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Employee Reactions to High Performance Work Systems  
in the Service Sector: Assessing the Role of Organisational  
Justice Theory.

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Submitted in fulfilment of the requirements for the degree of  
Doctor of Philosophy  
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Discipline of Management  
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# CONTENTS

<i>List of Tables</i> .....	vi
<i>List of Figures</i> .....	x
<i>List of abbreviations</i> .....	xii
<i>Declaration</i> .....	xiii
<i>Acknowledgements</i> .....	xiv
<i>Abstract</i> .....	xv
<b>1 INTRODUCTION</b>	
1.1 Introduction and background to the research .....	1
1.2 Research aims and theoretical framework .....	3
1.3 Overview of contributions of the research .....	5
1.4 Thesis organisation .....	6
1.5 Conclusion .....	6
<b>2 EMERGENCE OF HIGH PERFORMANCE WORK SYSTEMS</b>	
2.1 Introduction .....	8
2.2 A brief contextual understanding of work reform, human resource management and performance.....	8
2.2.1 Scientific management .....	8
2.2.2 Human relations .....	9
2.2.3 Quality of work life .....	11
2.2.4 Industrial democracy and new productions methods .....	12
2.2.5 Human resource management .....	13
2.3 An examination of high performance work systems .....	14
2.3.1 Defining high performance work system .....	14
2.3.2 Debates in HPWS literature .....	19
2.4 HPWS and employee outcomes: Rebalancing the HPWS debate .....	27
2.5 Conclusion .....	33
<b>3 THE EMERGENCE OF ORGANISATIONAL JUSTICE THEORY</b>	
3.1 Introduction .....	35
3.2 Philosophical and social scientific definitions .....	36
3.2.1 Justice as a philosophical concern .....	36
3.3 Developing organisational justice constructs .....	39
3.3.1 Distributive justice .....	41
3.3.2 Focus on procedural justice .....	43
3.3.3 Emergence of interactional justice .....	46
3.4 Integrating the theories of organisational justice .....	48
3.4.1 Process theories: the ‘how’ perspective of theory development .....	48
3.4.2 Content theories: the ‘why’ perspective of theory development .....	50
3.5 Debates in justice research .....	53
3.5.1 Distinctiveness of justice dimensions .....	53
3.5.2 Measurement .....	55
3.6 Conclusion .....	58

<b>4</b>	<b>INTEGRATING ORGANISATIONAL JUSTICE AND HIGH PERFORMANCE WORK SYSTEMS – A RESEARCH FRAMEWORK</b>	
4.1	Introduction .....	60
4.2	Organisational justice and high performance work systems .....	60
4.3	Distributive justice and high performance work systems .....	61
4.4	Procedural justice and high performance work systems .....	63
4.5	Interactional justice and high performance work systems .....	65
4.5.1	Interpersonal justice and HPWS .....	65
4.5.2	Informational justice and HPWS .....	66
4.6	Outcomes of organisational justice .....	68
4.7	Towards developing a multi-level research framework .....	69
4.7.1	Macro level data at company level: the influence of HPWS on firm outcomes .....	72
4.7.2	Micro level data at individual level: organisational justice perceptions of HPWS and impact on employee outcomes .....	74
4.7.3	Mediating factors impacting HPWS, organisational justice and employee outcomes .....	78
4.7.4	Cross level analysis: mediating role of organisational justice on HPWS-employee outcomes relationship .....	81
4.8	Conclusion .....	82
<b>5</b>	<b>METHODOLOGICAL APPROACH</b>	
5.1	Introduction .....	83
5.2	Philosophical foundations of this research .....	83
5.3	Mixed methods approach .....	86
5.4	Phase 1: High performance work systems survey of Ireland .....	90
5.4.1	Design phase (Phase 1) .....	91
5.4.2	Measurement of HPWS in Ireland survey variables .....	91
5.4.3	Administration of survey (Phase 1) .....	95
5.4.4	Exploratory factor analysis and Cronbach alpha test (Phase 1) .....	95
5.5	Phase 2: High performance work systems in practice .....	98
5.5.1	Design phase (Phase 2) .....	99
5.5.2	Measurement of employee level survey variables .....	100
5.5.3	Administration of survey (Phase 2) .....	105
5.5.4	Exploratory factor analysis and Cronbach alpha test (Phase 2) .....	107
5.6	Phase 3: Qualitative methods .....	115
5.6.1	Data analysis of qualitative data .....	117
5.7	Data analysis of quantitative data (Phase 1 and 2) .....	118
5.7.1	Correlation analysis .....	118
5.7.2	Test of hypothesised model .....	118
5.7.3	Moderation analysis .....	121
5.7.4	Mediation analysis .....	122
5.7.5	Cross level analysis .....	123
5.7.6	Cross level mediation .....	124
5.8	Conclusion .....	125
<b>6</b>	<b>HPWS IN IRELAND: THE MACRO LEVEL PERSPECTIVE</b>	
6.1	Introduction .....	126
6.2	Sample representativeness and non-response bias .....	126
6.3	Overview of respondents and organisational context .....	127

