to be positivism. Interpretivism “on the other hand mainly takes constructivism as the basis of understanding reality that is constructed individually and interpreted differently” (Sutrisna, 2009: 7).

*Human Nature*

The third assumption relates to human nature. Positivists have man as a mere responder to his social environment. Man is powerless to influence his environment and social processes. This determinist view “regards man and his activities as being completely determined by the situation or environment in which he is located” (Burrell & Morgan, 1979: 6). On the other hand, there is the voluntarist view, which sees man as pursuing his/her own will and totally unhindered in his pursuits. The researchers are seen as independent and free-willed. *A determinist view is adopted for this study due to the epistemological position adopted*

*Methodology*

The fourth and last assumption concerns the methodology which represents the research strategy or means to investigate a phenomenon. The nomothetic methodologies put more emphasis on basing research on systematic protocol and technique. Ideographic methodologies on “the other hand emphasise the analysis of subjective accounts that one generates by getting inside situations and involving oneself in the everyday flow of life” (Burrell & Morgan, 1979: 6-7). *This study has not made use of the nomothetic nor ideographic methods because none is capable of addressing the research questions.* Instead, it has made use of a combination of qualitative and quantitative methods. Table 4.1 compares the nomothetic and ideographic methods.

Table 4.1: A comparison of Nomothetic and Ideographic methods

<b>Nomothetic methods emphasise</b>	<b>Ideographic methods emphasise</b>
1 Deduction	Induction
2. Explain via analysis of causal relationships	Explanation of subjective meaning systems
3. Generation of quantitative data	Generation of qualitative data
4. Use of statistical controls, hypotheses testing	Commitment to research in everyday settings
5. Highly structured research	Minimum structure
6. Causal	Meanings
7. Impersonal	Personally involved
8. Study population/samples	Study cases

Laboratory experiments    Quasi experiments    Surveys    Action Research    Ethnography  
 (Source: Gill & Johnson, 2002: 36)

### *Pragmatism*

Creswell (2003) explored another research paradigm called *pragmatism*. This paradigm sits in between positivism and subjectivism (interpretivism) on a research philosophy continuum. Pragmatism brings together these research philosophies arguing that positivism and interpretivism “are not mutually exclusive” (Wahyudi & Park, 2014: 71). de Waal (2001) cited in Migiro and Magangi (2011) defined pragmatism as a philosophy that includes the use of induction, deduction and abduction. Induction involves the discovery of patterns or gaining an understanding of the meanings that humans attach to events. Deduction involves the collection of quantitative data, testing of theories and hypotheses, explanation of causal relationships between variables, application of controls to ensure validity of data and the selection of sufficient sample sizes in order to generalise conclusions. Abduction involves uncovering and relying on the best of a set of explanations for understanding one’s result.

The perspective acknowledges that a combination of ontological and epistemological assumptions is acceptable to investigate and appreciate a phenomenon under study. “The emphasis is on what works best to address the research problem at hand” (Wahyudi & Park, 2014: 71). Combining the quantitative and qualitative data is seen as helping researchers to understand social reality. The existence of continua for both ontological and epistemological positions “does not necessarily reflect a fundamental conflict, rather, it reflects different interests which are reconcilable (Gill & Johnson, 2002: 127). Such reconciliation however requires different ontological and epistemological positions. Figure 4.3 illustrates the mixed methods research used in pragmatism.

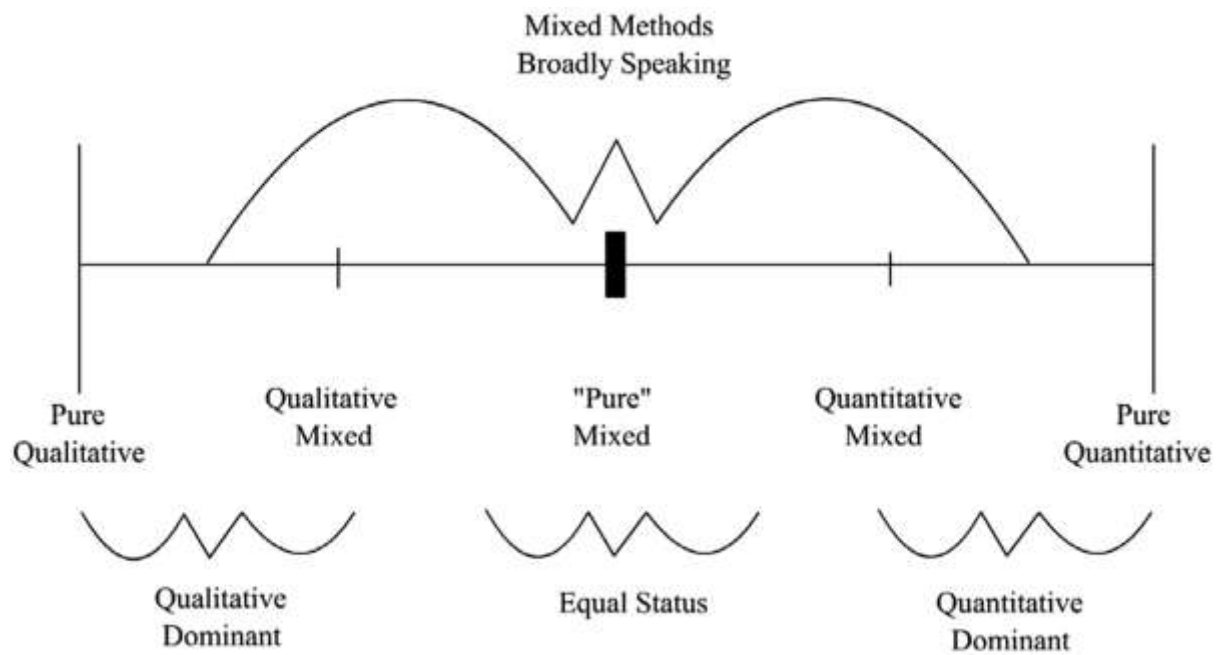


Figure 4.3 Three Major Research Paradigms (Source: Johnson et al., 2007: 124)

This comes after a realisation that a peaceful coexistence of multiple methodologies is possible (Ridenour & Newman, 2008). *In this study, the researcher uses pragmatism as a philosophical position.* Table 4.2 compares the three research paradigms with respect to ontology, epistemology, axiology and methodology.

Table 4.2: Assumptions of Research Philosophies

Fundamental Beliefs	Research Paradigms			
	Positivism (Naïve Realism)	Post positivism (Critical Realism)	Interpretivism (Constructivism)	Pragmatism
<b>Ontology (nature of reality)</b>	External, objective & independent of social actors.	Objective. Exists independently of human thoughts and beliefs or knowledge of their existence, but is interpreted through social conditioning.	Socially constructed, subjective, may change, multiple.	External, view chosen to best achieve answer to research question.
<b>Epistemology (what constitutes acceptable knowledge)</b>	Only observable phenomena can provide credible data. Focus on causality and law like generalisations.	Only observable phenomena can provide credible data, facts. Focus on explaining within a context or contexts.	Subjective meanings and social phenomena	Either observable phenomena or subjective meanings can provide acceptable knowledge dependent upon the research question.
<b>Axiology (the role of values in research and the researcher's stance)</b>	Research is undertaken in a value free way (Researcher is independent of data and maintains an objective stance).	Research is value laden; the researcher is biased by worldviews cultural experiences and upbringing.	Researcher is value bond (researcher is part of what is being researched) Researcher will be subjective.	Value-bond and etic-emic (Value plays a role in interpreting results but adopts both objective and subjective points of view.
<b>Research Methodology</b>	Quantitative	Quantitative or qualitative	Qualitative	Mixed (Quantitative and qualitative)

(Source: Wahyuni, 2012: 70)

Pragmatism seems a logical approach when one seeks to expand upon the understanding obtained in previous studies (Hackney, 2002). The paradigm is also ideal when one wants to provide a complete understanding of a phenomenon (Keil, 2008). This choice is also justified by the fact that e-HRM as a discipline is seen as a “pragmatic discipline with a prominence on practical research, theory and practical implications” (Goldkuhl, 2008; Agerfalk, 2010).

The choice of pragmatism as a research paradigm has been necessitated by its three strengths. Firstly, the paradigm can be deployed to address confirmatory and exploratory research questions at the same time (Teddlie & Tashakkori, 2009). The exploratory research questions allow researchers to develop a deep appreciation of a phenomenon as well as generate new theoretical insights into it. The confirmatory research questions allow for theory testing. Secondly, the paradigm can also be used to provide stronger inferences than a single worldview or method (Teddlie & Tashakkori, 2009). By combining the quantitative and qualitative studies, this paradigm offsets the disadvantages of individual methods by themselves (Molina-Azorin & Cameron, 2015; Halcomb & Hickman, 2015). It also complements the strengths of individual methods by themselves (Johnson, Onwuegbuzie & Turner, 2007). The third strength relates to the opportunity for a greater assortment of divergent and or complimentary views (Teddlie & Tashakkori, 2009). The paradigm offers a holistic view of a phenomenon as well as the relationship between and amongst its components. The divergent and complimentary views are combined in a single research inquiry.

#### **4.3 Research Purpose**

“The classification of research purpose most often used in the research methods literature is the threefold one of exploratory, descriptive and explanatory” (Saunders, Lewis & Thornhill, 2007: 133). An exploratory purpose study is one that explores a new phenomenon with very little being known about it or how it relates to other variables. The descriptive purpose research seeks to profile or describe variables, situations or people (Saunders et al., 2012). An explanatory purpose study seeks to form and explain (causal) relationships between variables. Under this purpose, data is subjected to statistical tests such as correlation, in order to establish some form of relationship (Saunders et al., 2012). This study sought to establish a model that maximises e-HRM macro-level consequences by focusing on the role of actors. Consequent to this broad goal, the study also sought to explain the effect of e-HRM use on



employee performance, job satisfaction and organisational politics. It sought to explain if these variables are intervening variables in the e-HRM use and e-HRM macro-level consequences relationship. As such, its *purpose was explanatory*.

#### **4.4 Research approach**

The research approach constitutes the reasoning of the research. The approach should be influenced and informed by the philosophical stance adopted by the researcher (Saunders et al., 2012). The approaches could be placed on a continuum of increasing rigour from deductive to inductive methods. A deductive research involves the development of a framework or model prior to its testing through empirical observation (Gill & Johnson, 2002). A structured methodology is applied to a research problem to confirm or disconfirm a proposed hypothesis. Induction on the other hand looks at observation and analysis of existing data for the generation of a theory. A less structured methodology is applied to gain a deeper and richer understanding of a phenomenon.

The key difference between a deductive and inductive approach to research, lies in the use of current body of knowledge and the role of data collection by each approach. Deductive research makes use of current body of knowledge and then conducts data collection and analysis to test a hypothesis. In inductive approach, the current body of knowledge is used to inform data analysis (Sustrina, 2009). *This study seeks to use both inductive and deductive research logic*. The study seeks to move from a deductive (the main approach) to an inductive approach in establishing a model that maximises e-HRM macro-level consequences.

#### **4.5 Research Design**

A research design “is a set of plans and procedures that researchers use” (Heppner, Kivlighan & Wampold, 2008: 66) within any enquiry so as to reach findings about given variables. It “involves developing a plan or structure for an investigation, a way of conducting or executing the study that reduces bias, distortion and random error” (Heppner, Kivlighan & Wampold, 2008: 66). In the past, management research focused on adopting either nomothetic (quantitative) or ideographic (qualitative) methodology.

In recent years, more researchers have developed interest in mixed methods designs (Ivankova et al., 2006). Mixed methods design is a procedure for combining, ‘mixing’ or integrating qualitative and quantitative research in a single study (Halcomb & Hickman, 2015). The rationale for using mixed methods research is grounded in the fact that neither qualitative nor quantitative designs are sufficient to capture the trends and details of a situation (Ivankova et al., 2006).

A number of benefits accrue from the use of mixed methods design. The “approach enables triangulation to take place, facilitating comparison of quantitative and qualitative data sets to produce well-validated conclusions. It also helps to explain on quantitative results with subsequent qualitative data. The design enhances a study with a supplemental data set, either quantitative or qualitative” (Migiro & Magangi, 2011: 3759). There are various typologies of mixed methods designs discussed in literature. The methods differ in terms of the *mixing* of the quantitative and qualitative methods: that is whether the mixing is partial or full, the time, *orientation* of the mixing: that is whether the mixing is concurrent or sequential and the *emphasis* of approaches: that is whether the mixing of the two methods is of equal measure or one method dominates the other (Leech & Onwuegbuzie, 2009).

There are two broad classifications of mixed methods research designs: the fully mixed methods and partially mixed methods research designs. The fully mixed designs involve mixing the qualitative and quantitative methods in one or more stages of the research process or across stages. The partially mixed methods design involve the qualitative and quantitative studies on their own before mixing them at the data interpretation stage (Leech & Onwuegbuzie, 2009). Figure 4.4 illustrates the typology of mixed methods research designs. *A partially mixed sequential dominant status explanatory design was used for this study.* Figure 4.5 depicts the steps followed in executing this explanatory sequential explanatory research design.

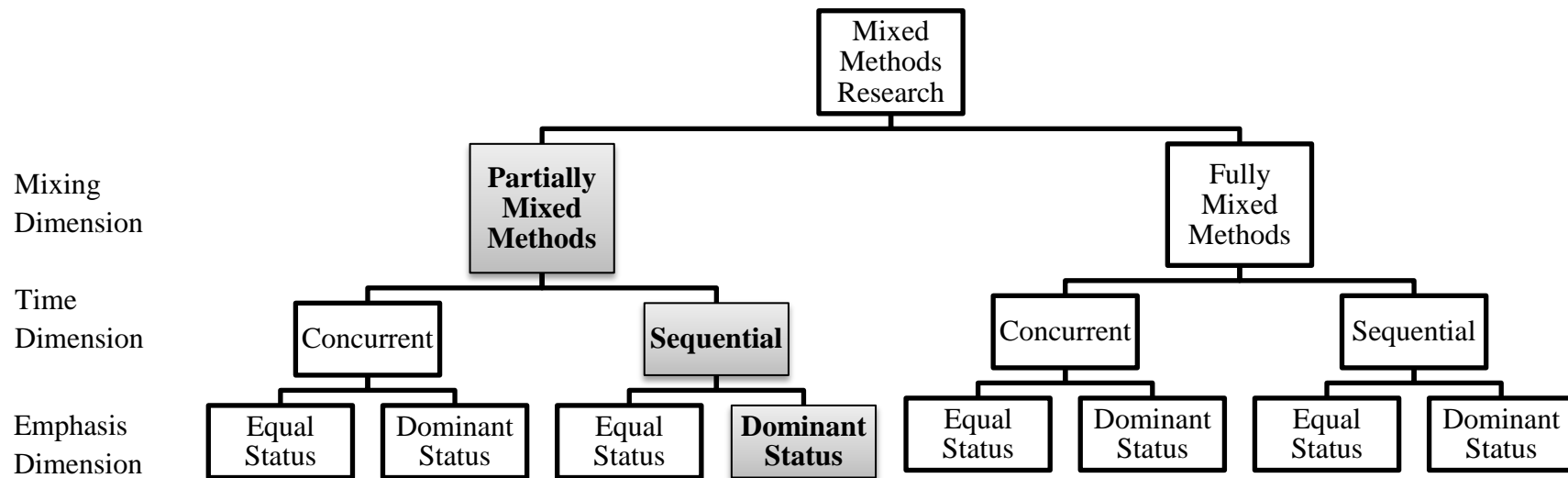


Figure 4.4 Typology of Mixed Methods Research Designs (Source: Leech & Onwuegbuzie, 2009: 271)

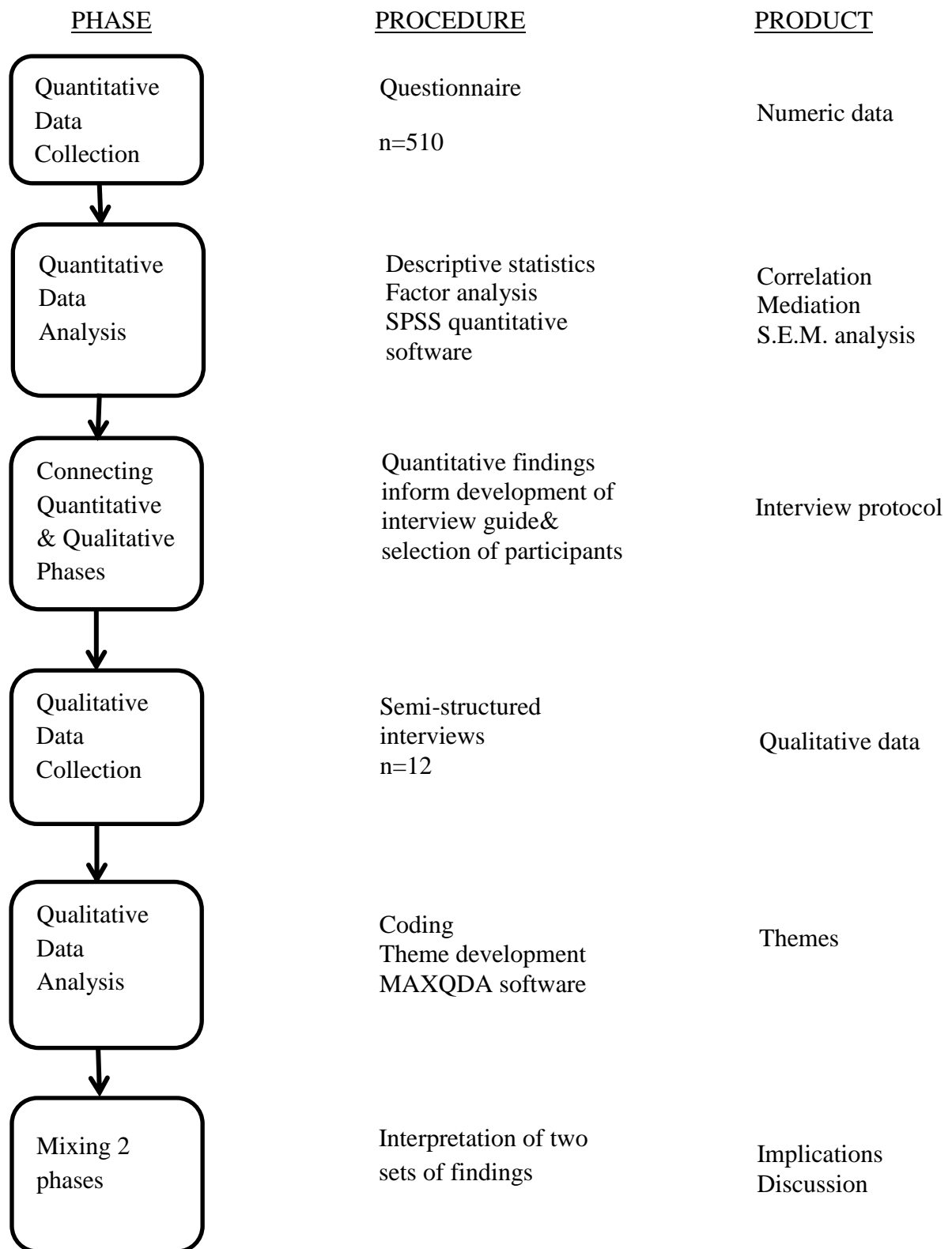


Figure 4.5 Sequential Explanatory Design Procedures (Source: Ivankova et al., 2006: 16)

The primary aim was to collect quantitative data, which was the primary database, and have the qualitative data provide supportive context. The study embedded qualitative data within a

quantitative database. The qualitative database provided a supporting role in the study (Creswell, 2009).

A sequential explanatory design was used to explain and interpret quantitative results by collecting and analysing follow-up qualitative data. The design is useful when ‘surprising’ results arise from a quantitative phase. “In this case the qualitative data collection that follows will be used to examine ‘surprising’ results in more detail” (Creswell, 2003: 178). The design starts with a quantitative phase (numeric) and qualitative data is collected thereafter to explain the quantitative findings. The two phases are connected at two stages: firstly, in selecting participants for the qualitative study. The participants were selected from the respondents who participated in the quantitative phase. The second connecting point included developing interview questions for the qualitative phase of the research. The questions were based on the findings of the quantitative phase.

The quantitative data informs the research questions, relationship between variables under study whilst the qualitative data refines and explains the unexpected statistical results by exploring participants’ views in more depth (Creswell, 2003). *This present study adopted a partially mixed sequential dominant status explanatory design* wherein the first phase studied the effect of e-HRM use on employee performance, job satisfaction and organisational politics and subsequently on e-HRM macro-level consequences. The second phase studied the significant, non-significant, outliers or surprising results from the quantitative study.

This entailed conducting a quantitative study first and then a separate qualitative phase later on (Creswell, 2003). The quantitative approach was given more weight or attention through data analysis because the quantitative data collection comes first and represents the major aspect of the mixed methods data collection process. The qualitative component follows the quantitative survey. It informs the quantitative study. This study is therefore a QUAN-qual study.

#### *4.5.1 Quantitative phase*

The aim of this phase was to identify the predictive power of e-HRM use on employee performance, job satisfaction and organisational politics and ultimately on e-HRM macro-level consequences. A cross sectional survey research was used to collect quantitative data. A five point Likert type scale was used to establish a relationship between e-HRM use and e-HRM macro-level consequences through employee performance, job satisfaction and

organisational politics. Data was collected on respondents' age, experience using e-HRM applications, employment positions within sampled organisations, and, relationship between employee performance, job satisfaction and organisational politics. A drop box was negotiated with the respective Human Resource Managers in order to ensure anonymity of respondents.

#### *4.5.2 Qualitative phase*

Participants were purposively selected to participate in semi-structured interviews. They were drawn from the following categories of respondents; the Human Resource specialists, line managers and IT specialists. The semi-structured interviews were conducted after analysing the data gathered through a survey. The aim was to go into the results arising from the survey in greater depth. The aim was to learn from the quantitative results. The study sought to follow up on the following types of responses:

- Unclear,
- Unexpected,
- Non-significant or significant, and
- Outliers or Extreme cases.

These responses were related to the following aspects: relationship between effective e-HRM use on one hand and employee performance, job satisfaction and organisational politics on the other and the possible reasons for the unexpected consequences arising from e-HRM use.

## **4.6 Population**

The population of any study refers to a complete set of units or actors that belong to the category of research interest (Bryman, 2016). It is all items, organisations, objects or individuals that possess data of interest to an inquiry. The population could be finite or infinite: finite in the sense that individuals or items of interest are known for certain and infinite in that a researcher could be having no idea about the total number of items to inquire from. In this present study, the population of interest included all registered organisations in Zimbabwe, implementing e-HRM.

The study focused on public and private companies as well as State Universities operating in Zimbabwe. The inclusion criteria for selecting participating organisations for the quantitative phase were that:

- i. The organisation should have had a minimum of 50 employees, and
- ii. Should have implemented e-HRM applications for at least one year, at the time of determining the sample size.

The inclusion criteria were informed by the resource demands of e-HRM systems. Only big organisations are in a position to meet these demands. Parry (2011: 1151) quoting Ball (2001) reported that “past empirical evidence has found a positive relationship between e-HRM and organisation size.” One year was deemed long enough a period for e-HRM systems to be embedded within organisations. Individuals of interest from these big organisations who formed the study population were all staff using the e-HRM systems: the HR managers, HR professionals, line managers and IT specialists.

Three sampling frames were used:

- (a) The *Zimbabwe Stock Exchange listed companies* (N=65),
- (b) The *Ministry of Industry & Commerce database of the top 100 companies by revenue* (N=100) and the
- (c) *State Universities list* (N=11).

These organisations are spread over 18 sectors. The study contacted all the 165 companies to establish those eligible for selection into the population of interest. A total of one hundred and one (101) companies met the selection criteria. Sixty-four (64) companies had either not implemented e-HRM or had less than one year experience in implementing e-HRM or both. As such, they were excluded from the population under consideration. A total of one hundred and one (101) companies satisfied the inclusion criteria and therefore made up the study population.

Eleven (11) State Universities formed part of the population, due to their huge investment in information technology over years. These institutions operate as quasi-governmental corporates; run privately just like the public and private limited companies that have been sampled from the Zimbabwe Stock Exchange and Ministry of Industry and Commerce databases. This justified their inclusion into the bigger sample. In total, 101 companies from eleven sectors and eleven (11) Universities from the education sector made up the total study population (N=112).

Table 4.3: Study Population distribution

	<b>Sector</b>	<b>Study Population</b>	<b>Percentage of total Study Population</b>
1	Building & Associated Industries	12	10.7
2	Technology	6	5.4
3	Banking	13	11.6
4	Mining	14	12.5
5	Beverages	8	7.1
6	Insurance	4	3.6
7	Food	3	2.7
8	Agricultural	17	15.2
9	Agro-industrial	8	7.1
10	Retail	5	4.5
11	Industrial	11	9.8
12	Education	11	9.8
	<b>TOTAL</b>	<b>112</b>	<b>100</b>

#### 4.7 Sampling

A sample is a subgroup of elements or cases, which represents a population from which data is collected in order to draw conclusions (Saunders et al., 2012; Bryman, 2016). A sample is necessitated by a number of reasons inter-alia: the presence of time and resource constraints, the need for quick decisions or resolution of problems, and a desire for a more in-depth understanding of phenomena being studied. Literature presents two broad ways of sampling a population; the use of probability and non-probability sampling. In probability sampling, the chances of participants from a population being selected for the sample are known. There is a higher degree of generalizability of results because the degree of difference between the population and the sample can be calculated. Bigger samples are generally used in order to increase external validity. In non-probability sampling, chances of participants being selected are unknown. The sampling error cannot be calculated, meaning the results have low population validity. Smaller samples are generally used.

##### 4.7.1 Sampling for the quantitative study

In the present quantitative study, convenience sampling was used to select organisations. The companies forming the population were stratified into 18 sectors whilst universities were categorised into six policy mandates. Companies were sampled from each of the eleven (out



of 18) sectors shown in Table 4.3. The study, whilst attempting to make the sample representative, chose organisations that were at different stages in the e-HRM implementation to enrich the findings (Parry, 2011). There was also a deliberate attempt to choose those organisations with different e-HRM systems (the system is run under different names) and experiences to minimise bias. Three (3) universities were sampled from the 6 policy mandate categories. As a result, an organisation sample of thirty-five (35), [19 from the Stock Exchange listed companies and 13 from the non-ZSE listed companies and three (3) Universities] was used for the quantitative phase of the present study as shown in table 4.4.

Table 4.4: Sample of Organisations

	<b>Sector</b>	<b>Study Population</b>	<b>Sample</b>	<b>Percentage of Study Population</b>
1	Building & Associated Industries	12	3	25
2	Technology	6	2	33
3	Banking	13	5	38
4	Mining	14	6	43
5	Beverages	8	3	38
6	Insurance	4	2	50
7	Food	3	2	67
8	Agricultural	17	3	18
9	Agro-industrial	8	3	38
10	Retail	5	1	20
11	Industrial	11	2	18
12	Education	11	3	27
	<b>TOTAL</b>	<b>112</b>	<b>35</b>	<b>100</b>

From each organisation, the sample respondents were HR managers, HR professionals and HR customers directly using e-HRM systems (line managers and IT professionals). Stratified sampling was used to select the respondents. The HR managers are “presumed to be knowledgeable about the characteristics of the workforce and existence of HRM practices within the organisation” (Parry, 2011: 1152), hence the exclusion of employees in this present study. This is in line with the ‘key informant’ methodology (Faifua, 2014). In total 510 respondents (n=510) were drawn from the thirty-two companies (442 respondents) and three Universities (68 respondents).

#### 4.7.2 Sampling for qualitative study

A non-probability sampling procedure was used for the qualitative study. Stratified purposive sampling was used to choose twelve (12) participants. Stratified purposive sampling is

defined as “selecting information-rich cases for in-depth study. Information-rich cases are those “from which one can learn a great deal about issues of central importance to the purpose of the inquiry” (Patton, 2015: 264). The following stages were followed in recruiting the 12 participants. The first stage was to identify the strata of respondents used in the quantitative stage. The participants should have been those who participated in the quantitative study. The second stage involved purposefully selecting participants from each stratum / sector (only the first participant was informed of this selection). This process ensures that the sample is representative of the different groups. It was hoped that a snowballing effect would result as the first informant informs the study of another potential participant within the stratum. The snowballing effect led to the selection of participants who met the criteria. The study relied on the participants’ role in the workplace to do this shortlisting. In the third stage, interviews were conducted.

Faifua (2014) lists the following criteria for selecting key informants from average informants. The criteria consist of the following:

- i. *Role in community*: One’s formal role in community should make a participant more inclined to possess information looked for.
- ii. *Knowledge*: A key informant should not only have meaningfully required information but should also have access to such information.
- iii. *Willingness*: The participant should be willing to share required information with the interviewer.
- iv. *Communicability*: A key informant should be able to communicate required information in an intelligent manner to the researcher.
- v. *Impartial*: An ideal participant should be able to communicate the required information with minimal bias.

#### **4.8 Sample Size**

The alpha level and margin of error are two key factors used in determining sample size. The most used alpha levels are .01 or .05 (Bryman, 2016). “In general, an alpha level of .05 is acceptable for most research. An alpha of .01 or lower is used when a study is more interested in identifying marginal relationship as a precursor to further studies” (Hair et al., 2013). Bryman (2016) argued for lower significance levels such as 0.01 when sample sizes are high and / or there is no theoretical or empirical support for the hypotheses. An alpha

level of 0.05 should be used for relatively small samples (Bryman, 2016). In social and behavioural research,  $\alpha$  is usually chosen to be either 0.05 or 0.01 (Kafadar, 2021). In this present study, a sample of 510 respondents is deemed moderate. The bulk of research on the phenomenon has made use of an alpha level of 0.05. There also exists substantial literature and theoretical support for this significance level (Hair et al. 2013; Bryman, 2016; Kafadar, 2021). As such, an alpha level of 0.05 was used in the study.

#### *4.8.1 Quantitative sample size*

The guidelines established by Onwuegbuzie and Collins (2007) with regards quantitative studies set a sample size at a minimum of 82 participants for two tailed hypotheses. A two-tailed hypothesis was recommended given that there are no assumptions made about coefficient signs of factor loadings. MacCallum, Widaman, Zhang, and Hong, (1999) cited in Wol et al. (2013) reasoned that a sample (n) should be at least 200, while Haig, 2005) recommended a minimum of 250. Comrey and Lee (1992) cited in Williams et al. (2010) provided the following guidance in determining the adequacy of sample size: 100= poor, 200 = fair, 300 = good, 500 = very good, 1,000 or more = excellent. The lower and upper sample size bounds were thus set at 82 to 510 participants. “When contemplating sample sizes investigators usually prioritise achieving adequate statistical power to observe true relationships in the data” (Hollander, Wolfe & Chicken, 2013: 2). The desire to achieve statistical power hugely influences the sample size. Statistically, minimum sample sizes are prescribed for certain data analyses. Most authors recommend a sample size of at least 100 to generate good results for Structural Equation Modelling (Weston & Gore, 2006; Worthington & Whittaker, 2006; Cuningham, 2006; Schumaker & Lomax, 2010; Rahi, Alnaser, & Abd Ghani, 2019). *The Comrey and Lee (1992) guidelines have been used for this present study and consequently, a sample of 510 respondents was used for the quantitative part of this study.*

The size was also partly influenced by the expected response rate. In a study that covered over 100,000 organisations between 2000 and 2005, Baruch and Holton (2008) noted that an average response rate for studies that utilised data collected from organisations was 37.2%. The response rate was however greater in instances where a questionnaire was distributed using the ‘drop in and pick’ method. A mean response rate of 62.4% has been recorded. The study further illustrated that where various sectors were targeted for research instead of one, the response rate fell to 46.2% (Baruch & Holton, 2008). In spite of these fluctuations, “the

average aggregate response rate seems to have levelled out at about 50 percent” (Baruch & Holton, 2008: 1153). *In this present study, a minimum of 300 respondents were anticipated, translating into a 59% response rate.* This figure is big enough for factor analysis and structural equation modelling. Table 4.5 shows the sample distribution.

## Survey Sample distribution

Table 4.5: Amalgamated Sample distribution by positions

<b>Respondents</b>	<b>Technology</b>	<b>Beverages</b>	<b>Agriculture</b>	<b>Retail</b>	<b>Mining</b>	<b>Banking</b>	<b>Agro-industrial</b>	<b>Food</b>	<b>Insurance</b>	<b>Industrial</b>	<b>Building</b>	<b>Education</b>	<b>TOTAL</b>
Population (Organisations)	6	8	17	5	14	13	8	3	4	11	12	11	<b>112</b>
Sample (Organisations)	2	3	3	1	6	5	3	2	2	2	3	3	<b>35</b>
<i>Sample (respondents)</i>													
HR Managers	5	10	5	1	12	5	4	2	2	2	4	9	<b>61</b>
HR Department employees	20	35	9	4	31	14	10	10	7	14	20	26	<b>200</b>
IT Professionals	2	10	3	1	12	5	3	2	2	2	3	7	<b>52</b>
Line Managers	20	35	9	1	31	14	10	10	7	2	20	26	<b>197</b>
<b>TOTAL</b>	<b>47</b>	<b>90</b>	<b>26</b>	<b>7</b>	<b>86</b>	<b>38</b>	<b>27</b>	<b>24</b>	<b>18</b>	<b>20</b>	<b>47</b>	<b>68</b>	<b>510</b>

#### 4.8.2 Qualitative sample size

The guidelines established by Onwuegbuzie and Collins (2007) (Table 4.3) were applied to determine the study's qualitative sample size that is sufficiently large. Twelve participants (12) were used for the qualitative stage of the study (n=12).

Table 4.6: Minimum Sample Size Recommendations for Most Common Quantitative and Qualitative Research Designs

<b>Research Design/Method</b>	<b>Minimum Sample Size Suggestion</b>
Correlation	64 participants for one-tailed hypothesis; 82 participants for two-tailed hypotheses
Causal-Comparative	51 participants per group for one-tailed hypotheses 64 participants per group for two-tailed hypotheses
Case Study	3-5 participants
Phenomenological	≤10 interviews
Grounded Theory	15-20 interviews
<i>Data Collection Procedure</i>	
<b>Interview</b>	<b>12 participants</b>

Source: (Onwuegbuzie and Collins (2007: 289)

#### 4.8.3 Study Setting

This present study was carried out in Zimbabwe. That is, the respondents came from organisations that are domiciled in Zimbabwe. The organisations came from twelve sectors (Table 4.5). The study was cross-sectional in nature.

### 4.9 Data Collection Instruments

Two data collection instruments were utilised for this present study: questionnaires and interviews. Questionnaires were used to gather the quantitative data whilst semi-structured interviews were used in the second qualitative phase. Questionnaires appear in three types; open ended (unstructured), closed ended (structured) and a mixed one (closed and open items). In this study, a structured (closed) questionnaire was used for the first phase. A semi-structured interview method was chosen for the qualitative phase. There are four variations of interviews: the unstructured (open-ended), structured (closed-ended), semi-structured (interview guide) and informal conversation. In this study, an interview guide was used.

#### 4.9.1 Questionnaire

The questionnaire, developed from the literature review, was used to investigate relationships between variables. A drop off and pick up method was used to administer the questionnaire (Bryman, 2016). A drop and pick method was chosen due to its relative higher response rate (Baruch & Holton, 2008). The purpose of the survey research was to explore and explain whether the use of e-HRM is mediated by employee performance, job satisfaction and organisational politics. The independent variable is e-HRM use, with employee performance, job satisfaction and organisational politics being hypothesised as intervening variables. Electronic HRM macro-level consequences are collectively treated as a dependent variable. Subsequently, the present study focused on the association between employee performance, job satisfaction and organisational politics on one-hand and e-HRM consequences on the other. All variables except job satisfaction were measured on a 5 point Likert scale, ranging from disagree strongly to agree strongly (1= Disagree Strongly to 5= Agree Strongly). Job satisfaction construct was measured on a 5 point Likert scale, ranging from not satisfied to extremely satisfied (1= Not Satisfied to 5= Extremely Satisfied).

In this present study, a closed-ended questionnaire was used for the quantitative phase of the study. The use of questionnaires was motivated mainly by the advantages of the questionnaire method in general and closed-ended questionnaire in particular.

Table 4.7: Advantages and Disadvantages of questionnaires

<b>Advantages</b>	<b>Disadvantages</b>
Efficient means of collecting data on a large scale	Inaccurate answers at times
Easy to analyse if closed ended	Low return rate
Cost efficient	Difficult to analyse if open ended
Easy to gather data with	Inaccurate responses due to ambiguous questions

Source: (Developed for this study)

Existing validated scales were used to measure e-HRM use, employee performance, job satisfaction, organisational politics and e-HRM macro-level consequences variables. Use was made of e-HR use scales and e-HRM consequences developed for other research work. These scales were modified into ones used in this study.

#### 4.9.2 Scale development and measurement

*e-HRM use:* A 12 items instrument was developed from validated research instruments used by Ruel, Bondarouk & van der Velde, 2007 and Wahyudi & Park, 2014 to measure this construct. The instrument has three dimensions: ease of use, system usefulness and quality of system. The sample questions are show in Table 4.8. Its internal consistency was high at  $\alpha=.93$  (Ruel, Bondarouk & van der Velde, 2007 and Wahyudi & Park, 2014).

*Employee Performance:* A validated modified 25 items Goodman & Svyantek (1999) job performance scale was used to measure this construct. The scale has three dimensions: contextual performance, task performance and conscientiousness. Yusoff, Khan and Azam (2013) and, Yusoff, Ali and Khan (2014) found the instrument to be reliable and valid in their respective studies. An average Cronbach's alpha statistic of .85 has been reported for this scale (Yusoff et al., 2014).

*Job Satisfaction:* A validated 17 items modified Minnesota Satisfaction Questionnaire (MSQ) (Weiss, Davis, England & Lofquist, 1967): short form scale was used to measure job satisfaction. The questionnaire consists of two dimensions: intrinsic job satisfaction and extrinsic job satisfaction. A Cronbach alpha statistic of 0.96 (Mueller et al., 2018) has been reported for this scale. Research has shown the MSQ as a valid and reliable instrument to assess "job satisfaction of employees at selected organisations in South Africa" (Buitendach & Rothmann, 2009: 6). Items 15 and 16 were removed because they load differently for blacks and white respondents. Item 20 was also removed as it loaded on both the intrinsic and extrinsic subscales (Buitendach & Rothmann, 2009).

*Organisational Politics:* A validated 15 items modified Kacmar & Carlson (1997) perception of politics scale (POPS) was used to measure organisational politics. This is a 3-dimension instrument: co-worker and clique behaviour, line manager behaviour, and, pay and promotion policies (organisational policies and practices). A study by Brubaker (2012) showed that this instrument was consistently reliable across cultures. The instrument also retains consistent concurrent validity across cultures. An average Cronbach alpha coefficient of .80 has been realised on its implementation (Vigoda-Gadot & Kapun, 2005: Richardsen et al., 2016).

*e-HRM macro-level consequences:* The work of Ruel et al. (2007), Strohmeier (2009), Marler (2009), Parry & Tyson (2011), Bondarouk & Ruel (2012) and Panos & Bellou (2016) were reviewed to arrive at the present e-HRM macro-level consequences research instrument



(questionnaire). The 22 items instrument is divided into three dimensions: operational consequences, relational consequences and transformational consequences.

Table 4.8: Measurement of constructs

<b>Construct</b>	<b>Number of Items</b>	<b>Sample Questions</b>
e-HRM use	12	<ul style="list-style-type: none"> <li>• The frequency of e-HRM use is high.</li> <li>• The e-HRM system provides interactive features between users and the system.</li> <li>• The e-HRM system helps my organisation to achieve its goals.</li> </ul>
Employee Performance	25	<ul style="list-style-type: none"> <li>• I help other employees with their work when they have been absent.</li> <li>• My team exhibits punctuality arriving at work on time in the morning and after lunch breaks.</li> <li>• I consistently achieve the objectives of my job.</li> </ul>
Job Satisfaction	17	<ul style="list-style-type: none"> <li>• I like the way my boss handles his/her workers.</li> <li>• I am happy with the way company policies are put into practice.</li> </ul>
Organisational Politics	15	<ul style="list-style-type: none"> <li>• It is best not to rock the boat in this organisation.</li> <li>• When it comes to pay raise and promotion decisions, policies are irrelevant.</li> <li>• There has always been an influential group in the department that no one ever crosses.</li> <li>• Telling others what they want to hear is sometimes better than telling the truth.</li> </ul>
e-HRM Consequences	22	<ul style="list-style-type: none"> <li>• The HR function spends more time on strategic issues.</li> <li>• There is an open culture with information sharing encouraged.</li> <li>• The organisation can now employ and retain top talent.</li> <li>• HR strategy is aligned to the corporate strategy.</li> </ul>

Source: (Developed for this study)

Table 4.9: Dimensions of constructs

No	Variable	Definition	Dimensions	Source of Scale
1	Employee Performance	It is the aggregated value to an organisation of the discrete behavioural episodes that an individual performs over a given period of time (Sonnentag, Volmer & Spsychala, 2008).	i. Contextual Performance ii. Conscientiousness iii. Task Performance	Goodman & Svyantek (1999)
2	Job Satisfaction	It is the extent of positive emotional response to the job resulting from an employee's assessment of the job as fulfilling the individual's values (Amin, 2021).	i. Intrinsic job satisfaction ii. Extrinsic job satisfaction	Minnesota Satisfaction Questionnaire (Weiss, Davis, England & Lofquist, 1967)
3	Organisational Politics	A process that involves an individual's attribution to behaviours of self-serving intent, and is defined as an individual's attitude that strategically escalates self-interest and challenges the combined organizational goals. (Richardson, Traavik & Burke, 2016).	i. General Political Behaviour ii. Go along to Get along iii. Pay & Promotion policies	Kacmar & Carlson (1997)
4	e-HRM use	"The implementation and delivery of HR functionality enabled by a HRIS that connects employees, applicants, managers and the decisions they make." (Lukaszewski and Stone 2016: 29)	i. Perceived Ease of Use ii. System Usefulness iii. Quality of System	Wahyudi & Park, 2014 & Ruel, Bondarouk, 2020
5	e-HRM macro-level consequences	Macro-level consequences address organisational outcomes that could be differentiated into operational, relational and transformational (Strohmeier & Kabst, 2014; Bondarouk et al., 2017).	i. Operational Consequences ii. Relational Consequences iii. Transformational Consequences	Panos & Bellou (2016)

#### *4.9.3 Semi-structured Interviews*

The second phase of the sequential explanatory study entailed the use of semi-structured interviews (Appendix 2). A number of methods are available for implementing semi-structured interviews. These range from telephone, focus group discussions to face to face interviewing. For this study, face to face interviewing was conducted with 12 participants. The semi-structured interviews were conducted after analysing the quantitative data collected during the survey study. The aim was to go deeper into the results obtained from the survey. Semi-structured face-to-face interviews were conducted with HR managers, HR specialists, IT specialists and line managers. This qualitative aspect sought to clarify the following types of responses:

- Unclear,
- Unexpected,
- Non-significant or significant, and
- Outliers or Extreme cases.

The issues that the qualitative study sought to clarify pertained to the following aspects: the effect of e-HRM use on employee performance and the effect of employee performance on e-HRM macro level consequences. The study also sought to understand why the effect of e-HRM use was very low on employee performance, and greater on job satisfaction and organisational politics variables.

The semi-structured interviews have been chosen mainly for their advantages. The popularity of semi-structured interviews is propelled by the following reasons:

- Semi-structured interviews have proved to be versatile in that they can be used to inform a number of research areas (de Leeuw, 2008).
- Its structure can be varied so as to optimise data collection. The interviewer can change questions to focus on those that elicit the much needed information from participants.
- Semi-structured interviews enable reciprocity between interviewer and interviewee (Galletta, 2012),
- The interview is flexible (can change at any time) and could differ from one respondent to another (Fylan, 2005), and
- They allow interviewers to improvise follow-up questions based on participants' responses (Polit & Beck, 2010).

The challenge of semi-structured interviews is the need for experienced researchers who are capable of probing into situations as well as ask for explanations.

#### 4.10 Data Collection Procedures

Data was collected over two phases, the quantitative data collection phase and qualitative data collection phase.

##### 4.10.1 Survey phase

This phase involved the development of a self-administered questionnaire that was used to collect quantitative data. A three-stage approach was used to collect quantitative data: development of questionnaire, pilot testing and final questionnaire presentation and implementation.

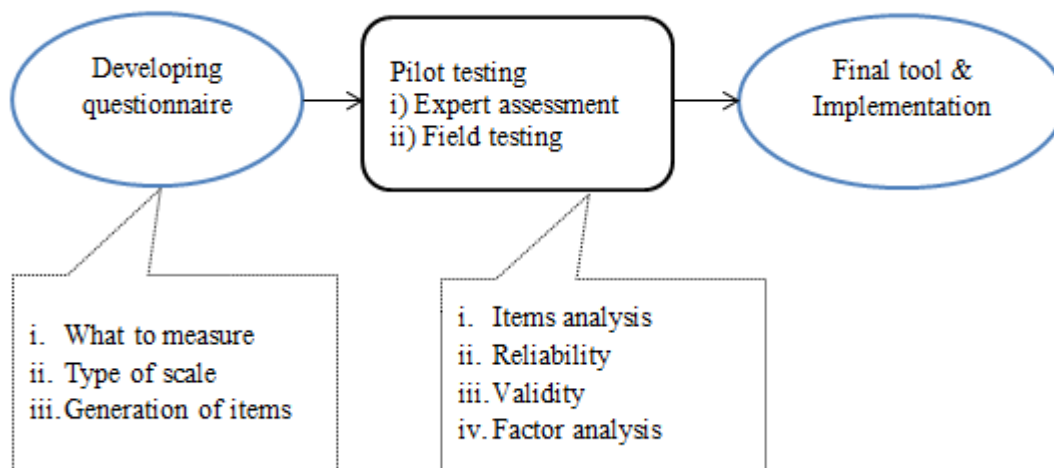


Figure 4.6 Questionnaire development stages (Source: Developed for this study)

The questionnaire was a result of an extensive review of literature wherein the variables under consideration were analysed. The study also made use of questionnaire items developed by other researchers. The questionnaire has six sections addressing the introductory aspects and five variables under study: e-HRM use, employee performance, job satisfaction, organisational politics and e-HRM macro-level consequences.

The questionnaire bore a cover letter whose purpose was to:

- Explain the purpose of the survey,
- Explain the survey's educational relevance and usage,

- Stresses voluntary participation of respondents such that if respondents felt further participation was not to their satisfaction, they would withdraw from participation, and
- Guarantee confidentiality and anonymity of respondents.

The questionnaire had instructions on how it had to be completed.

#### *Pilot testing the questionnaire*

The expert review technique was used to pre-test the questionnaire. This is an informal and individually based pre-testing technique. Three experienced researchers were used. The questionnaire was taken to the experts for them to review the questions and instrument items. Spaces were provided in the questionnaire under each question for the experts to note their suggestions.

Thereafter, field testing was undertaken with a representative sample of twenty (20) targeted respondents. This enabled the study to assess the respondents' views regarding the content of the questionnaire as well their reactions and feedback. The selected respondents were asked to comment on the data collection instrument, with assurances being given that their comments would be thought through. Of particular interest were comments pertaining to the length of the questionnaire (or alternatively the number of questions), understandability of questions that may affect the response rate, repetition of questions and adequacy of answer options. Some of the reasons for carrying out pilot studies are summarised in Table 4.10. The questionnaire was made up of validated scales as this enhances validity and reliability of a questionnaire (Bryman, 2016).

Table 4.10: Reasons for carrying out pilot studies

• Developing and testing adequacy of research instruments
• Assessing the feasibility of a (full-scale) study / survey
• Designing a research protocol
• Assessing whether the research protocol is realistic and workable
• Establishing whether the sampling frame and technique are effective
• Assessing the likely success of proposed recruitment approaches
• Identifying logistical problems which might occur using proposed methods
• Estimating variability in outcomes to help determining sample size
• Collecting preliminary data
• Determining what resources (finance, staff) are needed for a planned study
• Assessing the proposed data analysis techniques to uncover potential problems
• Developing a research question and research plan
• Training a researcher in as many elements of the research process as possible
• Convincing other stakeholders that the main study is worth supporting

Source: (Powell et al., 2021: 162)

#### *Questionnaire implementation*

The final instrument, with a cover letter, was ‘dropped and picked’ manually to and from respondents.

#### *4.10.2 Semi-structured interviews*

A qualitative approach was used to collect qualitative data from 12 participants, on emerging themes and follow up questions on ‘surprising’ results from the quantitative study. The participants came from different disciplinary backgrounds such as Human Resource professionals, Information Technology professionals and line managers). Interviews in general are the frequently utilised data collection method (Hackett & Strickland, 2018) and the “semi-structured in-depth interviews are the most widely used interview format for qualitative research and can occur either with an individual or in groups”(DiCicco-Bloom & Crabtree, 2006: 315). In this present study, interviews were carried out with individual participants. “Semi-structured interviews are simply conversations in which you know what you want to find out about – and to have a set of questions to ask and a good idea of what topics will be covered” (Fylan, 2005: 65). A semi-structured interview guide attempted to address complementary questions arising from the survey results. An attempt was made to

identify themes arising from the study, if any. The interviews were audiotaped to be transcribed later with the participants' consent. Each interview session, lasted on average, 30 minutes per participant.

The present study came up with an interview guide, which directed the conversation during the data collection process (Krauss, Hamzah, Omar, Suandi, Ismail & Zahari, 2009; Cridland, Jones, Caputi, & Magee, 2015). The questions were participant oriented (Creswell & Poth, 2016) and not leading (Turner, 2010), single faceted (Cridland et al., 2015) and open-ended (Chenail, 2011). The aim was to generate answers from participants that are spontaneous, in-depth (Baumbusch, 2010) and vivid (Dearnley, 2005). There was need to use what, who, where, when and how in order to encourage descriptive answers (Chenail, 2011). In some instances *why* was used (Turner, 2010).

Frameworks developed Kallio, Pietilä, Johnson and Kangasniemi, (2016) and Roberts, (2020) were used to develop a semi-structured interview guide. The process of developing an interview guide consists of four stages, namely:

- i. Formulating the preliminary interview guide,
- ii. Pilot testing the data collection instrument,
- iii. Presenting the final interview guide, and
- iv. Implementation.

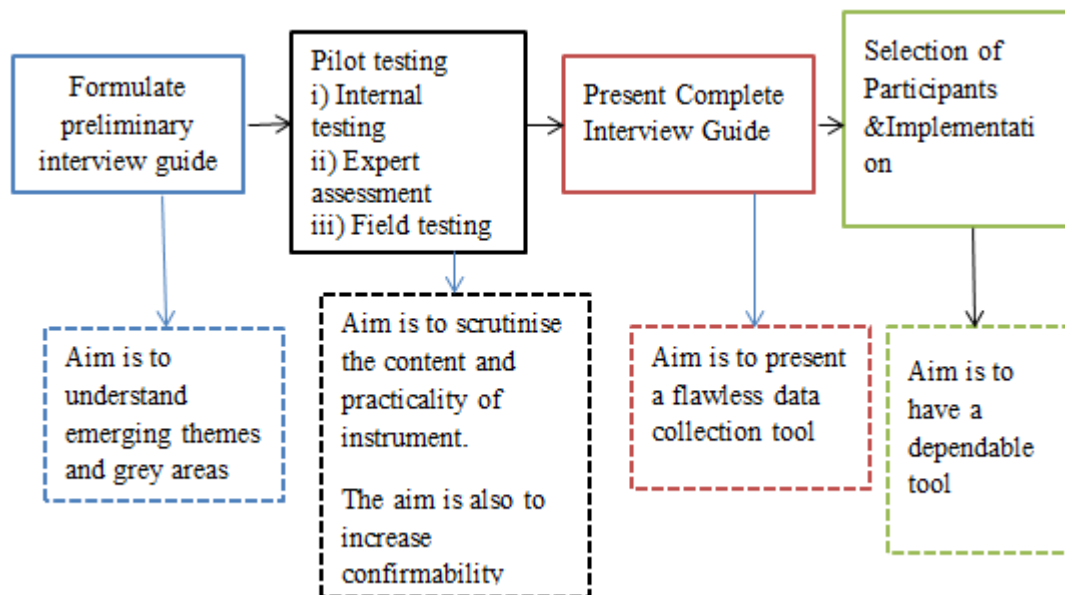


Figure 4.7 Interview guide development stages (Source: Developed for this study)

### *Pilot testing interview guide*

The pilot testing was done mainly to address instrumentation and bias issues. After pilot testing an interview guide, the study identified sections of the guide that were inappropriate or too complicated for participants. These were either modified and / or discarded. Pilot testing was conducted using three techniques: internal testing, expert assessment and field testing (Chenail, 2011). *Internal testing* involved the researcher acting the participant role. The researcher critically evaluated the guide questions by relating them to the research questions from the quantitative study. Such internal testing resulted in the removal of ambiguous and inappropriate leading questions (Kallio et al., 2016) and highlighting possible interviewer bias (Chenail, 2011). The alignment of questions to the research questions helped the study identify ambiguous questions. *Expert assessment* involved asking some data collection specialists and other researchers to have a look at the interview guide. The effect was to reword and rearrange some of the questions (Kallio et al., 2016). Research fellows at a local university were engaged to go through the research questions. Invaluable advice was rendered concerning rewording and removal of some questions. *Field testing* involved testing the guide with potential study participants. The interview guide was pilot tested on five (5) participants. The participants were representative of the wider study population. The aim was to make questions more relevant (Krauss et al., 2009). Thereafter, a complete interview guide was ready for data collection.

The interview addressed complementary questions obtained from the survey results. The interview focused more on the insignificant results and / or outliers from the quantitative study. Permission was sought to use audio equipment to record interviews. They were transcribed later. This promoted rapport between interviewer and interviewee. Where permission was not granted, note taking permission was requested.

The interviewer talked to and responded appropriately to participants. There was need to be sensitive to how participants were affected by the process and how they responded to different questions. The participants were given codes in terms of sector so that one got to know which category of participants had what type of views. This coding also helped to tabulate each participant's pattern of response.



## 4.11 Approaches to data analysis

### 4.11.1 Quantitative data

A number of statistical tests were conducted. These ranged from factor analysis to mediation analysis. The following statistical analyses were computed with the aid of IBM SPSS software package:

#### (i) Descriptive Statistics

This analysis looked at the description of the sample characteristics. Descriptive statistics of the survey responses, such as means and standard deviations, were computed to measure the distribution of values of all variables included in this study. Bivariate correlations were also calculated.

#### (ii) Reliability analysis

This analysis shows whether questionnaire items measure on a consistent basis what they are supposed to measure. The Cronbach's alpha coefficient was used to estimate the internal consistency or reliability of items in a questionnaire. Hair et al. (2010) considered an alpha coefficient of .70 and higher to indicate reliability of an instrument. Hair et al. (2013) said a questionnaire with an alpha ( $\alpha$ ) coefficient of 0.8 is considered reliable. *In this present study, a coefficient of 0.70 and higher was considered sufficient to indicate reliability.*

#### (iii) Sampling Adequacy

The KMO (Kaiser-Meyer-Olkin) index is a measure of sampling adequacy for each variable in a model. The index measures the suitability of the respondent data to factor analysis. The index ranges from 0 to 1. Hair et al. (2013) noted that a KMO index of 0.5 is deemed adequate for factor analysis. Tolvanen et al. (2020) argued for a KMO index of 0.6 as a minimum value for a good factor analysis. *In this present study, an index of 0.5 was used.*

#### (iv) Factor Analysis

Factor Analysis “is a multivariate statistical technique that takes a large set of variables and looks for a way that the data may be reduced or summarised using a smaller set of factors or components” (Williams, Onsman & Brown, 2010: 2). Factor analysis was used to identify a small number of factors that explain most of the variance in a much larger number of manifest variables. Two types of factor analyses were used:

- Exploratory Factor Analysis (EFA)

This analysis was used to explore the structure or interrelationship among the five variables in the model (e-HRM use, job satisfaction, employee performance, organisational politics and e-HRM macro-level consequences). The analysis determined whether data had singularity or multicollinearity problems. EFA was also used to determine the validity of the questionnaire.

- **Confirmatory Factor Analysis (CFA)**

CFA was used to test the internal structure of a questionnaire as well as the factor validity of the questionnaire. The analysis also helped establish the minimum number of factors that explain the common variance of the variables.

*(v) Mediation analysis with bootstrapping*

In order to test for the mediating effects, mediation analysis with bootstrapping was carried out. The analysis was employed to clarify whether the three variables of employee performance, job satisfaction and organisational politics are intervening variables in the research model. The analysis made use of PROCESS macro in SPSS. These analyses allowed the study to test the study's hypotheses and subsequently arrive at a model that maximises e-HRM consequences.

#### *4.11.2 Qualitative data*

Content analysis was used to analyse data collected through semi-structured interviews. The MAXQDA Analytics Pro 2020 (Release 20.2.2) software was used to aid the analysis (Figure 6.8). The data in audio tapes were transcribed verbatim. A five step process (Bennet, Barrett & Helmich, 2019) was used to analyse the qualitative data.

##### *Step 1: Tidying up data*

This stage involved listening to audio recordings several times. After data were transcribed, it was read and re-read multiple times. This allowed the study to have a good understanding of the data. There was need to organise the data so as to make it easy to use for analysis. This meant labelling all data, so that one knew where it came from and how it was collected. A master copy was created and stored away.

### *Stage 2: Focus the analysis*

This step involved finding out the items or units of analysis relevant to the research questions. These items could be identified out of their high or low frequency of existence (*frequency*), their omission when the researcher expected them to appear (*omission*) and when participants declare that they exist (*declaration*). This is the coding of the texts. Descriptive coding was adopted for this study. It is coding that “assigns labels to data to summarize in a word or short phrase- most often a noun- the basic topic of a passage of qualitative data” (Miles, Huberman, & Saldana, 2013: 8). A total of 17 codes were arrived at during this analysis (Figure 5.17). Initially, the coding was deductive in nature. Deductive coding produces a list of codes that come from the research model, research questions, hypotheses, problem areas and/or key variables that the study brought to the research (Miles et al., 2013). Other codes were, however, allowed to emerge progressively during data analysis (inductive coding). These codes were revised a number of times in order to create some unified structure.

### *Step 3: Categorise information (indexing the data)*

This step involved indexing the data. Pattern codes (categories) were derived. There are two ways of categorising data- using preset or emergent themes. In the preset categories approach, one starts with a list of categories in advance and searches the data for text that matches the themes (Bennet, Barrett & Helmich, 2019). The emergent categories approach looks for issues that recur in the data. “Categories are defined after you have worked with the data or as a result of working with the data’ (Bennet et al., 2019). Both approaches were used in this present study. Emerging categories were allowed to enrich the findings.

### *Step 4: Identification of patterns and connections within and between categories*

The analysis focused on identifying similarities and differences within and between categories. The step also involved identifying the relative importance of categories. A category frequency table shows the number of times a particular theme came up or the number of participants who referred to specific themes: this aided the analysis. There was also need to look at the relationships between categories and themes with a view to explaining why something occurs.

### *Step 5: Interpretation of data*

This step involved attaching meaning to the ‘themed’ data. Bennet et al. (2019) suggested the need for qualitative data to be displayed in the form of charts, tables and connections for

conclusions to be drawn. A number of questions the study needed to address in analysing qualitative data included the following:

- What theme is being demonstrated?
- What are the reasons for its emergence?
- What are the processes and consequences of the theme?
- How do participants cope with the theme?

#### 4.11.3 *Mixing of data*

The primary aim was to collect quantitative data, which is the primary database. The present study embedded qualitative data within a quantitative database. The qualitative database provided a supporting role in the study (Creswell, 2009).

### 4.12 **Validity and Reliability**

Any research inquiry is subject to trustworthiness analysis. To ensure the rigour of the inquiry, trustworthiness evaluation criteria were used. Research approaches “employ different evaluation criteria to ensure rigour of the inquiry because of the different philosophical and methodology assumptions that guide each approach” (Anney, 2014: 272). In quantitative approach, validity, reliability and objectivity are used to ensure the trustworthiness of the research findings. In qualitative research, researchers prefer dependability, credibility, transferability and confirmability to achieve the same objectives. Table 4.11 juxtaposes the two evaluation criteria.

Table 4.11: Trustworthiness evaluation criteria

<b>Quantitative Approach</b>	<b>Qualitative Approach</b>
Internal Validity	Credibility
	Authenticity
External Validity	Transferability
Reliability	Dependability
Objectivity	Confirmability

Source: (Shenton, 2004: 73)

#### *4.12.1 Quantitative Research*

##### *(a) Validity*

Validity is “the extent to which any measuring instrument measures what it is intended to measure” (Thatcher, 2010, :125). There are two variations of validity: internal and external validity.

##### *Internal Validity*

Internal validity refers to the ability of a research design to sustain the causal conclusions that is claimed for it. It is the extent to which the structure of a research design enables us to draw unambiguous conclusions from our results (Baldwin, 2018). For this to happen, there was need for a research design to eliminate alternate explanations between variables. The process of combining qualitative with quantitative methods created complementary strengths of the two approaches and resulted in non-overlapping weaknesses (Onwuegbuzie and Johnson, 2006). The study addressed face and content validity. To enhance face and content validity, validated questionnaires were used (Saunders et al., 2012).

##### *External validity*

It refers to the extent to which results from a study can be generalised beyond the particular study (Baldwin, 2018). For this to happen, the findings should be capable of being generalised to a wider population (population validity). A big sample allowed results thereof, to be extrapolated beyond the immediate research sample. In this present study, a sample of 510 was deemed big enough to ensure population validity.

##### *Reliability*

It refers to the “consistency, stability and repeatability of results, i.e. the result of a study is considered reliable if consistent results have been obtained in identical situations but different circumstances” (Suruch & Maslakci, 2020). Cronbach’s alpha statistic was used to assess internal consistency and reliability of the questionnaire.

#### *4.12.2 Qualitative Study*

Lietz and Zayas (2010) identified a four element framework for evaluating qualitative study, namely: credibility, dependability, transferability and confirmability. Qualitative study should achieve trustworthiness. Polit and Beck (2010) later added a fifth element of authenticity to the framework. These five elements make up what is now commonly referred to as the trustworthiness evaluation criteria (Creswell & Miler, 2000). Shenton (2004) as cited in Lietz

and Zayas (2010: 191) define trustworthiness as meaning “that the findings should represent as closely as possible the perspectives of the research participants.”

#### (a) Credibility

Credibility is defined as the trust that is placed in the correct interpretation of the research findings (Macnee & McCabe, 2008; Burke; Anney, 2014). It is designed to answer the essential question: do the results appear truthful (Billups, 2014). A number of techniques were available to enhance research findings’ credibility such as informants’ triangulation, member checks, authority of researcher and structural coherence (Kyngas, Kaariainen, & Elo, 2020). This present study made use of member checks to enhance credibility. Is it is a strategy that sought to collaborate the study findings by seeking feedback from the study participants (Padgett, 2008; Anney, 2014; Kyngas, Kaariainen, & Elo, 2020).

Once collected, analysed and interpreted, the data were sent to the participants who gave them, for them to verify if the interpretations made do reflect what they said or that there has been some wrong interpretations and misreporting. It looked at whether the study findings accurately represented the participants’ original views or opinions. (Onwuegbuzie & Leech, 2007; Holloway & Wheeler, 2010; Johnson, Adkins & Chauvin, 2020).

By including the voices of participants in the analysis and interpretation of data, the bias of the study in data interpretation was reduced. In some studies not all participants get the opportunity to feedback their interpretation of data; but a selected few participants (Anney, 2014). In this present study, six of the twelve respondents were asked to participate in the evaluation of analysed qualitative data. A four step procedure (Ivankova et al., 2006) was followed in executing this strategy:

- i. The researcher identified the six participants to provide the feedback. Stratified purposive sampling was used for this selection.
- ii. Participants were asked to comment on the accuracy of the transcribed text.
- iii. Participants commented on the accuracy of themes or categories as to whether they made sense.
- iv. The feedback was incorporated into the final narrative and interpretation.

In this manner, participants add credibility to the findings by having a chance to react to raw data and the final narrative.

#### (b) Transferability

It is “the degree to which the results of qualitative research can be transferred to other contexts with other respondents” (Anney, 2014: 277). Generalizability of findings could be enhanced by a number of strategies. In this study, transferability was enhanced by providing a ‘thick description’ of the research process. The thick description strategy will allow other researchers to replicate this study with similar conditions in different settings. Stratified purposive sampling also allows for replication. Only information rich participants were selected. This makes it easier for replication purposes. (Anney, 2014; Johnson et al., 2020).

#### (c) Dependability

It is the stability of the findings over time (Elo et al., 2014). The participants got the time to review the analysis and interpretation to ensure it reflects the opinions of informants. To enhance dependability, this present study documented in detail the research design and data collection processes. The study attached documents relating to the research process, such as the codebook. These documents allowed for the validation of the study process. This strategy is referred to as an audit trail. The researcher also critically reflected on own role within the data collection process as well as the analysis phase with the aim of understanding how this role could have influenced the findings.

#### (d) Confirmability

Baxter and Eyles (1997) cited in Anney (2014: 279) defined confirmability as “the degree to which results of an inquiry could be confirmed or collaborated by other researchers.” It is concerned with establishing that data and interpretation of the findings are not figments of the inquirer’s imagination but are clearly derived from the data (Harley & Cornelissen, 2020). To enhance this trustworthiness aspect, this study made use of an audit trail of the study process. There are six categories of information that needed to be collected to inform the audit process:

1. Raw data,
2. Data reduction and analysis notes,
3. Data reconstruction and synthesis products,
4. Process notes,
5. Materials related to intentions and dispositions, and
6. Preliminary development information (Carcary (2009)).

Guba (1985) cited in Carcary (2009: 15-16) claimed that “through examining these information categories, a researcher can better assess whether the study’s findings are grounded in the data, whether inferences are logical and so on.”

#### (e) Authenticity

The concept refers to the extent to which the research reflects the experiences of the respondents as they lived them and perceived them (Johnson et al., 2020). This could be enhanced through quoting enough raw narrative to convey a vivid picture and support each of the points” (audit trail) one makes from the analysis (Johnson et al., 2020).

### **4.13 Unit of Analysis**

Cooper and Schindler (2008: 234) defined the unit of analysis as “the level at which the research is performed and which objects are researched.” Researchers have argued as to the desirability of an accurate unit of analysis. Two contrasting views have posited that there is no single appropriate unit of analysis on one end and that there is a particular unit of analysis on the other. Due to the impact of the unit of analysis on research findings, most authors agree that the aim of a study should determine the unit of analysis. This present study sought to conceptualise a model wherein e-HRM macro-level consequences are maximised. This model considers the collective role of actors in the general e-HRM model: the line managers, HR professionals and IT personnel. These collective actors were the present study’s unit of analysis.

### **4.14 Ethical Considerations**

Research ethics “relates to questions about how we formulate and clarify our research topic, design our research and gain access, collect data, process and store our data, analyse data and write up our research findings in a moral and responsible way” (Saunders et al, 2012: 178). “Ethical decisions inform what you study, how you collect data, interpret and present knowledge and then how you disseminate that knowledge” (Daymon & Holloway, 2011: 76). A number of measures were put in place prior to, during and after data collection to ensure compliance to ethical conduct.



#### *4.14.1 Informed consent:*

The study approached individuals in positions of authority to be allowed to gain access into targeted organisations. The gatekeepers were convinced about the relevance of the study being done in their organisations. This included outlining the benefits of the involvement of the targeted organisations. After access was granted, *informed consent* was negotiated with potential respondents / participants. This involved ensuring that the study was culturally acceptable to the organisation and participants. Informed consent is an important aspect in research as “it protects research respondents / participants and ‘allows’ them to make informed choices” (NMB1, 2015: 9). In this present study, written consent was obtained from participants who participated in the study. This was important “as it ensures that the principle of respect for persons is acknowledged and adhered to” (NMB1, 2015: 9).

#### *4.14.2 No physical or emotional harm*

A key ethical consideration is to do no harm to respondents involved. Harm occurs when the respondents’ responses get known to those outside the confines of the research and threaten them with job loss or harassment and shame (Bahn, 2012). In this present study confidentiality and anonymity of respondents meant no harm was likely to occur in the form of victimisation and shame.

#### *4.14.3 Collection Phase: Survey Research*

A consent form was attached to questionnaires sent to respondents. The consent form requested respondents to confirm understanding the purpose of the study as well as understanding that their participation was voluntary. This voluntarism should have been understood to mean that respondents could pull out of the data collection process in the event they felt uncomfortable with the process. The study asked respondents to sign the form as a reflection of their consent.

#### *4.14.4 Collection Phase: Semi-structured interviews*

This phase involved communicating with selected participants. The study showed a professional and honest attitude towards the selected applicants. Permission was applied for, to interview employees selected as participants. The reasons for the second qualitative research stage were explained to the selected applicants. Consent forms were given to them to sign. Transcripts from the interview process were electronically returned to them for

verification. It was hoped that these proposed safeguards would ensure confidentiality and anonymity related to data collection. The principle of ‘respect for persons’ was upheld by the study during this phase (Terrel, 2011).

#### *4.14.5 Data Analysis phase: Anonymity and Confidentiality*

There was need for anonymity to “be maintained during data analysis (Terrell, 2011: 276). This entailed not disclosing participants’ names or organisations. The writing “should be free of bias towards any group” (Terrell, 2011: 276) or individual (s). The participants were assured of getting a copy of the study findings, upon request.

### **4.15 Limitations of the study**

The study was a cross-sectional one and as such it suffers from the well-documented limitations of ‘Neyman bias’ and population validity. Since it is a snapshot study, a cross sectional study tends to fail to capture processes that take time to materialise. As such if a study is replicated at another time, results may differ. The ‘Neyman bias’ refers to a limitation on the part of a study to explain a phenomenon that evolves over time. The present study also focused on organisations with an ability to finance an information system implementation. The variables may behave differently in situations where organisations are small and do not have requisite funding for such systems.

### **4.16 Summary of the chapter**

This chapter was about the research methodology employed in answering the research questions. The study was conducted from a pragmatist philosophical stance. This study adopted a partially mixed sequential dominant status explanatory design (QUAN-qual) wherein the first phase studied the effect of e-HRM use on employee performance, job satisfaction and organisational politics and subsequently on e-HRM macro-level consequences. The second phase explored in more depth the surprising results from the quantitative analysis. The chapter also specified the sample size, sampling procedure, data collection procedures as well as the statistics used to reduce and analyse data.

## **CHAPTER 5: DATA ANALYSIS, PRESENTATION AND DISCUSSION OF RESULTS**

### **5.1 Introduction**

This chapter analyses the quantitative and qualitative data as well as presents the results and the findings. The quantitative data were analysed with the aid of PROCESS procedure for SPSS version 3:5 software. The qualitative data were analysed with the aid of MAXQDA Analytics Pro 2020 (Release 20.2.2) software. The chapter is divided into five sections. Section one presents an analysis of the control variables in the study. Section 2 elaborates on factor analysis. Sections 3 and 4 assess the measurement and structural models respectively. The fifth and last sections present analysis and findings from the qualitative data.

### **5.2 Presentation of Quantitative Study Results**

#### *5.2.1 Descriptive Analysis:*

Descriptive analysis was employed in order to gain a feel for the collected data. A total of 510 questionnaires were distributed to 35 organisations drawn from the private and public sectors in Zimbabwe. Of these, 325 usable questionnaires were returned representing a response or return rate of 64 percent. A series of efforts were put into practice to improve the response rate (Table 5.1). A total of five reminders were pursued in order to increase the response rate (Edwards et al., 2009; Fan & Yan, 2010; Van Mol, 2016; Sebo et al., 2017; Cuane et al., 2019).

Table 5.1: Distribution and collection of completed questionnaires

<b>Dates</b>	<b>Process</b>	<b>Content</b>	<b>Number Collected</b>
01.07.2020 to 09.07.2020	Distribution	510 questionnaires distributed	-
10.07.2020	First collection	Collection from urban respondents	35
25.07.2020	Reminder 1 & 2 <sup>nd</sup> collection	Email sent to contact persons in urban organisations	25
10.08.2020	Third collection	Collection from rural based organisations	53
25.08.2020	Reminder 2 & 4 <sup>th</sup> collection	Email sent to contact persons in urban and rural organisations	42
09.09.2020	Reminder 3 & 5 <sup>th</sup> collection	Deadline of collection	51
17.10.2020	Reminder 4 & 6 <sup>th</sup> collection	Email sent to contact persons	44
23.10.2020	Reminder 5 & 7 <sup>th</sup> collection	Email sent to contact persons in organisations with owing forms	45
02.11.2020	Reminder 6 & 8 <sup>th</sup> collection	Communicated deadline for collection of completed questionnaires	10
05.11.2020	Final Collection	Appreciation email to all participating organisations	20
	<b>TOTAL</b>		<b>325</b>

*(a) Demographic variables of respondents*

The female-male ratio of the respondents was 50.5% to 49.5%, respectively. This reflects the gender distribution ratio in the wider population of the country, which is 52% female and 48% male (ZNSA, 2017). The age distribution of the respondents was as follows; 13% of the respondents were in the 18-30 years age group, 32% in the 31-40 years age group, 40% in the 41-50 years, 14% in the 51-60 years and 1% was, in the above 60 years age group. Forty percent of respondents (40%) were in the 41-50 age group (Figure 5.1).

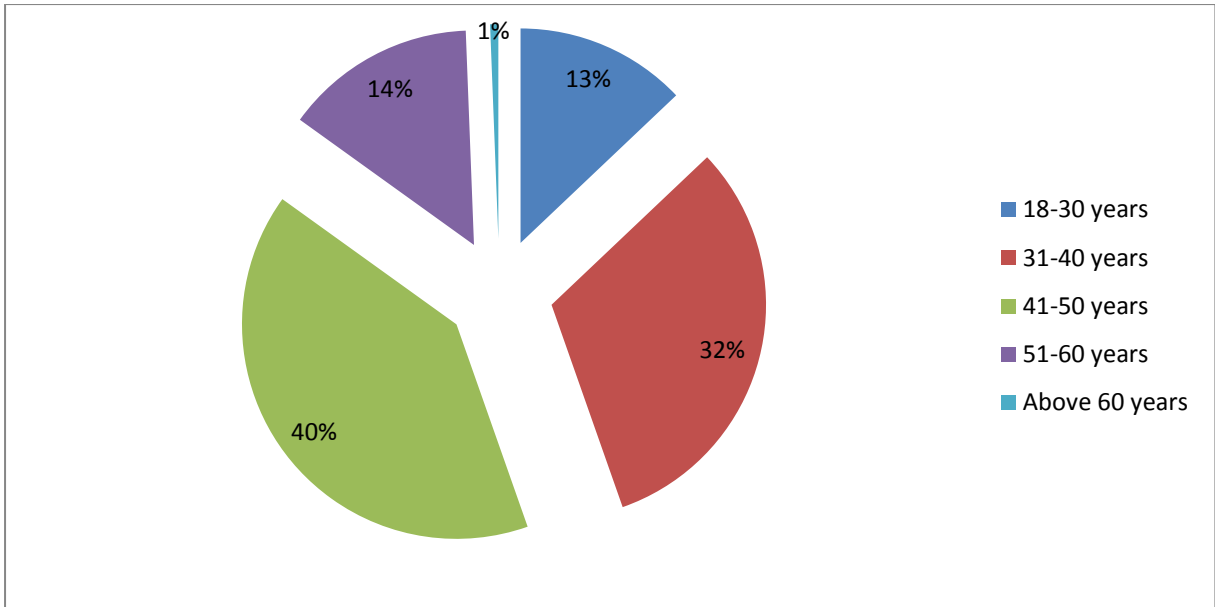


Figure 5.1 Age Distribution

*(b) Position of respondents*

The study sought to get views from Human Resource managers, Human Resources professionals, line management and Information Technology personnel. Forty-nine percent of respondents were human resource professionals (49.5%) and line managers (22.5%). The human resource managers (16.3%) and information technology personnel (11.7%) were in the minority as shown in figure 5.2.

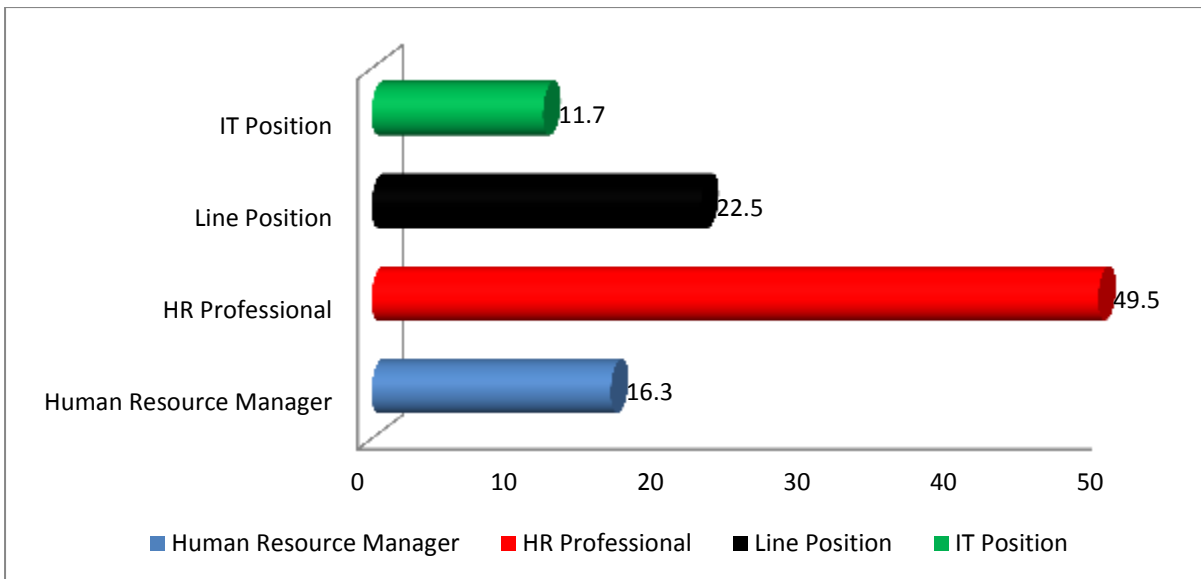


Figure 5.2 Positions of respondents

*(c) Distribution of respondents per sector*

The respondents came from 12 sectors (technology, beverages, banking, mining, insurance, education, building, industrial, food, agro-industrial, retail and agriculture). Four sectors contributed 51.7% of the respondents (beverages, mining, building and tertiary education). Forty-eight comma three percent (48.3%) of the respondents came from the technology, banking, insurance, agriculture, retail, agro-industrial, food and industrial sectors as shown in figure 5.3.

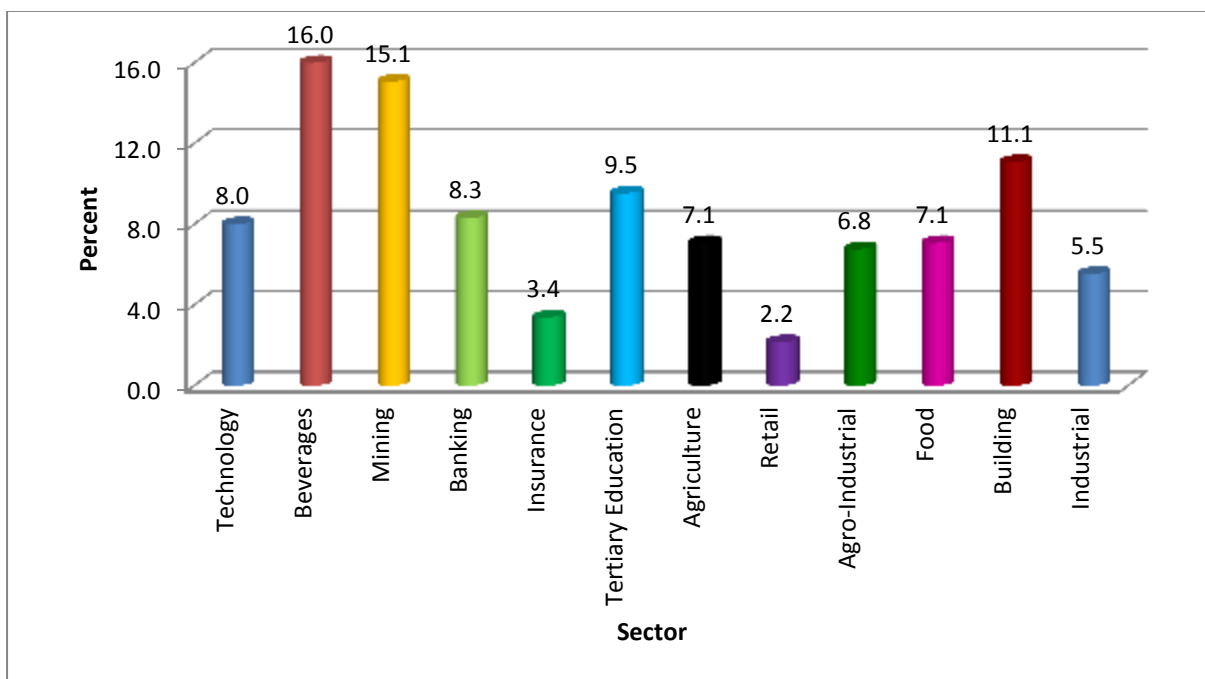


Figure 5.3 Distribution of respondents by sector

*(d) Tenure*

The tenure profile of survey respondents ranged from below 2 years to above 20 years. Their distribution is normal implying that it fits natural distribution of any employment phenomenon. Sixty two percent (62%) of the survey respondents shared between them 6 years to 15 years working experience (Figure 5.4).

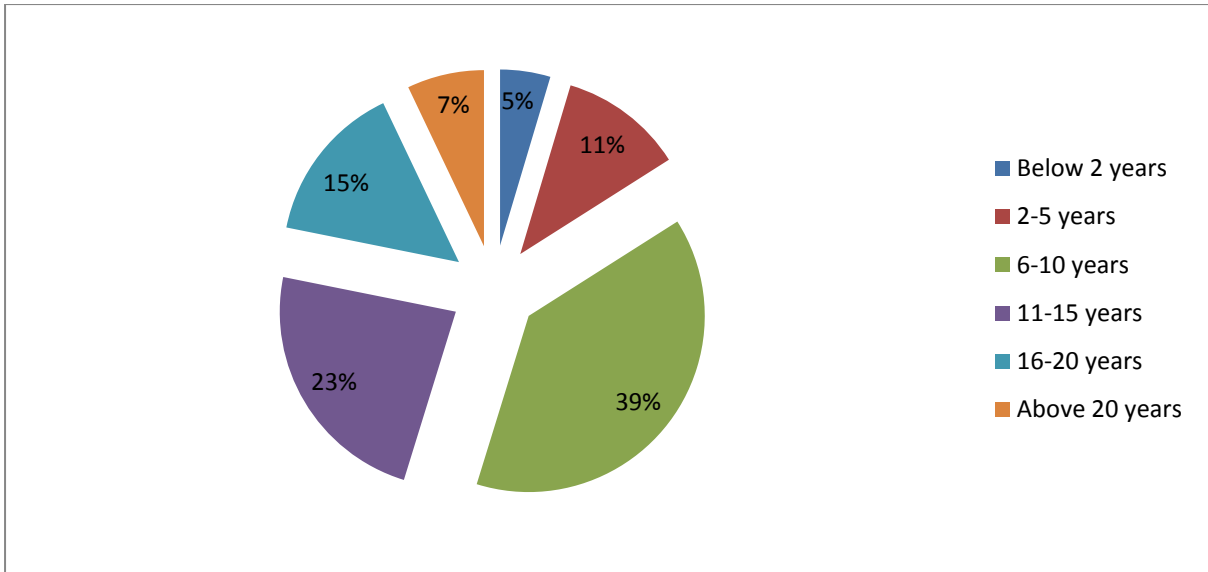


Figure 5.4 Tenure distribution of respondents

*(e) e-HRM applications used*

The e-recruitment (62%), e-performance (55%), ESD (44%), MSD (40%), e-learning (38%), time management (36%) and electronic payroll (34%) were the main e-HRM applications used (Figure 5.5). The balance in the use of the e-HRM applications allows for the attainment of both micro and macro level consequences.

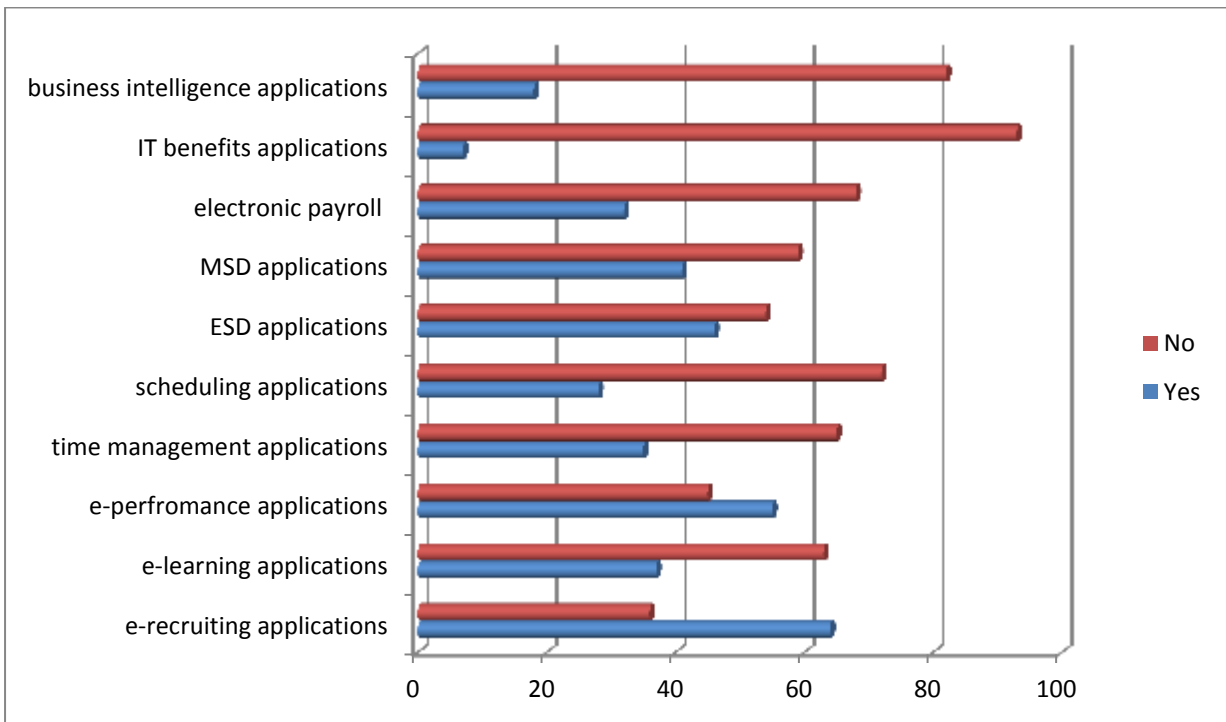


Figure 5.5 e-HRM Applications used

### **5.3 Factor Analysis**

In order to assess the reliability of the five measurement scales, factor analysis was performed. Factor analysis is a statistical method used to find a small number of unobserved variables (also referred to as factors or latent variables) which account for the covariance among a large set of observed (or manifest) variables (Nunes et al., 2020). The analysis is also used to assess the reliability and validity of measurement scales. In the present study, two types of factor analyses were carried out: Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). A number of tests were conducted to determine the suitability of the collected data set, for factor analysis.

The first test involved checking the data set for the presence of a patterned relationship amongst variables. Correlation matrices were generated for each of the five scales. Attention was paid to variables with relatively very low correlations ( $r < .30$ ). Very low correlations indicate a lack of patterned relationships. Furthermore, variables with relatively very high correlations ( $r > 0.9$ ) were removed from the analysis. High correlations, ( $r > 0.90$ ) indicate that collected data could have a multicollinearity problem (Hair, Black, Babin & Anderson, 2013). The Kaiser-Meyer Olkin Measure of Sampling Adequacy (KMO) score was also determined. A “score above 0.5 means that distinct and reliable factors could be produced” (Hair, et al., 2010:107). The last test involved examining the sample size. A sample of 510 respondents (in the present study) was deemed adequate to warrant factor analysis. Comrey and Lee (1999) suggested 100 as poor, 200 as fair, 300 as good, 500 as very good, and 1000 or more as excellent for factor analysis. Nunes et al. (2020) suggested having at least 300 cases for factor analysis. Bandalos & Finney (2018) suggested that sample sizes should be at least 100 or greater.

#### *5.3.1 Exploratory Factor Analysis*

The process of conducting exploratory factor analysis involved three stages:

- i. Extraction,
- ii. Rotation and
- iii. Interpretation.

The extraction stage refers to a process of determining the number of factors that best explain observed covariation matrix within the dataset. The result is to determine the fewest number of factors that explain the largest amount of variation among manifest variables (Hair et al.,



2010; Norris, Qureshi, Howitt & Cramer, 2014). Many extraction approaches exist including principal components analysis and principal axis factoring. Principal components analysis and principal axis factoring are the most used in research (Bandalos & Finney, 2018; Henson & Roberts, 2006; Nunes et al., 2020). Thompson (2004) noted that the practical differences between the two approaches are often insignificant especially, when variables have high reliability.

*In the present study, the principal axis factoring extraction approach was used.* Principal Axis Factor is recommended when researchers want to find out factors rather than components and when the data violate the assumption of multivariate normality (Costello & Osborne, 2005). Four extraction methods are popular in exploratory factor analysis: Total Variance Explained, Scree test, Eigenvalues and Parallel analysis (Mertler et al., 2021). *In the present study, Total Variance Explained and Scree Test methods were used to determine the appropriate number of factors.* This was done despite theoretical reasoning that stated a particular number of factors to be extracted.

One has to keep factors which in total explain for about 70% - 80% of the variance (Nunes et al., 2020). Realistically, researchers are happy with 50 to 75% of the variance explained. In the humanities, the explained variance is commonly as low as 50-60%. “In the natural sciences the factoring procedure usually should not be stopped until extracted factors account for at least 95% of the variance or until the last factor accounts for only a small portion (less than 5%). In contrast, in the social sciences, where information is often less precise, it is not uncommon to consider a solution that accounts for 60% of the total variance (and in some instances even less) as satisfactory” (Hair et al., 2010:107). *In the present study, a minimum of 60% of the total variance explained was adopted.*

Rotation is a method that allows for the creation of a simple structure. Rotation simply maximises the factor loadings for the items that best measure their respective factor. If factors are deemed to be correlated, an oblique solution is recommended. If factors are thought not to be correlated then an orthogonal solution is ideal (Hair et al., 2013). *In the present study, an oblique solution with Promax was used.* Oblique rotation produces factors that are correlated, which is often seen as producing more accurate results for research involving human behaviours, (Mertler et al., 2021; Yong & Pearce, 2013; Norris et al., 2014). The factor loading cut off point is subject to a lot of debate. Nevertheless cut off points of 0.30, 0.32, 0.35 and 0.40 tend to be recommended (Yong & Pearce, 2013). Factor loadings are useful in

determining the “substantive importance of a particular variable to a factor” (Field 2000: 425). *In the present study, a factor loading cut off mark was set at 0.30.* Factor loadings below 0.30 were not reflected in the output.

### *5.3.2 Measurement of ‘e-HRM use’ construct*

#### *(i) Exploratory Factor Analysis*

A number of statistical tests were conducted to gauge the suitability of the ‘e-HRM use’ dataset for factorability. The scale was first tested for its internal consistency. This scale was found to meet the internal consistency criterion as it has a Cronbach’s alpha statistic of 0.84 (Appendix 3, Table e-HRM 1). A correlation matrix determinant of  $0.003 > 0.001$  is indicative of respondents’ data having no multicollinearity problems (Yong & Pearce, 2013). In addition, the dataset shows patterned relationships amongst variables (Appendix 3, Table e-HRM 2). The absence of high correlations ( $r > 0.90$ ) and low correlations ( $r < 0.30$ ) are indications of patterned relationships and lack of multicollinearity problems (Yong & Pearce, 2013). The Barlett’s Test of Sphericity, significant level  $p < 0.05$  (Appendix 3, Table e-HRM 3) also confirms the existence of a patterned relationship amongst variables. There are no singularity (i.e., SMC close to 0) and multicollinearity issues (SMC close to 1.0) in the e-HRM dataset (Appendix 3, Table e-HRM 6). With a highly significant KMO score of 0.835 (Appendix 3, Table e-HRM 3) and individual diagonal elements (anti-image matrix), in the majority, above 0.70 (Appendix 3, Table e-HRM 4), exploratory factor analysis could be performed (Yong & Pearce, 2013). The values at the diagonal are more than the correlation values in the off-diagonal. This indicates discriminant validity (Bandalos & Finney, 2018).

Two latent factors; with at least three manifest variables per factor emanated from this EFA exercise (Table 5.1). The latent factors were named as: Perceived Ease of Use (PEOU) and System Usefulness (SU). The naming was based on the work of Ruel, Bondarouk and van der Velde (2007), and, Wahyudi and Park (2014). Quality of System construct had one manifest variable (QS3) that had a squared multiple correlation (SMC) of 0.995. This is indicative of an item with multicollinearity problems (Yong & Pearce, 2013). It had to be removed from the dataset. Quality of system item (QS4) cross-loaded significantly to the System Usefulness and Perceived Ease of Use latent factors (0.391 and 0.324 respectively). The item was removed from further consideration. This left the Quality of System latent factor having only two items. Since a minimum of three items is recommended for EFA, this latent factor was then removed from the dataset. For an item to be labelled as a factor it should have at least

three variables, although this depends on the design of the study (Mertler et al., 2021). As a general guide, rotated factors that have two or fewer variables should be interpreted with caution (Yong & Pearce, 2013).

This left two latent factors which are meaningful as their eigenvalues are greater than 1 (> 1). Factors 1 and 2 explain 51.08% and 20.72% of the variance respectively – a cumulative total of 71.80% (Hair et al., 2010; Field, 2018). The Extraction Sums of Squared Loadings provides similar information based only on the extracted factors. They cumulatively explain 59,64% of the variance (Appendix, Table e-HRM 5).

*(ii) Confirmatory Factor Analysis (CFA)*

CFA was conducted to confirm the constructs obtained using EFA. The theoretical model derived from EFA, was used as a-priori model for CFA. All manifest variables with factor loadings below 0.4 (<0.4) were dropped (as per Yong & Pearce, 2013; Bandalos & Finney, 2018). The Lisrel 8.8 statistical software was used for estimating the confirmatory factor model. The Joreskog and Sorbom’s Goodness of Fit Indices were used to evaluate the confirmatory factor model as per (West et al. 2012; Kline, 2016). These included the Goodness of Fit Index (GFI), the Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI),  $X^2/df$  ratio, Standardized Root Mean Square Residual (SRMR) and Average Value Explained (AVE). The following cut-off points are used in this present study;

Table 5.2: Goodness of Fit Indices

<b>Absolute Fit Indices</b>		
1	Goodness of Fit Index	$GFI \geq 0.95$
2	Adjusted Goodness of Fit Index	$AGFI \geq 0.95$
3	$X^2/df$ ratio	$X^2/df \leq 2$
4	Standardised Root Mean Square Residual	$SRMR \leq 0.05$
<b>Relative Fit Indices</b>		
1	Normed Fit Index	$NFI \geq 0.95$
<b>Non-centrality based indices</b>		
1	Root Mean Square Error of Approximation	$RMSEA \leq 0.05$
2	Comparative Fit Index	$CFI \geq 0.95$

(Adapted from West et al., 2012; Kline, 2016)

The retained manifest variables were six (PEOU2, PEOU, 3, PEOU4, SU5, SU7 and SU8) out of a total of 12 items in the initial scale (Table 5.3). These items made the final e-HRM

use scale. The scale has a KMO score of 0.765 and Cronbach alpha statistic of 0.773. The model scores represent a good fit as they satisfy the goodness of fit criteria (Table 5.4).

Table 5.3: Pattern Matrix(e-HRM use)

	Factors	
	1	2
Perceived Ease of Use 2 (PEOU2)	.929	
Perceived Ease of Use 4 (PEOU 4)	.777	
Perceived Ease of Use 3 (PEOU3)	.708	
System Usefulness 3 (SU7)		.869
System Usefulness 1 (SU5)		.724
System Usefulness 4 (SU8)		.531

Extraction Method: Principal Factor Analysis. Rotation Method: Promax with Kaiser Normalization.

Table 5.4: Goodness of Fit Indices

Cut-off for good-fit	CFI $\geq$ 0.95	RMSEA $<$ 0.05	SRMR $<$ 0.05	GFI $<$ 0.95	X <sup>2</sup> /df $<$ 2	NFI $<$ 0.95
e-HRM use indices	1.00	0.041	0.026	.99	1.55	0.99

### 5.3.3 Measurement of employee performance construct

#### (i) Exploratory Factor Analysis

A number of tests were conducted to gauge the suitability of the employee performance dataset for exploratory factor analysis. The scale was first tested for its internal consistency. It was found to meet the internal consistency criterion as it has a Cronbach's alpha statistic of .81 (Appendix 4, Table EP 1). A correlation matrix (Appendix 4, Table EP 2) shows the existence of a patterned relationship amongst variables. The Barlett's Test of Sphericity, significant level  $p < 0.05$ , (Appendix 4, Table EP 3) also confirms the existence of a patterned relationship amongst variables. The majority of squared multiple correlation scores range from 0.40 to 0.80 ( $0.40 \leq SMC \leq 0.80$ ), indicating a lack of singularity and multicollinearity problems with the dataset (Appendix 4, Table EP 6). With a KMO score of 0.876 (Table EP 3) and individual diagonal elements, in the majority, above 0.70 (Appendix 4, Table EP 4), exploratory factor analysis could be performed.

Manifest variables that cross-loaded significantly ( $r > 0.40$ ) onto two or more factors were discarded. Stevens (1992) cited in Field (2000:441) "recommends interpreting only factor

loadings with an absolute value greater than 0.4 (which explained around 16% of variance)”. Items with very low communalities were also discarded from further analysis (per Costello & Osborne, 2005). Three latent factors, Contextual performance, Task performance and Conscientiousness; emanated from this EFA exercise (Table 5.5). The naming was based on the work of Goodman & Svyantek (1999); Bakker & Bal (2010); Yusoff, Khan & Azam (2013) and Yusoff, Ali & Khan (2014). Task performance item 3 (EP19) was dropped for low factor loading (0.446) and low extracted communality of 0.377 (Table 5.6). Task performance 4 (EP20) was also discarded despite a factor loading of 0.569. This was necessitated by a very low communality of 0.322 (Kline, 2016). Task performance item 5 (EP21) was included due to high communality extracted (0.444). The final employee performance scale had nine items (Table 5.7).

The three factors are meaningful as their eigenvalues are greater than 1 ( $>1$ ). Factors 1, 2 and 3 explain 42.11%, 25.14% and 15.63% of the variance respectively – a cumulative total of 82.88%. The Extraction Sums of Squared Loadings provides similar information based only on the extracted factors. They cumulatively explain 74.43% of the variance (Appendix 4, Table EP 5).

Table 5.5: Preliminary Pattern Matrix

	Factor		
	1	2	3
Task Performance 1	.936		
Task Performance 2	.928		
Task Performance 4	.569		
Task Performance 5	.482		
Task Performance 3	.446		
Conscientiousness 1			
Conscientiousness 8		1.057	
Conscientiousness 9		.688	
Conscientiousness 7		.607	
Conscientiousness 3		.500	
Contextual Performance 5			.747
Contextual Performance 4			.746
Contextual Performance 6			.625
Contextual Performance 3			.510

Extraction Method: Principal Axis Factoring. Rotation Method: Promax with Kaiser Normalization.

Table 5.6: Employee performance communalities

	Initial	Extraction
Contextual Performance 3	.406	.405
Contextual Performance 4	.414	.506
Contextual Performance 5	.447	.555
Contextual Performance 6	.292	.365
Conscientiousness 3	.544	.458
Conscientiousness 7	.535	.525
Conscientiousness 8	.684	.920
Conscientiousness 9	.472	.451
Task Performance 1	.824	.803
Task Performance 2	.801	.724
Task Performance 4	.502	.355
Task Performance 5	.531	.425
Conscientiousness 1	.319	.310
Task Performance 3	.468	.377

Extraction Method: Principal Axis Factoring.

(ii) *Confirmatory Factor Analysis (CFA)*

CFA was conducted to confirm the constructs obtained using EFA. Lisrel 8.8 statistical software was used for estimating the confirmatory factor model. The Joreskog and Sorbom's Goodness of Fit Indices were used to evaluate the confirmatory factor analysis. These included the Goodness of Fit Index (GFI), the Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI),  $X^2/df$  ratio, Standardized Root Mean Square

Residual (SRMR) and Average Value Explained (AVE). A model re-specification was done to attain a lower chi-square and *p* value. An error covariance between EP14 and EP16 was added. The connection finds support from theory. When supervisors do not take unnecessary time off from work, it is highly likely that the team will not spend a great of time in idle conversation too. Conscientious individuals are likely to spend more time on the task and less time daydreaming (Tang et al., 2021). The final employee performance scale has nine items (Table 5.7). The values of the employee performance scale were constructed by summing the responses of the nine items on a 5-point Likert scale. The model scores represent a good fit (Table 5.8).

Table 5.7: Final Pattern Matrix

	Factor		
	1	2	3
Task Performance 1 (EP17)	.979		
Task Performance 5 (EP21)	.932		
Task Performance 2 (EP18)	.917		
Contextual Performance 5 (EP5)		.914	
Contextual Performance 4 (EP4)		.862	
Contextual Performance 6 (EP6)		.750	
Conscientiousness 9 (EP16)			.815
Conscientiousness 8 (EP15)			.776
Conscientiousness 7 (EP14)			.754

Extraction Method: Principal Axis Factoring. Rotation Method: Promax with Kaiser Normalization.

Table 5.8: Goodness of Fit Indices

Cut-off for good fit	CFI $\geq$ 0.95	RMSEA $<$ 0.05	SRMR $<$ 0.05	GFI $<$ 0.95	$\chi^2/df < 2$	NFI $>$ 0.95
Employee Performance indices	0.99	.039	0.040	.98	1.50	0.98

### 5.3.4 Measurement of job satisfaction construct

#### (i) Exploratory Factor Analysis

A number of statistical tests were conducted to gauge the suitability of the job satisfaction dataset for factorability. The scale was first tested for its internal consistency. It met the internal consistency criterion as it has a Cronbach's alpha statistic of 0.81 (Appendix 5, Table JS 1). A correlation matrix determinant of  $0.004 > 0.001$  is indicative of respondents data having no multicollinearity problems. In addition, the dataset shows patterned relationships amongst variables, again, indicating a lack of multicollinearity (Appendix 5, Table JS 2). The absence of both high correlations ( $r > 0.90$ ) and low correlations ( $r < 0.30$ ) are indications of patterned relationships and lack of multicollinearity issues. The Barlett's Test of Sphericity, significant level  $p < 0.05$ , (Appendix 5, Table JS 3) also confirms the existence of a patterned relationship amongst variables. With a highly significant KMO score of 0.764 (Appendix 5, Table JS 3) and individual diagonal elements (anti-image matrix), in the majority, above .70 (Appendix 5, Table JS 4), exploratory factor analysis can be performed. The values at the diagonal are more than the correlation values in the off-diagonal. This indicates discriminant validity.

Two latent factors: intrinsic job satisfaction and extrinsic job satisfaction emanated from this EFA exercise (Table 5.9). The names of the latent variables were informed by the work of Weiss et al., (1967) and Buitendach & Rothmann (2009). There were nine items in total (six intrinsic factors and three extrinsic factors). The intrinsic factors were made up of JS1, JS2, JS3, JS4, JS 8 and JS9. The extrinsic factors were JS 13, JS17 and JS19. Three intrinsic factors (JS1, JS4 and JS8) were dropped from further consideration due to either low factor loadings, low extraction communalities and / or high cross loadings. The final job satisfaction scale (Table 5.9) was made up of six items (JS2, JS3, JS9, JS13, JS17 and JS19). The two factors are meaningful as their eigenvalues are greater than 1 ( $>1$ ). Factors 1 and 2 explain 44.60%, and 40.74% of the variance respectively – a cumulative total of 85.34%. The Extraction Sums of Squared Loadings provides similar information based only on the extracted factors. They cumulatively explain 78.98% of the variance (Appendix 5, Table JS 5).