6.3.1	The HR function .....	128
6.4	Diffusion of high performance work system practices .....	131
6.5	High performance work systems and organisational outcomes .....	136
6.5.1	Moderating effects .....	142
6.6	Conclusion .....	149
<b>7</b>	<b>MICRO LEVEL HPWS: OVERVIEW OF COMPANIES</b>	
7.1	Introduction .....	151
7.2	Time frame .....	151
7.3	FoodCo .....	152
7.3.1	HR in FoodCo .....	153
7.4	InsureCo .....	154
7.4.1	HR in InsureCo .....	154
7.5	ProfCo .....	155
7.5.1	HR in ProfCo .....	156
7.6	Conclusion .....	157
<b>8</b>	<b>MICRO LEVEL HPWS: EMPLOYEE OUTCOMES</b>	
8.1	Introduction .....	158
8.2	Demographic characteristics of sample .....	158
8.3	Correlation analysis .....	159
8.4	Test of research hypotheses .....	162
8.4.1	Distributive and procedural justice and employee outcomes .....	163
8.4.2	Interactional justice and employee outcomes .....	176
8.4.3	Organisational justice dimensions and employee outcomes .....	180
8.5	Mediation analysis .....	183
8.5.1	Mediating role of leader-member exchange .....	184
8.5.2	Mediating role of perceived organisational support .....	189
8.6	Conclusion .....	198
<b>9</b>	<b>CROSS LEVEL HPWS EFFECTS ON EMPLOYEE OUTCOMES: THE MEDIATING ROLE OF ORGANISATIONAL JUSTICE</b>	
9.1	Introduction .....	200
9.2	Cross level linkages between HPWS and employee level attitudes and behavioural outcomes .....	200
9.3	Mediating role of organisational justice in HPWS-employee outcome relationship .....	203
9.3.1	Distributive justice as mediator .....	203
9.3.2	Procedural justice as mediator .....	207
9.3.3	Interactional justice as mediator .....	211
9.4	Conclusion .....	214
<b>10</b>	<b>DISCUSSION</b>	
10.1	Introduction .....	216
10.2	Extent of HPWS adoption in Ireland .....	216
10.3	HR architecture and employment sub systems .....	218
10.4	HPWS and firm performance .....	219
10.4.1	Individual HPWS practices.....	220
10.4.2	HPWS – best practice or best fit? .....	221

10.5	HPWS and organisational justice – micro level .....	223
10.5.1	Distributive justice .....	224
10.5.2	Procedural justice .....	225
10.5.3	Interactional justice .....	228
10.5.4	Mediating role of LMX .....	229
10.5.5	Mediating role of POS .....	230
10.6	Cross level effects of HPWS on employee attitudes and behavioural outcomes .....	232
10.7	Cross level effects: mediating role of organisational justice on HPWS-employee outcomes relationship .....	234
10.8	Conclusion .....	235
<b>11</b>	<b>CONCLUSION</b>	
11.1	Introduction .....	236
11.2	Key conclusions .....	236
11.2.1	How do HPWS policies affect performance outcomes?.....	238
11.2.2	Is the relationship between HPWS and organisational performance dependent on other factors? .....	238
11.2.3	What are the processes that influence employee attitudes and behaviours toward HPWS? Why do such attitudes and behaviours occur? .....	238
11.2.4	How does the relationship between employees, supervisors/managers and the organisation affect employee perceptions of HPWS? .....	239
11.3	Contribution to theory .....	240
11.4	Contribution to methods .....	243
11.5	Contribution to practice .....	244
11.6	Limitations of research .....	246
11.7	Recommendations for future research .....	247
11.8	Conclusion .....	248
	<b>REFERENCES</b> .....	249
<b>APPENDIX A</b>	<b>SUMMARY RESULTS OF HPWS STUDIES AND FIRM PERFORMANCE</b> .....	280
<b>APPENDIX B</b>	<b>SUMMARY RESULTS OF HPWS STUDIES AND EMPLOYEE OUTCOMES</b> .....	287
<b>APPENDIX C</b>	<b>EXAMPLES OF ORGANISATIONAL JUSTICE RESEARCH IN THE HIGH PERFORMANCE WORK SYSTEM DOMAIN</b> .....	291
<b>APPENDIX D</b>	<b>SUMMARY RESULTS OF ORGANISATIONAL JUSTICE STUDIES ON ORGANISATIONAL OUTCOMES</b> .....	310
<b>APPENDIX E</b>	<b>HIGH PERFORMANCE WORK SYSTEMS IN IRELAND SURVEY</b> .....	315
<b>APPENDIX F</b>	<b>EMPLOYEE SURVEY</b> .....	326
<b>APPENDIX G</b>	<b>INTERVIEW SCHEDULE FOR HR MANAGER AND EMPLOYEES</b> .....	334

<b>APPENDIX H</b>	EXAMPLE OF P-P PLOTS AND Q-Q PLOTS .....	340
<b>APPENDIX I</b>	RESULTS OF MODERATION ANALYSIS FOR MODERATING ROLE OF MANAGEMENT PHILOSOPHY ON HPWS- PERFORMNACE RELATIONSHIP .....	343

## LIST OF TABLES

Table 3.1: Procedural justice rules .....	45
Table 3.2: Fairness theory and its component justice concepts and theories .....	52
Table 4.1: Components of organisational justice .....	61
Table 5.1: Types of multi-method design .....	87
Table 5.2: Overview of research strategy .....	89
Table 5.3: Factor analysis of HPWS index .....	96
Table 5.4: Factor analysis of employee and HR performance variables .....	97
Table 5.5: Factor analysis of organisational performance variable .....	98
Table 5.6: Factor analysis of moderator variable (management philosophy) .....	98
Table 5.7: Response rate for employee level survey by company .....	107
Table 5.8: Factor analysis of distributive justice scale .....	109
Table 5.9: Factor analysis of procedural justice scale .....	110
Table 5.10: Factor analysis of interactional justice scale .....	111
Table 5.11: Factor analysis of leader member exchange scale .....	112
Table 5.12: Factor analysis of perceived organisational support .....	112
Table 5.13: Factor analysis of job satisfaction and affective commitment scales .....	113
Table 5.14: Factor analysis of trust in management scale .....	114
Table 5.15: Factor analysis of intention to leave .....	114
Table 5.16: Factor analysis of job demands scale .....	115
Table 5.17: Background details of interview respondents .....	116
Table 5.18: Distribution skewness and kurtosis scores for HPWS survey variables (Phase 1) .....	119
Table 5.19: Distribution skewness and kurtosis scores for independent variables in employee survey (Phase 2) .....	120
Table 5.20: Distribution skewness and kurtosis scores for mediating variables in employee survey (Phase 2) .....	120
Table 5.21: Distribution skewness and kurtosis scores for dependent variables in employee survey (Phase 2) .....	120
Table 5.22: Skewness and kurtosis for transformed and non-transformed variable .....	121
Table 6.1: Overview of Respondents .....	127
Table 6.2: Strategic integration of HRM at senior level of organisation .....	129
Table 6.3: Diffusion of HRM .....	131



Table 6.4	Diffusion of HPWS by employee category .....	133
Table 6.5:	T-test results for HPWS across employee category .....	134
Table 6.6:	HPWS score by organisational characteristic .....	135
Table 6.7:	Means, standard deviations, pearson product moment correlations of variables .....	138
Table 6.8:	Results of Hierarchical Regression Analysis for HPWS and dependent variables .....	140
Table 6.9:	Results of Hierarchical Regression Analysis for individual HPWS practices and dependent variables .....	141
Table 6.10:	Results for Hierarchical Regression Analysis for moderating role of differentiation strategy on outcomes .....	144
Table 6.11:	Results for Hierarchical Regression Analysis for moderating role of low cost strategy on outcomes .....	145
Table 6.12:	Summary of hypotheses results from macro level data .....	148
Table 7.1	Diffusion of PWS by employee category in FoodCo .....	153
Table 7.2:	Diffusion of HPWS by employee category in InsureCo .....	155
Table 7.3:	Diffusion of HPWS by employee category in ProfCo .....	157
Table 8.1:	Demographic characteristics of sample (n=187) .....	159
Table 8.2:	Means, standard deviations and correlations for study variables .....	161
Table 8.3:	Results of regression examining effects of transactional distributive justice on employee outcomes .....	164
Table 8.4:	Results of regression examining effects of relational distributive justice on employee outcomes .....	165
Table 8.5:	Results of regression examining effects of transactional procedural justice on employee outcomes .....	167
Table 8.6:	Results of regression examining effects of relational procedural justice on employee outcomes .....	168
Table 8.7:	Results of regression examining effects of distributive justice on employee outcomes .....	170
Table 8.8:	Results of regression examining effects of procedural justice on employee outcomes .....	174
Table 8.9:	Results of regression examining effects of interactional justice on employee outcomes .....	179
Table 8.10:	Results of regression examining effects of distributive, procedural and interactional justice on employee outcomes .....	181