Table 5.9: Job Satisfaction Pattern Matrix

	Factor	
	1	2
Intrinsic job satisfaction 2 (JS2)	.909	
Intrinsic job satisfaction 3 (JS3)	.888	
Intrinsic job satisfaction 7 (JS9)	.880	
Extrinsic job satisfaction 8 (JS19)		.972
Extrinsic job satisfaction 4 (JS13)		.953
Extrinsic job satisfaction 6 (JS17)		.703

Extraction Method: Principal Axis Factoring. Rotation Method: Promax with Kaiser Normalization.

*(ii) Confirmatory Factor Analysis (CFA)*

CFA was conducted to confirm the constructs obtained using EFA. The Lisrel 8.8 statistical software was used for estimating confirmatory factor model. The Joreskog and Sorbom’s Goodness of Fit Indices were used to evaluate the confirmatory factor analysis. These included the Goodness of Fit Index (GFI), the Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI),  $X^2/df$  ratio, Standardized Root Mean Square Residual (SRMR) and Average Value Explained (AVE). The KMO and Cronbach alpha statistics for the scale are 0.719 and 0.702 respectively. The model scores represent a good fit as shown in Table 5. 10.

Table 5.10: Goodness of Fit Indices

Cut-off for good fit	CFI $\geq$ 0.95	RMSEA $\leq$ 0.05	SRMR $\leq$ 0.05	GFI $\geq$ 0.95	$X^2/df\leq$ 2	NFI $\geq$ 0.95
Job Satisfaction indices	1.00	.045	0.030	.99	1.66	0.98

*5.3.5 Measurement of Organisational Politics construct*

*(i) Exploratory Factor Analysis*

A number of tests were conducted to gauge the suitability of the organisational politics dataset for exploratory factor analysis. The scale was first tested for its internal consistency. This scale meets the internal consistency criterion as it has a Cronbach’s alpha statistic of .69 (Appendix 6, Table OP 1). The dataset shows patterned relationships amongst variables, indicating a lack of multicollinearity (Appendix 6, Table OP 2). Two latent constructs can be identified from the patterned relationship. The absence of low correlations ( $r < 0.30$ ) and high

correlations ( $r > 0.90$ ) together with relatively high squared multiple correlations (SMC) are indications of patterned relationships and a lack of multicollinearity and singularity problems (Appendix 6, Table OP 6). The Barlett’s Test of Sphericity, significant level  $p < 0.05$  (Appendix 6, Table OP3) also confirms the existence of a patterned relationship amongst variables. With a KMO score of 0.766 (Appendix 6, Table OP 3) and individual diagonal elements, in the 0.70 to 0.90 range (Appendix 6, Table OP 4), exploratory factor analysis could be performed.

Two latent factors, Go Along to Get Along (GAGA) and Pay and Promotion policies (PAPO); emanated from this EFA exercise (Table 5.11). The names of the latent variables were informed by the work of Kacmar & Carlson (1997) and Brubaker (2012). The general political behaviour latent construct was dropped from further analysis as its manifest variables loaded lowly ( $r < 0.40$ ). Manifest variables that cross-loaded significantly ( $r > 0,40$ ) onto any two factors or loaded lowly were dropped from further analysis. The two factors are meaningful as their eigenvalues are greater than 1 ( $>1$ ). Factors 1 and 2 explain 41.41%, and 37.26% of the variance respectively – a cumulative total of 78.66%. The Extraction Sums of Squared Loadings provides similar information based only on the extracted factors. They cumulatively explain 68.94% of the variance (Appendix, Table OP 5).

Table 5.11: Organisational Politics Pattern Matrix

	Factor	
	1	2
Pay & promotion policy 13 (OP13)	.974	
Pay & promotion policy 14 (OP14)	.853	
Pay & promotion policy 12 (OP12)	.748	
Go along to Get along 4 (OP7)		.896
Go along to Get along 3 (OP6)		.740
Go along to Get along 5 (OP8)		.733

Extraction Method: Principal Axis Factoring. Rotation Method: Promax with Kaiser Normalization.

*(ii) Confirmatory Factor Analysis (CFA)*

CFA was conducted to confirm the constructs obtained using EFA. Lisrel 8.8 statistical software was for estimating confirmatory factor model LISREL 8.8 (Jöreskog & Sörbom,

2004). The Joreskog and Sorbom's Goodness of Fit Indices were used to evaluate the confirmatory factor analysis. These included the Goodness of Fit Index (GFI), the Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI),  $X^2/df$  ratio, Standardized Root Mean Square Residual (SRMR) and Average Value Explained (AVE). The final POPS scale (Figure 5.11) has six items with a minimum of 0.733 factor loading (OP6, OP7, OP8, OP12, OP13 and OP14). The KMO score is 0.771 and the Cronbach alpha statistic is 0.7 for the scale. The values of the POPS scale were constructed by summing the responses of the six items on a 5-point Likert scale. The model scores represent a good fit as shown in Table 5. 12.

Table 5.12: Goodness of Fit Indices

Cut-off for good fit	CFI $\geq$ 0.95	RMSEA $\leq$ 0.05	SRMR $\leq$ 0.05	GFI $\geq$ 0.95	$X^2/df\leq$ 2	NFI $\geq$ 0.95
POPS indices	1.00	0.029	0.026	0.99	1.27	0.99

### 5.3.6 Measurement of e-HRM macro-level consequences construct

#### (i) Exploratory Factor Analysis

A number of tests were conducted to gauge the suitability of the e-HRM macro level consequences dataset for exploratory factor analysis. The scale was first tested for its internal consistency. It met the internal consistency criterion as it has a Cronbach's alpha statistic of .88 (Appendix 7, Table MACRO 1). The squared multiple correlation statistic ( $0.04 \leq SMC \leq 0.8$ ) is indicative of respondents' data having no multicollinearity or singularity problems (Appendix 7, Table MACRO 6). In addition, the dataset shows patterned relationships amongst variables, indicating a lack of multicollinearity issues (Appendix 7, Table MACRO 2). The absence of low correlations ( $r < 0.30$ ) and high correlations ( $r > 0.90$ ), are indications of patterned relationships and lack of multicollinearity issues. The Barlett's Test of Sphericity, significant level  $p < 0.05$ , (Appendix 7, Table MACRO 3) also confirms the existence of a patterned relationship amongst variables. With a KMO score of 0.83 (Appendix 7, Table MACRO 3) and individual diagonal elements, in the majority, above 0.80 (Appendix 7, Table MACRO 4), exploratory factor analysis could be performed.

Three latent factors, operational consequences, relational consequences and transformational consequences emanated from this EFA exercise (Table 5.13). The names of the latent variables were informed by the work of several researchers (for example, Strohmeier 2007;

Bondarouk & Ruel 2007 & Foster 2009; Bondarouk, 2020). Manifest variables that cross-loaded significantly ( $r > 0,40$ ) onto the two or more factors were discarded. The three factors are meaningful as their eigenvalues are greater than 1 ( $>1$ ). Factors 1, 2 and 3 explain 44.42%, 13.70% and 12.19% of the variance respectively – a cumulative total of 70.31% (total acceptable). The Extraction Sums of Squared Loadings provides similar information based only on the extracted factors. They cumulatively explain 57.73% of the variance (Appendix 7, Table MACRO 5).

*(ii) Confirmatory Factor Analysis (CFA)*

CFA was conducted to confirm the constructs obtained using EFA. Lisrel 8.8 statistical software was for estimating confirmatory factor model LISREL 8.8 (Jöreskog & Sörbom, 2004). The Joreskog and Sorbom's Goodness of Fit Indices were used to evaluate the confirmatory factor analysis. These included the Goodness of Fit Index (GFI), the Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI),  $X^2/df$  ratio, Standardized Root Mean Square Residual (SRMR) and Average Value Explained (AVE). Nine items in Table 5.13 (OC2, OC4, OC5, RC13, RC14, RC15, TC17, TC18 and TC20) formed the final e-HRM macro-level consequences scale. A composite scale of e-HRM macro-level consequences was constructed by summing the responses of the nine items on a 5-point Likert scale. The KMO and Cronbach alpha indices for the scale are 0.798 and 0.850 respectively. The model scores represent a good fit (Table 5. 14).

Table 5.13: e-HRM macro-level consequences: Pattern Matrix

	Factors		
	1	2	3
Relational Consequences: Improved HR Service 3 (RC15)	.960		
Relational Consequences: Improved HR Service 2 (RC14)	.927		
Relational Consequences: Improved HR Service 1 (RC13)	.876		
Transformational Consequences: Alignment 1 (TC17)		.949	
Transformational Consequences: Strategic focus 3 (TC20)		.858	
Transformational Consequences: Strategic focus 2 (TC18)		.815	
Operational Consequences: Efficiency 2 (OC5)			.913
Operational Consequences: Effectiveness 2 (OC2)			.766
Operational Consequences: Efficiency 1 (OC4)			.700

Extraction Method: Principal Axis Factoring. Rotation Method: Promax with Kaiser Normalization.

Table 5.14: Goodness of Fit Statistics

Cut-off for good fit	CFI $\geq$ 0.95	RMSEA $\leq$ 0.05	SRMR $\leq$ 0.05	GFI $\geq$ 0.95	X <sup>2</sup> /df $\leq$ 2	NFI $\geq$ 0.95
e-HRM macro-level indices	1.00	0.033	0.027	0.98	1.35	0.99

#### 5.4 Assessing the measurement model

Although the scales have been reported in literature, a scale validation process was nonetheless carried out. The purpose was to identify and eliminate poorly performing manifest variables for the respective constructs. Once the exploratory factor analysis and confirmatory factor analysis were performed, the measurement models were assessed. The models related to the following variables: e-HRM use, employee performance, job satisfaction, organisational politics and e-HRM macro level consequences. To validate the measurement models, the following tests were carried out:

- i. Reliability test (Cronbach's alpha statistic),
- ii. Manifest variable standardised path loadings
- iii. Composite reliability test, and
- iv. Discriminant validity

Cronbach's alpha statistic is a measure of the internal consistency of a test or scale. Internal consistency describes the extent to which all the items in a test measure the same concept or construct (Hair et al., 2013). The statistics for the five scales ranged from 0.7 to 0.9, which exceeded the recommended value of 0.70 by Hair et al., (2013). The factor loading of all items exceeded the recommended value of 0.50 by Hair et al. (2013). Other researchers (for example, Henseler et al., (2009) however postulate that the absolute standardised outer loadings should be greater than 0.7. The consensus is that the average standardised path loading should be 0.50. Composite reliability values, which depict the degree to which the instrument measures the concept that it is intended to measure ranged from 0.81 to 0.94, again exceeding the recommended value of 0.70 as per Hair et al., (2013). The Average Variance Extracted, which reflects the overall amount of variance in the indicators accounted for by the latent constructs, were in the range of 0.60 to 0.79 which again exceeded the recommended value of 0.50 as per Hair et al. (2013).

Discriminant validity was also tested. It is a measure that establishes the extent to which scores on a measure are not correlated with measures of variables that are conceptually distinct. According to Hair et al. (2013), the square root of Average Variance Extracted values (discriminant values) should be greater than the highest correlations with any other construct. The square root of every AVE value belonging to each latent construct is much larger than any correlation among any pair of latent constructs (Table 5.15). The discriminant validity values range from 0.77 to 0.89. In total, the measurement model demonstrated adequate validity and reliability.

Table 5.15: Scales' internal consistencies

<b>Construct</b>	<b>AVE<math>\geq</math>0.50</b>	<b>CR<math>\geq</math>0.70</b>	<b><math>\alpha\geq</math>0.7</b>	<b>DV</b>	<b>R</b>	<b>Loadings<math>&gt;</math>0.50</b>
e-HRM use <i>Minimum</i> <i>Maximum</i>	0.60	0.81	0.8	0.77	0.50	0.53 0.93
Employee performance <i>Minimum</i> <i>Maximum</i>	0.73	0.83	0.8	0.85	0.49	0.75 0.98
Organisational politics <i>Minimum</i> <i>Maximum</i>	0.60	0.94	0.7	0.77	0.09	0.73 0.97
Job satisfaction <i>Minimum</i> <i>Maximum</i>	0.79	0.90	0.7	0.89	0.07	0.70 0.97
e-HRM macro level consequences <i>Minimum</i> <i>Maximum</i>	0.69	0.90	0.9	0.83	0.50	0.70 0.96

Key:

- DV: Discriminant Value (square root of AVE)
- AVE: Average Variance Extracted
- CR: Composite Reliability
- R: Correlation amongst latent variables / constructs

Table 5.16 presents the means, standard deviations and correlations for variables studied. Electronic HRM use is positively and significantly correlated to e-HRM macro level consequences ( $r = 0.547$ ,  $p < 0.01$ ). It is also positively and significantly correlated to employee performance ( $r = 0.178$ ,  $p < 0.01$ ), job satisfaction ( $r = 0.226$ ,  $p < 0.01$ ) and organisational politics ( $r = 0.243$ ,  $p < 0.01$ ). Electronic HRM use is positively associated with the three 'mediating' variables.

Employee performance is positively and significantly correlated to e-HRM macro level consequences ( $r = 0.304$ ,  $p < 0.01$ ). Employee performance is also positively and significantly associated with job satisfaction ( $r = 0.275$ ,  $p = 0.01$ ) and organisational politics ( $r = 0.271$ ,  $p < 0.01$ ). Job satisfaction is positively and significantly correlated to e-HRM macro level consequences ( $r = 0.587$ ,  $p < 0.01$ ) and organisational politics ( $r = 0.181$ ,  $p < 0.01$ ). Organisational politics is positively and significantly correlated to e-HRM macro level consequences ( $r = 0.315$ ,  $p < 0.01$ ). Age is positively and significantly correlated to e-HRM use ( $r = 0.110$ ,  $p < 0.05$ ) and employee performance ( $r = 0.187$ ,  $p < 0.01$ ). Experience is positively and significantly correlated to employee performance ( $r = 0.187$ ,  $p < 0.01$ ). A set

of surprising results concern a lack of significant correlation between tenure and a number of variables; e-HRM use ( $r = 0.041$ ,  $p < 0.01$ ) and organisational politics ( $r = 0.067$ ,  $p < 0.01$ ).



Table 5.16: Means, standard deviations and correlations for variables under study

	Variable	Mean	SD	1	2	3	4	5	6	7
<b>1</b>	Age	45 years	0.911							
<b>2</b>	Experience (Tenure)	13 years	1.216	.830**						
<b>3</b>	Position			-.246**	-.195**					
<b>4</b>	Organisational Politics	4.05	0.521	.093	.067	-.010				
<b>5</b>	e-HRM macro level consequences	4.26	0.482	.109	.028	-.097	.315**			
<b>6</b>	Job Satisfaction	3.83	0.557	.054	.018	-.055	.181**	.587**		
<b>7</b>	e-HRM use	4.43	0.520	.110*	.041	-.151**	.243**	.547**	.226**	
<b>8</b>	Employee Performance	4.06	0.446	.187**	.171**	-.119*	.271**	.304**	.275**	.178**

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

N=325

## 5.5 Assessment of the structural model

This assessment followed the validation of the measurement models. All the hypotheses were tested using a conditional process modelling program: PROCESS procedure for SPSS version 3:5. The program utilises ordinary least squares framework to test for both direct and indirect effects (Hayes, 2012). The analysis employed PROCESS Model 4 and Model 6. The lower level (LL) and upper level (UL) of the regression coefficients were calculated based on 10000 iterations in a bootstrapping model and 95% level of confidence. Bootstrapping is a non-parametric approach that bypasses the problem of questionable distributional assumptions of traditional techniques and enables an accurate test of the indirect effect (Turnes & Ernst, 2015; Koopman, Howe, Hollenbeck & Sin 2015), even in small samples (Preacher & Hayes 2008). Importantly, bootstrapping provides more power in detecting indirect effects, but it does not show a higher type-I-error tendency. Therefore, one can say with 95% confidence, that mediation is present (Preacher & Hayes, 2004). In addition to simple and parallel mediation, serial mediation was also employed because the mediators are assumed to be causally related with a specific direction of causal flow.

The regression outputs were used to test total, direct and indirect effects models. The mediating effects models were based on the test logic of Baron and Kenny (1986) and Preacher and Hayes (2008) approach. According to Baron and Kenny (1986), a variable becomes a mediator when it meets the following three conditions. Firstly, variations in the levels of independent variable (IV) significantly account for variations in the mediator. Secondly, variations in the mediator significantly account for variations in the dependent variable (path *b*) in Figure 5.6. Thirdly, when paths *a* and *b* are controlled, a previously significant relation between the independent variable and dependent variable is no longer that significant. The interpretation of size of effect makes use of Acock's (2014) interpretation of beta ranges. Acock, (2014: 272) categorised the beta values as follows: " $\beta < .2$  = weak effect;  $.2 < \beta < .5$  = moderate effect; and  $\beta > .5$  = strong effect."

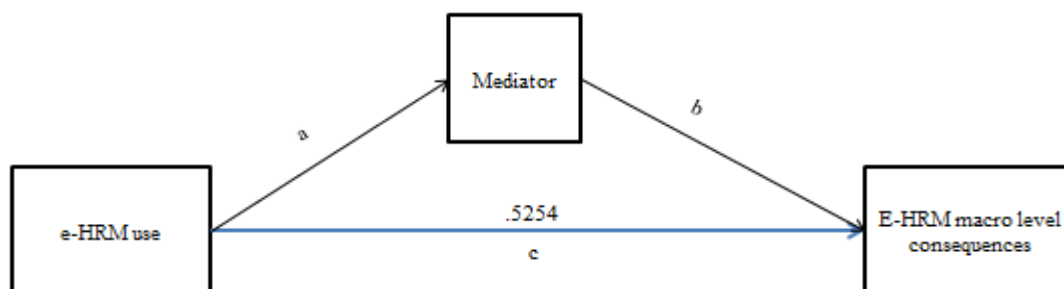


Figure 5.6 Effect of e-HRM use on e-HRM macro-level consequences

The test for mediation involves generating and estimating three regression equations:

- i) the independent variable significantly accounts for variations in the mediator variable,
- ii) the independent variable significantly accounts for variations in the dependent variable, and
- iii) the variations in the mediator variable significantly account for variations in the dependent variable. If these conditions hold, then the effect of the IV on DV must be less in the third equation than in the second. The lower levels (LL) and upper levels (UL) of the regression coefficients were calculated in a bootstrapping model. If the confidence interval (95%) spans '0', then a mediation hypothesis is insignificant. If it does not, the mediation hypothesis is significant.

The Preacher and Hayes (2008) approach involves the following:

- i. A statistically significant indirect effect is evidence of mediation ( $t > 1.96$ , two tailed  $p < 0.05$ ), and
- ii. If the confidence intervals for the indirect effect do not straddle a zero (0) in between, this supports the presence of mediation effect.

The strength of the indirect and the direct effects will determine the result of the mediation analysis (MacKinnon et al., 2007). If the indirect effect is significant, then it is considered to be successful mediation (MacKinnon et al., 2007). When this occurs, the direct effect may disappear or remain significant. If it disappears, then there is complete mediation (i.e., the effect of X on Y is entirely due to M), whereas if it remains, then there is partial mediation (i.e., M does account for part of the relationship between X and Y, but, X still predicts Y

even when taking into account M (MacKinnon et al., 2007). This indirect effect was tested using bias corrected bootstrapping. The Baron and Kenny (1986) logic as well as the Preacher & Hayes (2008) approach were used as evidence of mediation in the present study.

The prerequisite to mediation test is to establish a positive effect of an independent variable (e-HRM use) on the dependent variable (e-HRM macro level consequences). The coefficient of e-HRM use on the dependent variable is strong and significant ( $\beta=0.5254$ ,  $se = 0.0448$ ,  $p < 0.05$ ). This coefficient reflects the direct effect of e-HRM use on e-HRM macro-level consequences within the path model (Figure 5.6). This model is significant and explains 0.2987 (30%) of the variance in e-HRM macro level consequences (R-sq values in Table 5.17, Model 1).

This prerequisite (correlation between variables) is the basis for mediation testing as well as the basis for ruling out moderation testing. “It is desirable that the moderator variable be uncorrelated with both the independent and dependent variables in order to provide a clearly interpretable interaction term” (Baron & Kenny, 1986: 1174).

Hypotheses testing were conducted based on the regression output from SEM analysis. Tables 5.17 to 5.25 inclusive, summarise the regression estimates, which were used to decide on the significance or insignificance of the mediator variables in the research framework. Three levels of mediation analyses were performed: simple, parallel and serial mediation. Hypotheses 1-3 were subjected to simple, parallel and serial mediation analyses. Hypotheses 4-7 were subjected to serial mediation analyses only.

### *5.5.1 Hypothesis 1*

*There exists an indirect effect of e-HRM use on e-HRM macro level consequences through employee performance only (ab)*

The coefficient of e-HRM use on employee performance (Table 5.17, Model 2) is positive and significant ( $\beta=0.1639$ ,  $se = 0.0503$ ,  $p = 0.012$ ). The coefficient of the mediator variable on e-HRM macro level consequences (Table 5.17, Model 3) is also positive and significant ( $\beta=0.2236$ ,  $se = 0.0481$ ,  $p = < 0.05$ ). The direct effect of e-HRM use on the dependent variable is strong, positive and significant ( $\beta=0.488$ ,  $se = 0.441$ ,  $p = < 0.05$ ). According to the Baron & Kenny (1986) logic, a reduction in the independent variable coefficient from 0.5254 to 0.4888 ( $\beta=0.4888$ ,  $se = 0.0441$ ,  $p < 0.05$ ) when a mediator is included is evidence of

mediation. The indirect effect of e-HRM use on e-HRM macro-level consequences is positive and statistically significant  $\beta=0.0367$ ,  $\text{BootSE} = 0.0141$ ,  $p < 0.05$ ). The lower and upper bound of the confidence interval is 0.0121 and 0.0676. In this instance, zero falls outside the confidence interval (Table 5.17, Model 3). This model is significant and indicates a good overall model quality, explaining 0.3429 (34%) of the variance in e-HRM macro level consequences (R-sq values in Table 5.17, Model 3). The better the mediation of employee performance, the better the chances of realising intended e-HRM macro level consequences. Hypothesis 1 is therefore accepted. The results of the simple mediation analysis show that there is successful partial mediation (Appendix 8, Table PROC 1).

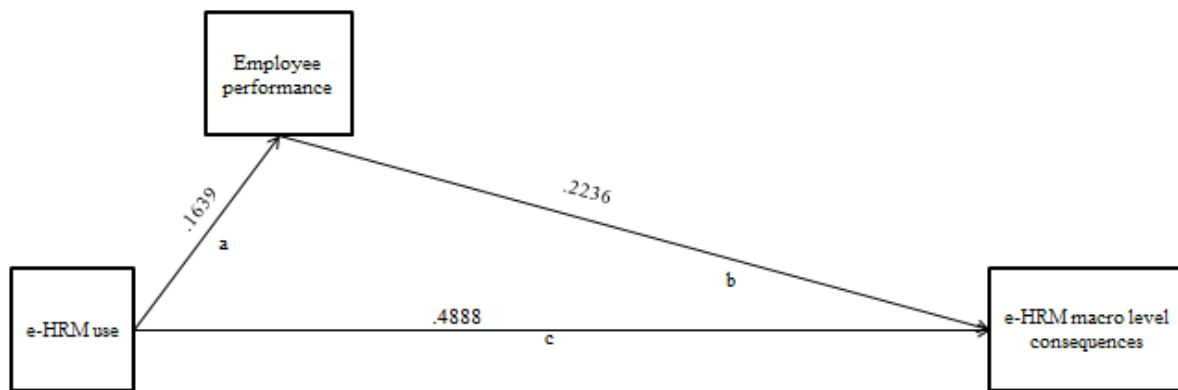


Figure 5.7 The indirect effect of e-HRM use on e-HRM macro level consequences through employee performance only.

Table 5.17: e-HRM use and employee performance  
Model 1

Total effect of e-HRM use on e-HRM macro level consequences

Effect	se	t	p	LLCI	ULCI
.5254	.0448	11.7296	.0000	.4373	.6136

R	R-sq.	MSE	F	df1	df2	P
.5465	.2987	.1635	137.5834	1.0000	323.0000	.0000

*Model 2*

Outcome variable: Employee performance

	coeff	se	t	p	LLCI	ULCI
Constant	3.4142	.2250	15.1726	.0000	2.9715	3.8569
e-HRM use	.1639	.0503	3.2603	.0012	.0650	.2628

*Model 3*

Outcome variable: e-HRM macro-level consequences

	coeff	se	t	p	LLCI	ULCI
Constant	1.1591	.2544	4.5556	.0000	.6585	1.6596
e-HRM use	.4888	.0441	11.0737	.0000	.4020	.5756
Employee performance	.2236	.0481	4.6518	.0000	.1290	.3182
R-sq.	<b>.3429</b>			.0000		

*Total indirect effects model*

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
Employee Performance	<b>.0367</b>	.0141	.0121	.0676

*5.5.2 Hypothesis 2*

*There exists an indirect effect of e-HRM use on e-HRM macro level consequences through job satisfaction only (de).*

The coefficient of e-HRM use on the job satisfaction (Table 5.18, Model 1) is positive and significant ( $\beta = 0.2350$ ,  $se = 0.0563$ ,  $p < 0.05$ ). The coefficient of job satisfaction on e-HRM macro level consequences (dependent variable) is strong, positive and significant ( $\beta=0.4520$ ,  $se = 0.0365$ ,  $p < 0.05$ ) as shown in figure 5.8 and Table 5.18, Model 2). The direct effect of e-HRM use on the dependent variable is positive and significant ( $\beta=0.4192$ ,  $se = 0.0379$ ,  $p < 0.05$ ). According to the Baron and Kenny (1986) logic, a reduction in the independent variable coefficient from 0.5254 to 0.4192 when a mediator is included is evidence of mediation. The total indirect effect of e-HRM use on e-HRM macro-level consequences (Table 5.18, Model 2) is positive and statistically significant ( $\beta=0.1062$ ,  $BootSE = 0.0259$ ,  $p < 0.05$ ). Zero falls outside of the calculated confidence interval of 0.0576 to 0.1592. The mediation effects model identifies partial mediation linked to job satisfaction. This model is significant and indicates a good overall model quality, explaining 0.5253 (53%) of the variance in e-HRM macro level consequences (Table 5.18, Model 2). The better the level of job satisfaction mediation, the higher the chances of attaining e-HRM macro level

consequences. The results of the simple mediation analysis show that there is successful partial mediation. Hypothesis 2 is therefore accepted (Appendix 9, Table PROC 2).

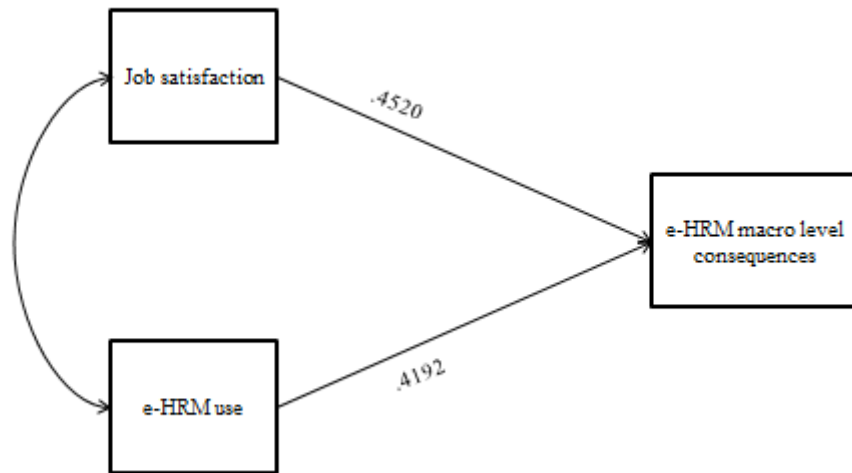


Figure 5.8 The indirect effect of e-HRM use on e-HRM macro level consequences through job satisfaction only.

Table 5.18: e-HRM use and job satisfaction  
Model Summary

*Model 1*

Outcome variable: Job satisfaction

	<b>coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
Constant	2.6930	.2522	10.6783	.0000	2.1968	3.1891
e-HRM use <sub>2</sub>	.2350	.0563	4.1718	.0000	.1242	.3459

*Model 2*

Outcome variable: e-HRM macro-level consequences

	<b>coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
<b>Constant</b>	.7053	.1922	3.6698	.0003	.3272	1.0834
e-HRM use	.4192	.0379	11.0629	.0000	.3447	.4938
Job satisfaction	.4520	.0365	12.3989	.0000	.3803	.5237
R-sq.	<b>.5253</b>			.0000		

*Total indirect effects model*

	<b>Effect</b>	<b>BootSE</b>	<b>BootLLCI</b>	<b>BootULCI</b>
Job satisfaction	<b>.1062</b>	.0259	.0576	.1592

### 5.5.3 Hypothesis 3

*There exists an indirect effect of e-HRM use on e-HRM macro level consequences through organisational politics only (path fg).*

The coefficient of e-HRM use on organisational politics is positive and significant ( $\beta = 0.2531$ ,  $se = 0.0561$ ,  $p < 0.05$ ). The coefficient of the mediator variable on the dependent variable is also positive and significant ( $\beta = 0.1793$ ,  $se = 0.0434$ ,  $p < 0.05$ ) as shown in figure 5.9. The mediation effects model found mediation linked to organisational politics. The direct effect of e-HRM use on the dependent variable is strong, positive and significant ( $\beta=0.4801$ ,  $se = 0.0451$ ,  $p<0.05$ ). According to the Baron and Kenny (1986) logic, a reduction in the independent variable coefficient from 0.5254 to 0.4801 when a mediator is included is evidence of mediation. The indirect effect of e-HRM use on e-HRM macro-level consequences is positive and statistically significant  $\beta = 0.0454$ ,  $BootSE = 0.0153$ ,  $p < 0.05$ . Zero falls outside of the calculated interval of 0.0194 to 0.0791 (Table 5.19). This model is significant and indicates a good overall model quality, explaining 0.3341 (33%) of the variance in e-HRM macro level consequences (Table 5.19, Model 2). The results of the simple mediation analysis show that there is successful partial mediation (Appendix 10, Table PROC 3). The third hypothesis is duly accepted.

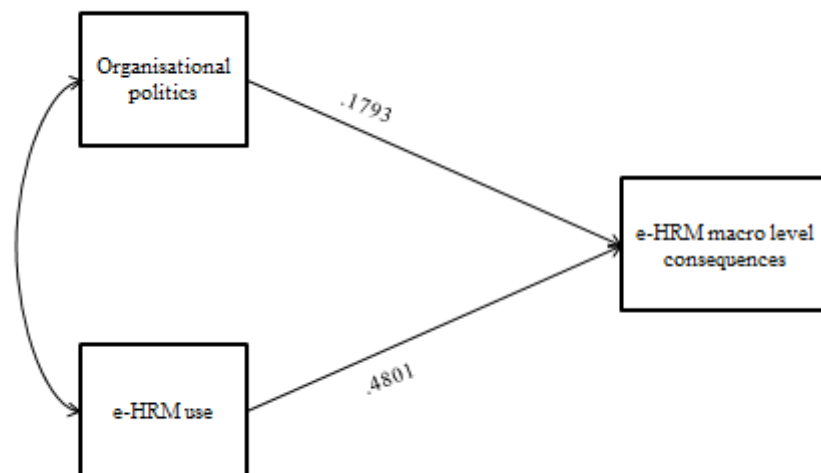


Figure 5.9 The indirect effect of e-HRM use on e-HRM macro level consequences through organisational politics only



Table 5.19: e-HRM use and organisational politics

*Model 1*

Outcome variable: Organisational politics (POPS)

	<b>coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
Constant	2.9261	.2512	11.6492	.0000	2.4320	3.4203
e-HRM use	.2531	.0561	4.5097	.0000	.1427	.3635

*Model 2*

Outcome variable: e-HRM macro-level consequences

	<b>coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
Constant	1.3977	.2332	5.9934	.0000	.9389	1.8566
e-HRM use	.4801	.0451	10.6503	.0000	.3914	.5687
POPS	.1793	.0434	4.1371	.0000	.0941	.2646
R-sq.	<b>.3341</b>			.0000		

*Total indirect s effect model (e-HRM use on e-HRM macro level consequences)*

Indirect effect(s) of X on Y:

	<b>Effect</b>	<b>BootSE</b>	<b>BootLLCI</b>	<b>BootULCI</b>
POPS (Organisational Politics)	<b>.0454</b>	.0153	.0194	.0791

Results from simple mediation analyses found partial mediation linked to employee performance, job satisfaction and organisational politics (Table. 5.20).

Table 5.20: Summary of simple mediation

	$\beta$	<b>se</b>	<b>LLCI</b>	<b>p</b>	<b>ULCI</b>	<b>Remarks</b>	<b>Model Quality (R<sup>2</sup>)</b>
Employee performance	0.0367	0.0142	0.0121	.0000	0.0676	SPM	.34
Job Satisfaction	0.1062	0.0259	0.0576	.0000	0.1592	SPM	.53
Organisational politics	0.0454	0.0153	0.0194	.0000	0.0791	SPM	.33

Key: SPM: Successful partial mediation

Given that there are three mediators, it was deemed interesting to know if any of the three variables drove the mediation more than the others or if all the three variables equally contribute to the mediation. Parallel mediation was performed. In this mediation process, mediators are allowed to correlate but not to causally influence each other (Figure 5.10).

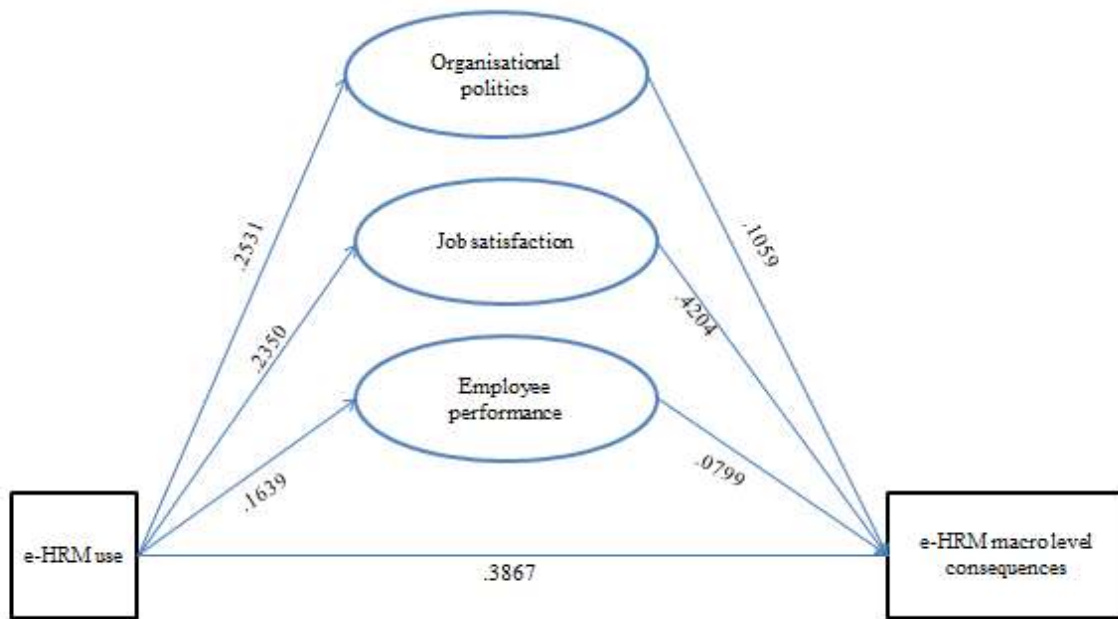


Figure 5.10 Parallel mediation of employee performance, job satisfaction and organisational politics

The indirect effect of e-HRM use on e-HRM macro-level consequences through employee performance is positive but statistically insignificant ( $\beta = 0.0131$ , BootSE = 0.0100,  $p = 0.06$ ). Zero falls within the calculated interval of -0.0039 to 0.0355 (Table 5.21). The indirect effect of e-HRM use on e-HRM macro-level consequences through job satisfaction is positive and statistically significant ( $\beta = 0.0988$ , BootSE = 0.0243,  $p < 0.05$ ). Zero falls outside the calculated interval of 0.0544 to 0.1497 (Table 5.21). The indirect effect of e-HRM use on e-HRM macro-level consequences through organisational politics is positive and statistically significant ( $\beta = 0.0268$ , BootSE = 0.0124,  $p < 0.05$ ). Zero falls outside the calculated interval of 0.0051 to 0.0538 (Appendix 11, Table 5.21). The direct effect of e-HRM use on the dependent variable is strong, positive and significant ( $\beta=0.3867$ , se = 0.441,  $p<0.05$ ). According to the Baron and Kenny (1986) logic, a reduction in the independent variable coefficient from 0.5254 to 0.3867 when a mediator is included is evidence of mediation. This model is significant and indicates a good overall model quality, explaining 0.2987 (30%) of the variance ( $R^2$ ) in e-HRM macro level consequences (Appendix 11).

Table 5.21: Summary of Indirect effects of X on Y (Parallel Mediation)

	$\beta$	se	p	LLCI	ULCI	Remarks
Employee performance	0.0131	0.0100	.0601	-0.0039	0.0355	UPM
Job Satisfaction	0.0988	0.0243	.0000	0.0544	0.1497	SPM
Organisational politics	0.0268	0.0124	.0046	0.0051	0.0538	SPM

Key: UPM: Unsuccessful partial mediation:  
SPM: Successful partial mediation

The mediation effects model found no mediation linked to employee performance. The mediation effects model found mediation linked to job satisfaction and organisational politics. Job satisfaction and organisational politics are, thus, the two significant mediators. In instances where causality between mediators is assumed, serial mediation is then a preferred model. Hypotheses 4 to 7 inclusive are based on this assumption.

#### 5.5.4 Hypothesis 4

*There exists an indirect effect of e-HRM use on e-HRM macro-level consequences through employee performance and job satisfaction in serial (ahe)*

The coefficient of e-HRM use on employee performance variable (Table 5.22, Model 1) is positive and significant ( $\beta = 0.1639$ ,  $se = 0.0503$ ,  $p < 0.05$ ). The coefficient of this mediator variable on job satisfaction variable (Table 5.22, Model 2) is also positive and significant ( $\beta = 0.2748$ ,  $se = 0.0605$ ,  $p < 0.05$ ). The coefficient of job satisfaction on e-HRM macro level consequences is positive and significant ( $\beta = 0.4289$ ,  $se = 0.0372$ ,  $p < 0.05$ ). The mediation effects model found mediation linked to the two mediators: the strength of the coefficient for e-HRM use was reduced. The total indirect effect of e-HRM use on e-HRM macro-level consequences is positive and statistically significant ( $\beta = 0.1181$ ,  $BootSE = 0.0275$ ,  $p < 0.05$ ). The indirect effect of the path (e-HRM use  $\rightarrow$  employee performance  $\rightarrow$  job satisfaction  $\rightarrow$  e-HRM macro level consequences) is positive and statistically significant ( $\beta = 0.0193$ ,  $bootSE = 0.0077$ ,  $p < 0.05$ ). Zero falls outside of the calculated 95% confidence interval of 0.0062 to 0.0358 (Table 5.22, Model 2). The direct effect of e-HRM use on the dependent variable is strong, positive and significant ( $\beta = 0.4073$ ,  $se = 0.0379$ ,  $p < 0.05$ ). According to the Baron

and Kenny (1986) logic, a reduction in the independent variable coefficient from 0.5254 to 0.4073 when mediators are included is evidence of mediation.

This model is significant and indicates a good overall model quality, explaining 0.5346 (53%) of the variance ( $R^2$ ) in e-HRM macro level consequences (Table 5.22, Model 2). This means that the better are the levels of employee performance and job satisfaction, the higher the chances of obtaining e-HRM macro level consequences. The fourth hypothesis is therefore accepted. There is evidence of partial mediation for the two mediators (Appendix 12, Table PROC 4).

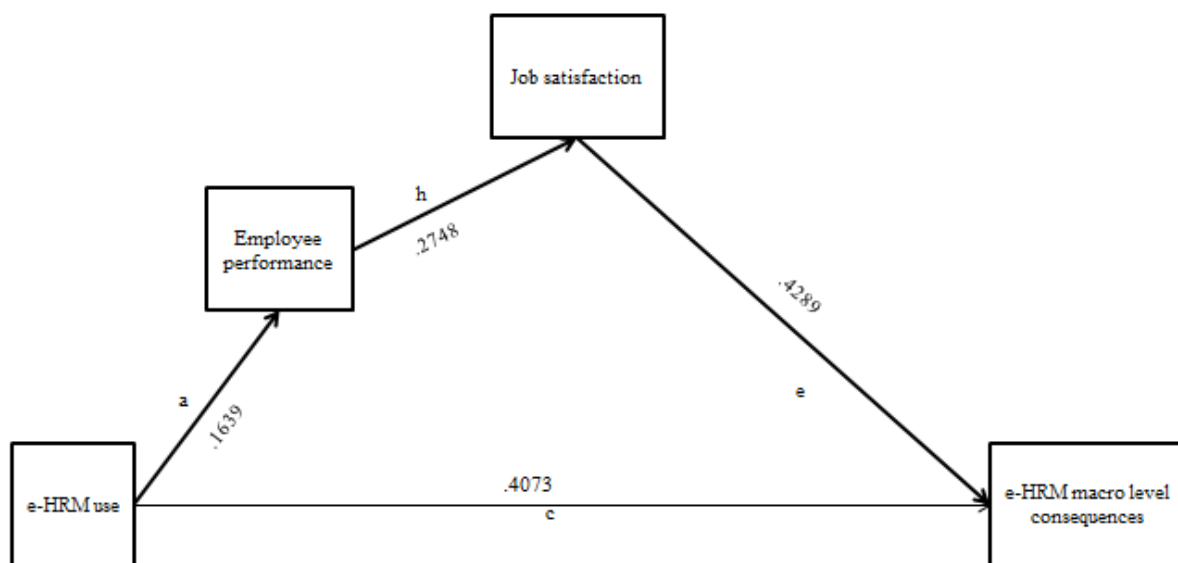


Figure 5.11 Employee performance & job satisfaction as mediators in serial.

Table 5.22: e-HRM use and employee performance and job satisfaction as mediators in serial

*Model 1*

Outcome variable: job satisfaction

	<b>coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
<b>Constant</b>	1.7547	.3205	5.4756	.0000	1.1243	2.3852
e-HRM use	.1900	.0556	3.41740	.0007	.0806	.2994
Employee performance	.2748	.0605	4.5385	.0000	.1557	.3939

Model 2

Outcome variable: e-HRM macro-level consequences

	<b>coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
<b>Constant</b>	.4065	.2242	1.8132	.0707	-.0346	.8476
e-HRM use	.4073	.0379	10.7550	.0000	.3328	.4818
Employee performance	.1058	.0418	2.5307	.0119	.0235	.1880
Job satisfaction	.4289	.0373	11.5003	.0000	.3555	.5022
R-sq.	<b>.5346</b>			.0000		

Total effect model

Total, direct, and indirect effects of X on Y

Total effect of X on Y

<b>Effect</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
.5254	.0448	11.7296	.0000	.4373	.6136

Direct effect of X on Y

<b>Effect</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
.4073	.0379	10.7550	.0000	.3328	.4818

Indirect effect(s) of X on Y:

	<b>Effect</b>	<b>BootSE</b>	<b>BootLLCI</b>	<b>BootULCI</b>
Total	<b>.1181</b>	.0275	.0681	.1756
Ind1	.0173	.0099	.0015	.0398
Ind2	.0815	.0245	.0359	.1321
Ind3	<b>.0193</b>	.0077	.0062	.0358

Indirect effect key:

Ind1 e-HRM use -> employee performance -> e-HRM macro-level consequences

Ind2 e-HRM use -> job satisfaction -> e-HRM macro-level consequences

Ind3 e-HRM use -> employee performance -> job satisfaction -> e-HRM macro-level consequences

5.5.5 Hypothesis 5

*There exists an indirect effect of e-HRM use on e-HRM macro-level consequences through employee performance and organisational politics (OP) in serial (aig).*

The coefficient of e-HRM use on employee performance variable (Table 5.17, Model 1) is positive and significant ( $\beta = 0.1639$ ,  $se = 0.0503$ ,  $p < 0.05$ ). The coefficient of this mediator variable on the second mediator (POPS) variable is positive and significant ( $\beta = 0.2665$ ,  $se = 0.0604$ ,  $p < 0.05$ ) (Figure 5.11 & Table 5.23, Model 2). Organisational politics as a mediator has a positive and significant effect on the dependent variable ( $\beta = 0.1395$ ,  $se = 0.0437$ ,  $p = .0016$ ). The mediation effects model found partial mediation linked to the two mediators: the strength of the coefficient for e-HRM use was reduced. The indirect effect of e-HRM use on

e-HRM macro-level consequences is positive and statistically significant  $\beta = 0.0061$ , BootSE = 0.0039,  $p < 0.05$ ). Zero falls outside of the calculated 95% confidence interval of 0.0008 to 0.0156 (Table 5.23). The direct effect of e-HRM use on the dependent variable is strong, positive and significant ( $\beta=0.4596$ , se = 0.445,  $p= < 0.05$ ). According to the Baron and Kenny (1986) logic, a reduction in the independent variable coefficient from 0.5254 to 0.4596 when a mediator is included is evidence of mediation (Table 5.23).

This model is significant and indicates a good overall model quality, explaining 0.3631 (36%) of the variance in e-HRM macro level consequences (Table 5.23, Model 2). This means that the better the levels of employee performance and organisational politics, the higher the chances of obtaining e-HRM macro level consequences. The fifth hypothesis is therefore accepted. There is evidence of partial mediation for the two mediators (Appendix 13, Table PROC 5).

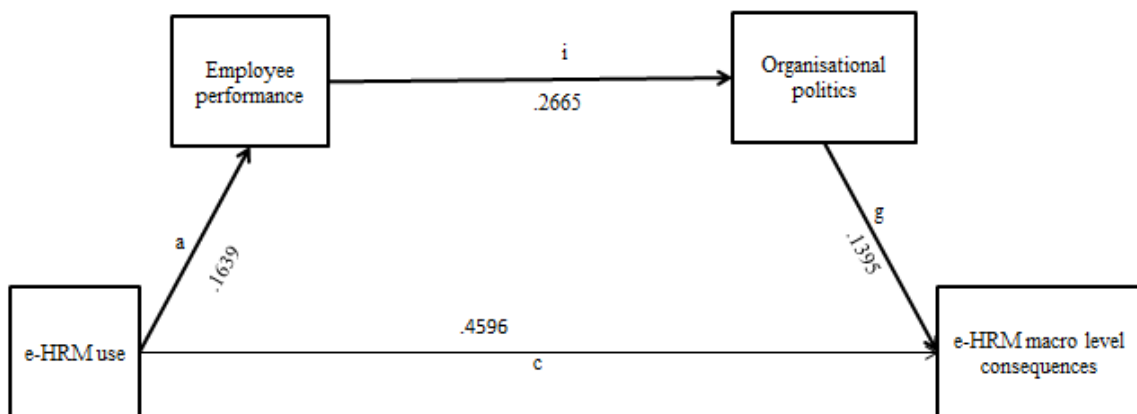


Figure 5.12 Employee performance & organisational politics as mediators in serial

Table 5.23:e-HRM use and ‘employee performance and organisational politics’ as mediators in serial

Model 1

Outcome variable: Organisational politics

	coeff	se	t	p	LLCI	ULCI
Constant	2.0163	.3197	6.3064	.0000	1.3873	2.6453
e-HRM use	.2094	.0555	3.7749	.0002	.1003	.3185
employee performance	.2665	.0604	4.4113	.0000	.1467	.3853

Model 2

Outcome variable: e-HRM macro-level consequences

	<b>coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
Constant	.8718	.2659	3.3012	.0011	.3547	1.4010
e-HRM use	.4596	.0445	10.3334	.0000	.3721	.5471
Employee performance	.1865	.0488	3.8198	.0002	.0904	.2825
POPS	.1395	.0437	3.1896	.0016	.0534	.2255
R-sq.	<b>.3631</b>			.0000		

(c) Total effect model

Total, direct, and indirect effects of X on Y

Total effect of X on Y

<b>Effect</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
.5254	.0448	11.7296	.0000	.4373	.6136

Direct effect of X on Y

<b>Effect</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
.4596	.0445	10.3334	.0000	.3721	.5471

Indirect effect(s) of X on Y:

	<b>Effect</b>	<b>BootSE</b>	<b>BootLLCI</b>	<b>BootULCI</b>
Total	<b>.0659</b>	.0179	.0330	.1027
Ind1	.0306	.0133	.0081	.0598
Ind2	.0292	.0124	.0077	.0561
Ind3	<b>.0061</b>	.0039	.0008	.0156

Indirect effect key:

Ind1: e-HRM use -> employee performance -> e-HRM macro-level consequences

Ind2: e-HRM use -> POPS -> e-HRM macro-level consequences

Ind3: e-HRM use -> employee performance -> POPS -> e-HRM macro-level consequences

### 5.5.6 Hypothesis 6

*There exists an indirect effect of e-HRM use on e-HRM macro-level consequences through job satisfaction (JS) and organisational politics (OP) in serial (d<sub>1</sub>)*

The coefficient of e-HRM use on job satisfaction variable (Table 5.18, Model 1) is positive and significant ( $\beta = 0.2350$ ,  $se = 0.0563$ ,  $p < 0.05$ ). The coefficient of this mediator variable on organisational politics (POPS) variable is also positive and significant ( $\beta = 0.1330$ ,  $se = 0.0550$ ,  $p < 0.05$ ) (Figure 5.12, Model 2). The mediation effects model found mediation linked to the two mediators. The indirect effect of e-HRM use on e-HRM macro-level consequences is positive and statistically significant  $\beta = 0.0038$ ,  $BootSE = 0.0025$ ,  $p < 0.05$ ). Zero falls outside of the calculated interval of 0.0002 to 0.0097 (Table 5.24). The direct effect

of e-HRM use on the dependent variable is strong, positive and significant ( $\beta=0.3924$ ,  $se = 0.0382$ ,  $p=<0.05$ ). According to the Baron and Kenny (1986) logic, a reduction in the independent variable coefficient from 0.5254 to 0.3924 when a mediator is included is evidence of mediation.

This means that the better (more positive) these mediating variables are, the greater the generation of e-HRM macro level consequences. This model is significant and indicates a good overall model quality, explaining 0.5411 (54%) of the variance in e-HRM macro level consequences (Table 5.24, Model 2). The sixth hypothesis is therefore accepted. There is evidence of successful mediation of these two mediators (Appendix 14, Table PROC 6).

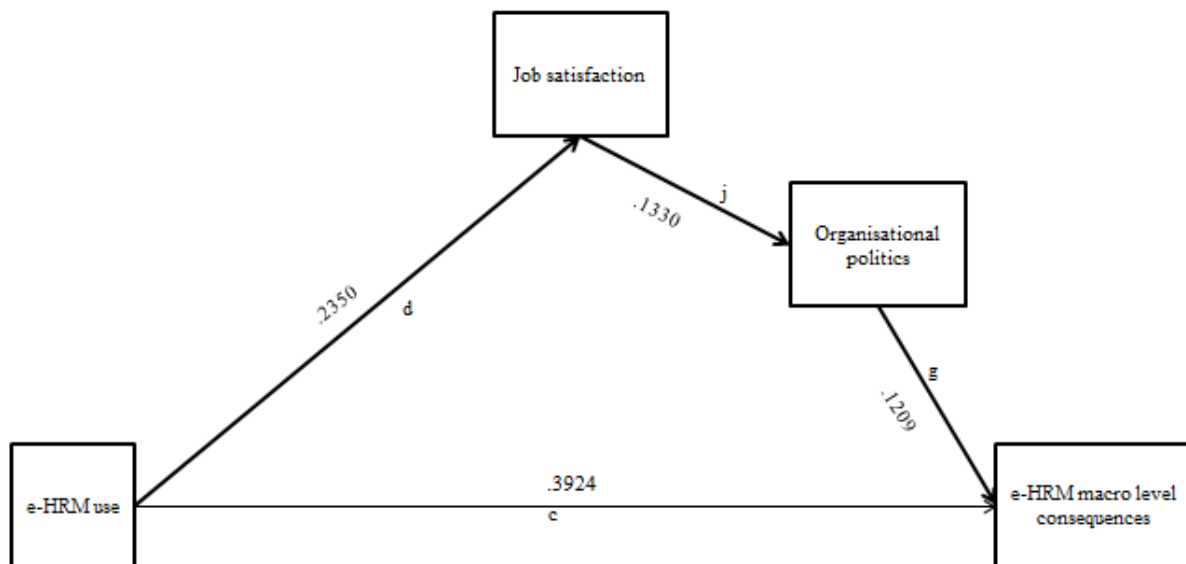


Figure 5.13 Job satisfaction & organisational politics as mediators in serial.