Table 8.11: Summary of hypotheses from employee level data and findings .....	182
Table 8.12: Results of regression examining effects of interactional justice on LMX .....	185
Table 8.13: Results of regression examining effects of mediator (LMX) on employee outcomes .....	186
Table 8.14: Results of regression examining effects of step 4 (LMX and interactional justice) on employee outcomes .....	188
Table 8.15: Results of regression examining effects of transactional procedural justice on POS .....	190
Table 8.16: Results of regression examining effects of mediator (POS) on employee outcomes .....	191
Table 8.17: Results of regression examining effects of step 4 (POS and transactional procedural justice) on employee outcomes .....	193
Table 8.18 Results of regression examining effects of relational procedural justice on POS .....	194
Table 8.19: Results of regression examining effects of step 4 (POS and relational procedural justice) on employee outcomes .....	196
Table 8.20: Summary of hypotheses for mediation analysis and findings .....	197
Table 9.1: Results of Hierarchical Regression Analysis for establishment level HPWS and dependent variables .....	202
Table 9.2: Mediation analysis for HPWS, transactional distributive justice and job satisfaction .....	204
Table 9.3: Mediation analysis for HPWS, transactional distributive justice and affective commitment .....	205
Table 9.4: Mediation analysis for HPWS, transactional distributive justice and work pressure .....	205
Table 9.5: Mediation analysis for HPWS, relational distributive justice and job satisfaction .....	206
Table 9.6: Mediation analysis for HPWS, relational distributive justice and affective commitment .....	206
Table 9.7: Mediation analysis for HPWS, relational distributive justice and work pressure .....	207
Table 9.8: Mediation analysis for HPWS, transactional procedural justice and job satisfaction .....	208
Table 9.9: Mediation analysis for HPWS, transactional procedural justice and affective commitment .....	208

Table 9.10: Mediation analysis for HPWS, transactional procedural justice and work pressure .....	208
Table 9.11: Mediation analysis for HPWS, relational procedural justice and job satisfaction .....	209
Table 9.12: Mediation analysis for HPWS, relational procedural justice and affective commitment .....	210
Table 9.13: Mediation analysis for HPWS, relational procedural justice and work pressure .....	210
Table 9.14: Mediation analysis for HPWS, interactional justice and job satisfaction .....	212
Table 9.15: Mediation analysis for HPWS, interactional justice and affective commitment .....	212
Table 9.16: Mediation analysis for HPWS, interactional justice and work pressure.....	213
Table 9.17: Summary of hypotheses for cross level mediation analysis and findings.....	213

## LIST OF FIGURES

Figure 1.1: The links in the chain linking HR practices to Performance .....	2
Figure 2.1: High Performance Work Systems: commonly hypothesised linkages.....	18
Figure 2.2: Advocates and Critics of HPWS .....	31
Figure 3.1: The four waves of organisational justice theory and research .....	40
Figure 4.1: Hypothesized multi level model of HPWS, organisational justice and employee outcomes.....	71
Figure 5.1: Sequence and priority of mixed methods used in this research .....	88
Figure 5.2: Baron and Kenny’s (1986) Steps for Single-Level Mediation Analysis .....	122
Figure 5.3: Cross level mediation models.....	124
Figure 6.1 Involvement of HR in corporate strategy development.....	130
Figure 6.2: HR involvement in corporate strategy development by HR representation at board level .....	130
Figure 6.3: Hypothesised model of HPWS and organisational outcomes .....	137
Figure 6.4: Hypothesised model of moderating effect of strategy and management philosophy on HPWS and organisational outcomes .....	142
Figure 6.5: The interaction between differentiation strategy and HPWS in relation to employee performance .....	146
Figure 6.6: The interaction between differentiation strategy and HPWS in relation to innovation .....	146
Figure 6.7: The interaction between low cost strategy and HPWS in relation to employee performance .....	147
Figure 6.8: The interaction between low cost strategy and HPWS in relation to innovation .....	148
Figure 7.1: Change in GDP in Ireland (2000-2011) .....	152
Figure 8.1: A hypothesised model of organisational justice, mediators and individual-level attitudes and behavioural outcomes .....	162
Figure 8.2: Mediation Model: Leader-member exchange as a mediator between interactional justice and dependent variables .....	184
Figure 8.3: Mediation Model: Perceived organisational support as mediator between procedural justice and dependent variables .....	189
Figure 9.1: A multilevel model of HPWS, organisational justice and individual-level attitudes and behavioural outcomes .....	200

Figure 9.2: Mediation Model: Distributive justice as a mediator between establishment level HPWS and dependent variables .....	204
Figure 9.3: Mediation Model: Procedural justice as a mediator between establishment level HPWS and dependent variables .....	207
Figure 9.4: Mediation Model: Interactional justice as a mediator between establishment level HPWS and dependent variables .....	211
Figure 10.1: Results of hypothesised model of HPWS and organisational outcomes .....	219
Figure 10.2: Results of hypothesised model of moderating effect of differentiation business strategy on HPWS and organisational outcomes .....	222
Figure 10.3: Results of hypothesised model of moderating effect of low cost business strategy on HPWS and organisational outcomes .....	223
Figure 10.4: A hypothesised model of distributive justice and employee attitudes and behavioural outcomes .....	225
Figure 10.5: A hypothesised model of procedural justice and employee attitudes and behavioural outcomes .....	227
Figure 10.6: A hypothesised model of interactional justice and employee attitudes and behavioural outcomes .....	229
Figure 10.7: A hypothesised model of mediator (LMX) and interactional justice and individual-level attitudes and behavioural outcomes .....	230
Figure 10.8: A hypothesised model of mediator (POS) and procedural justice and individual-level attitudes and behavioural outcomes .....	232
Figure 10.9: A hypothesised model of establishment level HPWS and individual-level attitudes and behavioural outcomes .....	233
Figure 11.1: Hypothesized multi level model of HPWS, organisational justice and employee outcomes revisited .....	237

## LIST OF ABBREVIATIONS

AC	Affective commitment
d.f.	Degrees of freedom
DJ	Distributive justice
DJ(Rel)	Relational distributive justice
DJ (Trans)	Transactional distributive justice
HCM	High commitment management
HIM	High involvement management
HR	Human resources
HRM	Human resource management
HPWS	High performance work systems
IJ	Interactional justice
JS	Job satisfaction
KMO	Kaiser-Meyer-Olkin
LMX	Leader member exchange
PA	Performance appraisal
PJ	Procedural justice
PJ (Rel)	Relational procedural justice
PJ (Trans)	Transactional procedural justice
POS	Perceived organisational support
QWL	Quality of working life
RBV	Resource based theory
RD	Relative deprivation
s.d.	Standard deviation
WERS	Workplace Employment Relations Study

## DECLARATION

I hereby certify that this material, which I now submit for assessment on the programme of study leading to the award of Doctor of Philosophy is entirely my own work, that I have exercised reasonable care to ensure that the work is original, and does not to the best of my knowledge breach any law of copyright, and has not been taken from the work of others save and to the extent that such work has been cited and acknowledged within the text of my work.

Signed: \_\_\_\_\_ (Candidate) ID No.: 02131935 Date: \_\_\_\_\_

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## **ABSTRACT**

This study examines the impact of high performance work systems (HPWS) on employee outcomes. Understanding the HR causal chain linking HR and performance has been an on-going area of investigation. This research seeks to respond to recent calls to integrate a full range of participating actors in HPWS research by examining the association between HR and employee outcomes in particular. It is argued that HPWS should incorporate employee perceptions in order to understand more fully the potential linkages between HPWS and performance. In seeking to develop a more rounded theoretical understanding of the linkages between HPWS and organisational performance, this research utilises organisational justice theory as a means of exploring employee reactions to HPWS.

The present study extends this HPWS literature by (a) focusing on the employee experiences of HPWS, (b) examining how organisational justice theory explains the link between HPWS practices and employee attitudes and behavioural outcomes, and (c) exploring the gap between espoused and enacted HR policies and practices. The empirical research is based on a national HR manager survey (n=169), an employee attitude survey (n = 188) and 23 interviews with HR managers, line managers and employees within three service sector organisations in Ireland. This study links establishment and employee level data using cross level analysis. The findings highlight that (a) distributive, procedural and interactional justice perceptions of HPWS impact employee attitudes and behavioural outcomes; (b) interactional justice has a greater impact on employee outcomes than distributive and procedural justice, thereby emphasising the role of the line manager as a key agent in shaping employee relations outcomes; (c) high investment in HPWS negatively impacts employee job satisfaction and affective commitment and increases perceptions of work pressure; and (d) organisational justice positively mediates the link between HPWS and employee outcomes. The implications of the findings for future research into HPWS are discussed and the limitations of present study are noted.