Table 5.24: e-HRM use and ‘job satisfaction and organisational politics’ in serial

Model 1

Outcome variable: Organisational politics

	coeff	se	t	p	LLCI	ULCI
Constant	2.5680	.2900	8.8547	.0000	1.9974	3.1385
Job satisfaction	.1330	.0550	2.4177	.0162	.0248	.2412



Model 2

Outcome variable: e-HRM macro-level consequences

	<b>coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
<b>Constant</b>	.3948	.2110	1.8708	.0623	-.0204	.8100
e-HRM use	.3924	.0382	10.2782	.0000	.3173	.4675
Job satisfaction	.4359	.0362	12.0343	.0000	.3647	.5072
POPS	.1209	.0364	3.3246	.0010	.0494	.1925
R-sq.	<b>.5411</b>			.0000		

Total effect model

Total, direct, and indirect effects of X on Y

Total effect of X on Y

<b>Effect</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
.5254	.0448	11.7296	.0000	.4373	.6136

Direct effect of X on Y

<b>Effect</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
.3924	.0382	10.2782	.0000	.3173	.4675

Indirect effect(s) of X on Y:

	<b>Effect</b>	<b>BootSE</b>	<b>BootLLCI</b>	<b>BootULCI</b>
Total	<b>.1331</b>	.0274	.0823	.1909
Ind1	.1025	.0250	.0568	.1543
Ind2	.0268	.0117	.0072	.0534
Ind3	<b>.0038</b>	.0025	.0002	.0097

Indirect effect key:

Ind1 e-HRM use -> job satisfaction -> e-HRM macro-level consequences  
 Ind2 e-HRM use -> organisational politics -> e-HRM macro-level consequences  
 Ind3 e-HRM use -> job satisfaction -> POPS -> e-HRM macro-level consequences

5.5.7 Hypothesis 7

*There exists an indirect effect of e-HRM use on e-HRM macro-level consequences through employee performance, job satisfaction and organisational politics (OP) in serial (ahjg)*

This last hypothesis looked at the indirect effects of all the three mediators (Figure 5.13). The coefficient of e-HRM use on the employee performance mediator is positive and significant ( $\beta = 0.1639$ ,  $se = 0.0503$ ,  $p < 0.05$ ). The coefficient of employee performance on the next mediator; job satisfaction, is also positive and significant ( $\beta = 0.2748$ ,  $se = 0.0605$ ,  $p < 0.05$ ). The coefficient of job satisfaction on organisational politics is positive but insignificant ( $\beta = 0.0795$ ,  $se = 0.0555$ ,  $p = 0.0601$ ). The coefficient of organisational politics on e-HRM macro level consequences is positive and significant ( $\beta = 0.1059$ ,  $se = 0.0371$ ,  $p < 0.05$ ). The

indirect effect of the three mediators on the e-HRM use and e-HRM macro-level consequences is positive but insignificant ( $\beta=0.0004$ ,  $\text{bootSE} = 0.0004$ ). Zero is straddled between the 95% confidence interval of -0.0003 to 0.0014 (Table 5.25). The direct effect of e-HRM use on the dependent variable is strong, positive and significant ( $\beta=0.3867$ ,  $\text{se} = 0.0381$ ,  $p<0.05$ ). According to the Baron and Kenny (1986) logic, a reduction in the independent variable coefficient from 0.5254 to 0.3867 when a mediator is included is evidence of mediation. The seventh hypothesis is thus rejected. There is evidence of unsuccessful partial mediation of these three mediators (Appendix 15, Table PROC 7).

In testing all the three variables for mediation effects in serial, the mediation effects model identifies unsuccessful mediation linked to:

- employee performance only (Table 5.25, Ind1),
- job satisfaction and organizational politics in serial (Table 5.25, Ind6) and
- employee performance, job satisfaction and organizational politics in serial (Table 5.25, Ind7).

The mediation effects model identifies successful partial mediation linked to:

- job satisfaction only (Table 5.25, Ind2),
- organizational politics only (Table 5.25, Ind3),
- employee performance and job satisfaction in serial (Table 5.25, Ind4) and
- employee performance and organizational politics in serial (Table 5.25, Ind5).

The total indirect effects of the three mediators is statistically significant ( $\beta=0.1387$ ,  $\text{bootSE} = 0.0276$ ). Zero lies outside the confidence interval: 0.0884 to 0.1959 (Table 5.25). This model is significant and indicates a good overall model quality, explaining 0.5462 (55%) of the variance in e-HRM macro level consequences (Table 5.25, model 2).

Table 5.25:e-HRM use and employee performance, job satisfaction and organisational politics as mediators in serial

*Model 1*

Outcome variable: e-HRM macro-level consequences

	<b>coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
Constant	.2078	.2324	.8939	.3720	-.2495	.6650
e-HRM use	.3867	.0381	10.1390	.0000	.3117	.4618
Employee performance	.0799	.0423	1.8870	.0601	-.0034	.1631
Job satisfaction	.4204	.0370	11.3633	.0000	.3476	.4932
Organisational politics	.1059	.0371	2.8556	.0046	.0329	.1789
R-sq.	<b>.5462</b>			.0000		

*Total and indirect effects of X on Y model*

Total effect of X on Y

<b>Effect</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
<b>.5254</b>	.0448	11.7296	.0000	.4373	.6136

Indirect effect(s) of X on Y:

	<b>Effect</b>	<b>BootSE</b>	<b>BootLLCI</b>	<b>BootULCI</b>
<b>TOTAL</b>	<b>.1387</b>	<b>.0276</b>	<b>.0884</b>	<b>.1959</b>
Ind1	.0131	.0102	-.0039	.0362
Ind2	.0799	.0238	.0361	.1296
Ind3	.0206	.0104	.0032	.0439
Ind4	.0189	.0076	.0060	.0357
Ind5	.0042	.0030	.0003	.0121
Ind6	.0016	.0016	-.0011	.0055
Ind7	<b>.0004</b>	.0004	-.0003	.0014

Indirect effect key:

Ind1: use -> perf-> EMacro  
 Ind2: use -> jobsa -> EMacro  
 Ind3: use -> POPS -> EMacro  
 Ind4: use -> perf -> jobsa -> EMacro  
 Ind5: use -> perf-> POPS -> EMacro  
 Ind6: use -> jobsa -> POPS -> EMacro  
 Ind7: use -> perf-> jobsa -> POPS -> EMacro

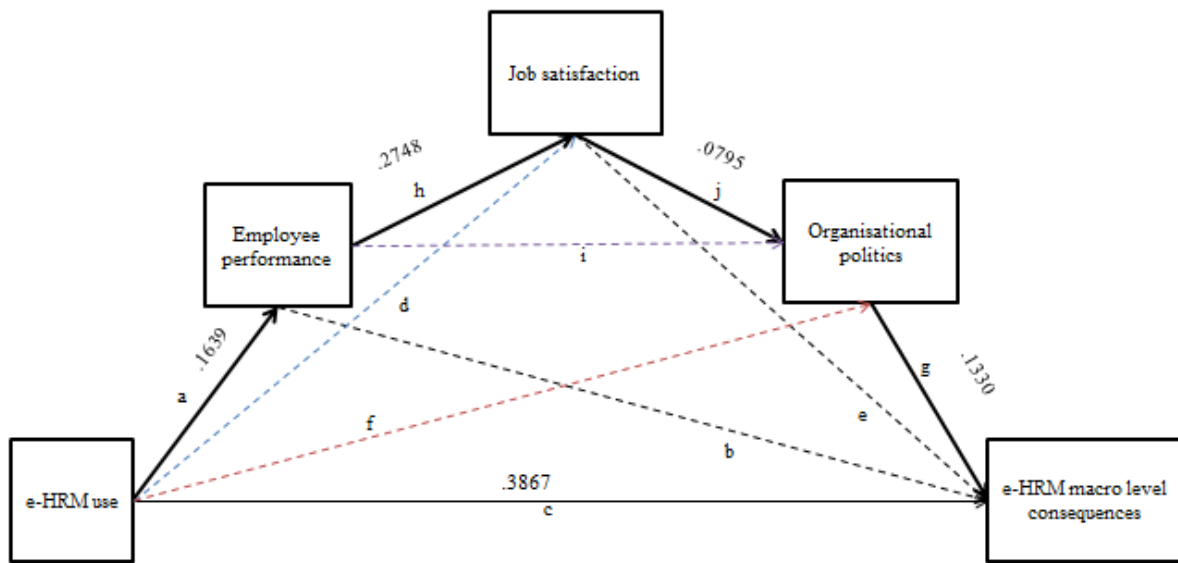


Figure 5.14 Employee performance, job satisfaction & organisational politics as mediators in serial (bold path *ahjg*)

Indirect effect key:

Path 1: e-HRM use	> perf	->	EMacro ( <i>ab</i> )		
Path 2: e-HRM use	> jobsa	->	EMacro ( <i>de</i> )		
Path 3: e-HRM use	> POPS	->	EMacro ( <i>fg</i> )		
Path 4: e-HRM use	> perf	->	jobsa	->	EMacro ( <i>ahjg</i> )
Path 5: e-HRM use	> perf	->	POPS	->	EMacro ( <i>ajg</i> )
Path 6: e-HRM use	> jobsa	->	POPS	->	EMacro ( <i>djg</i> )
Path 7: e-HRM use	> perf	->	jobsa	->	POPS > EMacro ( <i>ahjg</i> )

Key:

use:	e-HRM use
perf:	employee performance
jobsa:	job satisfaction
POPS:	organisational politics
EMacro:	e-HRM macro level consequences

## 5.6 Presentation of Qualitative Study Findings

This section presents the qualitative data analysis drawn from semi –structured interviews with 12 participants. The interviews were exploratory and descriptive in the sense that the aim was to understand and contextualise surprising results from the quantitative study. The quantitative results were coined ‘surprising’ if they were unclear, unexpected, significant/non-significant results, and, have outliers or extreme cases. The focus of this phase was to follow up on surprising results that the study expected to be significant. More specifically, the phase looked at the low effect of e-HRM use on employee performance and the subsequent low effect of employee performance on e-HRM macro level consequences.

The presentation is divided into two sections. Section 1 presents the demographic profiles of participants. Section 2 presents the participants' understanding of these 'surprising' results.

### 5.6.1 Demographic profile of participants

Forty-two percent (42%) of participants were in the 31-40 years age group. Thirty three percent (33%) came from the 41-50 years age group. The least number of participants (8%) came from the 51-60 age group (Figure 5.15).

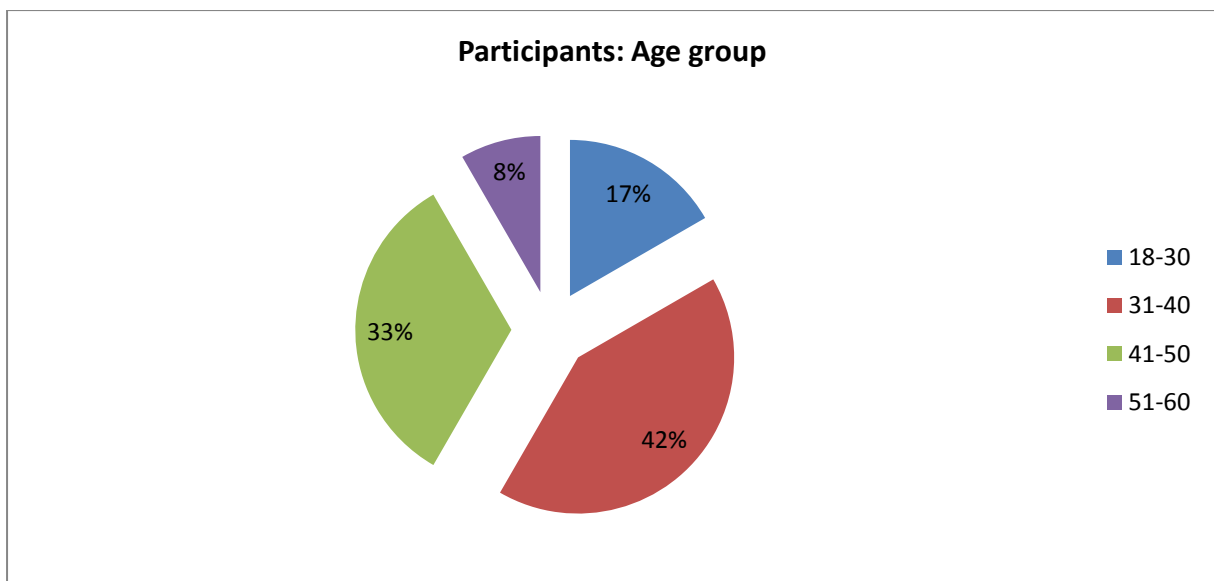


Figure: 5.15 Participants' Age groups

### 5.6.2 Position of Participants

Forty two percent (42%) of the participants were in line manager positions (Fig 5.16). Eight (8%) of the participants held IT positions while fifty percent (50%) of the participants held HR positions (either as HR professionals or HR Managers).

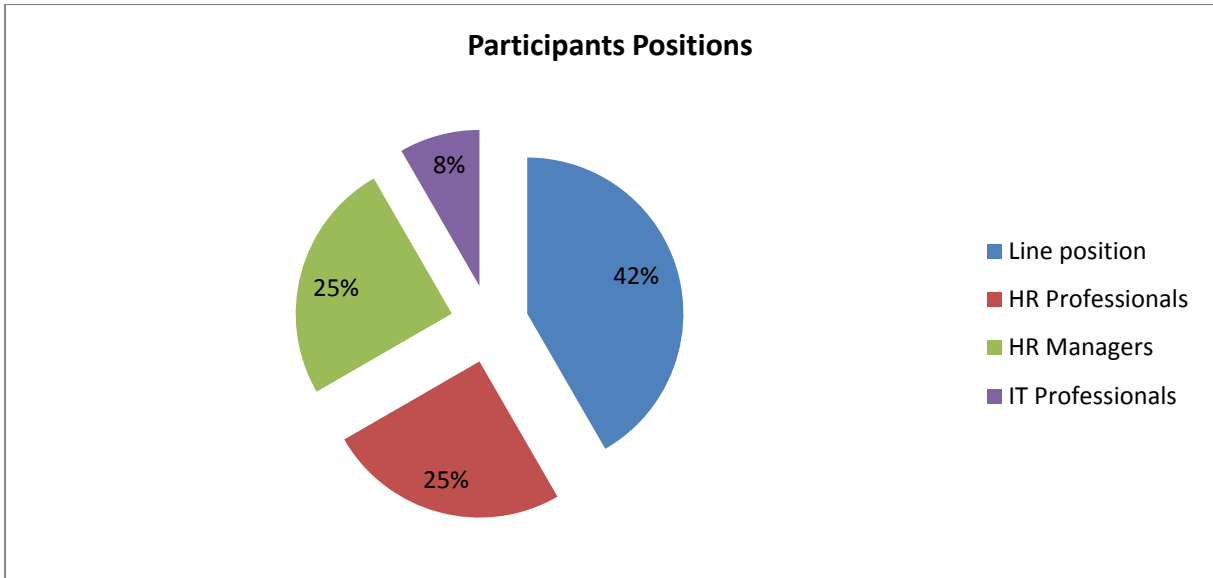


Figure 5.16 Participants' employment positions

### 5.6.3 Usage of e-HRM applications

The manager service delivery (MSD) application is the most used by participants (32.3%). Employee service delivery (ESD) application (16.1%), time management (12.9%), e-learning (9.7%) and payroll (9.7%) are the other widely used applications. The least used e-HRM applications (Figure 5.17) are e-recruitment (6.5%), work scheduling (6.5%) and e-performance (6.5%), respectively.

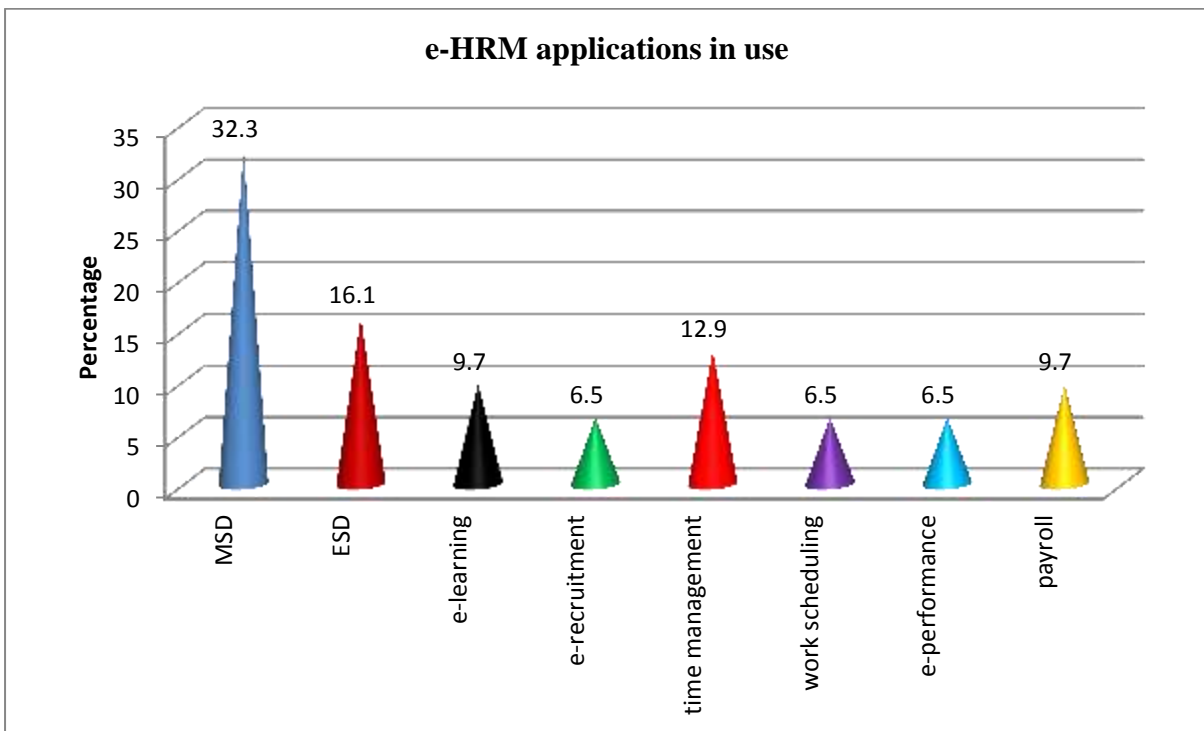


Figure 5.17 Participants' use of e-HRM applications

#### 5.6.4 Experience using e-HRM applications

The participants tended to have extensive experience in using the various e-HRM applications (Table 5.26). The majority of the participants (33%) had four years' experience. The participants with 5 and 6 years' experience accounted for 17% apiece. Seventeen percent (17%) of the participants had a maximum of two years' experience in using the e-HRM applications. The demographic information presented shows the diversity of participants involved and their backgrounds. This information helps in validating the findings and conclusions.

Table 5.26 Experience in using e-HRM applications

<b>Experience</b>	<b>Frequency (%)</b>
≤ 2 years	17
3 years	8.
4 years	33
5 years	17
6 years	17
7 years	8
<b>TOTAL</b>	<b>100</b>

#### 5.6.5 Focusing the analysis

Focusing the study involves coding the data: a process of systematically analysing the qualitative data resulting in identifying patterns and relationships. Items were identified out of their frequency (both low and high), omission (items that the study expected to find, declaration (items that participants declared to exist) and relevance to the research question.

Initially, the coding was deductive in nature. Deductive coding produces a list of codes that come from the conceptual research framework, research questions, hypotheses, problem areas and/or key variables that the researcher brings to the study (Miles et al., 2013). Other codes were however allowed to emerge progressively during data analysis (inductive coding). These codes were revised a number of times, in order to create some unified structure. A total of 31 codes were initially arrived at. A consensus total of 17 codes were developed with shared understanding and agreement on the names and meaning of codes (Figure 5.18). A codebook was also generated using the MAXQDA Analytics Pro 2020 (Release 20.2.2) software (Appendix 15; Table 6.4 & Table 6.5). The software was used for referencing direct quotes of interviewees. For example a quote from participant P8bu is referenced (P8bu) after

the quote. The location (position) of the quote in the transcribed text is indicated by the line number, for example Pos.9.

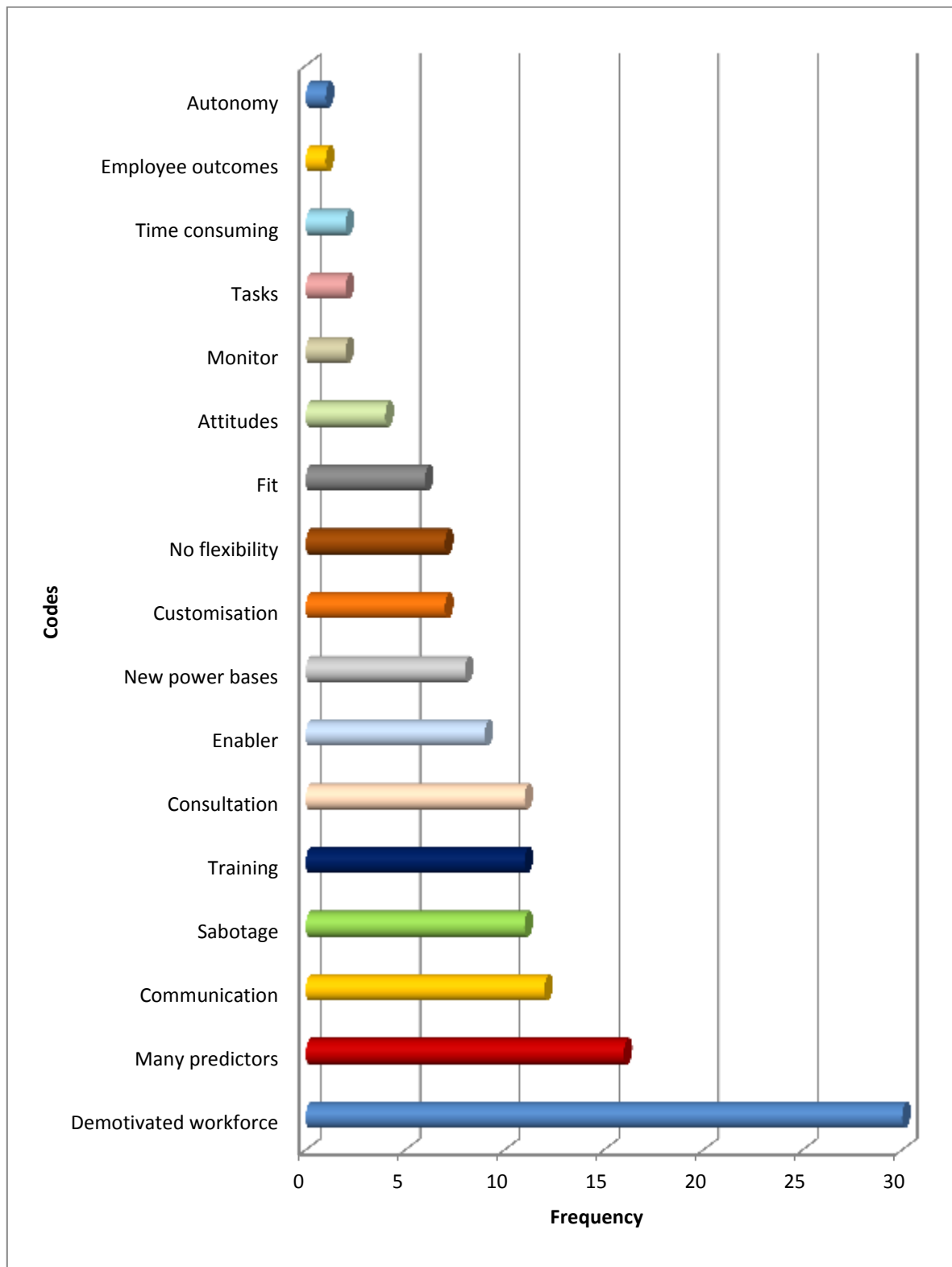


Figure 5.18 Analysis Codes



### 5.6.6 Indexing the data

The Saldana (2016) procedures and mechanics of coding were used for this study (Appendix 15; Figure 6.7). The preset and inductive coding approaches were used to categorise the 17 codes. The deductive approach was the main approach though. However, emerging categories were accepted to enrich the analysis. Four preset categories were used: **managerial issues**, **organisation**, **people** and **system performance**. One category was allowed to emerge: **the predictive role of information technology** (Figure 5.19; Figure 5.20 & Table 5.25).

#### *(a) Managerial issues*

The category was a combination of six codes: communication, consultation, training, monitoring, culture and motivation (demotivated employees). This was the most cited category by participants (66 times out of a total of 140 frequencies).

#### *(b) Organisation issues*

Organisational issues that were noted as affecting e-HRM use on employee performance were: sabotage by employees, power distribution, lack of fit between organisational strategy, culture and information technology strategy, and using e-HRM as a major predictor of employee outcomes. This was the second most referred to category with a frequency of 34.

#### *(c) People (human) issues*

A number of people factors are said to result in unintended results. These people factors were coded as employee outcomes and attitudes. Electronic HRM is hypothesised as having a big effect on employee performance only if employee outcomes such as job satisfaction and organisational citizenship behaviour are positive. This category registered a frequency of 5.

#### *(d) System performance*

This category refers to system design issues that reduce the effect of e-HRM use from achieving the intended consequences. The category was the third most referred to, of the five categories. It registered a frequency of 19. These factors are: inflexibility, autonomy, lack of customisation, being suited to routine tasks only and taking more time than anticipated. These issues have been cited as causing failure to achieve intended consequences.

#### *(e) Information system orientation (Predictive role of Information technology orientation)*

This category refers to an approach that an organisation takes with regards the predictive role of e-HRM systems. In some organisations, information technology is seen as determining the

intended consequences. In others, there is awareness that information technology is not the only predictor of intended outcomes. This category had a frequency of 16.

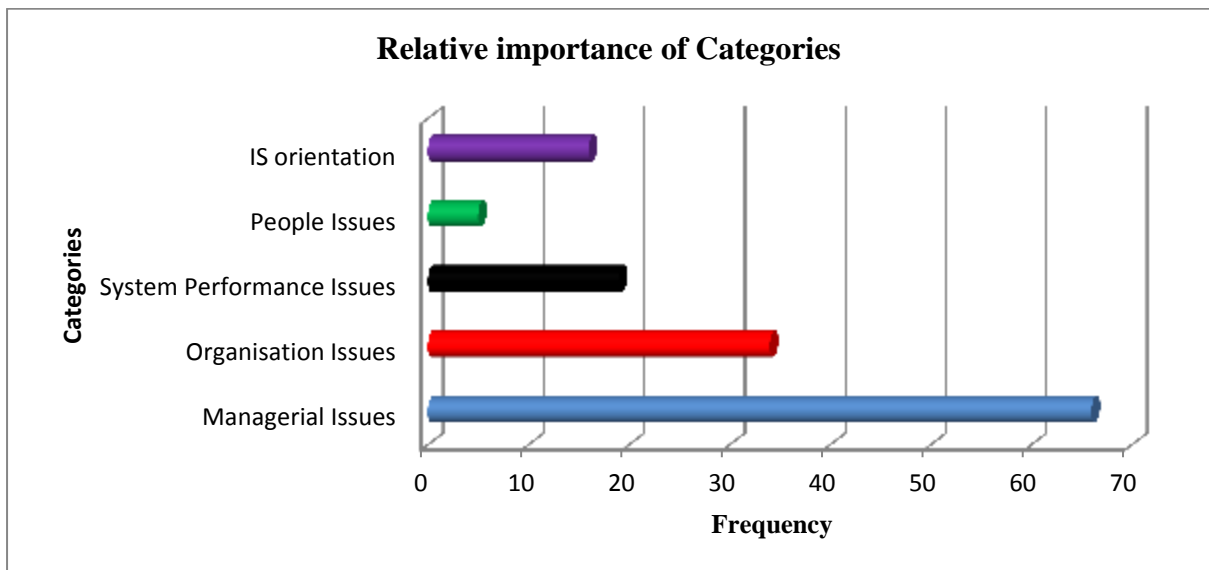


Figure 5.19 Relative importance of categories

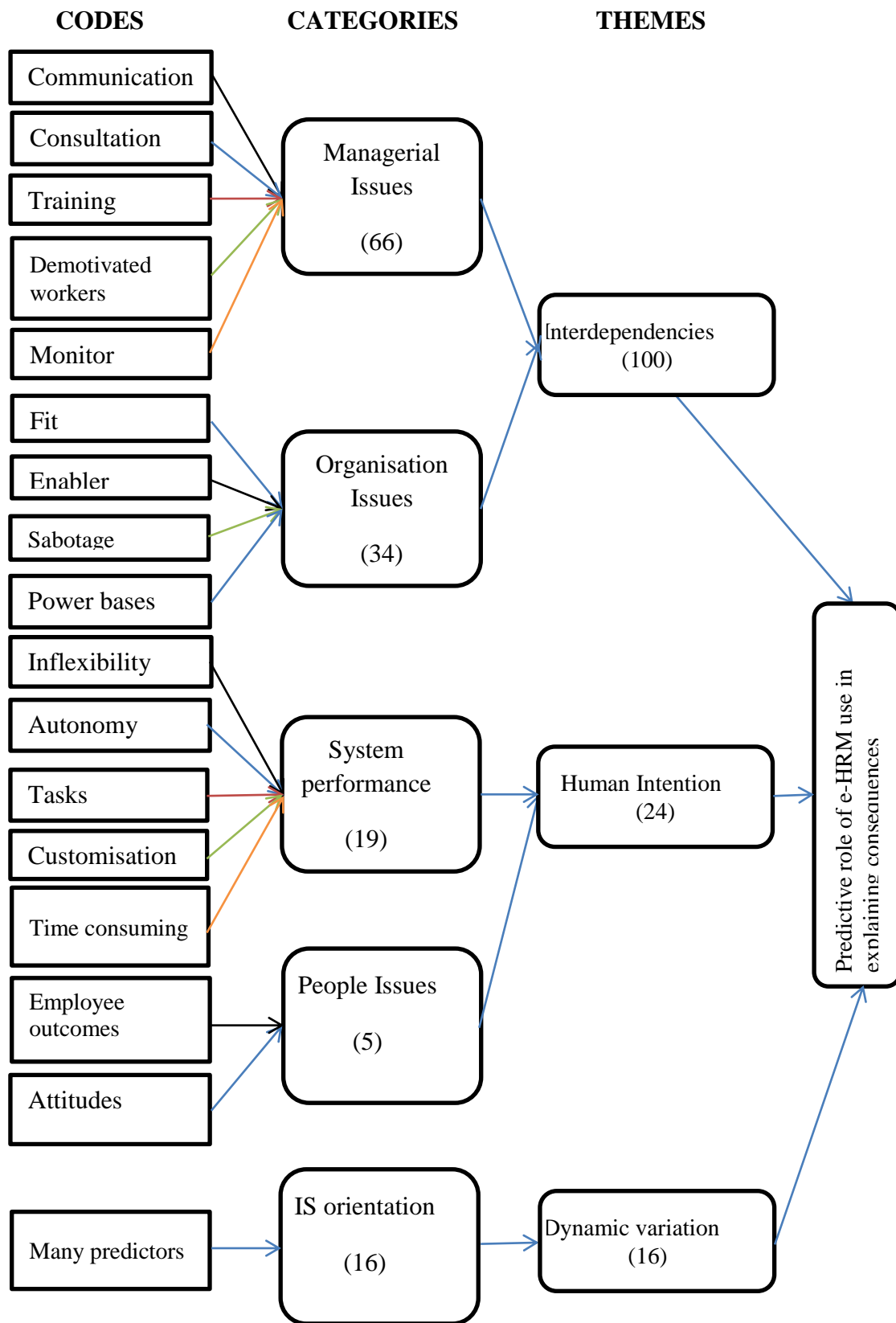


Figure 5.20 Indexing of qualitative data (Adapted from Saldana, 2016)

Table 5.27 Category distribution

<b>Participant ID</b>	<b>Management Issues</b>	<b>I.S. Orientation Issues</b>	<b>Organisational Issues</b>	<b>People Issues</b>	<b>System Performance Issues</b>
P1B	5	5	4	0	8
P2B	4	0	4	1	1
P3M	6	3	4	0	2
P4M	7	2	1	1	1
P5TE	5	0	4	1	0
P6BA	4	1	2	0	2
P7F	7	2	3	1	1
P8BU	6	3	2	1	0
P9R	8	0	6	0	0
L2P10AI	5	0	1	0	3
P11I	3	0	3	0	0
P12T	6	0	0	0	1
<b>TOTAL</b>	<b>66</b>	<b>16</b>	<b>34</b>	<b>5</b>	<b>19</b>

### 5.6.7 Drawing themes

Three themes were developed from the five categories: interdependencies, human intention and dynamic variation.

#### (a) Interdependencies

Information systems tend to have several consequence dimensions. These many dimensions are interrelated and contradictory. For example, e-HRM use is implemented to speed up task execution. At the same time, systems are designed to increase job satisfaction. These two dimensions spark a trade-off when efficiency increases, autonomy declines and so does quality of work. The employee is no longer in control of his/her work. Positive consequences in efficiency could be at the expense of unintended consequences emanating from lack of autonomy and job satisfaction.

#### (b) Human intention

Employees have the ability to reinvent systems. If the e-HRM systems are not monitored, e-HRM actors can start experimenting on how to use applications to their specific needs. This entails using a system differently from its intended purpose. As a result, this evokes unintended consequences.

### (c) Dynamic variation

Electronic HRM actors' usage and interest in a system change over time. Upon implementation, an information system is used as designed. Intended consequences designed into it are then attained. Whilst the technical aspects of a system do not change, the usage and interest in it change over time. Actors use systems differently from what designers intended. Employees have been seen to use systems less on some tasks and vice versa. These variations generate unintended consequences.

#### *5.6.8 The low effect of e-HRM use on employee performance*

The quantitative study showed a low effect of e-HRM use on employee performance. Of all the three mediating variables, the effect of e-HRM use on employee performance was the lowest. The effect of e-HRM use on employee performance was expected to be the highest of the three effects. This is because the prime purpose of introducing e-HRM is to achieve a series of intended outcomes of which employee performance improvement is one of them (Norzaidi & Salwani, 2009; Marler, 2009; Parry & Tyson, 2011; Isaac et al., 2017). This relatively low effect was 'surprising', even to the participants. One participant remarked a different view: "The labour relations are currently bad as a result of the worsening economic environment. Salaries are below the poverty datum line. Workers are not happy. I think employee performance in general is down. I do not think information technology implementation could raise it" (P8bu, Pos. 3).

Participants were asked to proffer reasons for this low effect. Interdependencies issues were the dominant theme cited as causing the low effect of e-HRM use on employee performance. Eleven participants said that there are interrelated dimensions of e-HRM use that spark trade-offs during implementation. The following dimensions were cited as interrelated and trading off: communication, demotivated e-HRM actors, sabotage, power distribution and training. Three participants cited failure to communicate the reasons for the introduction of a new information system as the cause of the low effect of e-HRM use on employee performance (as per Parry & Tyson, 2011; Poisat & Mey, 2017). Failure to communicate a change effort was said to cause the fear of the unknown effect. Employees would try to manage this fear by sabotaging the system so that no successful change took place, thus neutralising the unknown fear.

In instances where change was communicated, this would signal the design of new power structures and subsequently a new form of power distribution. New forms of power distribution are by their nature forms of change. If they are not managed well, those losing power sabotage the system and invariably affect employee performance negatively. A participant remarked, “I think the communication of the e-HRM system was not done well. This could have created fear amongst employees. Information technology implementation could have been seen as leading to layoffs” (P12t, Pos. 5). “It could be that the system has upset the power structure within the organisation. As such some employees have sabotaged the system through underperformance.” (P9r, Pos. 5).

Four participants cited lack of training of e-HRM actors on intended system use as the reason for the low effect (as per Panayotopoulou et al. 2007; Parry & Tyson, 2011; Poisat & Mey, 2017). A lack of training on how a system ought to be used would see system misuse and unintended consequences result. This leads to more time being consumed in executing tasks. This frustrates employees leading to demotivation. Low motivation levels within e-HRM actors would negatively affect employee performance. If management invests in training actors in system use, low employee performance could be avoided. One participant commented, “It could be that employees were not conversant with the system. As a result, the positives that were envisaged have not been realised due to lack of intended use.” (P9r, Pos. 5).

Four participants saw a demotivated workforce as contributing to low employee performance. They cited poor labour relations prevailing in the economy as explaining the low effect. “I expected that level of effect. Labour relations are so bad at the moment to envisage a change programme resulting in positive outcomes. The fundamentals are just not right” (P4m, Pos. 5). Participants were less inclined to talk about nature of tasks, lack of autonomy, inflexibility of the information technology system and other possible predictors of employee performance. Participants were of the view that working to better one dimension would affect the other dimension negatively. Therefore, the low effect of e-HRM use on employee performance is a result of managerial and organisational issues (issues that form the interdependencies theme).

#### *5.6.9 The effect of e-HRM use on job satisfaction and organisational politics*

Participants were asked to share their views pertaining to e-HRM use being a better predictor of job satisfaction and organisational politics than employee performance. Most participants

disputed the assertion that e-HRM use was a better predictor of job satisfaction and organisational politics. They felt employees were deliberately sabotaging the e-HRM system. As one participant remarked, “When employees are not happy with any change effort, they respond by manipulating their performance. I think this is what has just happened here” (P4m, Pos. 7). The argument is that employees are mostly not happy with conditions of service due to the economic meltdown. “If employees are not happy at work, performance is the first variable to suffer. This is true too, if employees are happy. Performance goes up” (P7f, Pos. 7). The soft target of their frustration has been performance. It is as if e-HRM applications have a bigger effect on job satisfaction and organisational politics, when the real issue is that, the system’s effect on employee performance has been deliberately minimised.

#### *5.6.10 Measures to enhance e-HRM use effect on employee performance*

Managerial and organisation issues (interdependencies) were cited as the major measures to implement to enhance the effect of e-HRM use on employee performance. Seven participants remarked that there is need to facilitate information flow (communication) during the implementation of information systems. This is to allay any fears concerning the thrust of the change process and ultimately reduce incidences of system sabotage. “There should be clear communication as to why the system is being implemented within the organisation” (P10ai, Pos. 9). There should also be clear communication as to the organisational intentions of introducing e-HRM systems.

Participants noted the need to consult e-HRM actors, before and during information system implementation (as per Parry & Tyson, 2011; Poisat & Mey, 2017). The consultation process should help designers customise the system to the task needs of various employees. “Above all, management should tailor make the information system applications to the tasks at hand. I am against ‘importing’ applications from the developed world for application without any customisation. I think these applications need to be customised to help employees improve their performance” (P7f, Pos. 9). These views are echoed in research findings (Huang & Martin-Taylor, 2013; Parry & Tyson, 2011; Poisat & Mey, 2017). Few participants talked about the need to motivate and train actors in order to enhance the predictive credentials of e-HRM use.

#### *5.6.11 Effect of employee performance on e-HRM macro-level consequences*

The majority of participants expected a big and positive effect of employee performance on e-HRM macro-level consequences. They were surprised at the low effect from the mediation analysis. Some participants even suggested the toxic labour relations climate as being behind this low effect. “I thought so. Employees in most organisations are so demotivated by the current economic challenges. I think they would not respond positively to information system implementation, due to this. These poor labour relations, in my view, would neutralise the gains of any use of information technology” (P3m, Pos. 16). Most participants cited managerial issues as explaining this low effect. The factors contributing to this were demotivated e-HRM actors, absence of consultation and training (Parry & Tyson, 2011; Poisat & Mey, 2017). “Management has not addressed the causes of employee low morale at work. I think where management has; employee performance could have had a big effect on bigger organisational goals” (P9r, Pos. 14). Management has not addressed adoption and implementation issues that are seeing different dimensions trade-off (Huang & Martin-Taylor, 2013). These factors have blunted the predictive power of e-HRM use on employee performance, and employee performance on e-HRM macro level consequences.

#### *5.6.12 Effect of job satisfaction, organisational politics and employee performance on e-HRM macro level consequences*

Participants were quizzed on the bigger effects of job satisfaction and organisational politics on e-HRM macro level consequences compared to that of employee performance. Most of the participants were of the view that if e-HRM use has failed to inspire improved employee performance, it was illogical to think that such a variable could have a big effect on e-HRM macro level consequences. The feeling was that if a variable is sabotaged, it becomes difficult for that same variable to play a significant role in mediating between the study’s independent and dependent variables.

#### *5.6.13 Measures to improve employee performance on e-HRM macro-level consequences*

All participants agreed that there was a need to get e-HRM to have a big and significant effect on employee performance first before employee performance could have a substantial effect on e-HRM macro-level consequences. For this to happen, a number of initiatives should be looked at. Participants highlighted the need to train e-HRM actors in the intended use of e-HRM applications (Poisat & Mey, 2017). Information system implementation has



not improved task performance due to cognitive skills deficiencies among some e-HRM actors (Parry & Tyson, 2011; Poisat & Mey, 2017). Training is thus suggested to increase these skills. This recommendation is being suggested despite some participants having hinted at training belonging to the interdependencies theme. Under this theme, an increase in training is said to have a negative trade off with other e-HRM dimensions such as speed.

Some participants cited the need for consultation during system implementation (Parry & Tyson, 2011; Poisat & Mey, 2017). The consultation is important for system customisation so that the system addresses tasks requirements. Most participants were eager to emphasise that most of e-HRM applications were more relevant to routine tasks than non-routine tasks. Participants from organisations that maximise exchange value through diversity and flexibility found the applications rigid and restricting value creation (Parry & Tyson, 2011). Other participants, however, noted that e-HRM is not the only predictor of employee performance: there are many other predictors, such as the level of motivation amongst actors. Participants observed lack of monitoring of systems during the implementation process. Over time, there is dynamic variation: a process wherein actors reinvent a system. A reinvented system produces unintended consequences. Thus monitoring should help an organisation anticipate such variations.

#### *5.6.14 Deployment of e-HRM applications to ensure consistent intended consequences*

Participants urged for a fit between e-HRM use and other HRM practices such as training and motivation. Electronic HRM applications should not be allowed to work alone in getting desired employee outcomes. “Always make sure there is horizontal and vertical fit between information technology strategy and other HRM strategies” (P9r, Pos. 20). Electronic HRM use should, therefore, be treated as an enabler than a deterministic phenomenon. A participant remarked, “Management should make sure that e-HRM use complements good HRM practices in order to achieve organisational outcomes” (P8bu, Pos. 20). The participants also discussed the need to monitor the implementation of the system and hence manage dynamic variation issues. Over time, the applications are used differently from their intended use, and, this then explains unintended consequences. In summary, the participants emphasised on the need to consult e-HRM actors and customise applications to suit task requirements for information system success.

## **5.7 Summary of the chapter**

This chapter presented sets of results and findings from two study phases. A series of quantitative and qualitative research questions were addressed to better understand the effect of e-HRM use on e-HRM macro level consequences. The first phase, the quantitative study, sought to establish **what** role the identified variables play in the relationship between e-HRM use and e-HRM macro-level consequences. The second phase, the qualitative study, sought to establish **how** some of the variables identified in the first phase contributed to the e-HRM use and e-HRM macro level consequence relationship. In the next chapter, the results from the two phases are combined to fully answer the research questions, and subsequently develop a model that maximises e-HRM macro-level consequences.

## CHAPTER 6 INTERPRETATION OF THE RESULTS AND THE MODEL

### 6.1 Introduction

The previous chapter presented and discussed validation of the measurement model, results and findings from the study. This chapter interprets the results and findings from both phases of the study (quantitative and qualitative) to better answer the research questions and to develop a more meaningful picture that addresses the research problem. The quantitative results are presented first with qualitative findings being used to clarify and explain some of the statistical results from the study. Following what Ivankova et al. (2006) posit, the interpretation is augmented by citing related and relevant literature. The measurement model related to e-HRM use, employee performance, job satisfaction, organisational politics and e-HRM macro level consequences variables was validated using a battery of tests.

### 6.2 Research question 1: What is the effect of e-HRM use on employee performance, job satisfaction and organisational politics?

The use of e-HRM applications has a positive and significant effect on all the variables (Table 6.1). The phenomenon has the biggest positive effect on organisational politics ( $\beta = 0.2531$ ). Job satisfaction ( $\beta = 0.2350$ ) and employee performance ( $\beta = 0.1639$ ) rank second and last in the order of e-HRM use effect. This positive effect relationship finds support in a number of literature, (for example Combs et al., 2006; Strohmeier, 2007; Parry, 2011; Bondarouk & Ruel, 2013; Obeidat, 2016).

Table 6.1: Effect of e-HRM use on employee performance, job satisfaction and organisational politics (arranged in order of effect)

Variables	$\beta$	se	t	p
Organisational Politics	0.2531	0.0561	4.5097	0.0000
Job satisfaction	0.2350	0.0563	4.1718	0.0000
Employee performance	0.1639	0.0503	3.2603	0.0012

### *6.2.1 Effect of e-HRM use on employee performance ( $\beta = 0.1639$ , $se=0.0503$ , $p=0.0012$ )*

The results show that e-HRM use has a positive and significant effect on employee performance (in line with Venkatesh, 2000; Gardner et al., 2003; Amoako-gyampah & Salam, 2004; Law & Ngai, 2005; Goodhue et al., 2006; Addo-Tenkorang & Helo, 2011; & Rajan & Baral, 2015; Kaygusuz et al., 2016). Wide utilisation of an information system leads to positive improvements in individual performance (Al-Kofahi et al., 2020). If an information system has features that allow it to address the requirements of tasks performed, then, individual employee performance improves (Goodhue et al., 2006 & Isaac et al., 2017).

Since e-HRM simplifies work processes and improves information flows, a positive effect on individual employee performance is realised (Hou, 2012; D'Ambra et al., 2013; Kaygusuz et al., 2016). The argument is that an increase in the frequency and duration of information system use leads to an improvement in employee performance. This happens in four ways: simplification of task processes, knowledge acquisition, enhancement of the quality of communication and improvement in the quality of decision making. The present study showed that there is a positive and significant relationship between this independent variable and employee performance.

It is important to note that there is literature that disputes the existence of the e-HRM use and employee performance link (examples include Khayun & Ractham, 2011 & Rajan & Baral, 2015; Rathore et al., 2019). Literature also posits that the link tends to depend on the context, that is, it may depend on a host of factors. The effect of e-HRM use on employee performance may be low to negative in the short run, due to a lack of skills needed to work on information system applications (Poisat & Mey, 2017). Strategic thinking, communication, process engineering, and analytical human resource skills are needed for improved service delivery (Poisat & Mey, 2017). In the long run, performance effect may however, be significant after the requisite cognitive skills have been acquired (Tafti et al., 2007; Sykes et al., 2014 & Melian-Gonzalez & Bulchand-Gidumal, 2016; Nye et al., 2021). The implication of this is that management could manipulate the use of e-HRM with a view of getting desired employee performance. Alternatively, e-HRM could be utilised to reinforce HRM practices meant to increase employee performance.

### *6.2.2 Effect of e-HRM use on job satisfaction ( $\beta = 0.2350$ , $se=0.0563$ , $p=0.0000$ )*

The present study showed that the effect of e-HRM use on job satisfaction is also positive and significant. This relationship finds support in the reviewed literature that information technology use in organisations is seen, in general, as increasing job satisfaction amongst employees (examples, Cavapozzi et al., 2015; Wang, 2020). Informing technology liberates people from rigid routines (Gardner et al., 2003; Bravo et al., 2016), removes monotony and makes jobs more enriching. This then enhances job satisfaction. Information systems revolutionise employee work in a positive way; employees with the greatest involvement in computer usage tend to become more satisfied with their work (Cavapozzi et al., 2015; Hwang et al., 2016; Kaygusuz et al., 2016). Kaygusuz et al. (2016) reiterated that job satisfaction amongst workers is lower in non-HRIS organisations and higher in those organisations with HRIS applications. The implementation of the phenomenon strengthens the positive relationship between the relevant job characteristics of skills variety, autonomy, feedback and job satisfaction (DeLone & McLean, 2003; Morris & Venkatesh, 2010).

Other researchers have e-HRM use as playing a contradictory role: the phenomenon could enhance job satisfaction or create job dissatisfaction. Automating technology ‘de-enriches’ jobs leading to job dissatisfaction (Bravo et al., 2016). It is when e-HRM implementation is communicated well to e-HRM actors, that there is ownership of the change effort and avoidance of poor working relations, leading to wholehearted dedication to its success. Job satisfaction is the ultimate end (Konradt et al., 2003; Cunningham, 2006). The opposite may be equally true. The implication of this is that e-HRM could be used to reinforce traditional HRM practices directed at improving job satisfaction. The consistent use of e-HRM applications generally leads to improvements in job satisfaction levels.

### *6.2.3 Effect of e-HRM use on organisational politics ( $\beta = 0.2531$ , $se=0.0561$ , $p=0.0000$ )*

Electronic HRM use is seen in the present study as having a positive and significant effect on organizational politics. Literature, however, shows e-HRM use having contradictory effect on organizational politics. The deployment of e-HRM is seen to result in either centralisation or decentralization of power within organisations. If those who benefit from this power centralisation or decentralisation are a powerful clique, positive outcomes are realised (Doherty & King, 2005; Randolph & Main, 2005; Peszynski, 2012; Jemine et al., 2020;

Robalo & Moreira, 2020). A system is sabotaged if the powerful clique ‘loses out’ as a result of this power shift (Strohmeier, 2009; Al-Okaily et al., 2020).

There are also changes in work processes (decision making ability) with political implications. Electronic HRM use could result in the winners making decisions that advance their selfish interests (Read et al., 2015; Liu et al., 2009; Al-Okaily et al., 2020; Robalo & Moreira, 2020). Positive effects are realised, as winners engage in behaviours that show acceptance. Electronic HRM use is also seen as pertaining to the use and distribution of information (data) for the performance of daily activities. This information can be used by employees to further their own interests or to frustrate competing groups of employees (Travica, 2005; Bartis & Mitev, 2008; Gonzalez & Geovany, 2021). Employees who gain power through the use of e-HRM tend to show positive behaviours such as improved individual and collective performance, lower turnover, frequent use of e-HRM applications and increased job satisfaction.

The last effect of e-HRM use on organisational politics relates to the creation of new organizational structures (as existing ones are undermined). In instances where the old ones are not eliminated, structural conflict is born. Winners of the structural conflict gain information-based power. A positive effect of e-HRM use on organizational politics is hence realised. The losers sabotage the system leading to negative effects and ultimately unintended macro level consequences (Travica, 2005). Electronic HRM use should be managed in such a manner as to create employee behaviours that positively effect on employee outcomes that reduce incidences of system sabotage and structural conflict.

In the present study, the three variables were also found to have positive and significant effects on e-HRM macro level consequences (Table 6.2). The implication of this is that employee outcomes and perception of organisational politics could be managed in a manner that helps in the realisation of the intended e-HRM macro-level consequences. These effects also make the three variables likely to play mediation roles between the independent variable and dependent variable. Management, could therefore, use e-HRM to get desired employee outcomes and organisational consequences.

Table 6.2: Effect of employee performance, job satisfaction and organisational politics on e-HRM macro level consequences (arranged in order of effect)

Variables	$\beta$	se	t	p
Job satisfaction	0.4520	0.0365	12.3989	0.0000
Employee performance	0.2236	0.0481	4.6518	0.0000
Organisational politics	0.1793	0.0434	4.1371	0.0000

### 6.3 Research question 2:- Do employee performance, job satisfaction and organisation politics variables play a mediating role in the e-HRM use and e-HRM consequences relationship?

To answer this research question, seven hypotheses were tested for mediation effects. The first three hypotheses ( $H_1$  to  $H_3$ ) were subjected to simple, parallel and serial mediation effects. The last four hypotheses ( $H_4$  to  $H_7$ ) were tested for serial mediation effects only.

*6.3.1  $H_1$ : There exists an indirect effect of e-HRM use on e-HRM macro level consequences through employee performance only.*

The results of the simple mediation analysis showed that the indirect effect of e-HRM use on e-HRM macro-level consequences is positive and statistically significant. Hypothesis 1 was therefore, accepted at simple mediation analysis. There is successful partial mediation. This is one of the gaps that this present study sought to fill. What this study establishes is that employee performance mediates the relationship between e-HRM use and e-HRM macro level consequences. The implication of the finding is that management has an option of working at improving employee performance levels in order to spur the effect of e-HRM use on desired e-HRM macro-level consequences.

The qualitative study established that the role of this variable as a mediator is contextual. A number of preconditions are suggested for employee performance to have a sizeable effect on e-HRM macro-level consequences, namely:- the presence of a conducive working environment (Vigoda-Gadot & Kapun, 2005; Pant, 2012; Butt et al., 2019; Atshan et al., 2021), clear communication regarding the introduction of the technology change programme (Dessler, 2003; Punnet, 2004; Penrose et al., 2005; Cunningham, 2006; Cronin et al., 2006; Panayotopoulou et al. 2007; Alleyne et al., 2007; Beulen, 2009; Kulkarni, 2014; Poisat & Mey, 2017), trained actors (Amoako-gyampah & Salam, 2004; Panayotopoulou et al, 2007; Lee Martin & Reddington, 2010; Parry & Tyson, 2011; Poisat & Mey, 2017) and high levels of

motivation amongst e-HRM actors (Peszynski, 2012; Konradt et al., 2003; Travica, 2005; Maier et al., 2013; Boonstra & Vries, 2015). These preconditions reinforce the mediation effect of employee performance. In the absence of these contextual factors, employee performance may at times fail successful partial mediation. Electronic HRM use is, therefore, a reliable predictor of individual performance when there is a horizontal fit between HRM practices and e-HRM use. This finds support in a HRIS-Success measurement model wherein employee performance is a mediator (Muturi, Kiflemariam & Acosta, 2018). These researchers recommended the model out of a literature review exercise. The model was, however, not subjected to hypothesis testing. Nevertheless, the implication of this is that positive employee performance is key to understanding unintended e-HRM consequences.

The results of the parallel and serial mediation analyses have, however, shown that the indirect effect of e-HRM use on e-HRM macro-level consequences through employee performance is positive but statistically insignificant. There is unsuccessful partial mediation at parallel and serial mediation. Hypothesis 1 was therefore rejected at that level of mediation.

### *6.3.2 H<sub>2</sub>. There exists an indirect effect of e-HRM use on e-HRM macro level consequences through job satisfaction only.*

The results of simple, parallel and serial mediation show that the indirect effect of e-HRM use on e-HRM macro-level consequences is positive and statistically significant. The mediation effects model identifies successful partial mediation linked to job satisfaction. A new addition to the current body of knowledge is the significance of job satisfaction as a mediator in simple, parallel and serial mediation. There was no literature to support job satisfaction variable as a mediator.

Bondarouk et al. (2017: 115) alluded to the need for exploring such a role by stating that “future research should pay attention to potential mediators or moderators affecting adoption and consequences.” According to the qualitative study, the mediating role of job satisfaction is also contextual. Job satisfaction may mediate the relationship between e-HRM use and e-HRM macro level consequences when the change effort is positively communicated to e-HRM actors (Alleyne et al., 2007; Beulen, 2009; Kulkarni, 2014). The other contextual factors are simplification of work processes and ease of use of the information system (DeLone & McLean, 2003; Parry & Tyson, 2011; Poisat & Mey, 2017). The implication of



this is that management should deploy an information system that is user friendly and takes into account the uniqueness of an organisation (Poisat & Mey, 2017). Management should invest in HRM practices that keep job satisfaction levels high in order to get desired e-HRM consequences.

*6.3.3 H<sub>3</sub>: There exists an indirect effect of e-HRM use on e-HRM macro level consequences through organisational politics only.*

The indirect effect of e-HRM use on e-HRM macro-level consequences is shown to be positive and statistically significant at simple, parallel and serial mediation. The mediation effects model identifies mediation linked to organizational politics. The third hypothesis was therefore, accepted. There is successful partial mediation. A new addition to the current knowledge is the positive significance of organisational politics as a mediator in simple, parallel and serial mediation. Although there is no direct support of this result from literature, a few sources allude to the mediating role of organisational politics. Wilson and Howcroft (2005) adopted a social shaping approach showing that empowered actors are able to turn an information system project into success. Although adoption and use of e-HRM could come from management, the users who do not share the expressed goals of the phenomenon can ignore it or even undermine its application (Marais & Kruger, 2005; Robalo & Moreira, 2020). The implication of this finding is that e-HRM use reduces perceived organisational politics and enhances work attitudes and performance (Meisler & Vigoda-Gadot, 2013). Understanding the dimensions of organisational power and its effects is essential to the successful use of e-HRM (Poisat & Mey, 2017).

*6.3.4 H<sub>4</sub>: There exists an indirect effect of e-HRM use on e-HRM macro-level consequences through employee performance and job satisfaction in serial.*

The indirect effect of e-HRM use on e-HRM macro-level consequences was shown to be positive and statistically significant. The fourth hypothesis was, therefore, accepted. The mediation effects model identifies mediation linked to employee performance and job satisfaction in serial. There is evidence of successful partial mediation. There is no known literature that explores such joint mediation in serial. The role of actors has not been adequately examined as playing a meaningful role in explaining e-HRM macro level consequences. A new addition to the current body of knowledge is, thus, the role of employee

performance and job satisfaction as mediators in serial. The implication of this is that the two variables (employee performance and job satisfaction) interact to create a complementary partial mediating effect. Employee performance and job satisfaction act as independent mediators, each playing a role in explaining the effect of e-HRM use towards e-HRM macro-level consequences. Job satisfaction, however, plays a greater role in explaining the effect of e-HRM use towards e-HRM macro-level consequences than employee performance does. Management should, therefore, positively manipulate the two variables through the deployment of relevant HRM practices, to create desired organisational outcomes.

*6.3.5 H<sub>5</sub>. There exists an indirect effect of e-HRM use on e-HRM macro-level consequences through employee performance and organisational politics (OP) in serial.*

The indirect effect of e-HRM use on e-HRM macro-level consequences is shown to be positive and statistically significant. The fifth hypothesis was, therefore, accepted. That is, e-HRM use increases employee performance, which in turn increases positive perception of organisational politics, which ultimately affects e-HRM macro-level consequences. The mediation effects model identifies partial mediation linked to employee performance and organizational politics in serial. There is no known literature that explores such joint mediation in serial. This present study is, thus pioneering in that joint serial mediation.

The data analysis revealed that e-HRM use effects e-HRM macro-level consequences through both employee performance as well as organisational politics. However, the indirect effect through employee performance is slightly greater in magnitude than that through organisational politics. This indicates that employee performance plays a slightly greater role in explaining the effect of e-HRM use towards e-HRM macro level consequences than organisational politics does. The two mediators are independent of each. They work together in a causal chain to impact on e-HRM macro-level consequences. Management should, therefore, positively manipulate employee performance and reduce perception of organisational politics to create desired organisational outcomes.

*6.3.6 H<sub>6</sub>. There exists an indirect effect of e-HRM use on e-HRM macro-level consequences through job satisfaction (JS) and organisational politics (OP) in serial.*

The indirect effect of e-HRM use on e-HRM macro-level consequences through ‘job satisfaction and organisational politics’ was shown to be positive and statistically significant.

The sixth hypothesis was, therefore, accepted. The mediation effects model identifies successful partial mediation linked to 'job satisfaction and organisational politics' in serial. Taken together, the study results support the serial mediation hypothesis: that is, e-HRM use increases job satisfaction, which in turn increases positive perception of organisational politics, which ultimately affects e-HRM macro-level consequences. This study is again pioneering in that regard. There was no known literature that explored such joint mediation in serial: job satisfaction and organisational politics.

The data analysis revealed that e-HRM use effects e-HRM macro-level consequences through both job satisfaction as well as organisational politics. However, the indirect effect through job satisfaction is greater in magnitude than that through organisational politics. This indicates that job satisfaction plays a greater role in explaining the effect of e-HRM use on e-HRM macro level consequences than organisational politics does. The two mediators are independent of each other. They also work together in a causal chain to effect on e-HRM macro-level consequences. When the three mediators are considered in serial, there is however evidence of unsuccessful mediation linked to job satisfaction and organisational politics. Management could, therefore, positively manipulate the two variables to create desired organisational outcomes in order to create successful mediation.

*6.3.7 H<sub>7</sub>. There exists an indirect effect of e-HRM use on e-HRM macro-level consequences through employee performance, job satisfaction and organisational politics (OP) in serial*

The indirect effect of the three mediators on the e-HRM use and e-HRM macro-level consequences was shown to be positive but insignificant. The seventh hypothesis was therefore, rejected. Taken together, the result does not support the serial mediation hypothesis that e-HRM use increases employee performance, which in turn increases job satisfaction, which in turn increases positive perception of organisational politics, which ultimately affects e-HRM macro-level consequences. There is no known study as yet that has looked at these three mediators in serial affecting a relationship between e-HRM use and e-HRM macro level consequences.

When a test for mediation was done in serial for all the three mediators, there was unsuccessful partial mediation linked to employee performance. An indirect effect of e-HRM use on e-HRM macro level consequences through employee performance was insignificant. In addition, employee performance did not act as an independent mediator but rather is part

of a longer causal chain that involves either job satisfaction or organisational politics. There was unsuccessful partial mediation involving employee performance only as a mediator.

Job satisfaction does act as an independent mediator. Electronic HRM use affects e-HRM macro-level consequences through job satisfaction without employee performance and organisational politics being involved. There is successful partial mediation involving job satisfaction only as a mediator. Organisational politics also acts as an independent mediator. Electronic HRM use affects e-HRM macro-level consequences through organisational politics without employee performance and job satisfaction being involved. There is successful partial mediation involving organisational politics only as a mediator.

The data analysis revealed that e-HRM use, effects e-HRM macro-level consequences through both employee performance as well as job satisfaction. However, the indirect effect through job satisfaction is greater in magnitude than that through 'employee performance. This indicates that job satisfaction alone, plays a greater role in explaining the effect of e-HRM use towards e-HRM macro level consequences than employee performance in serial does.

What this means is that a mediator could be significant in one form of mediation analysis (parallel) and insignificant in another form of mediation analysis (serial). The implication of this is that the three variables are so interdependent such that they either positively reinforce each other into some significant mediation role or reduce such reinforcement effect. Management needs to analyse the effect of HRM practices on employee performance, job satisfaction and organisational politics. A low effect of HRM practices on any one or two or all the three variables could have a ripple effect on the other variable(s). Ultimately, this could explain the unintended e-HRM consequences.

#### **6.4 Research question 3: - What is the nature of association between e-HRM use, employee performance, job satisfaction organisational politics and e-HRM macro-level consequences variables?**

Correlation analysis studied the closeness of the relationship among the variables. This analysis only measured the strength of linear relationships and does not imply a relationship between variables. With large sample sizes, correlation measurement becomes better (Moore, Notz & Flinger, 2013). Strong correlations have low *p* values because the probability that

they have no relationship is very low. The associations, as in most social sciences studies, were considered statistically significant if the p value was lower than 0.05 (Moore, Notz & Flinger, 2013). A rule of thumb for interpreting the strength of a relationship based on its  $r$  value as proposed by Moore et al. (2013) was used in this present study (Table 6.3).

Table 6.3: Rule of thumb for interpreting relationship between two variables

Absolute value of $r$	Strength of relationship
$r < 0.3$	Very weak
$0.3 < r < 0.5$	Weak
$0.5 < r < 0.7$	Moderate
$r > 0.7$	Strong

Source: (Moore et al., 2013).

#### 6.4.1: *e-HRM use and e-HRM macro-level consequences*

Organisations have embraced e-HRM technology in the hope of achieving intended e-HRM macro level operational, relational and transformational consequences. The correlation between e-HRM use and e-HRM macro level consequences was of moderate strength, positive and significant ( $r = 0.547$ ,  $p < 0.01$ ). Effective use of e-HRM often sees an increase in value creation by organisations. This relationship is also confirmed by a number of studies, (for example, Kovach, Hughes, Fagan, & Maggitti, 2002; Ruel et al., 2004; Strohmeier, 2009; Parry & Tyson, 2011; Parry, 2011; Ruel & Kaap, 2012; Bondarouk & Ruel, 2013; Wahyudi & Park, 2014; Marler & Parry, 2016; Obeidat, 2016).

The use of e-HRM technology has resulted in cost reduction, service improvements, and reorientation of HR professionals to become more strategic (Ruël, Bondarouk, & Van der Velde, 2007). Organisations can therefore, continue to spend millions of dollars on information technology as they are assured that their investment will also see an improvement in organisational and individual performance.

#### 6.4.2: *Employee performance and job satisfaction*

The idea that employee performance affects job satisfaction is consistent with several psychological theories such as intrinsic motivation theory (Robbins & Judge, 2017). The

correlation between employee performance and job satisfaction was shown as of weak strength, but positive and significant ( $r = 0.275$ ,  $p < 0.01$ ). Increased employee performance was shown to be positively associated with increased job satisfaction levels. Literature posits a significant relationship between employee performance and job satisfaction (Markus, Iyer & Soberman, 2006; Aziri, 2011; Vermeeren, Kuipers & Steijn, 2014; Inuwa, 2016; Yuen et al., 2018). Other literature sources, however, present a weak relationship or no relationship at all between employee performance and job satisfaction (Ahmad, Ahmad, & Shah, 2010; Alromaihi et al., 2017). Other sources see a positive relationship between employee performance and job satisfaction at organisational level (Vigoda-Gadot & Kapun, 2005; Christen, Bodla & Danish, 2012; Abdirahman, 2018). The argument lies in the definition and measurement of employee performance as a construct. If effort is excluded from the measurement of employee performance as a construct, it increases the effect of employee performance on job satisfaction. The two are positive and significantly correlated (Christen et al., 2012). If management works on improving job satisfaction amongst employees, this should also see an improvement in employee performance and ultimately on organisational outcomes.

#### *6.4.3: Job satisfaction and organisational politics*

The correlation between job satisfaction and organisational politics was shown to be of low strength, but positive and significant ( $r = 0.181$ ,  $p < 0.01$ ). This relationship finds support from a number of studies (for example, Kosteas, 2007; Akanbi & Ofoegbu, 2013). There is a significant positive relationship between political behaviour on one-hand, pay and promotion policies on the other. Political behaviour fuels this positive relationship with job satisfaction. Other studies, however, point to a negative relationship between the two variables (for example, Vigoda-Gadot & Kapun, 2005; Butt et al., 2019; Atshan et al., 2021). Organisational politics is seen as producing unfair and unjust working environments. These environments generate job dissatisfaction, low employee performance and low organisational commitment (Miller, Rutherford & Kolodinsky, 2008). Management should, therefore, invest in fair pay and promotion policies so as to create a favourable political climate within organisations.

#### *6.4.4: Employee performance and organisational politics*

The correlation between employee performance and organisational politics was shown to be of low effect, but positive and significant ( $r = 0.271$ ,  $p < 0.01$ ). Employees who understand and can control workplace politics were shown to experience higher morale and job satisfaction. There is a belief that hard work will be rewarded (Rosen, Levy & Hall, 2006; Atshan et al., 2021). In organisations where organisational politics is perceived as low, employee morale is high (Elkhalil, 2017). In such settings, political behaviour increases job satisfaction and ultimately employee performance. Other studies indicate a negative relationship though (for example, Bodla & Danish, 2012; Miller, Rutherford & Kolodinsky, 2008; Meisler, Drory & Vigoda-Gadot, 2019). If employees perceive organisational politics levels to be very high, there is a belief that hard work will not be rewarded. It is, thus, important for management to keep organisational politics levels low in a bid to increase employee morale and ultimately workplace performance.

#### *6.4.5 e-HRM use and mediating variables*

The correlation between e-HRM use and employee performance was shown to be of weak strength, but positive and significant ( $r = 0.178$ ,  $p < 0.01$ ). Introducing e-HRM applications in the workplace lead to the speeding of a number of work processes and efficiency in general (Ruel et al., 2004; Martin et al., 2008; Njoku et al., 2019; Bondarouk, 2020). Negative correlations have however also been recorded (Ruel et al., 2004; Parry, 2011; Bondarouk, 2020).

Electronic HRM use is positively and significantly correlated with job satisfaction ( $r = 0.226$ ,  $p < 0.01$ ). The correlation is however of weak strength (Acock, 2014). The deployment of e-HRM applications is likely to lift the satisfaction levels of a number of HR actors (Morris & Venkatesh, 2010; Cavapozzi et al., 2015; Hwang et al., 2016; Kaygusuz et al., 2016). Negative relations are also recorded in empirical studies between the two variables (Konradt, 2003; Cunningham, 2006; Peszynski, 2012; Sykes et al., 2014).

The correlation between e-HRM use and organisational politics was also shown to be of weak strength, but positive and significant ( $r = 0.243$ ,  $p < 0.01$ ). The present study supported both a positive correlation between e-HRM use and organisational politics. However, if organisational politics is mismanaged, a negative correlation exists as a result of e-HRM implementation. A positive correlation exists, if organisational politics is well managed

during the implementation process (Doherty & King, 2005; Peszynski, 2012; Bondarouk, 2015; Boonstra & Vries, 2015; Robalo & Moreira, 2020). Electronic HRM use could therefore be implemented to influence employee performance, job satisfaction and perception of organisational politics and ultimately wider organisational outcomes. Management needs to, therefore, identify and implement HR practices that would contribute to improved employee outcomes and perception of organisational politics.

#### *6.4.6: Mediating variables and e-HRM macro level consequences*

The correlation between employee performance and e-HRM macro level consequences was shown to be of weak strength, but positive and significant ( $r = 0.304$ ,  $p < 0.01$ ). Information technology success can be measured by its effect on an individual's work (Law & Ngai, 2007) and ultimately on organisational consequences. Rajan and Baral (2015: 108) citing Torkzadeh and Doll (1999) state that "the impact of IT on work at the individual level is a direct consequence of system use, which in turn is a major factor in determining organisational impact."

Job satisfaction has moderate strength, significant and positive correlation with e-HRM macro level consequences ( $r = 0.587$ ,  $p < 0.01$ ). Little empirical studies have been conducted on the existence of a positive association between job satisfaction and e-HRM macro level consequences. However, some studies have shown the existence of a positive association between job satisfaction and performance (Abdirahman, (2018), to improve productivity and effectiveness (McGill & Klobas, 2005 & Halawi, McCarthy; Aronson, 2007; Petter et al., 2008), to improve decision-making. Some studies found a positive relationship between job satisfaction and firm performance based on profitability and revenues (Law & Ngai, 2007; Kessler et al., 2020).

In the present study, organisational politics was shown as positively and significantly correlated with e-HRM macro level consequences ( $r = 0.315$ ,  $p < 0.01$ ). The association was however, of weak strength. When 'organisational politics caused conflict' is detected in time and resolved, the chances of an information system achieving positive consequences is greatly enhanced. If conflict is not detected and no action taken, the success rate falls sharply (Doherty & King 2005; Liu et al., 2009; Boonstra & de Vries, 2015). If power redistribution resulting from e-HRM deployment is acceptable to actors, positive consequences are recorded (Peszynski, 2012; Bondarouk, 2015). HRM practices could therefore, be



implemented to improve employee outcomes and perception of organisational politics in an effort to achieve intended organisational outcomes (Figure 6.1). Although the bulk of relationships are low, the correlation coefficients represent “real” relationships because the sample size is relatively moderate to large.

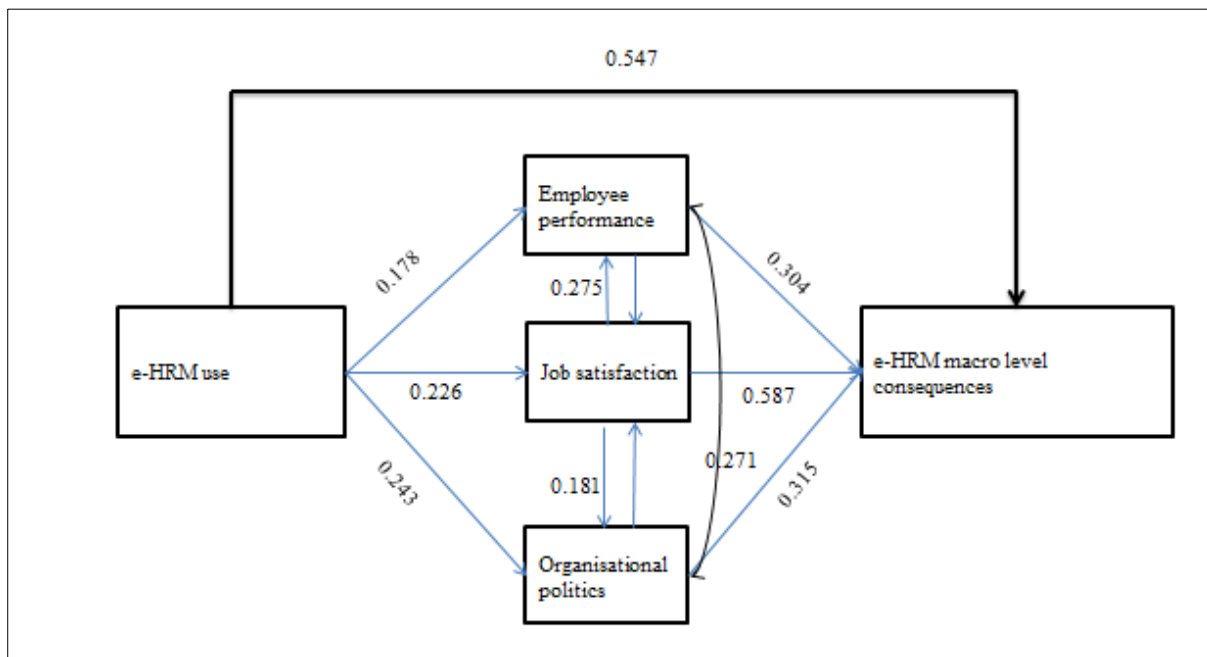


Figure 6.1 Relationship between e-HRM use, e-HRM macro level consequences, employee performance, job satisfaction and organisational politics.

The preceding interpretation shows variables with weak and modest relationships. Job satisfaction and e-HRM macro-level consequences are variables with the strongest relationship and, therefore, worth some serious consideration. ‘Job satisfaction and organisational politics’ are variables with the weakest relationship. This weak effect eliminated the concerned path (job satisfaction -> organisational politics) from further consideration towards a model for maximising intended e-HRM macro level consequences.

### 6.5 Control variables

A number of control items informed by literature review were included in the analysis. These variables have been suggested as influential on e-HRM consequences. These control items include age (Parry, 2011), number and type of e-HRM applications (Bondarouk & Ruel,

2009), experience and knowledge of information technology (Marler, 2009; Bondarouk & Ruel, 2013). Age, gender and organisational tenure have been associated with job performance (Semadar, Robins & Ferris, 2006; Karatepe et al., 2006; Steffens et al., 2014; Ferris et al., 2018). In this thesis, the respondent's age, experience, employment position, and HRM applications used are put forth as control variables. However none of these variables, when treated as covariates in the models, had significant direct or indirect effect on e-HRM macro level consequences.

## **6.6 A model for maximising electronic human resource management macro-level consequences**

This section presents the ultimate goal of the present study, the model for maximising electronic human resource management macro level consequences: the role of actors. The research model presented in figure 3.5 (chapter 3) was informed by literature and the underpinning theories. The logic behind the research model was that the role of actors holds the key to understanding the unintended e-HRM consequences. The role of actors was hypothesised as the missing piece in a jigsaw puzzle wherein emphasis so far has focused on failures of the technology used. The role of actors is herein assumed to play a mediating role in the new model.

Two models (referred to in this section as A and B) were of interest from the quantitative results. Model A looked at e-HRM use's total indirect effect on e-HRM macro-level consequences through job satisfaction and organisational politics (POPS) in serial ( $\beta=0.1331$ , BootSE = 0.0274,  $p < 0.05$ ). The model explains 54% (R-sq = 0.541) of the variance in the dependent variable. The specific path (e-HRM use  $\rightarrow$  job satisfaction  $\rightarrow$  organisational politics  $\rightarrow$  e-HRM macro level consequences) has an indirect effect of 0.0038. Model B looked at e-HRM use's total indirect effect on e-HRM macro level consequences through employee performance and job satisfaction in serial ( $\beta=0.1181$ , BootSE = 0.0275,  $p < 0.05$ ). The model also explains 54% (R-sq = 0.535) of the variance in the dependent variable. The specific path of Model B (e-HRM use  $\rightarrow$  employee performance  $\rightarrow$  job satisfaction  $\rightarrow$  e-HRM macro level consequences) has an indirect effect of 0.0193. In both models, job satisfaction plays a bigger mediating role than employee performance or organisational politics. Model B is preferred because of the strong effects of one mediator on another in both parallel and serial mediation. As a result, the e-HRM use  $\rightarrow$  employee performance  $\rightarrow$  job satisfaction  $\rightarrow$

e-HRM macro level consequences path has a bigger indirect effect. It is depicted and recommended as per figure 6.2 and 6.3.

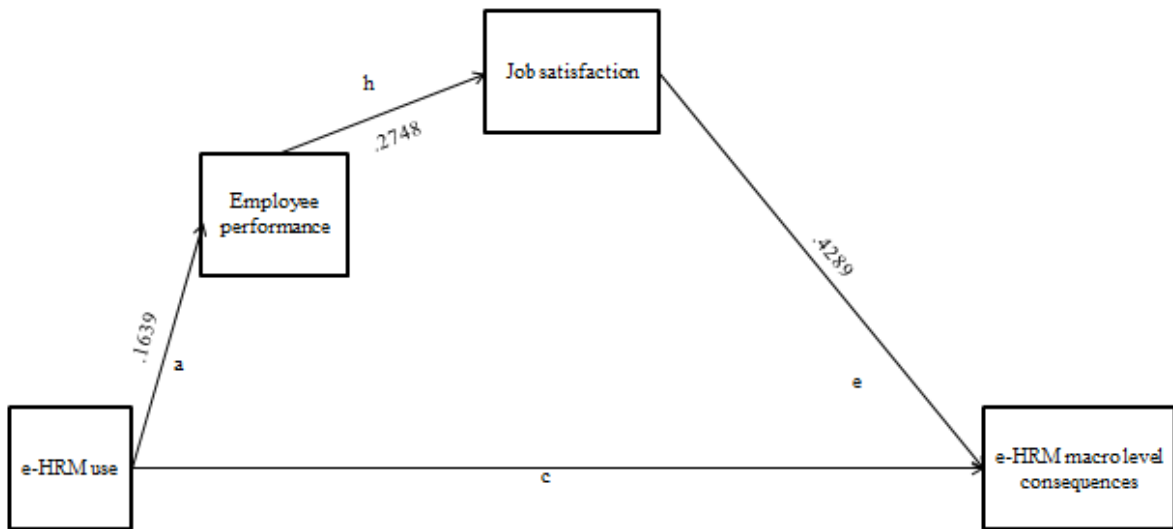


Figure 6.2 A model for maximising electronic human resource management macro-level consequences.

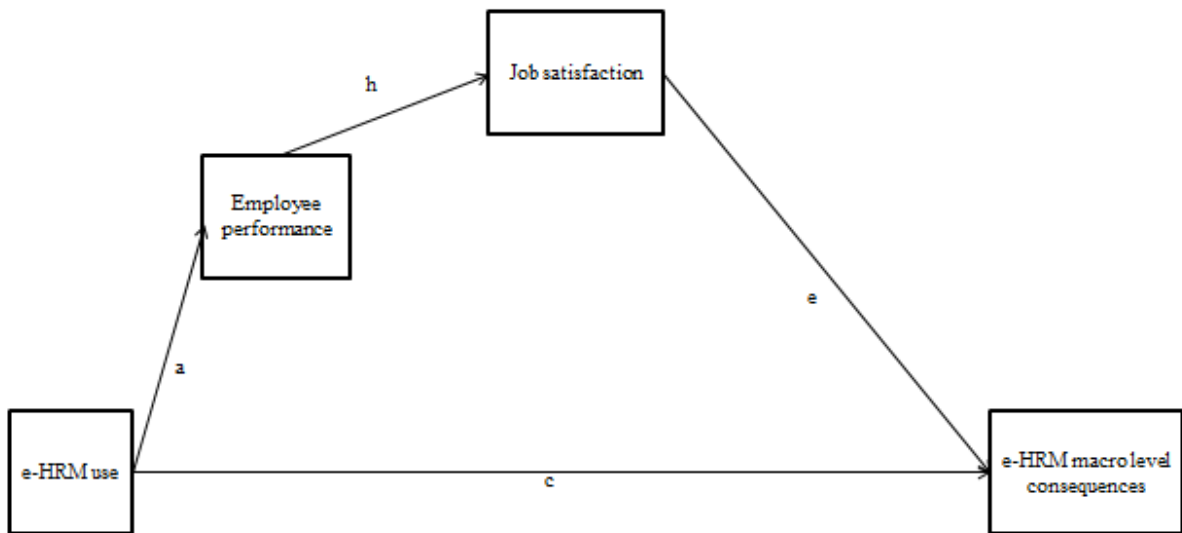


Figure 6.3 A model for maximising electronic human resource management macro-level consequences.

This model leads to the attainment of operational, relational and transformational e-HRM macro-level consequences. The total indirect effect of e-HRM use on e-HRM operational consequences is positive and significant ( $\beta=0.0584$ , BootSE = 0.0247,  $p < 0.05$ ). The model explains 18.62% (R-sq = 0.1624) of the variance in operational consequences. The total indirect effect of e-HRM use on e-HRM relational consequences is also positive and significant ( $\beta=0.1587$ , BootSE = 0.0124,  $p < 0.05$ ). The model explains 43.16% (R-sq = 0.4316) of the variance in relational consequences. The total indirect effect of e-HRM use on e-HRM transformational consequences is also positive and significant ( $\beta=0.0589$ , BootSE = 0.0261,  $p < 0.05$ ). The model explains 16.51% (R-sq = 0.1651) of the variance in the transformational consequences. The greatest effect of the model is in explaining relational consequences, and the lowest effect is in explaining the transformational sequences. The mediation effects allow e-HRM use to combine operational, relational and transformational consequences. This is akin to comprehensive computerisation of HRM in a ‘power user’ configuration (Strohmeier and Kabst, 2014). This is the contribution of the model to theory development and managerial implications.

### **6.7 Model Validation**

A number of tests were performed to evaluate whether the proposed model is reliable and valid. The R-sq ( $R^2$ ) was calculated for the three ‘predictors of the dependent variable (Table 6.4). This statistic helps determine the best fit for a model. e-HRM use explains 0.299 (29.9%) of the variance in the dependent variable. The addition of employee performance as a ‘mediating predictor’ increases the predictive value of a model to 0.343 (34.3%). Employee performance explains an additional 4.4% ( $\Delta R^2 = 0.044$ ) variance in e-HRM macro-level consequences. The addition of job satisfaction increases the predictive value of the model to .535 (53.5%). Job satisfaction explains an additional 19.2% ( $\Delta R^2 = 0.192$ ) variance in e-HRM macro-level consequences. In total, the three predictors explain 53.5% of the variance occurring in the dependent variable. To overcome the weakness of  $R^2$  statistic in model evaluation, the adjusted  $R^2$  was also used. All the three predictors are statistically significant in explaining the dependent variable. They explain 53% of the variance in the dependent variable (Table 6.4).

Six assumptions that the data must meet in order for the analysis and model to be reliable and valid were tested. Firstly, scatterplots show that the relationship between the independent

variable, employee performance and job satisfaction, and, the dependent variable are linear (Figure QA4). Secondly, there is also no multicollinearity in the data. The analysis of collinearity statistics (Table 6.5) show that the Variable Inflation Factor (VIF) scores range from 1.033 to 1.121, well below 5 (Turner, 2020). The tolerance scores ranged from 0.892 to 0.968, well above 0.2 (Turner, 2020). Thirdly, the values of the residuals are independent (Table 6.4). The Durbin-Watson statistic is 1.659, close to the recommended value of 2 (Turner, 2020).

Fourthly, the variance of the residuals is constant. The plot of standardised residuals versus standardised predicted values shows no sign of funnelling, suggesting the assumption of homoscedasticity has been met. Fifthly, the values of the residuals are normally distributed. The P-P plot for the model shows that the assumption of normality of the residuals has not been violated (Figure QA5). Sixthly, there are no influential cases biasing the model. Cook's distance values are all under the value of 1, meaning individual cases are not unduly influencing the model (Turner, 2020). The Cook's values range from 0.000 to 0.088. These tests indicate that the analysis that gave 'birth' to the model is reliable and valid. The model has significant predictive power. All the three predictors are statistically significant in explaining the dependent variable.

Table 6.4 Model Summary<sup>d</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.547 <sup>a</sup>	.299	.297	.40439	.299	137.583	1	323	.000	1.659
2	.586 <sup>b</sup>	.343	.339	.39205	.044	21.639	1	322	.000	
3	.731 <sup>c</sup>	.535	.530	.33045	.192	132.256	1	321	.000	

a. Predictors: (Constant), e-HRM use

b. Predictors: (Constant), e-HRM use, Employee Performance

c. Predictors: (Constant), e-HRM use, Employee Performance, Job Satisfaction

d. Dependent Variable: e-HRM macro level consequences

Table 6.5 Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	1.923	.201		9.588	.000	1.528	2.317		
	e-HRM use	.525	.045	.547	11.730	.000	.437	.614	1.000	1.000
2	(Constant)	1.159	.254		4.556	.000	.659	1.660		
	e-HRM use	.489	.044	.508	11.074	.000	.402	.576	.968	1.033
	Employee Performance	.224	.048	.214	4.652	.000	.129	.318	.968	1.033
3	(Constant)	.407	.224		1.813	.071	-.035	.848		
	e-HRM use	.407	.038	.424	10.755	.000	.333	.482	.934	1.070
	Employee Performance	.106	.042	.101	2.531	.012	.024	.188	.910	1.099
	Job Satisfaction	.429	.037	.464	11.500	.000	.355	.502	.892	1.121

a. Dependent Variable: e-HRM macro level consequences

## **6.8 Summary of the chapter**

This chapter interpreted the results and the findings from both phases of the study (quantitative and qualitative) to better answer the research questions and to provide a more meaningful picture that addressed the research problem. The interpretation was augmented by citing related and relevant literature. The quantitative results were interpreted first, followed by interpretation of the qualitative findings, and this contextualised and explained some of the statistical results from the study.

The use of e-HRM has positive effects on employee performance, job satisfaction and organisational politics. These three variables were also found to have positive and significant effects on e-HRM macro-level consequences. The implication of this is that employee outcomes and perception of organisational politics could be managed in a manner that helps in the realisation of the intended e-HRM macro-level consequences. Management, could therefore, use e-HRM to influence and get desired employee outcomes and organisational consequences.

Employee performance, job satisfaction and organisational politics were both found to mediate the effect of e-HRM use on e-HRM macro-level consequences. Job satisfaction drives the partial mediation effect. As a result, the e-HRM use  $\rightarrow$  employee performance  $\rightarrow$  job satisfaction  $\rightarrow$  e-HRM macro level consequences path has the biggest indirect effect. It is recommended for optimisation of e-HRM use in organisations. It is the model that is recommended for maximising e-HRM macro-level consequences.

The qualitative study reflected the need to involve actors for the minimisation of employee resistance. The need for training-HRM actors was also highlighted for enhanced effect. The people issues were highlighted as crucial to the successful implementation of e-HRM. The next chapter evaluates the study undertaken by providing recommendations, thesis contributions, limitations of the study and suggestions for future research.

## **CHAPTER 7: EVALUATION OF THE RESEARCH, THESIS CONTRIBUTIONS AND CONCLUSION**

### **7.1 Introduction**

This study sought to develop a model that could inform the maximising of electronic Human Resource Management macro-level consequences by focusing on the role of actors. This was achieved by analysing and interpreting the effect of e-HRM use on three variables: employee performance, job satisfaction and organisational politics. In addition, the roles of these three variables with respect to e-HRM use and e-HRM macro level consequences relationship were examined. The study objectives were addressed through testing of hypotheses and other referential statistical analysis. The chapter outlines the recommendations, contribution of the study to theory and practice, limitations of the study, and directions for future research.

### **7.2 Recommendations from the study**

This study made use of the moderate voluntarism approach to interpret e-HRM macro level consequences. Literature review identified multiple actors with multiple interests that interact to create outcomes that are not entirely predictable.

The implementation of e-HRM could lead to complex interactions. *The study recommends that the level of employee performance and job satisfaction of e-HRM actors should be monitored during the implementation of the phenomenon.* When employee performance and job satisfaction effects go down, corrective action should be taken in the form of implementing high performance work practices. The implementation of high performance work practices (HPWP) should see employee performance and job satisfaction improve and subsequently impacting positively on e-HRM macro level consequences. There should be a horizontal fit between e-HRM use and other HRM strategies for intended macro level consequences to be realised. This would see employee outcomes (employee performance and job satisfaction) being enabled from two positions; e-HRM use and HPWP implementation: thus increasing the mediating effects of these two mediators.

*Management should endeavour to keep actors motivated by adopting 'informating' technology in the majority of e-HRM systems.* Job satisfaction is the mediating variable with



the biggest indirect effect in the relationship between e-HRM use and e-HRM macro level consequences. In order to increase the level of job satisfaction of actors in the workplace there is need to adopt and implement those e-HRM applications with informing technology. This technology will support job satisfaction improvements through enriching jobs and introducing flexibility. A number of e-HRM applications designed to achieve operational consequences have more of automating technology designed into them. Automating technology ‘de-enriches’ jobs and deskills employees leading to job dissatisfaction (Bravo et al., 2016). The design of the e-HRM systems should be such that flexibility is enhanced. The characteristics of technology should therefore prove important in the use of e-HRM and subsequently in attaining job satisfaction, as posited by DeLone and McLean (2003) and Strohmeier (2007).

*The study also recommends that there should be due attention paid to contextual factors, during the implementation of the e-HRM system.* Electronic HRM use is one of the many predictors of e-HRM macro-level consequences. There are contextual factors too that explain intended consequences. These factors range from technology characteristics, need for consultation, support from management, and the employee skills needed to use the technology. As a result, intended consequences are a result of some collaborative effort. The use of the e-HRM system is one of the many variables positively related to intended e-HRM macro level consequences, as iterated by Ruel et al., (2007), Parry & Tyson (2011) and, Parry (2011). Technological determinism alone cannot explain intended and unintended e-HRM consequences. Human and organisational factors need to be taken into account to fully account for these consequences.

### **7.3 Contributions of the thesis**

The contributions of the thesis to the existing body of knowledge are in three fold, namely theoretical, contextual and practical.

#### *7.3.1 Theoretical Contribution*

The contribution from this thesis stems from triangulating well-established theories to explain the effect of e-HRM use on employee performance, job satisfaction and organisational politics. Electronic HRM use has positive explanatory powers in terms of the three variables. Electronic HRM applications can be used in isolation or together with other human resource

management practices to influence the behaviour of e-HRM actors. Although with some caution, if actors are motivated, the system designed in full consultation with actors and rightly monitored during implementation, use of e-HRM applications is capable of producing intended consequences.

The theoretical contribution is in explaining the mediating roles of employee performance, job satisfaction and organisational politics. In simple mediation analysis, all the three variables show successful partial mediation. In parallel mediation analysis, only job satisfaction and organisational politics variables show successful mediation. In serial mediation, 'employee performance' alone, 'job satisfaction and organisational politics' in serial and 'employee performance, job satisfaction and organisational politics' in serial show unsuccessful mediation. Variables could indicate unsuccessful mediation in serial but show successful mediation in simple or parallel or vice versa. There is no known study that has looked at any two possible mediators in serial affecting a relationship between e-HRM use and e-HRM macro level consequences, and the study bridged this knowledge gap.

The last theoretical contribution relates to showing that organisational politics have a positive effect on e-HRM macro level consequences. Organisational politics has all along been seen as negatively effecting a number of employee outcomes such as job satisfaction and turnover intentions. Organisational politics is now no longer the 'bad' variable that human resource management practitioners detested to hear about. It can actually aid the attainment of organisational outcomes.

### *7.3.2 Contextual Contribution*

Systematic literature review revealed that the bulk of e-HRM studies have taken place in developed countries. Context plays a role in the efficient use of information systems. However, no known study similar to the present one has taken place in the context of a developing country. This thesis, thus contributes new contextualised knowledge in the sense of appreciating the role of actors (such as line managers, HR professionals and IT personnel) within the existing e-HRM use literature in a developing country context. Literature has previously shown differences in HR systems due to economic and industrial development. In general, usage of e-HRM in developing countries takes more time to implement due to organisational politics and low levels of computer skills in its workforce as also noted by Olivas-Lujan et al. (2008), Marler & Fisher (2013) and Holm (2010).

### *7.3.3 Policy and Practice Contribution*

The study provides a number of implications for practitioners. Human resource professionals and line managers should understand how variables could have an effect on employee outcomes individually but fail to predict the same outcomes if analysed in serial. Employee outcomes (employee performance and job satisfaction), subject to adequate management interventions, hold the key to a realisation of intended consequences.

There is need to monitor how e-HRM systems are being implemented in organisations. As this thesis shows, the assumption that e-HRM systems could be put on autopilot during implementation seems to account for a number of unintended consequences. Practically, management needs to monitor the commitment and motivation of e-HRM actors during the entire implementation process. If the system is not monitored, management may find a gap between HR practices an organisation develops and the actors' perception of the HR information system.

### **7.4 Limitations of the study**

Without a doubt, the present study makes a contribution to the e-HRM body of knowledge. However, there were a number of limitations to having an ideal study, and this is further addressed as suggestions for future studies. First, the study sample is largely skewed in favour of Human Resource managers and HR professionals. Human resource managers and HR professionals make up 66% of the total sample. The study results could possibly have 'human resource bias'. Future research would do well with a 'near balanced' sample where diverse users of e-HRM are proportionately represented. Furthermore, the analysis has been at an aggregate level. It has not focused on the specific roles of each actor on specific consequences. It would be interesting to find out the effect of individual actors' roles on operational, relational and transformational consequences.

Secondly, there is need for the study results to be validated in different settings. This study was conducted in a developing country setting. The study may be validated in another developing country with different socio-economic settings. National-cultural characteristics are crucial for the implementation of e-HRM (Marler & Fisher, 2013). Replicating the

present study in another developing country context would validate the importance of such contextual factors.

There are various aspects of e-HRM use that tend to show up after some time. The effects of e-HRM use on job satisfaction, organisational politics and employee performance tend to show up after some time. In this study, all data were collected at one point in time, that is, the study was cross-sectional. There is no record of the value of these variables before implementation. As a result, it is difficult to determine actual causality. There is, therefore, need to conduct a longitudinal study to allow for the manifestation of all consequences and determine actual causality.

The study took place during a time the Zimbabwean economy went on a meltdown. The economy is struggling with rising inflation and instability in the economic fundamentals. The current economic conditions may have had negative effects on work place labour relations, employee morale, motivation and subsequently performance. It would have been ideal for the study to last through a stable macro-economic environment where any changes in the variables could be isolated to the phenomenon being introduced into the workplace. The effect of e-HRM use may be compromised if the economic fundamentals are unstable.

### **7.5. Suggested Future Research**

The present study represents a first attempt to look at variables mediating the e-HRM use and the e-HRM macro level consequence relationship. It is a pioneering piece of work in so far as exploring in some detail the role of e-HRM actors is concerned, notably in the context of a developing country. However, in view of the limitations suggested in the preceding section, the following avenues for further studies are suggested:

1. There is need for a longitudinal study to be conducted using the same variables and methodology. Employee outcomes such as job satisfaction tend to take time to manifest. A cross sectional study could have failed to capture the true score of some variables that need more time to manifest.
2. This present study has looked at the mediating effects of employee performance, job satisfaction and organisational politics in explaining e-HRM macro level consequences. The setting was a developing country. There are unique contextual issues in other developing countries. For example, the stable economy in a developing

country may make it possible to guarantee few changes in the working conditions. A hyper-inflationary situation can upset the working conditions climate. There is need for replication of the present study in other developing countries for the purposes of population validity.

3. There is need to study the effects of organisational culture as a mediating variable too. Literature shows that the effect of culture may be dominating on so many variables such as e-HRM usage, acceptance or non-acceptance of power distribution and job satisfaction. A study on the effects of organisational culture on a number of employee outcomes may perhaps refine the model provided in this thesis.
4. Future studies could explore the possibility of other employee outcomes such as job stress, turnover intentions and decision-making as mediating the relationship between e-HRM use and e-HRM macro level consequences.
5. The present study assessed the effect of actual use of e-HRM. It is important to realise that employee perception of e-HRM use may be different from actual use. Future studies are encouraged to explore ways of measuring both actual and perceived e-HRM use. There is also need to explore the degree and effectiveness of e-HRM use.

## **7.6 Conclusion**

This thesis explains and models factors, which may inform the maximising of electronic Human Resource Management macro level consequences, focusing on the role of actors. The use of e-HRM has increased over recent years and organisations are investing heavily in e-HRM applications with the hope of realising a series of organisational outcomes that come with their use. However, there were still inadequate models designed to translate e-HRM use into desired e-HRM macro level consequences. This is despite numerous empirical studies iterating that e-HRM use yields positive consequences as well as unintended consequences. Systematic literature review on the relationship between e-HRM use and macro level consequences did not ascertain, in part or as a whole, the behaviours and role of HRM actors. This thesis bridges this knowledge gap by explaining the relationship between e-HRM use on one-hand, and employee outcomes on the other hand. The contributions are, theoretically and practically showing and explaining ideal contingencies for maximising e-HRM macro level consequences while appreciating the role users and actors play.

## LIST OF REFERENCES

- Abbas, Q. & Awan, S. 2017. Impact of organisational politics on employee performance in public sector organisations. *Pakistan Administrative Review*, 1: 19-31.
- Abdirahman, H. 2018. The relationship between job satisfaction, work-life balance and organisational commitment on employee performance. *Academic Journal of Economic Studies*, 4(3): 12-17.
- Acock, A. C. 2014. *A gentle introduction to Statistics*. 4th edition. College Station, TX: Stata Press.
- Addo-Tenkorang, R. & Helo, P. 2011. *Enterprise resource planning (ERP): A review literature report: proceedings of the World Congress on Engineering and Computer Science, San Francisco, October 19-21*, 2: 19-21).
- Adli, M., Gharib, S., Hakami, M. & Pourmahdi, K. 2014. A Survey on Electronic Human Resource Management Consequences, Its Outcomes and Performances. *Journal of Basic and Applied*, 4(10): 71-82.
- Ahmad, H., Ahmad, K. & Shah, I. 2010. Relationship between job satisfaction, job performance, attitude towards work and organisational commitment. *European Journal of Social Sciences*, 18(2): 257-267.
- Ahmed, N., Rasheed, A. & Jehanzeb, K. 2012. An exploration of predictors of organizational citizenship behaviour and its significant link to employee engagement. *International Journal of Business, Humanities and Technology*, 2(4): 99-106.
- Ahsan, N., Abdullah, Z., Fie, D.Y.G. & Alam, S.S. 2009. A study of job stress on job satisfaction among university staff in Malaysia: Empirical study. *European journal of social sciences*, 8(1): 121-131.
- Akanbi, P.A. & Ofoegbu, O.E. 2013. Influence of perception of organizational politics on job satisfaction among university workers in Oyo Town, Nigeria. *European Journal of Business and Management*, 5(2): 162-168.
- Akcomak, S., Kok, S. & Rojas-Romagosa, H. 2013. The effects of technology and offshoring on changes in employment and task-content of occupations. *Netherlands Bureau for Economic Policy Analysis*: 233-244.
- Al-Ababneh, M. 2020. Linking ontology, epistemology and research methodology. *Science & Philosophy*, 8(1): 75-91.
- Al-Haziazi, M., Muthuraman, S., Al Yahyaei, N. & Al Balushi, A. 2021. Framework for e-HRM implementation & employee satisfaction in Sultanate of Oman. *Exploring Sustainable Paths*, 1-29
- Ali, S.A.M., Said, N.A., Abd Kader, S.F., Ab Latif, D.S. & Munap, R. 2014. Hackman and Oldham's job characteristics model to job satisfaction. *Procedia-Social and Behavioral Sciences*, 12(9): 46-52.

- Al-Kofahi, M., Hassan, R., Mohamad, R., Intan, T. & Com, M. 2020. Information Systems success model: A review of literature. *International Journal of Innovation, Creativity and Change*, 12(8): 397-419.
- Alleyne, C., Kakabadse, A & Kakabadse, N. 2007. Using the HR intranet- An exploratory analysis of its impact on managerial satisfaction with the HR function. *Personnel Review*, 36(2): 295-310.
- Al-Okaily, A., Al-Okaily, M., Shiyyab, F. & Masadah, W. 2020. Accounting g Information System effectiveness from an organisational perspective. *Management Science Letters*, 10(16): 3991-4000.
- Al-Raisi, A., Amin, S. & Tahir, S. 2011. Evaluation of e-performance analysis and assessment in the United Arab Emirates (UAE) organisations. *Journal of Internet and Information System*, 2(2): 20-27.
- Alromaihi, M., Alshomaly, Z. & George, s. 2017. Job satisfaction and employee performance: A theoretical review of the relationship between the two variables. *International Journal of Advanced Research in Management and Social Sciences*, 6(1): 1-20.
- Alromaihi, M.A., Alshomaly, Z.A., & George, S. 2017. Job satisfaction and employee performance: A theoretical Review of the relationship between the two variables. *International Journal of Advanced Research in Management and Social Sciences*, 6(1): 1-20
- Alshibly, H. H. 2014. Evaluating E-HRM success: A Validation of the Information Systems Success Model. *International Journal of Human Resource Studies*, 4(3): 107.
- Amin, F.A. 2021. A review of the job satisfaction theory for special education perspective. *Turkish Journal of Computer and Mathematics Education*, 12(11): 5224-5228.
- Amoako-Gyampah, K. & Salam, A. F. 2004. An extension of the technology acceptance model in an ERP implementation environment. *Information & Management*, 41: 731–745.
- Anderson, M.H. 2006. How Can We Know What We Think Until We See What We Said? A citation and citation context analysis of Karl Weick's. *The Social Psychology of Organizing. Organization Studies*, 27: 1675–1692.
- Anney, V. N. 2014. Ensuring the Quality of the Findings of Qualitative Research: Looking at Trustworthiness Criteria. *Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS)*, 5(2): 272-281.
- Armstrong, M. 2008. *Strategic Human Resource Management, A Guide to Action*. London: Kogan Page.
- Armstrong, M., & Taylor, S. 2014. *Armstrong's Handbook of Human Resource Management Practice*, 13th edition. London.
- Assensoh-Kodua, A. 2019, The resource-based view: A tool of key competency for competitive advantage. *Problems and Perspective in Management*, 17(3): 143-161.