# CHAPTER ONE

---

## INTRODUCTION

---

### 1.1 Introduction and background to the research

Over the last twenty years, a burgeoning body of literature has emerged on the ways in which human resource (HR) practices impact positively on an organisation's 'bottom line'. Prominent within this literature is the concept of **high performance work systems** (HPWS). There is no universally agreed meaning for the term HPWS due to quite broad differences regarding the theoretical, empirical and practical approaches adopted (Macky and Boxall, 2007). Despite this however, a HPWS can be broadly described as a range of innovative human resource management practices, work structures and processes, which, when used in certain combinations or bundles are mutually reinforcing and produce synergistic benefits (Huselid, 1995). These systems are built around the following core HR policy areas: (1) sophisticated selection and training; (2) behaviour-based appraisal and advancement criteria; (3) contingent pay systems; (4) job security and (5) employee involvement initiatives (Cook, 2001; Ramsey, Scholarios and Harley, 2000).

During the late 1990's and early 2000's, a growing number of studies provided initial evidence of a positive association between HRM and firm performance (*e.g.* Arthur, 1994; Delery and Doty, 1996; Guthrie, Spell and Nyamori, 2002; Hoque, 1999; Huselid, 1995; Patterson, West, Lawthom and Nickell, 1997). Pfeffer (1998: 34) claims that because 'the effects of high performance management practices are real, economically significant and general', they should be universally adopted by organisations irrespective of their strategic orientation. Despite this claim, a number of studies provide evidence to suggest that organisational strategy and HPWS should be aligned (Guthrie et al., 2002; Michie and Sheehan, 2005). Several authors have presented various sets of HR practices that bring competitive advantage to organisations and generate profits (Guerrero and Barraud-Didier, 2004; Guthrie, 2001). However, the considerable diversity in the practices identified, and the wide variance in how these practices have been operationalised, has given rise to a catalogue of inconsistent findings and what might be described as a 'cul-de-sac' in terms of progress in the field (Purcell, 1999).

Guest (2011) in his recent review of HPWS research acknowledges that the rush to empiricism to demonstrate a link between HPWS and higher performance has been at the cost of key conceptual issues. The primary criticism leveled at HPWS research concerns its lack of theoretical development

and the need for a better articulation of the ‘black box’ that logically explains the link between a firm’s HR architecture and its subsequent performance (Becker and Huselid, 2006). Wright and Gardner (2003) claim that little is known about what happens in between HR practices and performance, and hence the contents of the black box remain a mystery. Boselie, Dietz and Boon (2005:77) examined previous HPWS studies and note that whilst there is ‘plenty of acknowledgement of the existence of the ‘black box’ and some speculation on its possible contents, few studies tried to look inside’. Looking inside requires the researcher to examine the HR causal chain (Wright and Nishii, 2007) moving from intended to actual HR practices, to perceived HR practices, followed by employee reactions and then performance (see Figure 1.1). It therefore requires that various perspectives across multiple levels are considered, including HR and top management perspectives (to capture intended HR practices), line managers (as implementers of actual HR practices), and employees as recipients of, and reactors to, HR practices.

**Figure 1.1: The links in the chain linking HR practices to Performance**



Adapted from Wright and Nishii (2007)

As Figure 1.1 illustrates, employee perceptions of, and reactions to, HR practices are at the heart of the links in the chain between HR practices and performance (Kinnie, Hutchinson, Purcell, Rayton, and Swart, 2005). Guest (1997) was one of the earliest researchers in the field to highlight the importance of the worker based on the inherent assumption that improved performance in an organisation will be achieved through its employees. Yet, HPWS research examining employee attitudes and behaviours is surprisingly uncommon. Of the 104 studies examined by Boselie et al. (2005), only 11 used employee survey data. Boon et al. (2011) argue that few studies have yet to properly test the association between HPWS and employee outcomes. While Guest (2011) notes that researchers are finally acknowledging multiple stakeholders, including employees, he argues that more research is needed to understand the underlying processes and mechanisms involved in HPWS effects. This highlights a ‘gaping hole’ in the research to date which warrants further investigation. It points to a clear, and largely untested, route to understanding the mechanisms by which the relationship between HR practices and performance can be more closely interrogated.