- Atshan, N., Al-Abrow, H., Abdullah, H., Khaw, K., Alnoor, A. & Abbas, S. 2021. The effect of perceived organisational politics on responses to job satisfaction: The moderating roles of self-efficacy and political skill. *Global Business and Organisational Excellence*, 41(2): 43-54.
- Au, N., Ngai, E.W.T., & Cheng, T.C.E. 2002. A critical review of end-user information system satisfaction research and a new research framework. *Omega*, 1(30): 451-478.
- Autor, D., Levy, F. & Murnane, R. J. 2003. *The Skill Content of Recent Technological Change: An Empirical Exploration*. Oxford: Oxford University Press.
- Awamleh, F., & Ertugan, A. 2021. The relationship between information technology capabilities, organisational intelligence, and competitive advantage. *SAGE Open*, 11(2): 321-356.
- Awan, A. & Asghar, I. 2014. Impact of employee job satisfaction on their performance: A case study of the banking sector in Pakistan, *Global Journal of Human Resource Management*, 2(4): 71-94.
- Aziri, B. 2011. Job satisfaction: A literature review. *Management research and practice*, 3(4), 77-86.
- Bahn, S., 2012. Keeping academic field researchers safe: Ethical safeguards. *Journal of academic ethics*, 10(2), pp.83-91.
- Bakker, A.B. & Bal, M.P. 2010. Weekly work engagement and performance: A study among starting teachers. *Journal of occupational and organizational psychology*. 83(1): 189-206.
- Baldwin, 2018. Internal and external validity and threats to validity. *Research concepts for the practitioner of educational leadership*, 31-36.
- Bandalos, D. & Finney, S. 2018. Factor analysis: Exploratory and Confirmatory. *The reviewer's guide to quantitative methods in the social sciences*, 98-122.
- Barney, J. 1991. Firm resources and sustained competitive advantage. *Journal of Management*, 17(1): 99-105.
- Baron, R.M. & Kenny, D.A. 1986. The mediator-moderator distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51:1173-1182.
- Bartis, E & Mitev, N. 2008. A multiple narrative approach to information systems failure: a successful system that failed. *European Journal of Information Systems*, 17: 112–124.
- Baruch, Y. & Holtom, B.C. 2008. Survey response rate levels and trends in organizational research. *Human Relations*, 61(8): 1139-1160.
- Baumbusch J. 2010. Semi-structured interviewing in practice-close research. *Journal for Specialists in Paediatric Nursing*, 15(3): 255-258.



- Bellou, S.P.V. 2016. Maximizing e-HRM outcomes: a moderated mediation path. *Management Decision*, 54(5): 1088–1109.
- Bennet, D., Barrett, A. & Helmich, E. 2019. How to analyse qualitative data in different ways. *The clinical teacher*, 16(1): 7-12.
- Berber, N., Dordevich, B. & Milanovic, S. 2018. Electric Human Resource Management: A new concept for digital age. *Strategic Management and Decision Support Systems in Strategic Management*, 23(2): 1236-1248.
- Bergeron, D.M. 2007. The potential paradox of organizational citizenship behavior: Good citizens at what cost? *Academy of Management review*, 32(4): 1078-1095.
- Beulen, E. 2009. The contribution of a global service provider's Human Resources Information System (HRIS) to staff retention in emerging markets. *Information Technology & People*, 22: 270-288.
- Billups, F. 2014. The quest for rigor in qualitative studies: Strategies for institutional researchers. *The NERA Researcher*, 52(1): 1-5.
- Bisman, J. 2010. Postpositivism and Accounting Research: A (Personal) Primer on Critical Realism. *Australasian Accounting, Business and Finance Journal*, 4(4): 3-25.
- Bissola, R. & Imperatori, B. 2014. The unexpected side of relational e-HRM. *Employee Relations*, 36(4): 376-397.
- Blanz, M. 2017. Employees' job satisfaction: A test of the job characteristics model among social work practitioners. *Journal of evidence informed social work*, 14(1): 35-50.
- Bodla, M.A. & Danish, R.Q. 2009. Politics and workplace: an empirical examination of the relationship between perceived organizational politics and work performance. *South Asian Journal of Management*, 16(1): 44-62.
- Bodla, M.A., Danish, R.Q. & Nawaz, M.M. 2012. Mediating role of perceived organizational politics in relating job characteristics to morale. *African Journal of Business Management*, 6(15): 5185-5192.
- Bondarouk, T. & Ruël, H. 2013. The strategic value of e-HRM: Results from an exploratory study in a governmental organization. *The International Journal of Human Resource Management*, 24: 391-414.
- Bondarouk, T. & Ruel, H.J.M. 2007. *Non-technical side of implementation of electronic HRM systems: Discursive exploration of line managers' and employees' perceptions. In 9th International Conference on Enterprise Information Systems, Funchal, Madeira, June 12-16, ICEIS 2007, INSTICC PRESS, 263-267.*
- Bondarouk, T. & van Riemsdijk, M. 2007. Successes and Failures of SAP Implementation. *International Journal of Technology and Human Interaction*. 3(4): 33-51.
- Bondarouk, T. 2011. Theoretical Approaches to e-HRM Implementations. In: Bondarouk, T. Ruel, H. & Looise, J.C. eds. *Electronic HRM in Theory and Practice, Advanced Series in Management*. WA, UK: Emerald Group Publishing, 1-20.

- Bondarouk, T. 2014. *Orchestrating the e-HRM symphony*. Twente: University of Twente.
- Bondarouk, T. 2020. Implementation of e-HRM: Definitions and Theoretical approaches. *Encyclopaedia of electronic HRM*, 63-69.
- Bondarouk, T., Harms, R. & Lepak, D. 2017. Does e-HRM lead to better HRM service? *The International Journal of Human Resource Management*, 28(9): 1332-1355.
- Bondarouk, T., Parry, E. & Furtmueller, E. 2017. Electronic HRM: four decades of research on adoption and consequences. *The International Journal of Human Resource Management*, 28(1): 98-131.
- Bondarouk, T., ter Horst, V. & Engbers, S., 2011. Exploring perceptions about the use of e-HRM tools in medium sized organizations. *Enterprise Information Systems: Concepts, Methodologies, Tools and Applications*, 1379-1398.
- Bondarouk, T.V. & Ruël, H.J.M. 2009. Electronic Human Resource Management: challenges in the digital era. *The International Journal of Human Resource Management*, 20(3): 505–514.
- Bondarouk, T.V. & Ruel, H.J.M. 2013. The strategic value of e-HRM: results from an exploratory study in a governmental organization. *International Journal of Human Resource Management*, 24(2): 391-414.
- Bontis, N., Richards, D. & Serenko, A. 2011. Improving service delivery: Investigating the role of information sharing, job characteristics, and employee satisfaction. *Learning Organization*, 18(3): 239–250.
- Boonstra, A. & de Vries, J. 2015. Information system conflicts: causes and types. *International Journal of Information Systems and Project Management*, 3(4): 5–20.
- Boudreau, M.C. & Robey, D. 2005. Enacting Integrated Information Technology: A Human Agency Perspective. *Organisations Science*, (16:1): 3-18.
- Bravo, E.R., Santana, M., & Rodon, J. 2016. Automating and informing: roles to examine technology's impact on performance. *Behaviour and Information Technology*, 35(7): 586-604.
- Broderick, R. & Boudreau, J.W. 1998. Human resource management, information technology, and the competitive edge. *Academy of Management Perspectives*, 6(2): 7-17.
- Brubaker, T.A. 2012. Measuring Political Perceptions in Organizations: Assessing Reliability and Validity of POPS across Cultures. *Journal of Economics and Behavioural Studies*, 4(10): 603-611.
- Bryan, A. 2006. Integrating quantitative and qualitative research: How is it done? *Qualitative Research*, 6(1): 97-113.
- Bryan, A. 2008. *Social research methods*. 3rd edition. New York. Oxford University Press
- Bryman, A. 2016. *Social Research Methods*. Oxford: Oxford University Press.

- Buckley, P., Miette, K., Joy, D. & Michaels, J. 2004. The use of an automated employment recruiting and screening system for temporary professional employees: A case study. *Human Resource Management: Published in cooperation with the School of Business Administration, The University of Michigan and in alliance with the Society of Human Resources Management*, 43(3): 233-241.
- Buitendach, J.H., & Rothmann, S. 2009. The validation of the Minnesota Job Satisfaction Questionnaire in selected organisations in South Africa. *SA Journal of Human Resource Management/ SA Tydskrifvir Menslikehulpbronbestuur*, 7(1): 1-8.
- Burbach, R.A. & Dundon, T. 2005. The Strategic Potential of Human Resource Information Systems: Evidence from the Republic of Ireland. *Intentional Employment Relations Review*, 11: 97-117.
- Burrell, G. & Morgan, G. 1979. *Sociological Paradigms and Organisational Analysis: Elements of the Sociology of Corporate Life*. London: Heinemann Educational Books.
- Butt, M., Mahmood, A., Kanwal, S. & Bajwa, F. 2019. Organisational politics and task performance: the intervening role of affective organisational commitment in a public sector organisation. *Middle East Journal of Management*, 6(2): 170-185.
- Caldwell, R., 2003. The changing roles of personnel managers: old ambiguities, new uncertainties. *Journal of Management Studies*, 40 (4): 983–1004.
- Campbell, J.P., McCloy, R.A., Oppler, S.H. & Sager, C.E. 1993. A theory of performance. In: Schmitt, N. & Borman, W.C. eds. *Personnel selection in Organization*, Jossey Bass, 3570: 35-70.
- Cardy, R.L. & Miller, J.S. 2003. Technology: Implications for HRM. In: Stone, D. ed. *Advances in human performance and cognitive engineering research*. Greenwich, CT: JAI Press, 99–118.
- Caruana, S. 2015. Ethical considerations when carrying out research in one's own academic institution. *In Symposia Melitensia*, 10: 61-71).
- Cavapozzi, D., Trevisan, E. and Weber, G., 2015. 25 The use of PC at work and job satisfaction. *Ageing in Europe: Supporting policies for an inclusive society*, pp.279-288.
- CedarCrestone. 2009. *CedarCrestone. 2009 Workforce Technologies and service delivery approaches survey*, 9th annual edition. Albany. New York
- Cha, J., Kim, Y. & Kim, T. 2009. Person-career fit and employee outcomes among research and development professionals. *Human Relations*, 62(12): 1857-1886.
- Chahal, H. & Mehta, S. 2010. Antecedents and consequences of organisational citizenship behaviour (OCB): A conceptual framework in reference to health care sector. *Journal of Services Research*, 10(2): 25-31.
- Chang, C., Rosen, C. & Levy, P. 2009. The relationship between perception of organisational politics and employee attitudes, strain and behaviour: a meta-analytic examination", *Applied Psychology*, 60(3), pp. 779-801.

- Chang, S.J., Van Witteloostuijn, A. and Eden, L. 2010. From the editors: Common method variance in international business research.
- Chang, Y., Li, H., Wu, C., & Wang, P. 2010. The influence of personality traits on nurses' job satisfaction in Taiwan. *International nurses review*, 57(4): 478-484.
- Charbonnier-Voirin, A. & Roussel, P. 2012. Adaptive performance: A new scale to measure individual performance in organisations. *Canadian Journal of Administrative Sciences*, 29(3): 280-293.
- Chen, L. 2008. Job satisfaction among information system (IS) personnel. *Computers in human behaviour*, 24(1): 105-118.
- Chenail, R.J. 2011. Interviewing the Investigator: strategies for addressing instrumentation and researcher bias concerns in qualitative research. *The Qualitative Report*, 16(1): 255-262.
- Chenevert, D. and Tremblay, M. 2009. Fits in strategic human resource management and methodological challenge: empirical evidence of influence of empowerment and compensation practices on human resource performance in Canadian firms. *International Journal of Human Resource Management*, 20(4): 738-770.
- Christen, M., Iyer, G. & Soberman, D. 2006. Job satisfaction, job performance, and effort: A re-examination using agency theory. *Journal of Marketing*, 70: 137-150.
- Coelho, F. and Augusto, M. 2010. Job Characteristics and the Creativity of Frontline Service Employees. *Journal of Service Research*, 13(4): 426-437.
- Collins, C. 2021. Expanding the resource based view model of strategic human resource management. *The International Journal of Human Resources Management*, 32(2): 331-358.
- Comacchio, A. & Scapolan, A. 2004. The adoption process of corporate e-learning in Italy. *Education + Training*, 46(7): 315-325.
- Combs, J., Liu, Y., Hall, A. & Ketchen, D. 2006. How much do high-performance work practices matter? A meta-analysis of their effects on organizational performance. *Personnel Psychology*, 59(3): 501-528.
- Cooper, D.R. & Schindler, P.S. 2008. *Business Research Methods*. 10th edition. Boston, Massachusetts: McGraw Hill.
- Cordella, A. 2006. Transaction costs and information systems: does IT add up? *Journal of Information Technology*, 21: 195-202.
- Costello, A.B. & Osborne, J.W. 2005. Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research and Evaluation*, 10(7), 1-9.
- Creswell, J. & Poth, C. 2016. *Qualitative inquiry and research design: Choosing among five approaches*. Sage.

- Creswell, J. 2003. *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. Thousand Oaks: Sage Publications.
- Creswell, J.W. 2009. *Research design: Qualitative, quantitative, and mixed methods approaches*. 3rd edition. Thousand Oaks: Sage Publications.
- Cridland E.K., Jones S.C., Caputi, P. & Magee C.A. 2015. Qualitative research with families living with autism spectrum disorder: recommendations for conducting semi structured interviews. *Journal of Intellectual & Developmental Disability*, 40(1): 78-91.
- Cronin, B., Morath, R., Curtain, P & Heil, M. 2006. Public sector use of technology in managing human resources. *Human Resource Management Review*, 16: 416-430.
- Cuane, B. et al., 2019. The role of questionnaire length and reminders frequency on response rates to a web based epidemiologic study: a randomised trial, *International Journal of Social Research Methodology*: 1-11.
- Cunningham, G.B. 2006. The relationships among commitment to change, coping with change, and turnover intentions. *European Journal of Work and Organizational Psychology*, 15(1): 29–45.
- D'Ambra, J., Wilson, C.S. & Akter, S. 2013. Application of the Task-Technology Fit Model to Structure and Evaluate the Adoption of E-Books by Academics. *Journal of the American Society for Information Science and Technology*, 64(1): 48–64.
- Davidson, E. 2006. A technological frames perspective on information technology and organisational change. *The journal of applied behavioural sciences*, 42(1): 23-39.
- Daymon, C. & Holloway, I. 2011. *Qualitative research methods in public relations and marketing communications*. 2nd edition. Abingdon and New York: Routledge.
- de Leeuw, E. 2008. Self-administered questionnaires and standardised interviews. In: Alasuutari, P., Bickman, L. & Brannan, J. eds. *The SAGE handbook of social research methods*. Los Angeles: Sage Publications. 313–327.
- de Wit, F. 2011. Where the Light Is. A Review of the Literature on Factors and Consequences of e-HRM Success and a Contingency Framework. Master's Thesis. University of Twente, Twente.
- Dearnley, C. 2005. A reflection on the use of semi-structured interviews. *Nurse Researcher*, 13(1): 19-28.
- Dede, N.P. 2020. The role of e-HRM practices in the digital era. *Tools and techniques for implementing international e-trading tactics for competitive advantage*, 1-20.
- Delone, W.H. & Mclean, E.R. 2003. The DeLone and McLean Model of Information Systems Success. *Journal of Management Information Systems*, 19(4): 9–30.
- Dery, K., Grant, D. & Wiblen, S. 2009. *Human resource information systems: replacing or enhancing HRM: proceedings of the 15th World Congress of the International Industrial Relations Association IIRA 2009, Sydney, Australia, August 27, 2009*.

- DeSanctis, G. 1986. Human resource information systems: A current assessment. *MIS Quarterly*, 10: 15-27.
- Devadoss, P. & Pan, S.L. 2007. Enterprise systems use: Towards a structural analysis of enterprise systems induced organizational transformation. *Communications of the Association for Information Systems*, 19(1): 17.
- DeVaro, J., Li, R., & Brookshire, D. 2007. Analysing the job characteristics model: New support from a cross-section of establishments. *The International Human Resource Management*, 18(6): 986-1003.
- DiCicco-Bloom, B. & Crabtree, B.F. 2006. The qualitative research interview. *Medical Education*, 40(4): 314-321.
- Doherty, N.F. & King, M. 2005. From technical to socio-technical change: tackling the human and organisational aspects of systems development projects. *European Journal of Information Systems*, 14(1): 1-5.
- Durnali, M. & Ayyildiz, P. 2019. The relationship between faculty members' job satisfaction and perception of organisational politics. *Participatory Educational Research*, 6(2): 169-188.
- Dwivedi, Y., Wastell, D., Laumer, S., Henriksen, H., Myers, M., Bunker, D., Elbanna, A., Ravishankar, M., & Srivastava, B. 2015. Research on Information System failures and successes: Status update and future directions. *Information Systems frontiers*, 17(1): 143-157.
- Edwards, B.D., Suzanne, T.B., Arthur, W. & Decuir, A.D. 2009. Relationship between facets of job satisfaction and task and contextual performance. *Applied psychology: an international review*, 57(3): 441-465.
- Ejiaku, S.A. 2014. Technology Adoption: Issues and Challenges in Information Technology Adoption in Emerging Economies. *Journal of International Technology and Information Management*, 23(2): Article 5.
- Elkhalil, Y. 2017. Organisational Politics and employee behaviour: A comparison between the US and Lebanon. Doctoral Thesis, Walden University.
- Elo, S., Kaariainen, M., Kanste, O., Polkki, T., Utriainen, K. & Kyngas, H. 2014. Qualitative content analysis: A focus on trustworthiness. *SAGE open*, 4(1): 1-14.
- Emamjome, F., Gable, A., Bandara, W. & Gable, G. 2018. *Re-thinking the ontology of information. Proceedings of the 39th International Conference on Information Systems Conference, 2018, Australia*, Association for Information Systems.
- Erdoğmu, N. & Esen, M. 2011. An investigation of the effects of technology readiness on technology acceptance in e-HRM. *Procedia - Social and Behavioral Sciences*, 24: 487-495.
- Faifua, D., 2014. *The key informant technique in qualitative research*. SAGE Publications, Ltd.

- Fan, W. and Yan, Z., 2010. Factors affecting response rates of the web survey: A systematic review. *Computers in human behavior*, 26(2): 132-139.
- Farndale, E., Scullion, H. & Sparrow, P. 2010. The role of the corporate HR function in global talent management. *Journal of World Business*, 45(2): 161–168.
- Farrington, S. & Lillah, R. 2018. Servant leadership and job satisfaction within private healthcare practices. *Leadership in Health Services*, 32(1): 148-168.
- Favilukis, J., Lin, X., Sharifkhani, A., & Zhao, X., 2021. Labour Force Telework, Flexibility and Asset Prices: Evidence from the Covid-19 Pandemic. *SSRN Electronic Journal*, doi//org/10.2139/ssrn.
- Fenwick, J. 2021 Power and Control. *Organisational Behaviour in the Public Sector: A critical Introduction*, Emerald Publishing Limited, Bingley, 11-25.
- Ferris, G., Harris, J., Russel, Z., and Maher, L. 2018. Politics in Organisations. In: Ones, D., Anderson, N., Viswesvaran, C. and Sinangil, K. Eds, *The SAGE handbook of Industrial work and organisational psychology: Organisational Psychology*, 469-486.
- Field, A. 2018. *Discovering statistics using IBM SPSS statistics*. 5th edition. London: Sage Publications.
- Florea, V. Badea, M. 2013. *Acceptance of new technologies in HR: E-Recruitment in organisations. Proceedings of the European Conference on Information Management & Evaluation, ICIME*, 344-352.
- Foster, S. 2009. *Making Sense of e-HRM: Technological Frames, Value Creation and Competitive Advantage*. Hertfordshire: University of Hertfordshire
- Fraij, J. 2021. E-HRM to overcome HRM challenges in the pandemic. *SEA – Practical Applications of Science*, 9(25): 41-49.
- Frayne, C.A. & Geringer, J.M. 2005. Self-management training for joint Venture General Managers. *Human Resource Planning*, 15: 69-88.
- Frey, C.B. & Osborne, M.A., 2017. The future of employment: How susceptible are jobs to computerisation? *Technological forecasting and social change*, 114: 254-280.
- Fritzsche, B.A. & Parrish, T.J. 2005. Theories and Research on Job Satisfaction. In: Brown, S.D. & Lent, R.W. Eds. *Career development and counseling: Putting theory and research to work*. Hoboken, NJ, US: John Wiley & Sons Inc. 180-202.
- Fylan, F. 2005. Semi-structured interviewing. In: Miles, J. & Gilbert, P. Eds. *A handbook of research methods for clinical and health psychology*. Oxford University, 5(2): 65-78.
- Galletta A. 2012. *Mastering the Semi-structured Interview and Beyond: From Research Design to Analysis and Publication*. New York: New York University Press.
- Gao, S., Chen, J & Fang, D. 2009. The influence of IT capability on dimensions of organisation structure. In *2009 Second International Conference on Future Information Technology and Management Engineering*, 269-273.

- Gardner, S.D., Lepak, D.P. & Bartol, K.M. 2003. Virtual HR: The impact of information technology on the human resource professional. *Journal of Vocational Behaviour*, 63(2): 159–179.
- George, E., Louw, D. and Badenhorst, G., 2008. Job satisfaction among urban secondary-school teachers in Namibia. *South African Journal of Education*, 28(2): 135-154.
- Geurts, L. 2018. *E-HRM consequences in Dutch schools: an old-fashioned sector entering the digital age* (Master's thesis, University of Twente)
- Ghazzawi, K., Al-khoury, P., & Saman, J. 2014. The effect of implementing technology in HRM on the level of employee motivation. *Human Resource Management Research*, 4(2), 33–39.
- Gill, J. & Johnson, P. 2002. *Research Methods for Managers*, 3rd edition. London. Sage Publications Ltd.
- Girisha, M.C. & Nagendrababu, K. 2020. Challenges and Issues of e-HRM practices in India. *Our Heritage*, 68(30): 5123-5132.
- Gonzalez, C. & Geovany, E. 2021. Rethinking the fourth power dimension: organisational subject and culture change. *Clencias administrativas*, 18: 63-74.
- Goodhue, D., Klein, B., Salvatore, T. & Thompson, R. 2006. Task Technology Fit. *Human-Computer Interaction and Management Information Systems: Foundations*: 184-504.
- Goodman, S.A. & Svyantek, D.J. 1999. Person–Organization Fit and Contextual Performance: Do Shared Values Matter, *Journal of Vocational Behavior*, 55(2): 254-275
- Gupta, A. & Saxen, S. 2011. Employees' satisfaction towards E-HRM in service organisations. *Gurukul Business review*, 7: 41-52.
- Hackett, A. & Strickland, K. 2018. Using the framework approach to analyse qualitative data: a worked example. *Nurse Researcher*, 26(3): 23-39.
- Hackman, J.R. & Oldham, G.R. 1975. Development of the Job Diagnostic Survey. *Journal of Applied Psychology*, 60(2): 159–170.
- Hackman, J.R. & Oldham, G.R. 1980. *Work Redesign*. Philippines. Addison-Wesley.
- Hackney Jr, J.R. 2002. The End of: Science, Philosophy, and Legal Theory. *U. Miami L. Rev.*, 57: 629.
- Hafez, M.A. 2011. *Maintenance of Human Resources*. 1st edition. Dar Al Fajr for Publication and Distribution.
- Haig, B. 2005. Exploratory factor analysis, theory generation, and scientific method. *Multivariate Behavioural Research*, 40(3): 303-329.
- Haines, V.Y. & Petit, A. 1997. Conditions for Successful Human Resource Information Systems. *Human Resource Management*, 36(2): 265-271.



- Hair, J.F. Jr., Black, W.C., Babin, B.J. & Anderson, R. 2010. *Multivariate Data Analysis*. London: Prentice Hall.
- Hair, J.F., Ringle, C.M. & Sarstedt, M. 2013. Partial least squares structural equation modelling: Rigorous applications, better results and higher acceptance. *Long range Planning*, 46, 1-12.
- Halawi, L.A., McCarthy, R.V. & Aronson, J.E. 2007. An empirical investigation of knowledge-management system's success. *The journal of Computer Information Systems*, 48(20): 121-135.
- Halcomb, E.J. & Hickman, L 2015. Mixed Methods. *Nursing Standard: promoting excellence in nursing care*, 29(32): 41-47.
- Hardy, C. 1996. Understanding power: bringing about strategic change. *British Journal of Management*, 7(Special Issue): s3-s16.
- Harley, B. & Cornelissen, J. 2020. Rigor with or without templates? The pursuit of methodological rigor in qualitative research. *Organisational Research Methods*, 25(2): 239-261.
- Hartley, J. 2004. Is judging test on a screen different from judging text in print? A naturalistic email experiment. *Innovations in Education and Teaching International*, 39(1): 21-25.
- Hawking, P., Stein, A. & Foster, S. 2004. e-HR and employee self-service: a case study of a Victorian public sector organisation. *Issues in Informing Science and Information Technology*, 1: 1017-1026.
- Hayes, A.F. 2012. PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling [White paper]. Retrieved from <http://www.afhayes.com/public/process2012.pdf>
- Hayes, A.F. 2018. *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York: The Guilford Press.
- Heikkilä, J. 2010. *A Delphi Study on E-HRM: Future Directions E-HRM*. In: Strohmeier, S.; Diederichsen, A. eds. *Evidence-Based e-HRM? On the way to rigorous and relevant research: proceedings of the Third European Academic Workshop on electronic Human Resource Management, Bamberg, May 20-21*. 229-249.
- Heikkilä, J., Rentto, O. & Feng, Y. 2017. Aiming for Strategic e-HRM: Motives and Consequences of e-HRM Implementation in an MNC. In Bondarouk, T., Ruël, H.J.M. & Parry, E. eds. *Electronic HRM in the Smart Era (The Changing Context of Managing People)*. Twente: Emerald Publishing Limited, 173 - 199
- Henseler, J., Ringle, C.M. & Sinkovics, R.R. 2009. The use of partial least squares path modeling in international marketing. In *New challenges to international marketing. Advances in International Marketing*, Volume 20, 277–319.
- Henson, R.K. & Roberts, J.K. 2006. Use of exploratory factor analysis in published research: Common errors and some comment on improved practice. *Educational and Psychological measurement*, 66(3): 393-416.

- Heppner, P.P., Kivlighan, D.M. & Wampold, B.E. 2008. *Research design in counselling*. 3rd edition. Belmont, CA: Thomson Brooks/Cole.
- Hollander, M., Wolfe, D.A. & Chicken, E. 2013. *Nonparametric statistical methods*. John Wiley & Sons.
- Holloway I. & Wheeler S. 2010. *Qualitative research in nursing and health care*. 3rd edition. Chichester, Ames, Iowa: Wiley-Blackwell.
- Holloway, I., & Wheeler, S. 2002. *Qualitative research in nursing*. 2nd edition. Malden, MA: Blackwell.
- Holm, A.B. 2010. *The effect of E-recruitment on the recruitment process: Evidence from case studies of three Danish MNCs. proceedings of the Third European Academic Workshop on electronic Human Resource Management, Bamberg, Germany, May 20-21.*
- Hou, C.K. 2012. Examining the effect of user satisfaction on system usage and individual performance with business intelligence systems: An empirical study of Taiwan's electronics industry. *International Journal of Information Management*, 32(6): 560-573.
- <https://www.internetworldstats.com/stats2.htm>. (Accessed May 6, 2019).
- Huang, J. & Martin-Taylor, M. 2013. Turnaround user acceptance in the context of HR self-service technology: An action research approach. *The International Journal of Human Resource Management*, 24(3): 621-642.
- Husain, N., Abas, N., Ariffin, N., & Norhisham, N. 2020 Job Characteristics and Job Satisfaction among Office Workers: The Mediating Role of Distributive Justice. *International Journal of Academic Research in Business and Social Sciences*, 10(9): 494-508.
- Hussain, Z., Wallace, J. & Cornelius, N. 2007. The use and impact of Human Resource Information Systems on Human Resource Management Professionals. *Information & Organisation*, 44: 74-89.
- Hussein, A. 2018. Test of Hackman and Oldham's job characteristics model at general media sector. *International Journal of Academic Research in Business and Social Sciences*, 8(1): 352-371.
- Hutchinson, S. 2014. The importance of communication in fulfilling the strategic role of HRM. In: Miller, V.D. & Gordon, M.E. eds. *Meeting the Challenges of Human Resource Management: A Communication Perspective*. New York, NY: Routledge. 16-26.
- Hwang, Y., Lee, Y. & Shin, D. 2016. The role of goal awareness and information technology self-efficacy on job satisfaction of healthcare system users. *Behaviour & Information Technology*, 35(7): 548-558.
- Indermun, V., & Bayat, M. 2013. The job satisfaction-employee performance relationship: a theoretical perspective. *International Journal of Innovative Research in Management*, 11(2): 1-9.

- Inuwa, M. 2016 Job Satisfaction and Employee performance: An empirical approach. *The Millennium University Journal*, 1(1): 90-103.
- Isaac, O., Abdullah, Z., Ramayah, T. & Mutahar, A.M. 2017. Internet usage, user satisfaction, task-technology fit, and performance impact among public sector employees in Yemen. *The International Journal of Information and Learning Technology*, 34(3): 210-241.
- Ivankova, N., Creswell, J.W. & Stick, S. 2006. Using mixed-methods sequential explanatory design: From theory to practice. *Field Methods*, 18: 3-20
- Jarrar, Y. & Schiuma, G. 2007. Measuring performance in the public sector: challenges and trends. *Measuring business excellence*, 11(4): 4-8.
- Jemine, G., Pichault, F. & Dubois, C. 2021. The politics behind design projects: when space, organisation, and technology collide. *International Journal of Managing Projects in Business*, 14(3): 743-766.
- Jensen, T.B., Kjaergaard, A. & Svejvig, T. 2009. Using institutional theory with sensemaking theory: a case study of information system implementation in healthcare. *Journal of Information Technology*, 24: 343-353.
- Johnson, J., Adkins, D. & Chauvin, S. 2020. A review of the quality indicators of rigor in qualitative research. *American Journal of Pharmaceutical Education*, 84(1): 7120-7142.
- Johnson, R.B., Onwuegbuzie, A.J. & Turner, L.A. 2007. Toward a definition of mixed methods research. *Journal of mixed methods research*, 1(2): 112-133.
- Johnson, R.D. & Gueutal, H.G. 2011. Transforming HR in Organizations through Technology, *Society*, 1–29.
- Johnson, R.D., Lukaszewski, K.M. & Stone, D.L. 2016. The evolution of the field of human resource information systems: Co-evolution of technology and HR processes. *Communications of the Association for Information Systems*, 38(1): 28-48.
- Johnson, R.D., Lukaszewski, K.M. & Stone, D.L. 2017. The importance of the interface between humans and computers on the effectiveness of e-HRM. *AIS Transactions on Human-Computer Interaction*, 9(1): 23-33.
- Judge, T.A., Zhang, S.C. & Glerum, D.R. 2020. Job satisfaction. *Essentials of job attitudes and other workplace psychological constructs*, 241-252.
- Kacmar, K.M. & Carlson, D.S. 1997. Further validation of the perceptions of politics scale (POPS): A multiple sample investigation. *Journal of Management*, 23(5): 627-658.
- Kafadar, K. 2021. Statistical significance, P-values, and replicability. *The Annals of Applied Statistics*, 15(3): 1081-1083.
- Kallio, H., Pietilä, A.M., Johnson, M. & Kangasniemi, M. 2016. Systematic methodological review: Developing a framework for a qualitative semi-structured interview guide. *Journal of advanced nursing*, 72(12): 2954-2965.

- Kappagoda, S. 2012. Job satisfaction and its impact on task and contextual performance in the banking sector in Sri Lanka. *1st International Conference on Management and Economics: COMSATS Institute of Information Technology*. Colombo.
- Karatepe, O., Ulundag, O., Menevis, L., Hadzaimedagic, L. & Baddar, L. 2006. The effects of selected individual characteristics on frontline employee performance and job satisfaction. *Tourism Management*, 27(4): 547-560.
- Kaygusuz, İ., Akgemci, T. & Yilmaz, A. 2016. The impact of HRIS usage on organizational efficiency and employee performance: a research in industrial and banking sector in Ankara and Istanbul cities. *International Journal of Business and Management*, IV (4), 14–52.
- Keil, G. 2008. Naturalism. In: Moran, D. Ed. *The Routledge Companion to Twentieth Century Philosophy*, London: Routledge.
- Kessler, S., Lucianetti, L., Pindek, S., Zhu, Z. & Spector, P. 2020. Job satisfaction and firm performance: Can employees' job satisfaction change the trajectory of a firm's performance? *Journal of Applied Social Psychology*, 50(10), pp. 563-572.
- Kettley, P. & Reilly, P. 2003. e-HR: An Introduction, *The Institution for Employment Studies*, Brighton, available at: [www.employment-studies.co.uk/](http://www.employment-studies.co.uk/) (accessed May 6, 2019).
- Khayun, V. & Ractham, P. 2011. *Measuring e-excise tax success factors: applying the DeLone and McLean information systems success model: proceedings of the Annual Hawaii International Conference on System Sciences*, Honolulu, 2011.
- Khazanchi, D. 2005. Information technology (IT) appropriateness: The contingency theory of “fit” and IT implementation in small and medium enterprises. *Journal of Computer Information Systems*, 45(3): 88-95.
- Kianto, A., Vanhala, M. & Heilmann, P. 2016. The impact of knowledge management on job satisfaction. *Journal of Knowledge Management*, 20(4): 621–636.
- Kirongo, A. & Odoyo, C. 2020. Research Philosophy Design and Methodologies: A systematic review of Research Paradigms in Information Technology, *Information Technology*, 8(5): 33-38.
- Kline, R.B. 2016. *Principles and Practice of Structural Equation Modeling*. 4th edition. New York: Guilford.
- Klopper, R. & Lubbe, S. 2012. Using matrix analysis to achieve traction, coherence, progression and closure in problem-solution oriented research. *Alternation Special Edition*, 4: 403-419.
- Kobayashi, K. 2018. *A study on the Causes of Information System Failure. Proceedings of the 7th International Congress on Advanced Applied Informatics*, 762-764.
- Kolkowska, E. & Dhillon, G. 2013. Organisational power and information security rule compliance. *Computers & Security*, 33: 3-11.

- Konradt, U., Hertel, G. & Schmook, R. 2003. Quality of management by objectives, task-related stressors, and non-task-related stressors as predictors of stress and job satisfaction among teleworkers. *European Journal of Work and Organizational Psychology*, 12 (1), 61–79.
- Koopman, J., Howe, M., Hollenbeck, J. & Sin, H. 2015. Small sample mediation testing: misplaced confidence in bootstrapped confidence intervals. *Journal of Applied Psychology*, 100(1): 194-202.
- Koseoglu, M.A., Bektas, C., Parnell, J.A. & Carraher, S. 2010. Knowledge management, organisational communication and job satisfaction: An empirical test of a five-star hotel in Turkey. *International Journal of Leisure and Tourism Marketing*, 1(4): 323-343.
- Kosteas, V.D. 2011. Job satisfaction and promotions. *Industrial Relations: A Journal of Economy and Society*, 50(1): 174-194.
- Kovach, K.A., Hughes, A.A., Fagan, P. & Maggitti, P.G. 2002. Administrative and strategic advantages of HRIS. *Employment Relations Today*, 29(2): 43-48.
- Krauss S. E., Hamzah A., Omar Z., Suandi T., Ismail I. A. & Zahari M. Z. 2009. Preliminary investigation and interview guide development for studying how Malaysian farmers form their mental models of farming. *The Qualitative Report*, 14(2): 245-260.
- Kulkarni, S. 2014. Human capital enhancement through e-HRM. *Journal of Management & Research*, 3(1): 59-74.
- Kyngas, H., Kaariainen, M. & Elo, S. 2020. The trustworthiness of content analysis. *The application of content analysis in nursing science research*, 41-48.
- Law, C.C. & Ngai, E.W. 2008. An empirical study of the effects of knowledge sharing and learning behaviors on firm performance. *Expert systems with applications*, 34(4): 342-2349.
- Leech, N.L. & Onwuegbuzie, A.J. 2009. A typology of mixed methods research designs. *Qual Quant*, 43: 265–275.
- Lengnick-Hall, M., Lengnick-Hall, C., Andrade, L. & Drake, B. 2009. Strategic human resource management: The evolution of the field. *Human Resource Management Review*, 19: 64-95.
- Lengnick-Hall, M.L. & Moritz, S. 2003. The impact of e-HR on the Human Resource Management function. *Journal of Labor Research*, 24(3): 365-379.
- Lepak, D.P. & Snell, S.A. 1998. Virtual HR: Strategic human resource management in the 21<sup>st</sup> century. *Human Resource Management Review*, 8(3): 215-234.
- Lewis, A., Cardy, R. & Huang, L. 2019. Institutional Theory and HRM: A new look. *Human Resource Management Review*, 29(3): 316-335.
- Lietz, C.A. & Zayas, L.E., 2010. Evaluating qualitative research for social work practitioners. *Advances in Social Work*, 11(2): 188-202.

- Lin, C., Sanders, K., Sun, J., Shipton, H., & Mooi, E. 2016. From customer oriented strategy to organisational financial performance: The role of human resource management and customer linking capability. *British Journal of Management*, 27(1): 21-37.
- Liu, J.Y., Klein, G., Chen, J.V. and Jiang, J.J., 2009. The negative impact of conflict on the information system development process, product, and project. *Journal of Computer Information Systems*, 49(4): 98-104.
- Locke, E. & Schattke, K. 2019 Intrinsic and extrinsic motivation: Time for expansion and clarification. *Motivation Science*, 5(4): 277-290.
- Lukaszewski, K.M., Stone, D.L. & Stone-Romero, E.F. 2008. The effects of the ability to choose the type of human resources system on perceptions of invasion of privacy and system satisfaction. *Journal of Business and Psychology*, 23: 73–86.
- Lumley, E.J., Coetzee, M., Tladinyane, R & Ferreira, R. 2011. Exploring the job satisfaction and organisational commitment of employees in the information technology environment. *South African Business Review*, 15(1): 100-118.
- Maatman, M., Bondarouk, T. & Looise, J. K. 2010. Conceptualising the capabilities and value creation of HRM shared service models. *Human Resource Management Review*, 20(4): 327-339.
- MacKinnon, D.P., Fairchild, A.J. & Fritz, M.S. 2007. Mediation Analysis. *Annual. Review of Psychology*, 58: 593-614.
- Macnee, L.C. & McCabe, S. 2008. *Understanding nursing research: Using research evidence-based practice*. Philadelphia, PA: Lippincott Williams & Wilkins.
- Magalhaes, R. & Ruel, H. 2007. *Studying Human Resource Information Systems from an integrated perspective: A Research Agenda: proceedings of the 1st International Workshop on Human Resource Information System*, Funchal, 130-146.
- Maier, C., Laumer, S., Eckhardt, A. & Weitzel, T. 2013. Analyzing the impact of HRIS implementations on HR personnel's job satisfaction and turnover intention. *Journal of Strategic Information Systems*, 22:193-207.
- Malhotra N.K. 2006. Questionnaire Design and Scale Development. In: Grover, R. & Vriens, M. eds. *The Handbook of Marketing Research: Uses, misuses, and future advances*. California: Sage Publications, 176-202.
- Marais, W.J., & Kruger, C.J. 2005. Implementation of an information system within a bureaucratic environment: an understanding of the human issues. *South African Journal of Information Management*, 7(1): 1-18.
- Markus, C., Iyer, G. & Soberman, D. 2006. Job Satisfaction, Job performance, and Effort: A Re-examination Using Agency Theory. *Journal Of Marketing*, [Online] 70(1):137-150. Available: American Marketing Association. Accessed: 13 August 2018
- Markus, M.L. 1983. Power, Politics, and MIS Implementation. *Communications of the ACM*, (26:6): 430-444.

- Marler, J.H. & Fisher, S.L. 2013. An evidence-based review of e-HRM and strategic human resource management. *Human Resource Management Review*, 23(1): 18–36.
- Marler, J.H. & Parry, E. 2016. Human resource management, strategic involvement and e-HRM technology. *The International Journal of Human Resource Management*, 27(19): 2233-2253.
- Marler, J.H. 2009. Making human resources strategic by going to the Net: Reality or myth? *International Journal of Human Resource Management*, 20 (3): 515-527.
- Martin, G. & Reddington, M. 2010. Theorizing the links between e-HR and strategic HRM: A model, case illustration and reflections. *International Journal of Human Resource Management*, 21(10): 1553-1574.
- McGill, T. & Klobas, J. 2005. The role of spreadsheet knowledge in user-developed application success. *Decision Support Systems*, 39(3): 355-369.
- McGill, T.J & Klobas, J.E 2009. A task-technology fit view of learning management system impact. *Computers and Education*, 52(2): 496-508.
- Meisler, G. & Vigoda-Gadot, E. 2013. Perceived organisational politics, emotional intelligence and work outcomes. *Personnel Review*, 43(1), 116-135.
- Meisler, G., Drory, A., & Vigoda-Gadot, E. 2019. Perceived organisational politics and counterproductive work behaviour: The mediating role of hostility. *Personnel Review*, 49(8): 1505-1517.
- Melián-González, S. & Bulchand-Gidumal, J. 2016. A model that connects information technology and hotel performance. *Tourism Management*, 53: 30-37.
- Mertler, C., Vannata, R. & LaVenía, K. 2021. *Advanced and multivariate statistical methods: Practical application and interpretation. Advanced and multivariate statistical methods: Practical application and interpretation.* Routledge
- Mhouthi, A., Erradi, M. & Nasseh, A. 2018. Using cloud-computing services in e-learning process: benefits and challenges. *Education and Information Technologies*, 23(2023(2): 893-909.
- Migiro S.O. & Magangi B.A. 2011. Mixed methods: A review of literature and the future of the new research paradigm. *African Journal of Business Management*, 5(10): 3757-3764.
- Miles, M., Huberman, M. & Saldana, J. 2013. *Qualitative data analysis: A methods sourcebook.* Thousand Oaks, CA: SAGE Publications, Incorporated.
- Miller, B.K., Rutherford, M.A. & Kolodinsky, R.W. 2008. Perceptions of organizational politics: A meta-analysis of outcomes. *Journal of Business and Psychology*, 22(3): 209-222.
- Molina-Azorin, J. & Cameron, R. 2015 Emergent MMR in management and marketing. In: Hesse-Biber, S. & Burke, J. eds. *Oxford Handbook of Mixed and Multi-method Research.* Oxford: Oxford University Press, 383-401.

- Mooney, D.J. 2020 *A Meta-Analysis of e-recruitment applicant experience, Perception, and Behaviour, and Behaviour, W, and Behaviour*, Walden University.
- Moore, D.S., Notz, W.I. & Flinger, M.A. 2013. *The basic practice of statistics*. 6th edition, New York: W.H. Freeman & Company.
- Morris, M.G., & Venkatesh, V. 2010. Job Characteristics and Job Satisfaction: Understanding the Role of Enterprise Resource Planning System Implementation. *MIS Quarterly*, (34:1): 143-161.
- Motowidlo, J.S. 2003 Job Performance: Handbook of Psychology. *Industrial and Organizational Psychology*, 12: 39-55.
- Mueller, D. & Strohmeier, S. 2010. Design characteristics of virtual learning environments: An expert study. *International Journal of training and development*, 14(3): 209-222.
- Mueller, R. & Hancock, G. 2018. Structural Equation Modeling, *The Reviewer's Guide to Quantitative Methods in the Social Sciences*, 445-456.
- Muqaddim, N. & Hosain, M. 2021. HRM Practices and Operational Efficiency: Evidence from Bangladeshi Garment Industry. *Asian Journal of Economics, Business, and Accounting*, 80-95.
- Muturi, B., Kiflemariam, A. & Acosta, F. 2018. Towards a Robust Human Resource Information System's Success Measurement Model. *International Journal of Academic Research in Business and Social Sciences*, 8(3): 1-14.
- Ngai, E.W., Law, C.C. & Wat, F.K. 2008. Examining the critical success factors in the adoption of enterprise resource planning. *Computers in industry*, 59(6):548-564.
- Nivlouei, F.B. 2014. Electronic Human Resource Management System: The Main Element in Capacitating Globalization Paradigm. *International Journal of Business and Social Science*. 5(2):147-159.
- Njoku, E., Ruel, H., Rowlands, H., Evans, L. & Murdoch, M. 2019. An analysis of the contribution of e-HRM to sustaining business performance. *HRM 4.0 For Human-Centered Organisations*, 23: 21-39. Emerald Publishing Limited
- Noe, R., Hollenbeck, J., Gerhart, B. & Wright, P. 2010. *Human Resource Management: gaining a competitive advantage*. 7th edition. New York: McGraw-Hill.
- Norris, G., Qureshi, F., Howitt, D. & Cramer D. 2014. *Introduction to statistics with SPSS for social science*. Routledge.
- Norzaidi, M.D. & Salwani, M.I. 2009. Evaluating technology resistance and technology satisfaction on students' performance. *Campus-Wide Information Systems*, 26(4): 298-312.
- Nunes, A., Montero, P. & Nunes, A. 2020. Factor structure of the convergence insufficiency symptom survey questionnaire. *Plos one*, 15(2): 25-39.
- Nursing and Midwifery Board of Ireland. 2007. *Scope of Nursing and Midwifery Practice Framework*. Dublin: NMBI.



- Nye, C., Ma, J. & Wee, S. 2021. Cognitive ability and Job Performance: Meta-analytic Evidence for the Validity of Narrow Cognitive Abilities. *Journal of Business and Psychology*, 1-21.
- Obeidat, S.M. 2016. The link between e-HRM use and HRM effectiveness: an empirical study. *Personnel Review*, 45(6): 1281-1301.
- Oiry, E., 2009. Electronic human resource management: Organizational responses to role conflicts created by e-learning. *International Journal of Training and Development*, 13(2): 111-123.
- Okundaye, K.E. 2016. Adoption of Information and Communication Technology in Nigerian Small- to Medium-Size Enterprises. Walden Dissertations and Doctoral Studies Collection. Walden University.
- Olah, J., Karmazin, G., Peto, K. & Popp, J. 2018. Information Technology developments of logistics service providers in Hungary. *International Journal of Logistics Research and Applications*, 21(3): 332-344.
- Olaskoaga-Larrauri, J., Gonzalez-Laskibar, X., Barrenetxea-Ayesta, M. & Diaz-DeBasurto-Uraga, P. 2019. The sign of the new millennium. Organisational changes and job satisfaction at Spanish public universities. *European Journal of Education*, 54(1): 137-150.
- Olivas-Lujan, M.R., Ramirez, J. & Zapata-Cantu, L. 2007. e-HRM in Mexico: adapting innovations for global competitiveness. *International Journal of Manpower*, 28(5): 418-434.
- Onwuegbuzie, A.J. & Collins, K.M.T. 2007. A typology of mixed methods sampling designs in social science research. *The Qualitative Report*, 12(2): 281-316.
- Onwuegbuzie, A.J. & Johnson, R.B. 2006. The validity issue in mixed research. *Research in the Schools*, 13(1): 48-63.
- Onwuegbuzie, A.J. & Leech, N.L. 2007. Validity and Qualitative Research: An Oxymoron? *Quality and Quantity*, 41: 233-249.
- Orlikowski, W.J. & Scott, S.V. 2008. Sociomateriality: Challenging the Separation of Technology, Work and Organization. *The Academy of Management Annals*, 2(1): 433-474.
- Padgett, D. 2008. *Qualitative methods in social work research*. Los Angeles: Sage Publications.
- Panayotopoulou, L., Vakola, M. & Galanaki, E. 2007. E-HR adoption and the role of HRM: Evidence from Greece. *Personnel Review*, 36(2): 277-294.
- Panos, S. & Bellou, V. 2016. Maximizing e-HRM outcomes: a moderated mediation path. *Management Decision*, 54(5), 1088-1109.
- Park, S. & Park, S. 2019. Employee adaptive performance and its antecedents: Review and synthesis. *Human Resource Development Review*, 18(3): 294-324.

- Parry, E. & Tyson, S. 2011. Desired goals and actual outcomes of e-HRM. *Human Resource Management Journal*, 21(3): 335-354.
- Parry, E. 2011. An examination of e-HRM as a means to increase the value of the HR function. *The International Journal of Human Resource Management*, 22(5): 1146–1162.
- Parry, E. 2014. e-HRM: A Catalyst for Changing the HR Function? In: Woodside, A.G. and LaPlaca, P.G. eds. *Handbook of Strategic e-Business Management*. Berlin, Heidelberg: Springer, 589-604.
- Patton, M.Q. 2015. *Qualitative research & evaluation methods: Integrating theory and practice*. 4th edition. Thousand Oaks: Sage Publications.
- Payne, S.C., Horner, M.T., Boswell, W.R, Schroeder, A.N. & Stine-Cheyne, K.J. 2009. Comparison of online and traditional performance appraisal systems. *Journal of Managerial Psychology*, 24(6): 526–544.
- Peng, G. & Zhang, D. 2020. Does information technology substitute for or complement human labor? A dynamic stratified analysis on European countries. *Decision Sciences*, 51(3): 720-754.
- Peszynski, K. 2012. Understanding Human Factors in Systems Selection and Implementation: Exploring the Role of Power and Politics. In *Virtual Learning Environments: Concepts, Methodologies, Tools and Applications*, 1232-1248.
- Petter, S., Delone, W. & Mclean, E. 2008. Measuring information systems success: models, dimensions, measures, and interrelationships. *European Journal of Information Systems*, 17: 236–263.
- Pettigrew, A.M. 2014. *The politics of organizational decision-making*. Routledge.
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y. and Podsakoff, N.P. 2003. Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of applied psychology*, 88(5): 879-894.
- Poisat, P. & Mey, M.R. 2017. Electronic human resource management: Enhancing or entrancing? *S.A. Journal of Human Resource Management*, 15(1): 1-9.
- Polit, D.F. & Beck, C.T. 2010. *Essentials of nursing research: Appraising evidence for nursing practice*. 7th edition. Lippincott Williams & Wilkins.
- Poor, J., Sasvari, P., Szalay, Z., Peto, I., Gyurian, N., Suhajda, C. & Zsigri, F. 2020. The implementation and management of e-learning in companies: The state of e-learning in Hungary based on empirical research. *Journal of Engineering Management and Competitiveness*, 10(1): 3-14.
- Powell, L., Kaufmann, P. & Freedland, K. 2021. Feasibility and Pilot Studies, Behavioural Clinical Trials for Chronic Diseases, 147-167.

- Preacher, K.J. & Hayes, A.F. 2008. Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior research methods*, 40(3): 879-891.
- Preacher, K.J. & Hayes, A.F., 2004. SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior research methods, instruments & computers*, 36(4): 717-731.
- Pugno, M. & Depedri, S. 2009. Job performance and job satisfaction: an integrated survey. *Economia Politica*, 27(1): 175-210.
- Quaosar, G.M., 2018. Adoption of human resource information systems in developing countries: An empirical study. *International Business Research*, 11(4): 133-144.
- Ragab, M. & Atisha, A. 2018. Research methodology in business: A starter's guide. *Management and organisational studies*, 5(1): 1-14.
- Rahi, S., Alnaser, F. & Abd Ghani, M. 2019. Designing survey research: recommendation for questionnaire development, calculating sample size and selecting research paradigms. *Economic and Social Development: Book of Proceedings*, 1157-1169.
- Rahmi, B., Birgoren, B. & Aktepe, A. 2018. A meta-analysis of factors affecting perceived usefulness and perceived ease of use in the adoption of e-learning systems. *Turkish Online Journal of Distance Education*, 19(4): 4-42.
- Rajan, C.A. & Baral, R. 2015. Adoption of ERP system: An empirical study of factors influencing the usage of ERP and its impact on end user. *IIMB Management Review*, 27(2): 105-117.
- Randolph, C. & Main, R. 2005. Exploring the Power and Politics of a PeopleSoft Implementation. In *Qualitative Case Studies on implementation of Enterprise Wide Systems*, 140-159.
- Rao, P. 2010. A Resource-Based Analysis of Recruitment and Selection Practices of Indian Software Companies. *Journal of Indian Business Research*, 2(1): 32 – 51.
- Rathore, K., Qaiser, A. & Sherazi, F. 2019. Impact of Office Automation on employee amotivation: The case of Punjab civil secretariat. *Paradigms*, 13(2): 144-150.
- Rattray, J. & Jones, M.C. 2007. Essential elements of questionnaire design and development. *Journal of clinical nursing*, 16(2): 234-243.
- Ravichandran, T., Lertwongsatien, C. & Lertwongsatien, C. 2005. Effect of information systems resources and capabilities on firm performance: A resource-based perspective. *Journal of management information systems*, 21(4): 237-276.
- Read, G., Salmon, P. Lenne, M. & Stanton, N. 2015. Designing sociotechnical systems with cognitive work analysis: putting theory back into practice. *Ergonomics*, 58(5): 822-851.
- Reddick, C.G. 2009. Human resources information systems in Texas City governments: Scope and perception of its effectiveness. *Public Personnel Management*, 38(4), 19–34.

- Reinking, J. 2012. Contingency theory in information systems research. In: Dwivedi, Y.K., Wade, M.R. & Schneberger, S.L. eds. *Information Systems Theory: Explaining and Predicting our Digital Society*. 1: 247–263.
- Richardson, A. M., Traavik, L. E., & Burke, R. J. (2016). Women and Work Stress: More and Different? In *Handbook on Well-Being of Working Women*, (pp. 123-140). Springer Netherlands.
- Ridenour, C. & Newman, I. 2008. *Mixed Methods: Exploring the Interactive Continuum*. Arbondale IL: Southern Illinois University Press.
- Robalo R. & Moreira, J. 2020. The influence of power strategies in Accounting Information Systems implementation process. *International Journal of Accounting Information Systems*, 39: 100487-100493.
- Robbins, S., Judge, T., Millett, B. & Boyle, M. 2013. *Organisational behaviour*. Pearson Higher Education.
- Robbins, S.P., & Judge, T.A. 2017. *Organisational Behaviour*. 16th edition, Tamil Nadu: India Education Services.
- Roberts, R. 2020. Qualitative Interview Questions: Guidance for Novice Researchers. *Qualitative Report*, 25(9): 3185-3203.
- Rosen, C.C., Levy, P.E. & Hall, R.J. 2006. Placing perceptions of politics in the context of the feedback environment, employee attitudes, and job performance. *Journal of applied psychology*, 91(1):211.
- Ruël, H. & van der Kaap, H. 2012. E-HRM usage and value creation. Does a facilitating context matter? *German Journal of Research in Human Resource Management*, 26(3): 260-281.
- Ruël, H., Bondarouk, T. & Looise, J.K. 2004. E-HRM: Innovation or Irritation. An Explorative Empirical Study in Five Large Companies on Web-based HRM. *Management Revue*, 15(3): 364-380.
- Ruel, H.J.M., Bondarouk, T. & van der Velde, M. 2007. The contribution of e-HRM to HRM effectiveness. Results from a quantitative study in a Dutch Ministry. *Employee Relations*, 29(3): 280-291.
- Ruel, H.J.M., Magalhaes, R. & Chiemeke, C.C. 2011. Human Resource Information Systems: An Integrated Research Agenda. *Electronic HRM in Theory and Practice. Advanced Series in Management*, 8: 21-39.
- Ruta, C.D. 2005. The application of change management theory to HR portal implementation in subsidiaries of multinational corporations. *Human Resource Management*, 44(1): 35-53.
- Said, N.A. and Munap, R. 2010. *Job characteristics and job satisfaction: A relationship study on supervisors' performance: proceedings of the 2010 IEEE International Conference on Management of Innovation & Technology*, Singapore, June, 2010: 714-719.

- Saldana, J. 2016. *The Coding Manual for Qualitative Researchers*. 3rd edition. London, UK. Sage.
- Saunders, M., Lewis, P. & Thornhill, A. 2012. *Research Methods for Business Students*. 4th edition. London: FT Prentice Hall.
- Schumacker, R.E. & Lomax, R.G. 2010. *A beginner's guide to structural equation modeling*. New York. Routledge.
- Schwartz, H. 2020. Intellectual property, technorents and the labour share of production. *Competition and Change*, 1-14.
- Sebo, P., Maisonneuve, H., Cerutti, B., Fournier, J.P., Senn, N. & Haller, D.M. 2017. Rates, delays, and completeness of general practitioners' responses to a postal versus web-based survey: a randomized trial. *Journal of medical Internet research*, 19(3):6308.
- Semadar, A., Robins, G. & Ferris, G.R. 2006. Comparing the effects of multiple social effectiveness constructs on managerial performance. *Journal of Organizational Behavior*, 27: 443-461.
- Shane, L. 2009. Development and validation of a measure that examines attitudes towards e-HRM practices. Masters' Thesis. University of South Africa. Pretoria:
- Sheehan, C. De Cieri, H. Cooper, B. & Brooks, R. 2014. Exploring the power dimensions of the human resource function. *Human Resource Management Journal*, 24(2), pp. 193-210.
- Shenton, A.K. 2004. Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, 22: 63–75.
- Shilpa, V. & Gopal, R. 2011. The implications of implementing electronic-human resource management (e-HRM) systems in companies. *Journal of Information Systems and Communication*, 2(1): 10-29.
- Shrout, P.E. & Bolger, N. 2002. Mediation in experimental and nonexperimental studies: new procedures and recommendations. *Psychological methods*, 7(4): 422.
- Singh, R. 2016. The impact of intrinsic and extrinsic motivators on employee engagement in information organisations. *Journal of Education for Library and Information Sciences*, 57(2), pp.197-206.
- Skudiene, V., Vezeliene, G. & Stangej, O. 2020. Transforming human resource management: innovative e-HRM value creation for multinational companies. In *Innovation Management*. Edward Elgar Publishing
- Smith, E. Joubert, P. & Karodia, A.M. 2015. The impact of intrinsic and extrinsic rewards on employee motivation at a medical devices company in South Africa. *Kuwait Chapter of Arabian Journal of Business and Management Review*, 33(2588), pp. 1-49.
- Sonnentag, S., Volmer, J. & Spsychala, A. 2008. Job performance. *The Sage handbook of organizational behavior*, 1: 427-447.

- Staples, D. & Seddon, P. 2005. Testing the Technology-to-Performance Chain model. In *Advanced Topics in End-User Computing*, 4: 42-64.
- Steffens, N., Shemla, M., Wegge, J. & Diestel, S. 2014. Organisational tenure and employee performance: A multilevel analysis. *Group and Organisation Management*, 39(6): 664-690.
- Stone, D.L., Deadrick, D.L., Lukaszewski, K.M. & Johnson, R. 2015. The influence of technology on the future of human resource management. *Human Resource Management Review*, 25(2): 216-231.
- Strohmeier, S. & Kabst, R. 2012. Evaluating major human resource information systems design characteristics—an empirical study. *International journal of business information systems*, 9(3): 328-342.
- Strohmeier, S. & Kabst, R. 2014. Configurations of e-HRM - an empirical exploration. *Employee Relations*, 36(4): 333-353.
- Strohmeier, S. 2007. Research in e-HRM: Review and implications. *Human Resource Management Review*, 17(1): 19–37.
- Strohmeier, S. 2009. Concepts of e-HRM consequences: A categorisation, review and suggestion. *The International Journal of Human Resource Management*, 20: 528–543.
- Suruch, L. & MASLAKCI, A. 2020. Validity and Reliability in quantitative research. *Business & Management Studies: An International Journal*, 8(3): 2694-2726.
- Sutrisna, M. 2009. Research methodology in Doctoral Research: Understanding the meaning of conducting qualitative research, Working Paper. In: Ross, A. ed. *Proceedings of the association of researchers in construction management (ARCOM) Doctoral Workshop, Liverpool, May 12, 2009*. Liverpool John Moores University, 48-57.
- Swanepoel, B.J., Erasmus, B.J., Van Wyk, M.W. & Schenk, H.W. 2007. *South African Human Resource Management Theory and Practice*, Cape Town, Juta.
- Sykes, T. A., Venkatesh, V. & Johnson, J. L. 2014. Enterprise system implementation and employee job performance: Understanding the role of advice networks. *MIS Quarterly*, 38(1), 51–72.
- Tabiu, A., Pangil, F. & Othman, S. 2016. Examining the link between HRM Practices and Employees' performance in Nigerian public sector. *Management Science Letters*, 6: 395-408.
- Tafti, A., Mithas, S. & Krishnan, M.S. 2007. Information technology and the autonomy – control duality: toward a theory. *Information Technology Management*, 8: 147–166.
- Taher, M. 2012. 'Resource based view theory', *Information Systems Theory*, Springer, New York: 151-163.
- Taher, M. 2012. Resource-Based View Theory, In: Dwivedi, Y.K., Wade, M.R. & Schneberger, S.L. Eds. *Information Systems Theory: Explaining and Predicting our Digital Society*. 1: 247-264.

- Marangunic, N. & Granic, A. 2015. Technology acceptance model: a literature review from 1996 to 2013. *Universal access in the information society*, 14(1): 81-95.
- Tang, P., Koopman, J., McClean, S., Zhang, J., Li, C., De Cremer, D., Lu, Y. & Ng, C. 2021. When conscientious employees meet intelligent machines: An integrative approach inspired by complementary theory and role theory. *Academy of Management*, 1-16.
- Teddlie, C. & Tashakkori, A. 2009. *Foundation of Mixed Methods Research: Integrating Quantitative and Qualitative approaches in the Social and Behavioural Sciences*. London, Sage.
- Terrell, S. 2011. Mixed-methods research methodologies. *The Qualitative Report*, 17(1), 254-280.
- Thatcher, R. 2010. Validity and Reliability of Quantitative Electroencephalography. *Journal of Neurotherapy*, 14: 122-152.
- Thite, D. & Kavanagh, M.J. 2009. Evolution of human resource management & human resource information systems: The role of information technology. In: Thite, D. & Kavanagh, M.J. eds. *Human Resource Information Systems: Basics, Applications, and Future Directions*. Thousand Oaks, CA: Sage.
- Tolvanen, A., Kangas, K., Tarvainen, O., Huhta, E. & Nivala, V. 2020. Data on recreational activities respondents' values, land use preferences, protection level and biodiversity in nature-based tourism areas in Finland. *Data in brief*, 31: 105724-105749.
- Tomeski, E.A. & Lazarus, H. 1974. Computerized Information Systems in Personnel: A comparative analysis of the state of the art in government and business. *Academy of Management Journal*, 17(1): 168-172.
- Travica, B. 2005. Information Politics and Information Culture: A Case Study. *Informing Science Journal*, 8: 211-244.
- Tsai, Y. & Wu, S.W. 2011. Using internal marketing to improve organizational commitment and service quality. *Journal of advanced nursing*, 67(12): 2593-2604.
- Turner, D.W. 2010. Qualitative interview design: a practical guide for novice researcher. *The Qualitative Report*, 15(3): 754-760.
- Turnes, P., & Ernst, R. 2015. Strategies to measure direct and indirect effects in multi-mediator models. *Business Review*, 14(10): 504-514.
- Turulja, L. & Bajgoric, N. 2016. Human resources or Information technology: What is more important for companies in the digital era? *Business Systems Research: International Journal of the Society for Advancing Innovation and Research in Economy*, 7(1): 35-45.
- Uman, I.D. 2006. What is e-HRM? Retrieved from <http://www.ehrmplein.nl/> [Accessed 26 March 2019].
- Van den Bos, I. & Van der Heijden, P. 2005. E-HRM. In: Kluytmans, F. ed. *Leerboek personeels management*. Groningen: Wolters-Nordhoff.

- Van Geffen, C., Ruël, H. and Bondarouk, T., 2013. E-HRM in MNCs: what can be learned from a review of the IS literature? *European journal of international management*, 7(4): 373-392.
- Van Mol, C., 2017. Improving web survey efficiency: the impact of an extra reminder and reminder content on web survey response. *International Journal of Social Research Methodology*, 20(4): 317-327.
- Vandenberghe, C. & Tremblay, M., 2008. The role of pay satisfaction and organizational commitment in turnover intentions: A two-sample study. *Journal of Business and Psychology*, 22(3): 275-286.
- Vermeeren, B., Kuipers, B., & Steijn, B. (2014). Does leadership style make a difference? Linking HRM, job satisfaction, and organizational performance. *Review of Public Personnel Administration*, 34(2):174-195.
- Vigoda-Gadot, E. & Kapun, D. 2005. Perceptions of politics and perceived performance in public and private organisations: A test of one model across two sectors. *Policy and Politics*, 33(2): 251–276.
- Voermans, M. & Van Veldhoven, M. 2007. Attitude towards E-HRM: An Empirical Study at Philips. *Personnel Review*, 36(6): 887-902.
- Wahyudi, E. & Park, S. 2014. Unveiling the value creation process of electronic human resource management: an Indonesian case. *Public Personnel Management*, 43(1): 83-114.
- Wahyuni, D. (2012). The research design maze: Understanding paradigms, cases, methods and methodologies, *Journal of applied management accounting research*, 10(1): 69-80.
- Wang, W., Wang, Y., Zhang, Y. & Ma, J. 2020. Spillover of workplace IT satisfaction onto job satisfaction: The roles of job fit and professional fit. *International Journal of Information Management*, 50: 341-352.
- Weeks, K.O. 2013. An Analysis of Human Resource Information Systems impact on Employees. *Journal of Management Policy and Practice*, 14(3): 35–49.
- Weick, K.E., Sutcliffe, K.M. and Obstfeld, D., 2005. Organizing and the process of sensemaking. *Organization science*, 16(4): 409-421.
- Weiss, D.J., Dawis, R.V., England, G.W. & Lofquist, L.H. 1967. *Manual for the Minnesota satisfaction questionnaire*. Minneapolis, MN: University of Minnesota.
- Werbel, J. & DeMarie, S. 2005. Aligning strategic human resource management and person-environment fit. *Human Resources Management Review*, 15(4): 247-262.
- West, S.G., Taylor, A.B. & Wu, W. 2012. Model fit and model selection in structural equation modeling. *Handbook of structural equation modeling*, 1: 209-231.
- Weston, R. & Gore Jr, P.A. 2006. A brief guide to structural equation modeling. *The counseling psychologist*, 34(5): 719-751.



- Williams, B., Brown, T. & Onsman, A. 2010. Exploratory factor analysis: A five-step guide for novices. *Australasian Journal of Paramedicine*, 8(3), 1-13.
- Williams, B., Onsman, A. & Brown, T. 2010. Exploratory factor analysis: A five-step guide for novices. *Journal of Emergency Primary Health Care (JEPHC)*, 8(3) Article 990399.
- Wilson, M. & Howcroft, D. 2005. Power, politics and persuasion in IS evaluation: a focus on 'relevant social groups'. *The Journal of Strategic Information Systems*, 14(1): 17-43.
- Wolf, J., Harrington, K., Clark, S. & Miller, M. 2013. Sample Size Requirements for Structural Equation Models: An evaluation of Power, Bias, and Solution Propriety. *Educa Psychol Meas*, 76(6): 913-934.
- Worthington, R.L. & Whittaker, T.A. 2006. Scale development research: A content analysis and recommendations for best practices. *The Counseling Psychologist*, 34(6): 806-838.
- Wynn, R., Gabarron, E., Johnsen, J. & Traver, V. 2020. Special issue on e-health services. *International Journal of Environmental Research and Public Health*, 17(8): 2885-2892.
- Yong, A.G & Pearce, S.P. 2013. A Beginner's Guide to Factor Analysis: Focusing on Exploratory Factor Analysis. *Tutorials in Quantitative Methods for Psychology*, 9(2): 79-94.
- Yuen, K., Loh, H., Zhou, Q., & Wong, y. 2018. Determinants of job satisfaction and performance of seafarers. *Transportation research part A: Policy and practice*, 110: 1-12.
- Yusoff, R., Ali, A. & Khan, A. 2014. Assessing Reliability and Validity of Job Performance Scale among university teachers. *Journal of Basic and Applied Scientific Research*. 4(1): 35-41
- Yusoff, R., Khan, A. & Azam, K. 2013. Job Stress, Performance and Emotional Intelligence in Academia. *J. Basic & Applied Science Research*, 3(6): 1-8
- Zimbabwe. Zimbabwe National Statistics Agency. 2017. *Inter-censal demographic survey*. Harare: Government of Zimbabwe.

## APPENDICES

### APPENDIX 1 QUESTIONNAIRE

**University: UNISA, School of Business Leadership (SBL)**

**Researcher: Musa Nyathi**

**Supervisor: Professor Ray Kekwaletswe**

**Degree: DBL**

The purpose of this survey is to understand the effect of computerising the human resource management function on employee performance, job satisfaction and organisational politics and subsequently on the overall intended goals of introducing electronic human resource management.

**In this survey, the computerisation of human resource management function is referred to as electronic human resource management (e-HRM). The main goals of introducing computers in human resource management are referred to as electronic human resource management macro-level consequences.**

This research is being carried in total conformity to UNISA research ethical principles. As such, your responses will be kept confidential and anonymous. There is no way a third party could link your responses to you personally or your organisation. Participation in this survey is voluntary and you can choose to withdraw at any stage of the survey. In order for your responses to be used in this research, we require your consent.

Date of completion of survey

I do understand that my participation in this research is voluntary and that I can withdraw at any stage of the process. I give my consent to the researcher to use my responses in fulfilling the purpose of this research provided that my personal details are kept confidential.

## QUESTIONNAIRE

### SECTION A (DEMOGRAPHICS)

(Tick appropriate space / box)

1. Gender

Female		Male	
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2. Age

18-30		31-40		41-50		51-60		>60	
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3. For how long have you been working for your current organisation?

<2 years		2-5 years		6-10 years		11-15 years		16-20 years		>20 years	
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4. What position do you hold?

Position	Department / Section in which position exists

5. In which sector is your organisation? (Tick appropriate space / box)

	Sector	
i	Technology	
ii	Beverages	
iii	Mining	
iv	Banking	
v	Insurance	
vi	Tertiary education	
vii	Agriculture	
viii	Retail	
ix	Agro-industrial	
x	Food	
xi	Building	
xii	Industrial	

6. Which HRM application do you use in your work?

No	HR Application	Yes	No
a	e-recruiting system		
b	e-learning system		
c	e-performance management		
d	Time management systems		
e	Scheduling of work systems		
f	Employee service delivery applications		
g	Manager service delivery applications		
h	electronic-payroll system		
i	IT Benefits system		
j	Business Intelligence IT system		
k	Other (State HR applications)		

#### SECTION B (E-HRM USE SCALE)

What is the breadth and frequency of electronic Human Resource Management (e-HRM) use in your organisation? (Tick the appropriate space / box).

1=Strongly Disagree	2=Disagree	3=Neutral	4=Agree	5=Strongly Agree					
					1	2	3	4	5
<b>Perceived Ease of Use</b>									
PEOU2	I have the necessary knowledge to use the e-HRM system								
PEOU3	Use of e-HRM applications do not require a lot of mental effort								
PEOU4	The e-HRM system is clear and understandable								
<b>System Usefulness</b>									
SU5	The e-HRM system helps me improve my job performance								
SU7	I find the e-HRM system useful for performing my day to day job-related activities at lower costs								
SU8	e-HRM allows employees to perform job related activities faster								

**SECTION C (EMPLOYEE PERFORMANCE SCALE)**

To what extent do you agree or disagree with the following statements regarding your job performance? (Tick the appropriate space / box)

1=Strongly Disagree		2=Disagree		3=Neutral		4=Agree		5=Strongly Agree	
<b>Contextual Performance</b>									
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>			
EP4	I help others when their work load increases (assists others until they get over the hurdles)								
EP5	I assist others with their duties.								
EP6	I make innovative suggestions to improve the overall quality of the department.								
<b>Contextual Performance (Conscientiousness)</b>									
EP14	I do not take unnecessary time off work.								
EP15	Employees in my department do not take extra breaks.								
EP16	We do not spend a great deal of time in idle conversations								
<b>Task Performance</b>									
EP17	I consistently achieve the objectives of my job								
EP18	I consistently meet the criteria for performance								
EP20	I make sure that I fulfil all the requirements of the job								

**SECTION D (JOB SATISFACTION SCALE)**

How satisfied are you with the following aspects of your job? (Tick the appropriate space / box)

1=Strongly Dissatisfied		2=Dissatisfied		3=Neutral		4=Satisfied		5=Strongly Satisfied	
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>			
<b>Intrinsic job satisfaction</b>									
JS2	I have the chance to work alone on the job								
JS3	I have the chance to do different things from time to time								
JS9	I have the chance to do things for other people								
<b>Extrinsic job satisfaction</b>									
JS13	I am happy with my pay and the amount of work I do								
JS17	I love the working conditions								
JS19	I like the praise I get for doing a good job								

**SECTION E (PERCEPTION OF ORGANISATIONAL POLITICS SCALE)**

To what extent do you agree or disagree with the following statements pertaining to your work environment? (Tick appropriate space / box)

1=Strongly Disagree		2=Disagree		3=Neutral		4=Agree		5=Strongly Agree							
								1	2	3	4	5			
<b><i>Go along to Get along</i></b>															
OP6	Agreeing with powerful people is the best alternative in this organisation.														
OP7	It is best not to rock the boat in this organization.														
OP8	Sometimes it is better to remain quiet than to fight the system.														
<b><i>Pay and Promotion Policies</i></b>															
OP12	None of the pay increases (raises) I have received are consistent with the policies on how raises should be determined.														
OP13	The stated pay and promotion policies have nothing to do with how pay increases (raises) and promotions are determined.														
OP14	When it comes to pay increase (rise) and promotion decisions, policies are irrelevant.														

**SECTION F (E-HRM MACRO-LEVEL CONSEQUENCE SCALE)**

Since the implementation of e-HRM, the following results have been noticed: (Tick appropriate space / box)

1=Strongly Dissatisfied		2=Dissatisfied		3=Neutral		4=Satisfied		5=Strongly Satisfied							
								1	2	3	4	5			
<b>Operational Consequences</b>															
OC2	There is standardisation of HR processes														
OC4	Increased efficiency in most departments														
OC5	Employees are saving on time spent doing routine tasks														
<b>Relational Consequences</b>															
RC13	There is improved HR service to employees														
RC14	Improved line managers' responsibility to meet HR responsibilities														
RC15	Increased responsiveness to employee needs														
<b>Transformational Consequences</b>															
TC17	e-HRM Technology allows the HR department to spend more time on HR planning activities														
TC18	e-HRM allows HR staff to redirect time onto strategic initiatives														
TC20	e-HRM has allowed HR professionals of my organisation to focus on tasks that provide increased value														

**THANK YOU FOR PARTICIPATING IN THIS SURVEY**

## **APPENDIX 2      INTERVIEW SCHEDULE**

The purpose of this interview is to understand the ‘surprising’ results from the quantitative phase of this study: The quantitative study showed that e-HRM use has a weak effect on employee performance. As a mediator, employee performance has the lowest effect on e-HRM macro level consequences. This is the focus of this study.

This research is being carried in total conformity to UNISA research ethical principles. As such, your responses will be kept confidential and anonymous. There is no way a third party could link your responses to you personally or your organisation. Participation in this interview is voluntary and you can choose to withdraw at any stage of the interview. In order for your responses to be used in this research, I require your consent.

### **SECTION A: DEMOGRAPHICS**

1. Sector: .....
2. Position: .....
3. Age: .....
4. Experience using e-HRM applications: .....
5. Organisational tenure: .....
6. e-HRM applications being used: .....

### **SECTION B: E-HRM USE EFFECT ON EMPLOYEE PERFORMANCE**

7. What do you think should be the size of the effect of e-HRM use on employee performance vis-a-vis the effect on the other two mediators?
8. A low effect of e-HRM use on employee performance was obtained from the quantitative phase of this study. What do you attribute this to?
9. Why do you think e-HRM use has a bigger effect on such variables as job satisfaction and organisational politics?

10. What measures do you think should be implemented to ensure that e-HRM use has a bigger effect on employee performance?

### **SECTION C: EMPLOYEE PERFORMANCE EFFECT ON E-HRM MACRO LEVEL CONSEQUENCES**

11. What do you think should be the size of the effect of employee performance on e-HRM macro level consequences?

12. What do you attribute the low effect obtained from the quantitative study to?

13. Why do you think respondents ranked job satisfaction and organisational politics as having bigger effects on the dependent variable?

14. What measures do you think should be implemented to ensure that employee performance has a bigger effect on e-HRM macro level consequences too?

15. In your view, how should e-HRM applications be deployed to consistently yield e-HRM macro level consequences?

16. Any other views on issues raised in this interview?

**Thank you for your contribution towards making this research a success. Your efforts are greatly appreciated.**



## APPENDIX 3 E-HRM CONSTRUCT STATISTICS

### 1. e-HRM use construct tables and figures

Table e-HRM 1: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.839	.864	12

Table e-HRM 2: Correlation Matrix

	PEOU2	PEOU3	PEOU4	SU1	SU2	SU3	SU4	QS1	QS2	QS3	QS4
PEOU 2	1.000										
PEOU 3	.659	1.000									
PEOU 4	.729	.533	1.000								
System Usefulness 1	.207	.265	.146	1.000							
System Usefulness 2	.111	.209	.094	.445	1.000						
System Usefulness 3	.341	.297	.340	.441	.276	1.000					
System Usefulness 4	.364	.348	.366	.388	.196	.651	1.000				
Quality of System 1	.418	.609	.292	.356	.226	.214	.258	1.000			
Quality of System 2	.350	.447	.265	.311	.193	.162	.237	.731	1.000		
Quality of System 3	.557	.478	.551	.281	.127	.420	.469	.494	.535	1.000	
Quality of System 4	.442	.384	.467	.221	.128	.503	.469	.318	.311	.621	1.000

Key: PEOU: Perceived Ease of Use, SU: System Usefulness, QS: Quality

Table e-HRM 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.835
Bartlett's Test of Sphericity	Approx. Chi-Square
	1717.832
	Df
	55
	Sig.
	.000

Table e-HRM 4: Anti-image matrix

	PEOU1	PEOU2	PEOU3	PEOU4	SU1	SU2	SU3	SU4	QS1	QS2	QS3	QS4
Perceived Ease of Use 1	<b>.887<sup>a</sup></b>											
Perceived Ease of Use 2	-0.024	<b>.839<sup>a</sup></b>										
Perceived Ease of Use 3	-0.144	-0.315	<b>.889<sup>a</sup></b>									
Perceived Ease of Use 4	-0.052	-0.562	-0.135	<b>.822<sup>a</sup></b>								
System Usefulness 1	-0.109	0.034	0.048	0.036	<b>.728<sup>a</sup></b>							
System Usefulness 2	0.028	-0.087	-0.073	0.083	-0.685	<b>.765<sup>a</sup></b>						
System Usefulness 3	0.108	-0.031	-0.004	-0.029	-0.183	-0.05	<b>.832<sup>a</sup></b>					
System Usefulness 4	-0.008	0.01	-0.073	-0.038	-0.081	-0.016	-0.455	<b>.872<sup>a</sup></b>				
Quality of System 1	-0.196	-0.006	-0.354	0.096	-0.038	-0.062	-0.012	0.045	<b>.826<sup>a</sup></b>			
Quality of System 2	-0.121	0.012	0.065	0.027	0.041	-0.133	0.104	-0.01	-0.521	<b>.818<sup>a</sup></b>		
Quality of System 3	0.082	-0.091	0.04	-0.226	-0.082	0.094	-0.028	-0.132	-0.093	-0.294	<b>.878<sup>a</sup></b>	
Quality of System 4	0.056	-0.024	-0.039	-0.044	0.13	-0.113	-0.233	-0.078	-0.004	0.009	-0.368	<b>.882<sup>a</sup></b>

Table e-HRM 5: Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.065	51.083	51.083	2.711	45.184	45.184
2	1.243	20.716	71.799	.868	14.459	<b>59.643</b>
3	.669	11.157	82.957			
4	.445	7.413	90.370			
5	.340	5.665	96.036			
6	.238	3.964	100.000			

Table e-HRM 6: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
PEOU1	47.61	33.615	.523	.364	.834
PEOU2	47.18	36.258	.613	.648	.832
PEOU3	47.55	32.162	.673	.604	.821
PEOU4	47.12	36.594	.507	.588	.836
SU5	47.53	34.065	.473	.374	.839
SU6	47.87	35.376	.318	.226	.854
SU7	47.00	36.892	.482	.530	.838
SU8	46.95	37.340	.508	.490	.838
QS9	47.79	31.080	.685	.661	.820
QS10	47.71	31.570	.594	.588	.830
QS11	47.03	35.829	.667	.609	.829
QS12	46.84	38.088	.523	.479	.840

## APPENDIX 4: EMPLOYEE PERFORMANCE CONSTRUCT STATISTICS

Table EP 1: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.811	.870	25

Table EP 2: Correlation Matrix

	EP1	EP2	EP3	EP4	EP5	EP6	EP7	EP8	EP9	EP10	EP11	EP12	EP13	EP14
EP1	1.000													
EP2	.331	1.000												
EP3	.246	.648	1.000											
EP4	.038	.234	.399	1.000										
EP5	.149	.437	.434	.548	1.000									
EP6	.034	.213	.350	.424	.433	1.000								
EP7	.231	.516	.481	.000	.241	.264	1.000							
EP8	.131	.404	.362	.186	.191	.190	.376	1.000						
EP9	-.191	-.408	-.236	-.011	-.110	-.005	-.363	-.514	1.000					
EP10	.319	.626	.373	.075	.287	.123	.479	.357	-.414	1.000				
EP11	.212	.536	.393	.100	.222	.151	.421	.416	-.351	.588	1.000			
EP12	.034	.238	.112	.107	.077	.168	.123	.421	-.279	.139	.364	1.000		
EP13	-.250	-.391	-.213	.130	-.107	.051	-.356	-.289	.497	-.625	-.485	-.078	1.000	
EP14	.190	.488	.421	.206	.316	.299	.389	.411	-.279	.428	.424	.278	-.354	1.000
EP15	.199	.493	.262	.117	.170	.107	.396	.424	-.386	.608	.472	.369	-.461	.639
EP16	.118	.372	.269	.203	.210	.112	.245	.299	-.183	.374	.286	.150	-.260	.489
EP17	.172	.450	.271	-.013	.095	.092	.379	.430	-.430	.433	.478	.272	-.462	.357
EP18	.089	.391	.229	.008	.112	.096	.313	.388	-.396	.383	.404	.210	-.389	.297
EP19	.228	.468	.267	.018	.186	.091	.429	.275	-.382	.573	.411	.149	-.509	.268
EP20	.098	.297	.133	.045	.185	.135	.219	.288	-.226	.308	.377	.194	-.341	.270
EP21	.105	.362	.283	.142	.312	.250	.221	.319	-.111	.322	.353	.223	-.241	.422
EP22	.179	.438	.282	.041	.185	.196	.356	.267	-.301	.460	.373	.235	-.395	.395
EP23	.292	.617	.421	.043	.250	.180	.507	.388	-.438	.721	.534	.207	-.649	.465
EP24	.073	.243	.236	.144	.122	.139	.194	.217	-.206	.255	.330	.223	-.247	.306
EP25	.110	.171	.082	.018	.233	.057	.173	.219	-.270	.197	.159	.136	-.227	.146

Table EP2: Correlation Matrix continued

	EP15	EP16	EP17	EP18	EP19	EP20	EP21	EP22	EP23	EP24	EP25
EP15	1.000										
EP16	.651	1.000									
EP17	.470	.313	1.000								
EP18	.407	.268	.892	1.000							
EP19	.426	.310	.453	.396	1.000						
EP20	.309	.224	.415	.408	.490	1.000					
EP21	.374	.379	.430	.410	.400	.640	1.000				
EP22	.481	.276	.487	.370	.524	.387	.417	1.000			
EP23	.593	.357	.534	.465	.672	.421	.413	.598	1.000		
EP24	.312	.251	.296	.293	.347	.299	.277	.236	.438	1.000	
EP25	.164	.101	.272	.271	.275	.291	.325	.323	.291	.381	1.000

Table EP 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.876
Bartlett's Test of Sphericity	Approx. Chi-Square	4336.850
	Df	300
	Sig.	.000

Table EP 4: Anti-Image Correlations

	EP1	EP2	EP3	EP4	EP5	EP6	EP7	EP8	EP9	EP10	EP11	EP12	EP13	EP14	EP15
EP1	<b>.921<sup>a</sup></b>														
EP2	-.102	<b>.917<sup>a</sup></b>													
EP3	-.060	-.404	<b>.855<sup>a</sup></b>												
EP4	.005	.036	-.266	<b>.660<sup>a</sup></b>											
EP5	-.010	-.212	-.006	-.425	<b>.807<sup>a</sup></b>										
EP6	.027	.134	-.058	-.229	-.192	<b>.792<sup>a</sup></b>									
EP7	-.008	-.054	-.253	.279	-.065	-.217	<b>.901<sup>a</sup></b>								
EP8	.031	.055	-.117	-.110	.074	-.009	-.110	<b>.907<sup>a</sup></b>							
EP9	.022	.128	-.022	.029	-.018	-.060	.067	.329	<b>.890<sup>a</sup></b>						
EP10	-.083	-.215	.084	-.009	-.073	-.030	-.036	-.041	-.013	<b>.916<sup>a</sup></b>					
EP11	.013	-.089	-.083	-.012	.007	.029	-.087	-.050	-.071	-.268	<b>.933<sup>a</sup></b>				
EP12	.027	-.092	.099	.022	.013	-.123	.122	-.244	.113	.170	-.255	<b>.764<sup>a</sup></b>			
EP13	.026	-.164	.029	-.149	.066	-.117	-.072	-.058	-.270	.219	.162	-.141	<b>.896<sup>a</sup></b>		
EP14	-.028	-.076	-.096	.048	-.086	-.153	-.050	-.093	-.006	.087	-.037	.023	.126	<b>.919<sup>a</sup></b>	
EP15	-.005	.003	.179	-.107	.098	.122	-.106	0.09	.042	-.265	.029	-.266	.004	-.357	<b>.866<sup>a</sup></b>
EP16	.031	-.056	-.039	-.070	-.024	.030	.037	-.058	-.057	.044	.036	.157	.009	-.059	-.491
EP17	-.119	-.048	.014	.007	.097	.031	-.074	-.063	-.004	.096	-.107	-.081	.120	.001	.017
EP18	.145	-.015	.000	.010	-.043	-.044	.053	-.002	.079	-.057	.044	.099	-.072	.040	-.061
EP19	-.024	-.033	.056	-.040	.011	.053	-.158	.067	.091	-.143	.053	-.017	.047	.152	.072
EP20	.000	-.040	.154	-.026	-.008	-.015	-.002	-.061	.020	.109	-.129	.031	.101	.042	-.005
EP21	.018	.020	-.103	.082	-.108	-.062	.115	-.068	-.205	-.022	-.003	-.049	-.079	-.159	.040
EP22	.049	-.028	-.042	.010	.050	-.107	.032	.109	.002	.011	.022	-.039	-.047	-.073	-.140
EP23	-.034	-.146	-.076	.080	.004	-.094	-.039	-.048	-.037	-.226	.056	.028	.277	.026	-.136
EP24	.047	.090	-.097	-.119	.128	-.020	.052	.089	-.018	.088	-.133	-.088	-.055	-.120	-.001
EP25	-.064	.051	.095	.080	-.239	.083	-.053	-.076	.139	-.001	.083	-.007	.025	.068	.057



Table EP 4: Anti-Image Correlations continued

	EP16	EP17	EP18	EP19	EP20	EP21	EP22	EP23	EP24	EP25
EP1										
EP2										
EP3										
EP4										
EP5										
EP6										
EP7										
EP8										
EP9										
EP10										
EP11										
EP12										
EP13										
EP14										
EP15										
EP16	<b>.857<sup>a</sup></b>									
EP17	-.059	<b>.825<sup>a</sup></b>								
EP18	.055	-.840	<b>.800<sup>a</sup></b>							
EP19	-.112	-.017	.013	<b>.933<sup>a</sup></b>						
EP20	.076	.053	-.083	-.218	<b>.865<sup>a</sup></b>					
EP21	-.173	-.052	-.041	-.047	-.492	<b>.864<sup>a</sup></b>				
EP22	.080	-.245	.190	-.168	-.048	-.061	<b>.912<sup>a</sup></b>			
EP23	.095	-.004	-.019	-.240	.006	-.032	-.214	<b>.931<sup>a</sup></b>		
EP24	-.074	.023	-.051	-.101	-.073	.064	.153	-.268	<b>.829<sup>a</sup></b>	
EP25	.033	.026	-.051	.027	.010	-.163	-.204	.027	-.336	<b>.791<sup>a</sup></b>

Table EP 5: Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.790	42.108	42.108	3.575	39.718	39.718
2	2.262	25.135	67.244	2.033	22.584	62.302
3	1.407	15.633	<b>82.877</b>	1.092	12.131	<b>74.432</b>
4	.422	4.691	87.568			
5	.370	4.110	91.678			
6	.337	3.747	95.426			
7	.187	2.075	97.501			
8	.149	1.656	99.157			
9	.076	.843	100.000			

Table EP 6: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Contextual Performance 1	90.76	90.072	.271	.167	.835
Contextual Performance 2	90.77	94.129	.725	.677	.786
Contextual Performance 3	90.52	99.145	.563	.594	.796
Contextual Performance 4	90.22	106.097	.249	.494	.808
Contextual Performance 5	90.42	103.208	.421	.513	.803
Contextual Performance 6	90.28	104.745	.326	.375	.806
Contextual Performance 7	90.82	96.786	.545	.482	.795
Conscientiousness 1	90.44	100.383	.498	.478	.799
Conscientiousness 2	92.97	117.185	-.468	.486	.835
Conscientiousness 3	91.28	92.655	.646	.695	.788
Conscientiousness 4	90.74	98.876	.605	.532	.795
Conscientiousness 5	90.39	104.561	.318	.375	.806
Conscientiousness 6	91.97	126.791	-.558	.602	.866
Conscientiousness 7	90.50	100.307	.603	.557	.797
Conscientiousness 8	90.70	97.672	.640	.728	.793
Conscientiousness 9	90.46	101.641	.476	.504	.801
Task Performance 1	90.07	99.498	.587	.847	.796
Task Performance 2	90.10	100.808	.507	.818	.799
Task Performance 3	91.10	97.050	.579	.574	.794
Task Performance 4	90.48	102.605	.464	.526	.802
Task Performance 5	90.47	102.001	.562	.581	.800
Task Performance 6	90.97	98.561	.573	.507	.795
Task Performance 7	91.08	91.553	.716	.749	.784
Task Performance 8	90.22	103.141	.408	.376	.803
Task Performance 9	89.87	104.909	.311	.337	.807

## APPENDIX 5 JOB SATISFACTION CONSTRUCT STATISTICS

Table JS 1: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
<b>.810</b>	.812	17

Table JS 2 Inter-Item Correlation Matrix (showing intrinsic factors only)

	I1	I2	I3	I4	I5	I6	I7	I8	I9
Intrinsic job satisfaction 1	1.000								
Intrinsic job satisfaction 2	.312	1.000							
Intrinsic job satisfaction 3	.214	.662	1.000						
Intrinsic job satisfaction 4	.605	.259	.157	1.000					
Intrinsic job satisfaction 5	.331	.363	.323	.317	1.000				
Intrinsic job satisfaction 6	.418	.152	.033	.593	.368	1.000			
Intrinsic job satisfaction 7	.219	.412	.369	.127	.368	.260	1.000		
Intrinsic job satisfaction 8	.127	.336	.361	.020	.253	.019	.574	1.000	
Intrinsic job satisfaction 9	.003	.282	.317	-.145	.273	.058	.400	.380	1.000

Table JS 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.764
Bartlett's Test of Sphericity	Approx. Chi-Square
	1902.962
	df
	136
	Sig.
	.000

Table JS 4: Anti-Image Correlation

	Intrinsic job satisfaction 1	Intrinsic job satisfaction 2	Intrinsic job satisfaction 3	Intrinsic job satisfaction 4	Intrinsic job satisfaction 5	Intrinsic job satisfaction 6	Intrinsic job satisfaction 7	Intrinsic job satisfaction 8	Intrinsic job satisfaction 9
Intrinsic job satisfaction 1	<b>.857<sup>a</sup></b>								
Intrinsic job satisfaction 2	-.095	<b>.770<sup>a</sup></b>							
Intrinsic job satisfaction 3	-.011	-.548	<b>.718<sup>a</sup></b>						
Intrinsic job satisfaction 4	-.396	-.087	-.082	<b>.754<sup>a</sup></b>					
Intrinsic job satisfaction 5	-.088	-.080	-.102	-.034	<b>.876<sup>a</sup></b>				
Intrinsic job satisfaction 6	-.024	.036	.126	-.397	-.172	<b>.798<sup>a</sup></b>			
Intrinsic job satisfaction 7	-.035	-.125	-.065	.122	-.080	-.188	<b>.790<sup>a</sup></b>		
Intrinsic job satisfaction 8	-.039	-.036	-.061	-.079	-.072	.133	-.469	<b>.714<sup>a</sup></b>	
Intrinsic job satisfaction 9	.028	-.059	-.114	.186	-.155	-.112	-.142	-.136	<b>.780<sup>a</sup></b>

Table JS 5: Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.676	44.601	44.601	2.489	41.490	41.490
2	2.444	40.738	<b>85.339</b>	2.250	37.493	<b>78.983</b>
3	.402	6.705	92.044			
4	.221	3.686	95.730			
5	.186	3.099	98.829			
6	.070	1.171	100.000			

## APPENDIX 6: ORGANISATIONAL POLITICS CONSTRUCT STATISTICS

Table OP 1: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.692	.767	15

Table OP 2: Correlation matrix

Inter-Item Correlation Matrix															
	OP 1	OP 2	OP3	OP4	OP5	OP_6	OP_7	OP_8	OP_9	OP10	OP11	OP_12	OP_13	OP_14	OP_15
OP1	1.000														
OP2	.066	1.000													
OP3	.151	.540	1.000												
OP4	.051	.040	.055	1.000											
OP5	.078	.066	.080	.735	1.000										
OP_6	.132	.059	.041	.464	.481	1.000									
OP_7	.013	.065	.038	.434	.473	.657	1.000								
OP_8	.011	.031	.042	.377	.440	.542	.656	1.000							
OP_9	.087	.094	.135	.221	.191	.387	.187	.244	1.000						
OP10	.026	-.036	-.004	.041	.182	-.027	.092	-.061	-.173	1.000					
OP11	.031	-.007	.001	.110	.189	.021	.119	-.060	-.199	.837	1.000				
OP_12	.066	.000	.083	.035	.205	-.080	.040	.002	-.045	.552	.497	1.000			
OP_13	.058	.042	.081	.149	.205	-.084	.085	.006	-.117	.393	.419	.728	1.000		
OP_14	.057	.012	.054	.124	.135	-.068	.051	-.052	-.134	.346	.397	.639	.831	1.000	
OP_15	.039	-.001	.013	.180	.260	-.044	.183	.123	-.160	.552	.555	.655	.709	.664	1.000

Table OP 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.766	
Bartlett's Test of Sphericity	Approx. Chi-Square	2531.233
	Df	105
	Sig.	.000



Table OP 4 Anti-Image Correlation matrix

	OP1	OP2	OP3	OP4	OP5	OP_6	OP_7	OP_8	OP_9	OP8	OP9	OP_12	OP_13	OP_14	OP_15
OP1	.588 <sup>a</sup>														
OP2	.023	.515 <sup>a</sup>													
OP3	-.130	-.532	.531 <sup>a</sup>												
OP4	.026	.045	-.018	.701 <sup>a</sup>											
OP5	-.027	-.039	-.011	-.647	.742 <sup>a</sup>										
OP_6	-.155	-.014	.051	-.087	-.139	.766 <sup>a</sup>									
OP_7	.084	-.043	.002	-.040	-.035	-.445	.765 <sup>a</sup>								
OP_8	.038	.046	-.033	.018	-.126	-.147	-.431	.792 <sup>a</sup>							
OP_9	-.023	-.025	-.085	-.107	.036	-.281	.082	-.056	.755 <sup>a</sup>						
OP10	.004	.050	-.008	.113	-.102	.034	-.050	.073	.002	.709 <sup>a</sup>					
OP11	.003	-.040	.008	-.099	.054	-.112	-.020	.101	.123	-.739	.733 <sup>a</sup>				
OP_12	-.014	.063	-.067	.214	-.173	.025	.082	-.045	-.164	-.251	.028	.851 <sup>a</sup>			
OP_13	-.012	-.050	-.015	-.061	-.030	.100	-.055	.006	.024	.072	-.010	-.368	.793 <sup>a</sup>		
OP_14	-.006	.032	-.015	-.072	.104	-.104	.013	.127	.051	.110	-.066	-.086	-.598	.800 <sup>a</sup>	
OP_15	-.027	-.022	.064	-.059	-.030	.173	-.090	-.192	.069	-.148	-.110	-.141	-.209	-.207	.904 <sup>a</sup>

Table OP 5: Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.484	41.408	41.408	2.250	37.498	37.498
2	2.235	37.257	78.664	1.886	31.441	<b>68.939</b>
3	.467	7.779	86.443			
4	.372	6.199	92.642			
5	.290	4.839	97.481			
6	.151	2.519	100.000			

Extraction Method: Principal Axis Factoring.