A closer look at the employee perspective on HRM is therefore needed. This is primarily because the now largely saturated literature on the links between HPWS and performance from a predominantly firm level perspective has failed to provide consistent or conclusive findings. It is claimed to be managerialist in its perspective and thus fails to give adequate attention to ‘those at the receiving end’ of HRM initiatives (Legge, 2005). HPWS research has been built on largely unitarist assumptions about the employment relationship, which argues that HPWS have positive outcomes for the organisation and for employees (Appelbaum, Bailey, Berg, and Kalleberg, 2000; Guest, 1999). In contrast, HPWS critics suggest that performance improvements are due to work intensification rather than more autonomy, greater discretionary effort or higher job satisfaction (e.g. see Ramsey et al., 2000). This gives rise to the possibility that HPWS is little different to previous forms of management control of employees (Grant and Shields, 2002). The degree to which employees perceive HPWS as fair and therefore respond positively to them represents one way of gaining a fuller understanding of the HRM phenomenon. Therefore, in order to provide a more representative understanding of HPWS and its outcomes, employees as the primary recipients and subjects of HPWS will be the primary focus of this research.

## **1.2 Research aims and theoretical framework**

The primary aim of this research is to develop and test a theoretical model which is underpinned by theory and research concerning the link between HPWS and employee outcomes. This will help to decode the ‘black box’ that has dominated much of the debates in the literature on the HRM–performance link. A better understanding about employee perceptions of, and responses to, espoused and actual HR practices is a prerequisite to improving knowledge about HRM’s contribution to organisational effectiveness (Boxall and Macky, 2007). The question of how HRM practices impact on employee attitudes and behaviour is also important for HR professionals and line managers because it will impact on how HR practices are designed, delivered and communicated. This research will use organisational justice as a key framework and lens through which the effectiveness of HPWS on employees’ perceptions of, and responses to, HPWS can be examined. A focus on justice evaluations is important as they can affect what people do and feel (Homans, 1961).

Organisational justice is a relatively recent concept in organisational studies and refers to ‘the extent to which people perceive organizational events as being fair’ (Colquitt and Greenberg, 2003: 166). The concept has emerged as a powerful predictor of people’s affective, cognitive and behavioural reactions in various work contexts (Folger and Cropanzano, 1998). Justice researchers have typically distinguished between four types of justice: the perceived fairness of outcomes (distributive justice);

the fairness of the procedure used to make decisions about who gets what outcome (procedural justice); the interpersonal treatment received during the implementation of the procedure (interactional justice); and the perceived adequacy and timeliness of information (informational justice) (Colquitt, Wesson, Porter, Conlon, and Ng, 2001). Studies examining the relationship between organisational justice and HR practices have shown that employee perceptions of organisational justice are salient for certain practices such as pay (McFarlin and Sweeney, 1992), performance appraisals (Greenberg, 1986), and staffing (Gilliland, 1993). However, few studies have examined the fairness of the HPWS system as a whole and so little is known about the effects of these practices relative to others in the system. The principle aim of the current study is therefore to investigate, through an organisational justice perspective, the impact of HPWS on employee attitudes and behavioural outcomes.

Following the previous paragraphs, four key research questions will guide this thesis:

1. How do HPWS policies affect performance outcomes?
2. Is the relationship between HPWS and organisational performance dependent on other factors?
3. What are the processes that influence employee attitudes and behaviours towards HPWS?
4. Why do such attitudes and behaviours occur?
5. How does the relationship between employees, supervisors/managers and the organisation affect employee perceptions of HPWS?

In chapter 4, a research model will be presented (see Figure 4.1) and twelve hypotheses will be developed in order to investigate the core research questions outlined above. In examining research question 1, it is hypothesised that higher investment in HPWS is associated with lower absenteeism and turnover, higher employee, HR and organisational outcomes and higher innovation levels. Hypotheses 3, 4 and 5 will address research question 2 by examining whether the HPWS-performance relationship is contingent on business strategy and management philosophy. The second part of the research model addresses research questions 3 and 4 and 5 and suggests that employee perceptions of how organisationally just the enacted HPWS system is will be positively associated with job satisfaction, affective commitment, trust in management and work effort. In contrast, it is posited that higher HPWS justice perceptions will be negatively associated with intentions to leave and work pressure. Finally, research question 5 explores the role of leader-member exchange (LMX) and perceived organisational support (POS) as mediators of organisational justice and employee outcomes. Hypothesis 8 posits that LMX will have a mediating

effect on the relationship between interactional justice and employee outcomes. POS will be examined to establish mediating effects between procedural justice and employee outcomes (Hypothesis 9). Finally, cross level effects will be examined to link establishment level HPWS policy measures with employee outcomes. Consistent with previous literature, it is argued that HPWS policy will positively affect job satisfaction, affective commitment, trust in management and work effort and negatively affect intention to leave and work pressure. This HPWS-employee outcome relationship will be further strengthened by examining the mediating role of the three organisational justice dimensions (hypotheses 10, 11 and 12). In this way, the relationship between *intended* HR (HPWS at establishment level) and *enacted* HR (as reported by individual level data) and subsequent employee attitudes and behaviours will be explored.