Table OP 6: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
General Political Behaviour 1	42.51	21.757	.234	.400	.078
General Political Behaviour 2	42.02	21.354	.318	.474	.050
General Political Behaviour 3	41.32	16.347	.055	.197	.179
Go along to Get along 1	42.95	28.180	-.337	.620	.317
Go along to Get along 2	43.26	27.039	-.258	.635	.272
Go along to Get along 3	41.88	23.116	.186	.588	.114
Go along to Get along 4	41.67	22.944	.278	.632	.097
Go along to Get along 5	41.67	23.118	.225	.516	.108
Go along to Get along 6	42.62	22.490	.218	.289	.096
Pay and Promotion Policies 1	41.66	24.850	-.081	.754	.213
Pay and Promotion Policies 2	41.54	25.743	-.147	.749	.234
Pay and Promotion Policies 3	43.71	23.996	.055	.661	.155
Pay and Promotion Policies 4	43.86	23.488	.124	.793	.133
Pay and Promotion Policies 5	43.97	22.965	.199	.725	.109
Pay and Promotion Policies 6	43.50	23.035	.099	.673	.135

## APPENDIX 7: E-HRM MACRO CONSEQUENCES CONSTRUCT STATISTICS

Table MACRO 1: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.884	.895	22

Table MACRO 2: Inter-Item Correlation Matrix

	OC:CY 2	OC CY: 3	OC:E 2	OC:E 3	RC: IHRS 1	RC: IHRS 2	RC: IHRS 3	TC: SF 1	TC: SF 2	TC: SF 3	TC: SF 4	TC: A 1
OC:CY 2	1.000											
OC CY: 3	.297	1.000										
OC:E 2	.532	.230	1.000									
OC:E 3	.466	.080	.686	1.000								
RC: IHRS 1	.385	.420	.338	.203	1.000							
RC: IHRS 2	.319	.274	.297	.298	.778	1.000						
RC: IHRS 3	.330	.373	.309	.201	.799	.810	1.000					
TC: SF 1	.170	.147	.197	.105	.331	.261	.238	1.000				
TC: SF 2	.256	-.018	.248	.317	.360	.366	.341	.311	1.000			
TC: SF 3	.291	.046	.220	.321	.329	.328	.336	.432	.643	1.000		
TC: SF 4	.275	.179	.244	.236	.373	.441	.455	.346	.468	.460	1.000	
TC: A 1	.249	.160	.214	.107	.401	.400	.361	.475	.344	.420	.401	1.000

Key: OC: CY: Operational Consequences: Efficiency 1 & 2  
 OC: E: Operational Consequences: Effectiveness 2 & 3  
 RC IHRS: Relational Consequences: Improved Human Resource Services 1, 2 & 3  
 TC: SF: Transformational Consequences: Strategic focus 1, 2, 3 & 4  
 TC: A: Transformational Consequences: Alignment 1

Table MACRO 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.829	
Bartlett's Test of Sphericity	Approx. Chi-Square	3773.054
	Df	231
	Sig.	.000

Table MACRO 4: Anti-Image Correlation matrix

	OC:V1	OC:CY1	OC:CY2	RC:R1	RC:R2	RC:R3	RC:IHRS1	RC:IHRS2	RC:IHRS3	TC:SF1	TC:SF2	TC:SF3	TC:SF4	TC:A1
OC:V1	<b>.799<sup>a</sup></b>													
OC:CY1	-.477	<b>.843<sup>a</sup></b>												
OC:CY3	-.056	-.021	<b>-.588</b>											
RC:R1	-.041	-.032	-.001	<b>.678<sup>a</sup></b>										
RC:R2	-.077	-.037	.109	-.286	<b>.881<sup>a</sup></b>									
RC:R3	-.082	.069	-.113	-.668	-.037	<b>.720<sup>a</sup></b>								
RC:IHRS1	.049	-.113	-.059	.029	-.021	-.084	<b>.874<sup>a</sup></b>							
RC:IHRS2	-.128	-.021	.154	.010	-.144	.030	-.359	<b>.831<sup>a</sup></b>						
RC:IHRS3	.158	.027	-.113	.019	.078	-.101	-.367	-.506	<b>.831<sup>a</sup></b>					
TC:SF1	.018	-.098	-.065	.012	.021	-.021	-.139	.015	.115	<b>.842<sup>a</sup></b>				
TC:SF2	.084	-.030	-.040	.044	-.099	.082	-.139	-.017	.024	.016	<b>.836<sup>a</sup></b>			
TC:SF3	.035	.082	.133	.034	-.023	-.120	.013	.077	-.077	-.242	-.456	<b>.797<sup>a</sup></b>		
TC:SF4	-.181	-.103	.027	.182	-.148	-.082	.162	-.023	-.224	-.091	-.192	-.122	<b>.874<sup>a</sup></b>	
TC:A1	-.031	.084	-.123	-.128	-.013	.141	-.051	-.135	.037	-.287	-.015	-.155	-.141	<b>.858<sup>a</sup></b>

Key:

- OC:CY: Operational Consequences: Efficiency 1 & 2
- RC IHRS: Relational Consequences: Improved Human Resource Services 1, 2 &3
- RC:R: Relational Consequences: Relationships 1, 2, 3
- TC:SF: Transformational Consequences: Strategic focus 1, 2, 3, 4
- TC: A: Transformational Consequences: Alignment 1

Table MACRO 5: Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.998	44.421	44.421	3.653	40.584	40.584
2	1.233	13.695	58.116	.903	10.029	50.613
3	1.097	12.193	<b>70.309</b>	.640	7.113	<b>57.725</b>
4	.756	8.405	78.714			
5	.632	7.027	85.741			
6	.486	5.398	91.139			
7	.407	4.517	95.656			
8	.213	2.366	98.022			
9	.178	1.978	100.000			

Table MACRO 6: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Operational Consequences: Effectiveness 1	86.22	82.344	.567	.591	.877
Operational Consequences: Effectiveness 2	85.73	88.673	.484	.414	.880
Operational Consequences: Effectiveness 3	86.65	83.760	.450	.448	.882
Operational Consequences: Efficiency 1	86.07	85.124	.603	.622	.876
Operational Consequences: Efficiency 2	85.71	89.467	.482	.676	.880
Operational Consequences: Efficiency 3	85.66	90.884	.417	.676	.882
Relational Consequences: Improved Communication 1	85.90	86.610	.577	.624	.877
Relational Consequences: Improved Communication 2	85.78	89.229	.479	.598	.880
Relational Consequences: Improved Communication 3	86.06	85.984	.608	.530	.876
Relational Consequences: Relationships 1	87.26	88.214	.337	.661	.884
Relational Consequences: Relationships 2	86.58	87.227	.485	.418	.879
Relational Consequences: Relationships 3	87.42	86.768	.418	.655	.882
Relational Consequences: Improved HR Service 1	86.16	86.351	.694	.760	.875
Relational Consequences: Improved HR Service 2	86.08	86.953	.660	.760	.876
Relational Consequences: Improved HR Service 3	86.14	86.556	.649	.775	.876
Transformational Consequences: Strategic focus 1	86.46	89.156	.388	.379	.882
Transformational Consequences: Strategic focus 2	85.98	89.506	.389	.526	.882
Transformational Consequences: Strategic focus 3	86.10	89.394	.441	.550	.881
Transformational Consequences: Strategic focus 4	86.15	85.153	.566	.502	.877
Transformational Consequences: Alignment 1	86.17	88.271	.493	.472	.879
Transformational Consequences: Alignment 2	86.74	89.575	.256	.264	.887
Transformational Consequences: Alignment 3	86.41	85.471	.458	.393	.881





## APPENDIX 8: EMPLOYEE PERFORMANCE AS A MEDIATOR STATISTICS

### Table PROC 1

Model: 4

Y: EMacro: (e-HRM macro-level consequences)

X: use: (e-HRM use)

M: per: (employee performance)

Sample

Size: 325

\*\*\*\*\*

OUTCOME VARIABLE:

perf

Model Summary

R	R-sq	MSE	F	df1	df2	p
.1785	.0319	.2059	10.6299	1.0000	323.0000	.0012

Model

	coeff	se	t	p	LLCI	ULCI
constant	3.4142	.2250	15.1726	.0000	2.9715	3.8569
use	.1639	.0503	3.2603	.0012	.0650	.2628

OUTCOME VARIABLE:

EMacro

Model Summary

R	R-sq	MSE	F	df1	df2	p
.5856	.3429	.1537	84.0071	2.0000	322.0000	.0000

Model	coeff	se	t	p	LLCI	ULCI
constant	1.1591	.2544	4.5556	.0000	.6585	1.6596
use	.4888	.0441	11.0739	.0000	.4020	.5756
perf	.2236	.0481	4.6518	.0000	.1290	.3182

\*\*\*\*\* DIRECT AND INDIRECT EFFECTS OF X ON Y \*\*\*\*\*

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
.4888	.0441	11.0739	.0000	.4020	.5756

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
perf	.0367	.0142	.0121	.0676

\*\*\*\*\* ANALYSIS NOTES AND ERRORS \*\*\*\*\*

Level of confidence for all confidence intervals in output:

95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:

10000

----- END MATRIX -

## APPENDIX 9: JOB SATISFACTION AS A MEDIATOR STATISTICS

### Table PROC 2

Model: 4

Y: EMacro: e-HRM macro-level consequences

X: use: e-HRM use

M: jobsa: job satisfaction

Sample

Size: 325

\*\*\*\*\*

OUTCOME VARIABLE:

jobsa

Model Summary

R	R-sq	MSE	F	df1	df2	p
.2261	.0511	.2587	17.4042	1.0000	323.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.6930	.2522	10.6783	.0000	2.1968	3.1891
use	.2350	.0563	4.1718	.0000	.1242	.3459

Standardized coefficients

coeff

use .2261

\*\*\*\*\*

OUTCOME VARIABLE:

EMacro

Model Summary

R	R-sq	MSE	F	df1	df2	p
.7248	.5253	.1110	178.1860	2.0000	322.0000	.0000

Model	coeff	se	t	p	LLCI	ULCI
constant	.7053	.1922	3.6698	.0003	.3272	1.0834
use	.4192	.0379	11.0629	.0000	.3447	.4938
jobsa	.4520	.0365	12.3989	.0000	.3803	.5237

Standardized coefficients

coeff
use .4360
jobsa .4887

\*\*\*\*\* TOTAL EFFECT MODEL \*\*\*\*\*

OUTCOME VARIABLE:

EMacro

Model Summary

R	R-sq	MSE	F	df1	df2	p
.5465	.2987	.1635	137.5834	1.0000	323.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.9225	.2005	9.5876	.0000	1.5280	2.3170
use	.5254	.0448	11.7296	.0000	.4373	.6136

Standardized coefficients

coeff
use .5465

\*\*\*\*\* TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y \*\*\*\*\*

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_ps	c_cs
.5254	.0448	11.7296	.0000	.4373	.6136	1.0898	.5465

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_ps	c'_cs
.4192	.0379	11.0629	.0000	.3447	.4938	.8695	.4360

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
jobsa	.1062	.0259	.0576	.1592

Partially standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
jobsa	.2203	.0508	.1238	.3227

Completely standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
jobsa	.1105	.0251	.0617	.1589

\*\*\*\*\* ANALYSIS NOTES AND ERRORS \*\*\*\*\*

Level of confidence for all confidence intervals in output:

95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:

10000

----- END MATRIX -----

## APPENDIX 10: ORGANISATIONAL POLITICS AS A MEDIATOR STATISTICS

Table PROC 3

Model: 4  
 Y: EMacro: e-HRM macro-level consequences  
 X: use: e-HRM use  
 M: POPS: perception of organisational politics

Sample  
 Size: 325

\*\*\*\*\*

OUTCOME VARIABLE:

POPS

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.2434	.0592	.2566	20.3376	1.0000	323.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.9261	.2512	11.6492	.0000	2.4320	3.4203
use	.2531	.0561	4.5097	.0000	.1427	.3635

Standardized coefficients

	coeff
use	.2434

\*\*\*\*\*

OUTCOME VARIABLE:

EMacro

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.5780	.3341	.1558	80.7820	2.0000	322.0000	.0000

Model						
	coeff	se	t	p	LLCI	ULCI
constant	1.3977	.2332	5.9934	.0000	.9389	1.8566
use	.4801	.0451	10.6503	.0000	.3914	.5687
POPS	.1793	.0434	4.1371	.0000	.0941	.2646

Standardized coefficients

	coeff
use	.4993
POPS	.1940

\*\*\*\*\* TOTAL EFFECT MODEL \*\*\*\*\*

OUTCOME VARIABLE:

EMacro

Model Summary

R	R-sq	MSE	F	df1	df2	p
.5465	.2987	.1635	137.5834	1.0000	323.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.9225	.2005	9.5876	.0000	1.5280	2.3170
use	.5254	.0448	11.7296	.0000	.4373	.6136

Standardized coefficients

	coeff
use	.5465

\*\*\*\*\* TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y \*\*\*\*\*

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_ps	c_cs
.5254	.0448	11.7296	.0000	.4373	.6136	1.0898	.5465

Direct effect of X on Y							
Effect	se	t	p	LLCI	ULCI	c'_ps	c'_cs
.4801	.0451	10.6503	.0000	.3914	.5687	.9957	.4993

Indirect effect(s) of X on Y:				
	Effect	BootSE	BootLLCI	BootULCI
POPS	.0454	.0153	.0194	.0791

Partially standardized indirect effect(s) of X on Y:				
	Effect	BootSE	BootLLCI	BootULCI
POPS	.0941	.0317	.0400	.1632

Completely standardized indirect effect(s) of X on Y:				
	Effect	BootSE	BootLLCI	BootULCI
POPS	.0472	.0159	.0199	.0822

\*\*\*\*\* ANALYSIS NOTES AND ERRORS \*\*\*\*\*

Level of confidence for all confidence intervals in output:  
95.0000'

Number of bootstrap samples for percentile bootstrap confidence intervals:  
10000

----- END MATRIX -----



## APPENDIX 11: PARALLEL MEDIATION- EMPLOYEE PERFORMANCE, JOB SATISFACTION & ORGANISATIONAL POLITICS

Model: 4

Y: EMacro: e-HRM macro-level consequences  
 X: use: e-HRM use  
 M1: perf: employee performance  
 M2: jobsa: job satisfaction  
 M3: POPS: perception of organisational politics

Sample  
 Size: 325

\*\*\*\*\*

OUTCOME VARIABLE:  
 perf

Model Summary

R	R-sq	MSE	F	df1	df2	p
.1785	.0319	.2059	10.6299	1.0000	323.0000	.0012

Model

	coeff	se	t	p	LLCI	ULCI
constant	3.4142	.2250	15.1726	.0000	2.9715	3.8569
use	.1639	.0503	3.2603	.0012	.0650	.2628

\*\*\*\*\*

OUTCOME VARIABLE:  
 jobsa

Model Summary

R	R-sq	MSE	F	df1	df2	p
.2261	.0511	.2587	17.4042	1.0000	323.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.6930	.2522	10.6783	.0000	2.1968	3.1891
use	.2350	.0563	4.1718	.0000	.1242	.3459

\*\*\*\*\*

OUTCOME VARIABLE:

POPS

Model Summary

R	R-sq	MSE	F	df1	df2	p
.2434	.0592	.2566	20.3376	1.0000	323.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.9261	.2512	11.6492	.0000	2.4320	3.4203
use	.2531	.0561	4.5097	.0000	.1427	.3635

\*\*\*\*\*

OUTCOME VARIABLE:

EMacro

Model Summary

R	R-sq	MSE	F	df1	df2	p
.7390	.5462	.1068	96.2829	4.0000	320.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.2078	.2324	.8939	.3720	-.2495	.6650
use	.3867	.0381	10.1390	.0000	.3117	.4618
perf	.0799	.0423	1.8870	.0601	-.0034	.1631
jobsa	.4204	.0370	11.3633	.0000	.3476	.4932
POPS	.1059	.0371	2.8556	.0046	.0329	.1789

\*\*\*\*\* TOTAL EFFECT MODEL \*\*\*\*\*

OUTCOME VARIABLE:

EMacro

Model Summary

R	R-sq	MSE	F	df1	df2	p
.5465	.2987	.1635	137.5834	1.0000	323.0000	.0000

Model	coeff	se	t	p	LLCI	ULCI
constant	1.9225	.2005	9.5876	.0000	1.5280	2.3170
use	.5254	.0448	11.7296	.0000	.4373	.6136

\*\*\*\*\* TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y \*\*\*\*\*

Total effect of X on Y							
Effect	se	t	p	LLCI	ULCI	c_ps	c_cs
.5254	.0448	11.7296	.0000	.4373	.6136	1.0898	.5465

Direct effect of X on Y							
Effect	se	t	p	LLCI	ULCI	c'_ps	c'_cs
.3867	L8.0381	10.1390	.0000	.3117	.4618	.8021	.4023

Indirect effect(s) of X on Y:				
	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.1387	.0279	.0867	.1950
perf	.0131	.0100	-.0039	.0355
jobsa	.0988	.0243	.0544	.1497
POPS	.0268	.0124	.0051	.0538

Completely standardized indirect effect(s) of X on Y:				
	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.1443	.0273	.0918	.1985
perf	.0136	.0104	-.0041	.0367
jobsa	.1028	.0236	.0577	.1500
POPS	.0279	.0131	.0051	.0566

\*\*\*\*\* ANALYSIS NOTES AND ERRORS \*\*\*\*\*

Level of confidence for all confidence intervals in output:  
95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:  
10000

----- END MATRIX -----

## APPENDIX 12: EMPLOYEE PERFORMANCE & JOB SATISFACTION AS MEDIATORS IN SERIAL STATISTICS

Table PROC 4

Model: 6

Y: EMacro: e-HRM macro-level consequences  
 X: use: e-HRM use  
 M1: perf: employee performance  
 M2: jobsa: job satisfaction

Sample

Size: 325

\*\*\*\*\*

OUTCOME VARIABLE:

perf

Model Summary

R	R-sq	MSE	F	df1	df2	p
.1785	.0319	.2059	10.6299	1.0000	323.0000	.0012

Model

	coeff	se	t	p	LLCI	ULCI
constant	3.4142	.2250	15.1726	.0000	2.9715	3.8569
use	.1639	.0503	3.2603	.0012	.0650	.2628

Standardized coefficients

	coeff
use	.1785

\*\*\*\*\*

OUTCOME VARIABLE:

jobsa

Model Summary

R	R-sq	MSE	F	df1	df2	p
.3289	.1082	.2439	19.5292	2.0000	322.0000	.0000

Model	coeff	se	t	p	LLCI	ULCI
constant	1.7547	.3205	5.4756	.0000	1.1243	2.3852
use	.1900	.0556	3.4174	.0007	.0806	.2994
perf	.2748	.0605	4.5385	.0000	.1557	.3939

Standardized coefficients

	coeff
use	.1828
perf	.2427

\*\*\*\*\*

OUTCOME VARIABLE:

EMacro

Model Summary

R	R-sq	MSE	F	df1	df2	p
.7312	.5346	.1092	122.9193	3.0000	321.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.4065	.2242	1.8132	.0707	-.0346	.8476
use	.4073	.0379	10.7550	.0000	.3328	.4818
perf	.1058	.0418	2.5307	.0119	.0235	.1880
jobsa	.4289	.0373	11.5003	.0000	.3555	.5022

Standardized coefficients

	coeff
use	.4237
perf	.1010
jobsa	.4637

\*\*\*\*\* TOTAL EFFECT MODEL \*\*\*\*\*

OUTCOME VARIABLE:

EMacro

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.5465	.2987	.1635	137.5834	1.0000	323.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.9225	.2005	9.5876	.0000	1.5280	2.3170
use	.5254	.0448	11.7296	.0000	.4373	.6136

Standardized coefficients

	coeff
use	.5465

\*\*\*\*\* TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y \*\*\*\*\*

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_ps	c_cs
.5254	.0448	11.7296	.0000	.4373	.6136	1.0898	.5465

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_ps	c'_cs
.4073	.0379	10.7550	.0000	.3328	.4818	.8448	.4237

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.1181	.0275	.0681	.1756
Ind1	.0173	.0099	.0015	.0398
Ind2	.0815	.0245	.0359	.1321
Ind3	.0193	.0077	.0062	.0358

Completely standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.1229	.0268	.0714	.1761
Ind1	.0180	.0103	.0015	.0413
Ind2	.0848	.0241	.0380	.1330
Ind3	.0201	.0079	.0065	.0373

Indirect effect key:

Ind1 use           ->   perf               ->   EMacro  
Ind2 use           ->   jobsa           ->   EMacro  
Ind3 use           ->   perf               ->   jobsa           ->   EMacro

\*\*\*\*\* ANALYSIS NOTES AND ERRORS \*\*\*\*\*

Level of confidence for all confidence intervals in output:

95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:

10000

----- END MATRIX -----

## APPENDIX 13: EMPLOYEE PERFORMANCE & ORGANISATIONAL POLITICS AS MEDIATORS IN SERIAL STATISTICS

Table PROC 5

```

*****
Model: 6
Y: EMacro: e-HRM macro-level consequences
X: use: e-HRM use
M1: perf: employee performance
M2: POPS: perception of organisational politics

Sample
Size: 325

*****
OUTCOME VARIABLE:
perf

Model Summary
      R      R-sq      MSE      F      df1      df2      p
      .1785    .0319    .2059    10.6299    1.0000    323.0000    .0012

Model
      coeff      se      t      p      LLCI      ULCI
constant    3.4142    .2250    15.1726    .0000    2.9715    3.8569
use          .1639    .0503     3.2603    .0012     .0650     .2628

Standardized coefficients
coeff
use          .1785

*****

```



OUTCOME VARIABLE:  
POPS

Model Summary

R	R-sq	MSE	F	df1	df2	p
.3359	.1128	.2427	20.4797	2.0000	322.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.0163	.3197	6.3064	.0000	1.3873	2.6453
use	.2094	.0555	3.7749	.0002	.1003	.3185
perf	.2665	.0604	4.4113	.0000	.1476	.3853

Standardized coefficients

coeff
use .2014
perf .2353

\*\*\*\*\*

OUTCOME VARIABLE:  
EMacro

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6025	.3631	.1494	60.9913	3.0000	321.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.8778	.2659	3.3012	.0011	.3547	1.4010
use	.4596	.0445	10.3334	.0000	.3721	.5471
perf	.1865	.0488	3.8198	.0002	.0904	.2825
POPS	.1395	.0437	3.1896	.0016	.0534	.2255

Standardized coefficients

coeff
use .4780
perf .1781
POPS .1508

\*\*\*\*\* TOTAL EFFECT MODEL \*\*\*\*\*

OUTCOME VARIABLE:

EMacro

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.5465	.2987	.1635	137.5834	1.0000	323.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.9225	.2005	9.5876	.0000	1.5280	2.3170
use	.5254	.0448	11.7296	.0000	.4373	.6136

Standardized coefficients

coeff	
use	.5465

\*\*\*\*\* TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y \*\*\*\*\*

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_ps	c_cs
.5254	.0448	11.7296	.0000	.4373	.6136	1.0898	.5465

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_ps	c'_cs
.4596	.0445	10.3334	.0000	.3721	.5471	.9532	.4780

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.0659	.0179	.0330	.1027
Ind1	.0306	.0133	.0081	.0598
Ind2	.0292	.0124	.0077	.0561
Ind3	.0061	.0039	.0008	.0156

Partially standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.1366	.0367	.0687	.2121
Ind1	.0634	.0273	.0170	.1238
Ind2	.0606	.0257	.0160	.1165
Ind3	.0126	.0082	.0015	.0327

Completely standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.0685	.0187	.0336	.1075
Ind1	.0318	.0137	.0084	.0614
Ind2	.0304	.0130	.0080	.0587
Ind3	.0063	.0041	.0008	.0166

Indirect effect key:

Ind1 use	->	perf	->	EMacro	
Ind2 use	->	POPS	->	EMacro	
Ind3 use	->	perf	->	POPS	-> EMacro

\*\*\*\*\* ANALYSIS NOTES AND ERRORS \*\*\*\*\*

Level of confidence for all confidence intervals in output:

95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:

10000

----- END MATRIX -----

## APPENDIX 14: JOB SATISFACTION & ORGANISATIONAL POLITICS AS MEDIATORS IN SERIAL STATISTICS

Table PROC 6

```

*****
Model: 6
Y: EMacro: e-HRM macro-level consequences
X: use: e-HRM use
M1: jobsa: job satisfaction
M2: POPS: perception of organisational politics

Sample
Size: 325

*****
OUTCOME VARIABLE:
jobsa

Model Summary
      R      R-sq      MSE      F      df1      df2      p
     .2261     .0511     .2587    17.4042     1.0000    323.0000     .0000

Model
      coeff      se      t      p      LLCI      ULCI
constant    2.6930    .2522    10.6783    .0000    2.1968    3.1891
use          .2350    .0563     4.1718    .0000     .1242    .3459

Standardized coefficients
coeff
use          .2261

*****

```

OUTCOME VARIABLE:  
POPS

Model Summary

R	R-sq	MSE	F	df1	df2	p
.2757	.0760	.2528	13.2440	2.0000	322.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.5680	.2900	8.8547	.0000	1.9974	3.1385
use	.2218	.0572	3.8791	.0001	.1093	.3343
jobsa	.1330	.0550	2.4177	.0162	.0248	.2412

Standardized coefficients

coeff
use .2133
jobsa .1330

\*\*\*\*\*

OUTCOME VARIABLE:  
EMacro

Model Summary

R	R-sq	MSE	F	df1	df2	p
.7356	.5411	.1077	126.1836	3.0000	321.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.3948	.2110	1.8708	.0623	-.0204	.8100
use	.3924	.0382	10.2782	.0000	.3173	.4675
jobsa	.4359	.0362	12.0343	.0000	.3647	.5072
POPS	.1209	.0364	3.3246	.0010	.0494	.1925

Standardized coefficients

coeff
use .4082
jobsa .4713
POPS .1308

\*\*\*\*\* TOTAL EFFECT MODEL \*\*\*\*\*

OUTCOME VARIABLE:

EMacro

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.5465	.2987	.1635	137.5834	1.0000	323.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.9225	.2005	9.5876	.0000	1.5280	2.3170
use	.5254	.0448	11.7296	.0000	.4373	.6136

Standardized coefficients

coeff

use .5465

\*\*\*\*\* TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y \*\*\*\*\*

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_ps	c_cs
.5254	.0448	11.7296	.0000	.4373	.6136	1.0898	.5465

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_ps	c'_cs
.3924	.0382	10.2782	.0000	.3173	.4675	.8138	.4082

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.1331	.0274	.0823	.1909
Ind1	.1025	.0250	.0568	.1543
Ind2	.0268	.0117	.0072	.0534
Ind3	.0038	.0025	.0002	.0097

Partially standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.2760	.0535	.1756	.3869
Ind1	.2125	.0488	.1220	.3128
Ind2	.0556	.0246	.0148	.1111
Ind3	.0078	.0052	.0004	.0200

Completely standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.1384	.0267	.0879	.1922
Ind1	.1066	.0242	.0604	.1550
Ind2	.0279	.0123	.0073	.0560
Ind3	.0039	.0026	.0002	.0101

Indirect effect key:

Ind1 use	->	jobsa	->	EMacro	
Ind2 use	->	POPS	->	EMacro	
Ind3 use	->	jobsa	->	POPS	-> EMacro

\*\*\*\*\* ANALYSIS NOTES AND ERRORS \*\*\*\*\*

Level of confidence for all confidence intervals in output:

95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:

10000

----- END MATRIX -----

## APPENDIX 15: EMPLOYEE PERFORMANCE, JOB SATISFACTION & ORGANISATIONAL POLITICS AS MEDIATORS IN SERIAL STATISTICS

Table PROC 7

Model: 6  
 Y: EMacro: e-HRM macro-level consequences  
 X: use: e-HRM use  
 M1: perf: employee performance  
 M2: jobsa: job satisfaction  
 M3: POPS: perception of organisational politics

Sample  
 Size: 325

\*\*\*\*\*

OUTCOME VARIABLE:  
 perf

Model Summary

R	R-sq	MSE	F	df1	df2	p
.1785	.0319	.2059	10.6299	1.0000	323.0000	.0012

Model

	coeff	se	t	p	LLCI	ULCI
constant	3.4142	.2250	15.1726	.0000	2.9715	3.8569
use	.1639	.0503	3.2603	.0012	.0650	.2628

Standardized coefficients

coeff
use .1785

.....



OUTCOME VARIABLE:

jobsa

Model Summary

R	R-sq	MSE	F	df1	df2	p
.3289	.1082	.2439	19.5292	2.0000	322.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.7547	.3205	5.4756	.0000	1.1243	2.3852
use	.1900	.0556	3.4174	.0007	.0806	.2994
perf	.2748	.0605	4.5385	.0000	.1557	.3939

Standardized coefficients

coeff
use .1828
perf .2427

\*\*\*\*\*

OUTCOME VARIABLE:

POPS

Model Summary

R	R-sq	MSE	F	df1	df2	p
.3442	.1185	.2419	14.3809	3.0000	321.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.8769	.3337	5.6238	.0000	1.2203	2.5334
use	.1943	.0564	3.4465	.0006	.0834	.3052
perf	.2446	.0622	3.9325	.0001	.1223	.3670
jobsa	.0795	.0555	1.4317	.1532	-.0297	.1887

Standardized coefficients

coeff
use .1869
perf .2160
jobsa .0794

\*\*\*\*\*

OUTCOME VARIABLE:

EMacro

Model Summary

R	R-sq	MSE	F	df1	df2	p
.7390	.5462	.1068	96.2829	4.0000	320.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.2078	.2324	.8939	.3720	-.2495	.6650
use	.3867	.0381	10.1390	.0000	.3117	.4618
perf	.0799	.0423	1.8870	.0601	-.0034	.1631
jobsa	.4204	.0370	11.3633	.0000	.3476	.4932
POPS	.1059	.0371	2.8556	.0046	.0329	.1789

Standardized coefficients

coeff

use	.4023
perf	.0763
jobsa	.4546
POPS	.1145

\*\*\*\*\* TOTAL EFFECT MODEL \*\*\*\*\*

OUTCOME VARIABLE:

EMacro

Model Summary

R	R-sq	MSE	F	df1	df2	p
.5465	.2987	.1635	137.5834	1.0000	323.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.9225	.2005	9.5876	.0000	1.5280	2.3170
use	.5254	.0448	11.7296	.0000	.4373	.6136

Standardized coefficients

coeff

use	.5465
-----	-------

\*\*\*\*\* TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y \*\*\*\*\*

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_ps	c_cs
.5254	.0448	11.7296	.0000	.4373	.6136	1.0898	.5465

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_ps	c'_cs
.3867	.0381	10.1390	.0000	.3117	.4618	.8021	.4023

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.1387	.0276	.0884	.1959
Ind1	.0131	.0102	-.0039	.0362
Ind2	.0799	.0238	.0361	.1296
Ind3	.0206	.0104	.0032	.0439
Ind4	.0189	.0076	.0060	.0357
Ind5	.0042	.0030	.0003	.0121
Ind6	.0016	.0016	-.0011	.0055
Ind7	.0004	.0004	-.0003	.0014

Partially standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.2877	.0539	.1883	.3987
Ind1	.0271	.0211	-.0082	.0751
Ind2	.1657	.0474	.0771	.2636
Ind3	.0427	.0218	.0067	.0911
Ind4	.0393	.0156	.0127	.0739
Ind5	.0088	.0064	.0007	.0252
Ind6	.0033	.0034	-.0022	.0114
Ind7	.0008	.0009	-.0005	.00291

Completely standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.1443	.0271	.0927	.1992
Ind1	.0136	.0105	-.0042	.0376
Ind2	.0831	.0235	.0384	.1312
Ind3	.0214	.0110	.0032	.0462
Ind4	.0197	.0078	.0061	.0368
Ind5	.0044	.0032	.0003	.0126
Ind6	.0017	.0017	-.0011	.0056
Ind7	.0004	.0004	-.0003	.0015

`Indirect effect key:

Ind1 use	->	perf	->	EMacro				
Ind2 use	->	jobsa	->	EMacro				
Ind3 use	->	POPS	->	EMacro				
Ind4 use	->	perf	->	jobsa	->	EMacro		
Ind5 use	->	perf	->	POPS	->	EMacro		
Ind6 use	->	jobsa	->	POPS	->	EMacro		
Ind7 use	->	perf	->	jobsa	->	POPS	->	EMacro

\*\*\*\*\* ANALYSIS NOTES AND ERRORS \*\*\*\*\*

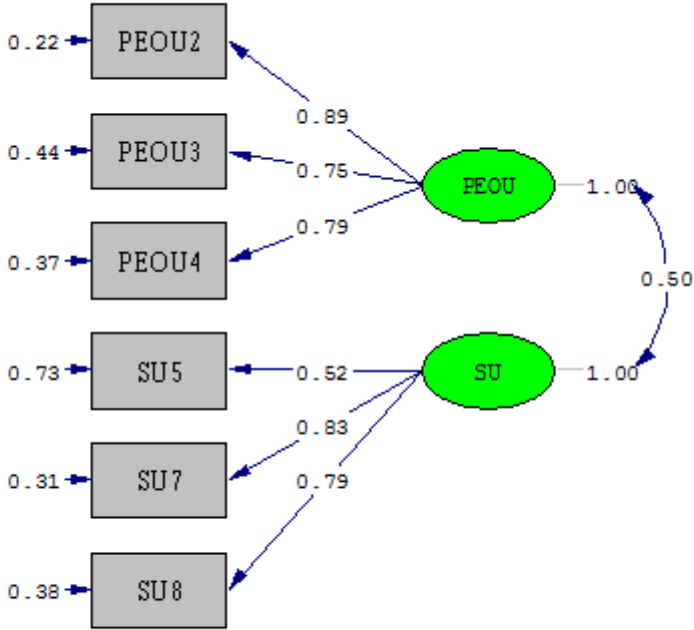
Level of confidence for all confidence intervals in output:

95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals: 10000

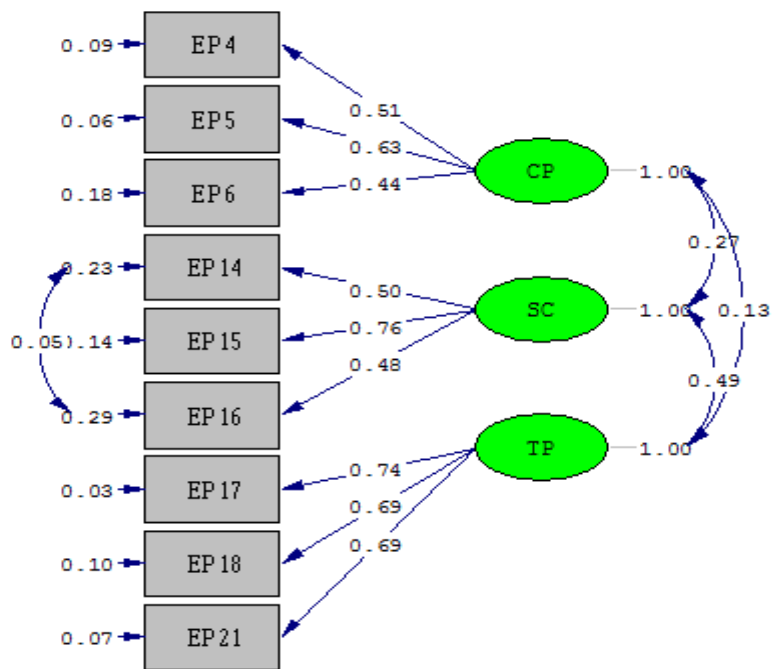
----- END MATRIX -----

**APPENDIX 16: PATH DIAGRAMS OF CONFIRMATORY FACTOR MODELS**



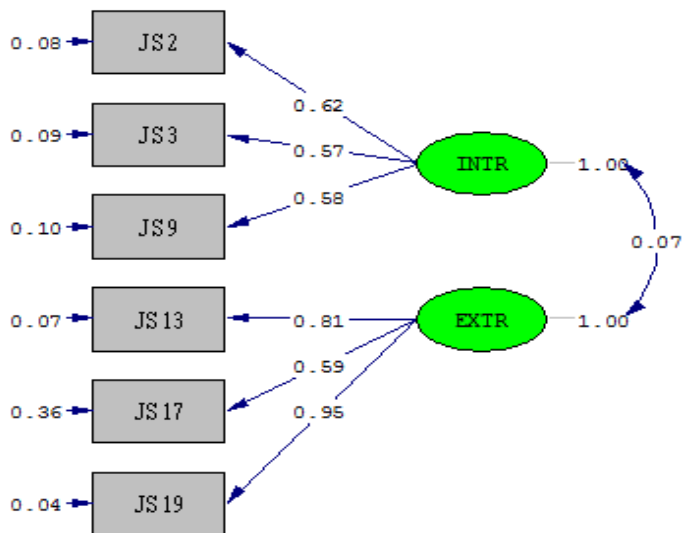
Chi-Square=12.36, df=8, P-value=0.13575, RMSEA=0.041

Figure 6.4 Path diagram of a confirmatory factor model: e-HRM use



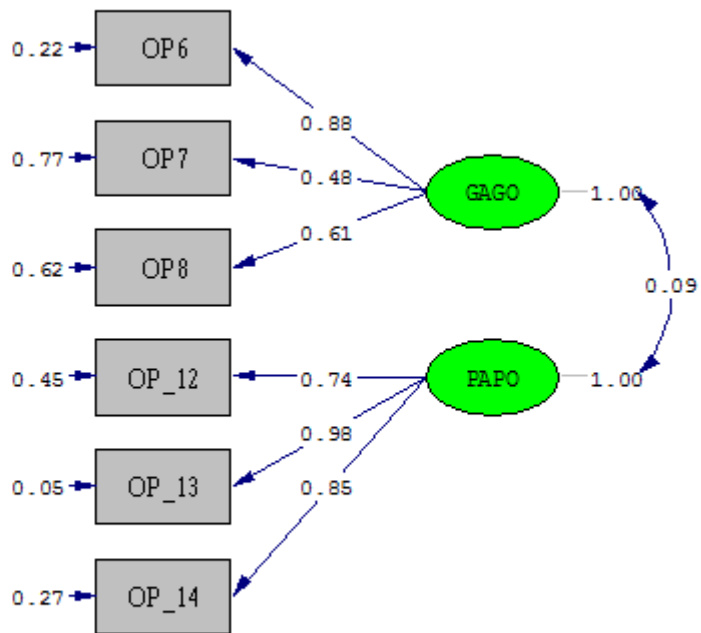
Chi-Square=34.44, df=23, P-value=0.05911, RMSEA=0.039

Figure 6.5 Path diagram of a confirmatory factor model: employee performance



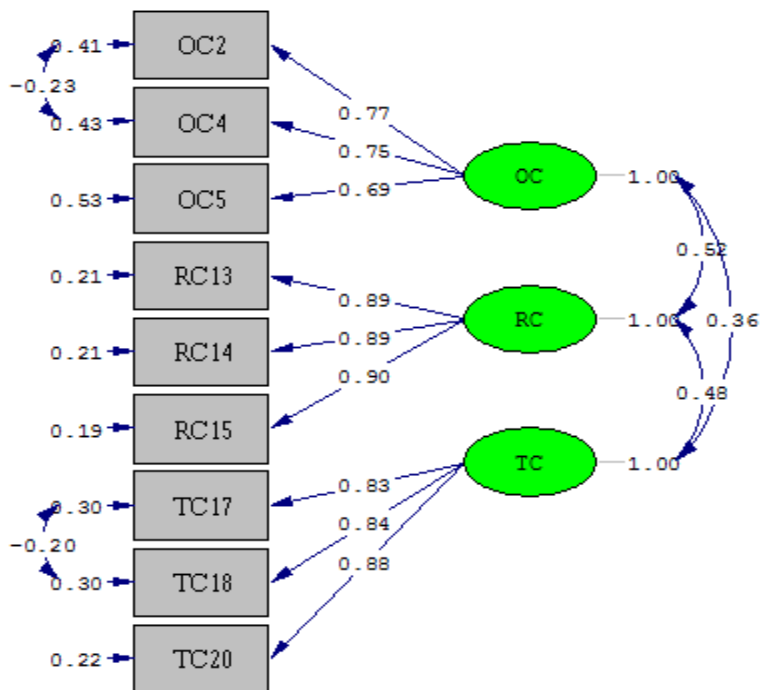
Chi-Square=13.26, df=8, P-value=0.10317, RMSEA=0.045

Figure 6.6 Path diagram of a confirmatory factor model: job satisfaction



Chi-Square=10.17, df=8, P-value=0.25327, RMSEA=0.029

Figure 6.7 Path diagram of a confirmatory factor model: organisational politics



Chi-Square=29.69, df=22, P-value=0.12611, RMSEA=0.033

Figure 6.8 Path diagram of a confirmatory factor model: e-HRM macro level consequences

## **APPENDIX 17: CODEBOOK**

### **Codebook**

dbl.mx20

11/17/2020



Table QA 1 Meaning of Codes

	<b>Code</b>	<b>Meaning</b>
1	Employee outcomes	e-HRM success hinges on favourable employee outcomes
2	Monitor	Management should monitor e-HRM implementation
3	Fit	There is need for a fit between e-HRM and other HR strategies
4	Customisation	There is need to customize e-HRM applications
5	New power bases	e-HRM has created new power structure that empower and disempower groups of employees
6	Communication	The system fails partly due to lack of communication about its implementation
7	Sabotage	e-HRM failure partly due to employee sabotage
8	Training	Employees should be trained in e-HRM systems
9	Tasks	e-HRM system more suited for repetitive tasks
10	Attitudes	Job satisfaction and organizational politics are attitudinal
11	No flexibility	Controls in e-HRM system creates lack of flexibility
12	Demotivated workforce	Environment is demotivating employees, leading to under-performance
13	Consultation	Actors should be consulted before implementation
14	Many predictors	e-HRM is one of the several predictors of employee performance
15	Autonomy	The system removes autonomy
16	Time consuming	Controls in e-Applications are time consuming
17	Enabler	e-HRM is more of an enabler than a predictor

Table QA 2 Participant – code matrix

ID	Monit	Fit	Custom	power	employ	com	sabot	Train	Tasks	attitude	flex	motiv	consult	Predict	auto	time	enabler	SUM
P1b	0	0	0	0	0	0	0	1	1	1	4	2	2	5	1	2	3	22
P2b	1	0	1	2	0	1	1	0	0	1	0	1	1	0	0	0	1	10
P3m	0	0	1	0	0	0	2	1	1	0	0	4	1	3	0	0	2	15
P4m	0	0	0	0	0	1	1	0	0	0	1	5	1	2	0	0	1	12
P5te	1	0	0	2	0	0	2	0	0	0	0	3	1	0	0	0	1	10
P6ba	0	0	1	2	0	2	0	0	0	0	1	2	0	1	0	0	0	9
P7f	0	2	1	0	0	1	1	0	0	1	0	5	1	2	0	0	0	14
P8bu	0	1	0	1	0	0	0	0	0	1	0	4	2	3	0	0	0	12
P9r	0	2	0	1	0	2	3	3	0	0	0	3	0	0	0	0	0	14
P10ai	0	1	2	0	0	2	0	3	0	0	1	0	0	0	0	0	0	9
P11i	0	0	0	0	1	1	1	1	0	0	0	0	1	0	0	0	1	6
P12t	0	0	1	0	0	2	0	2	0	0	0	1	1	0	0	0	0	7
<b>SUM</b>	<b>2</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>1</b>	<b>12</b>	<b>11</b>	<b>11</b>	<b>2</b>	<b>4</b>	<b>7</b>	<b>30</b>	<b>11</b>	<b>16</b>	<b>1</b>	<b>2</b>	<b>9</b>	<b>140</b>

Key:

<b>Monit</b>	Monitor	<b>custom</b>	Customisation
<b>Power</b>	new power bases	<b>employ</b>	employee outcomes
<b>Com</b>	Communication	<b>sabot</b>	Sabotage
<b>Train</b>	Training	<b>flex</b>	no flexibility
<b>Motiv</b>	demotivated workforce	<b>consult</b>	Consultation
<b>Predict</b>	many predictors	<b>time</b>	time consuming

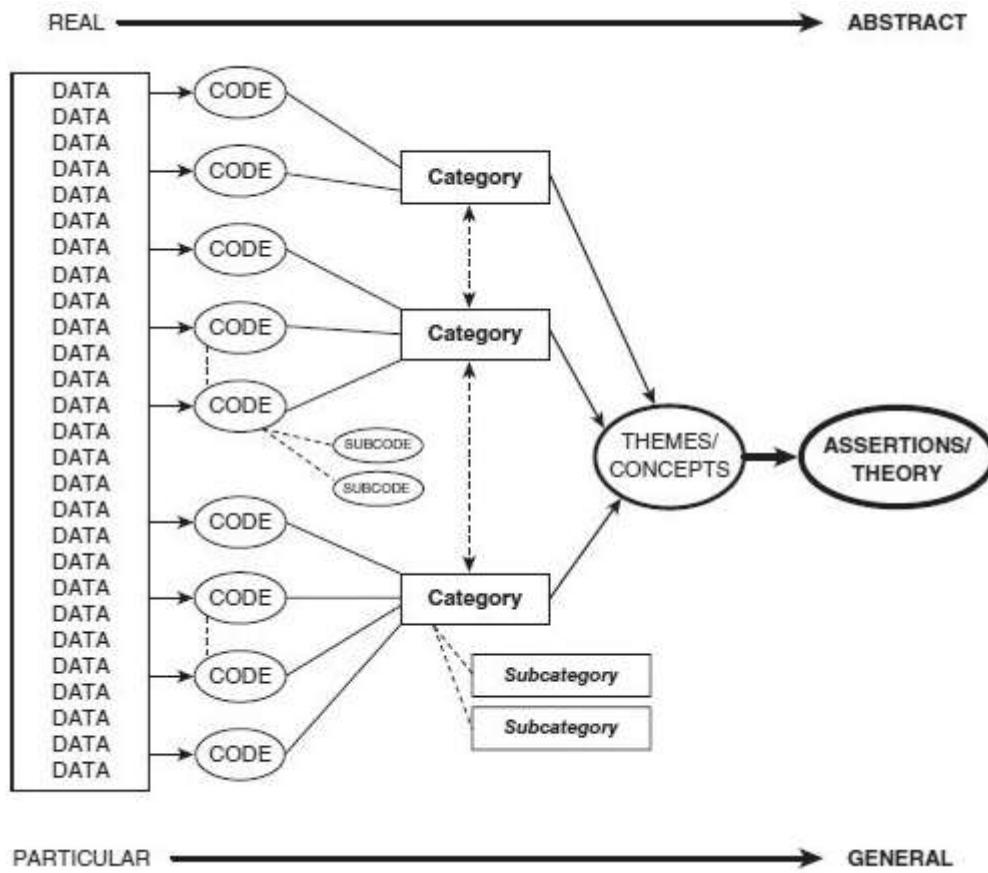


Figure QA 1: A streamlined codes-to-theory model for qualitative inquiry

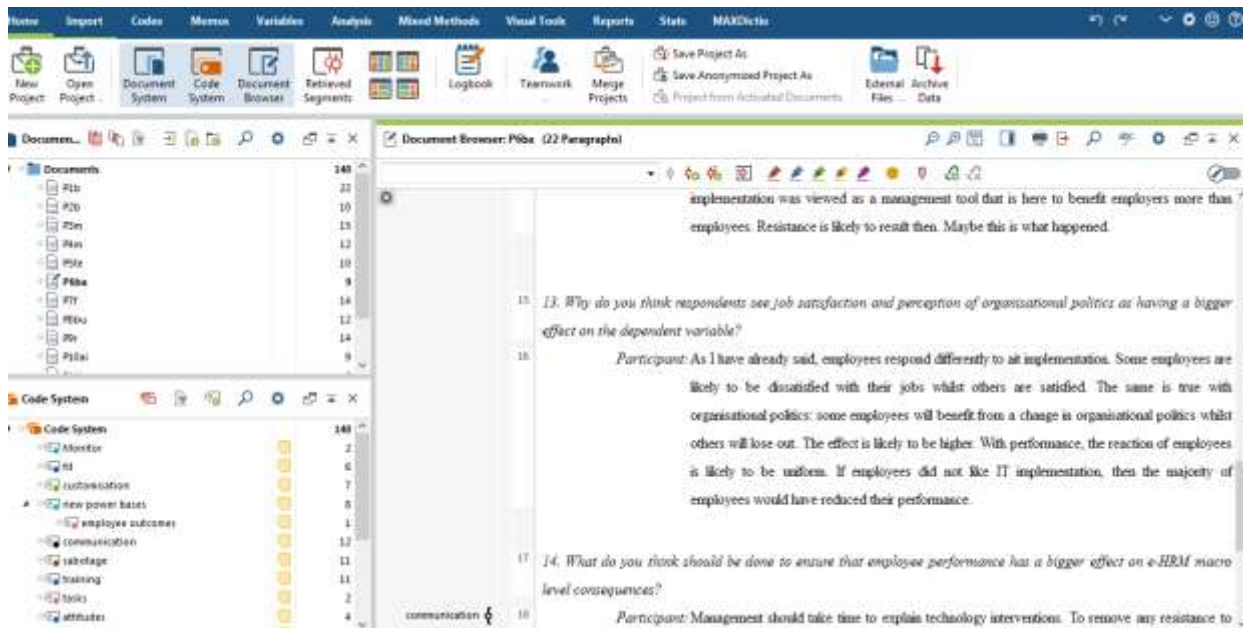


Figure QA 2: A screenshot from MAXQDA Analytics Pro 2020 (Release 20.2.2) software

## APPENDIX 18: ETHICAL CLEARANCE APPROVAL

University of Limpopo, P.O. Box 2026, Medunsa, 0201, South Africa  
Contact and Research Ethics Offices: 083 34 4211/083 34 4212/083 34 4213/083 34 4214  
E-mail: [ethics@unilim.ac.za](mailto:ethics@unilim.ac.za) Website: [www.unilim.ac.za](http://www.unilim.ac.za)

**SCHOOL OF BUSINESS LEADERSHIP  
RESEARCH ETHICS REVIEW COMMITTEE (GSBL CRERC)**

24 June 2020

Ref #: 2020\_SBL\_DBL\_009\_FA  
Name of applicant: Mr M Nyathi  
Student #: 29487394

Dear Mr Nyathi

**Decision: Ethics Approval**

---

**Student:** Mr M Nyathi, [29487394@mylife.unisa.ac.za](mailto:29487394@mylife.unisa.ac.za), +263 772 243 993

**Supervisor:** Prof R Kekwaletswe, [raykekwaletswe@gmail.com](mailto:raykekwaletswe@gmail.com), 082 685 2903

**Project Title:** A model for maximising electronic Human Resource Management macro-level consequences: the role of actors.

**Qualifications:** Doctor of Business Leadership (DBL)

**Expiry Date:** July 2022

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Thank you for applying for research ethics clearance, SBL Research Ethics Review Committee reviewed your application in compliance with the Unisa Policy on Research Ethics.

**Outcome of the SBL Research Committee:**  
**Approval is granted for the duration of the Project**

The application was reviewed in compliance with the Unisa Policy on Research Ethics by the SBL Research Ethics Review Committee on the 24/06/2020.

The proposed research may now commence with the proviso that:

- 1) The researcher will ensure that the research project adheres to the relevant guidelines set out in the Unisa Covid-19 position statement on research ethics attached
- 2) The researcher/s will ensure that the research project adheres to the values and



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SOUTH AFRICA

principles expressed in the UNISA Policy on Research Ethics.

- 3) Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study, as well as changes in the methodology, should be communicated in writing to the SBL Research Ethics Review Committee.
- 4) An amended application could be requested if there are substantial changes from the existing proposal, especially if those changes affect any of the study-related risks for the research participants.
- 5) The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study.

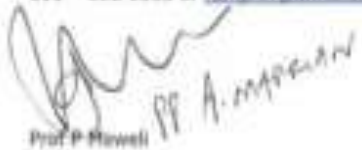
Kind regards,



Prof R Ramphal

**Chairperson: SBL Research Ethics Committee**

011 - 652 0363 or [ramphal@unisa.ac.za](mailto:ramphal@unisa.ac.za)



Prof P Maxwell

**Executive Dean (Acting): Graduate School of Business Leadership**

011- 652 0256/[maxwel@unisa.ac.za](mailto:maxwel@unisa.ac.za)

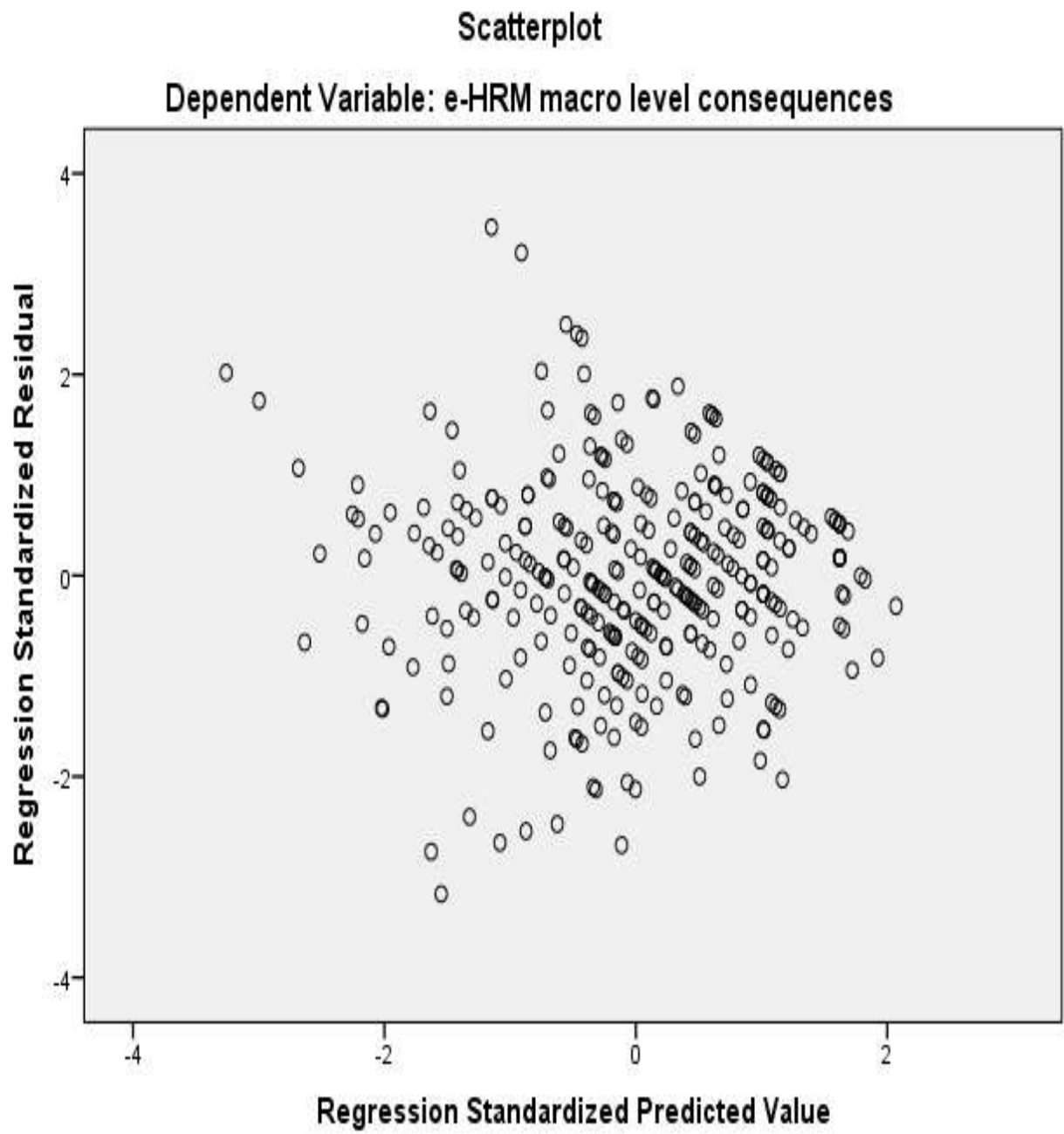


Figure QA3 Scatterplot

Normal P-P Plot of Regression Standardized Residual  
Dependent Variable: e-HRM macro level consequences

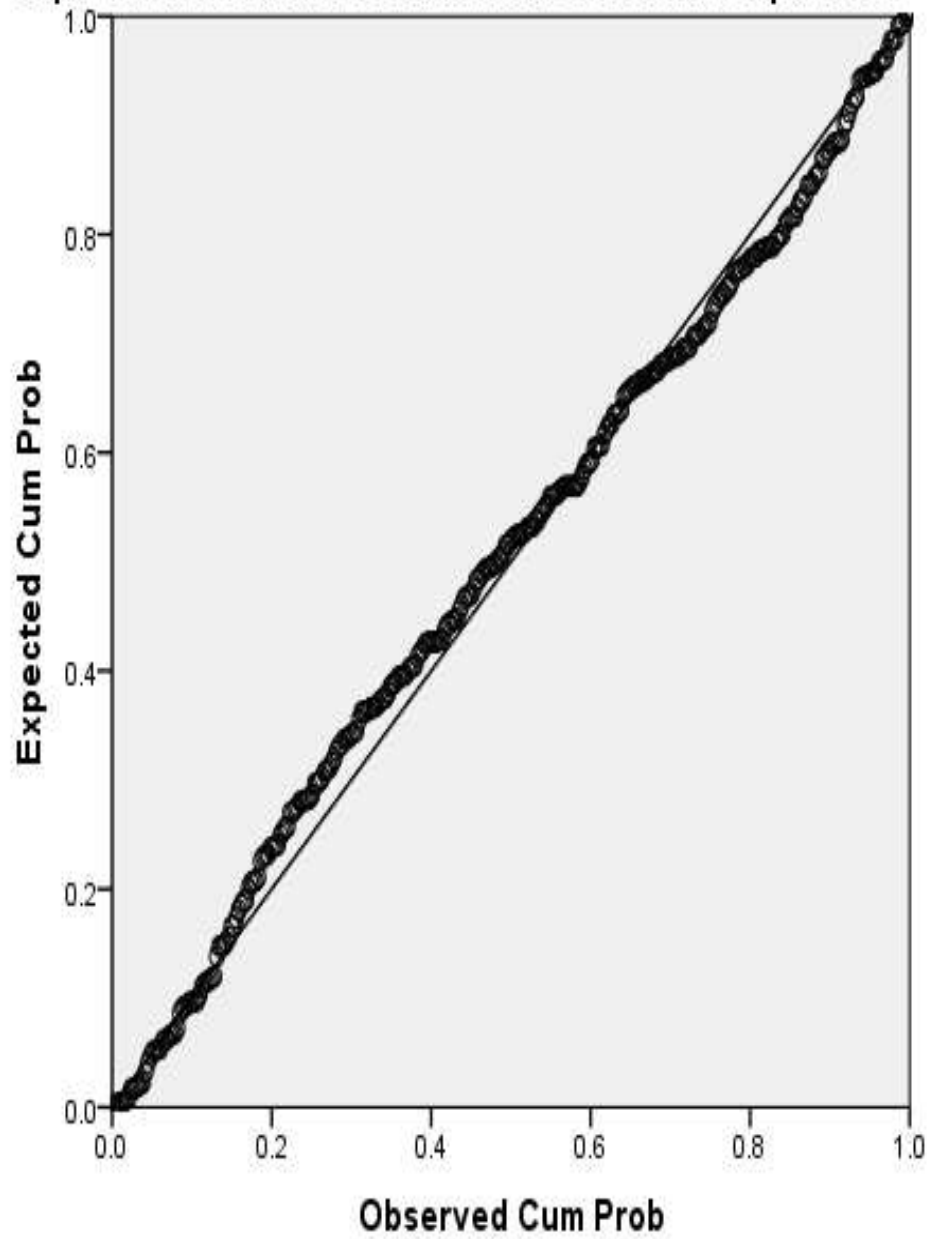


Figure QA4 Normal P-P Plot