To answer the research questions mixed methods will be used. Questions 1 and 2 will be explored using quantitative data from a national HR survey examining HPWS at firm level. Questions 2 and 3 will be examined at the employee level using both quantitative and qualitative methods. Finally, cross level effects will be examined to link firm level HPWS policy measures with employee outcomes.

### **1.3 Overview of contributions of the research**

Previous HPWS research has been criticised on a number of grounds (Boselie et al., 2005). For example, many studies are conducted at a single point in time (cross-sectional), in manufacturing settings and use single respondents (mostly HR managers) as their source of information. Many tend to focus on the managerial view and seldom assess the employees' perspective. Finally, the theoretical foundation for how and why HPWS might affect performance is not always clear (den Hartog, Boselie and Paauwe, 2004). This research aims to overcome these limitations in a number of ways.

Firstly, the use of the organisational justice framework to investigate employee experiences of HPWS is expected to advance knowledge on the link between HPWS and organisational performance and add to the theoretical foundations of HPWS-performance debates. Secondly, the over-emphasis on the managerial view has been at the cost of examining employees' experiences of HPWS. This research overcomes this criticism by bringing the employee to the heart of the HR-outcomes relationship. The research also helps to understand the HPWS process, particularly the disconnect that can occur between what HR practices are as espoused by the organisation and what managers actually do in the delivery of those practices (Boxall and Macky, 2007). Thirdly, the research makes a number of important methodological contributions. It uses multiple sources to

investigate HPWS including the views of HR managers, employees and line managers. Previous HPWS and organisational justice research has relied on quantitative analyses and has taken a managerialist view, not providing much detail about individual experiences (Ambrose and Cropanzano, 2003; Huselid, 1995). In order to better understand the individual experience of HPWS, both quantitative and qualitative methods will be used. By adopting this design, the research makes a fourth contribution by carrying out an empirical examination of the mutual gains and critical perspectives of HPWS. Peccei (2004) questions whether HPWS, which has been shown to be good for the organisation from the point of view of enhancing productivity and profit, is equally good for employees in terms of enhancing their job satisfaction and commitment. This research therefore aims to further address these conflicting perspectives. This research is conducted within the service sector in an attempt to overcome the dominant focus of previous research on HPWS in manufacturing sectors (see Guest, Michie, Conway, and Sheehan, 2003). Sector specificity is important in advancing our knowledge of HPWS. Finally, the research acknowledges the work of Ostroff and Bowen (2000) who presented a conceptual multi-level framework suggesting that the HRM – performance relationship should be considered at both the individual and organisational levels and through the linkages between them. As a result, this research will use cross level analysis at both the organisational and the employee level.

#### **1.4. Thesis Organisation**

This thesis is presented in eleven chapters. Chapter 1 has outlined the study's background, aims, theoretical framework and methodology, and contribution to the body of knowledge. Chapter 2 presents a review of related work in the HPWS literature and reveals a gap in the literature which highlights the significance of focusing on the employee in HPWS research. Chapter 3 examines justice as a theoretical framework. Chapter 4 examines the application of justice theory to HPWS and presents the research framework and hypotheses. Chapter 5 presents an overview of the research methodology employed to test the framework and hypotheses. Chapter 6 presents the empirical results from the survey in Phase 1. Chapter 7 describes the organisational context in which the survey in phase 2 took place. Chapter 8 describes the empirical results from the employee level survey and interviews. Chapter 9 presents the findings of the cross level analysis. Finally, chapter 10 discusses the key findings in light of previous research, and chapter 11 concludes by highlighting the contribution of the study, its limitations, and areas that future research should address.

#### **1.5 Conclusion**

This chapter presented background information on the importance of HPWS for organisations and the rationale for this study which incorporates employees' experiences of, and attitudes to HPWS. It

was proposed that organisational justice theory perceptions of HPWS represent a way to better understand employee attitudes and behavioural outcomes and answer the research questions posed. This contributes to knowledge about the 'black box' between HRM and performance. The research has a number of implications for both HPWS research and practice. The findings provide clear evidence for the need to examine employee perceptions of HPWS. The next chapter reviews the relevant literature relating to HPWS.



## CHAPTER TWO

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### EMERGENCE OF HIGH PERFORMANCE WORK SYSTEMS

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#### **2.1 Introduction**

This chapter introduces the concept of HPWS and is structured as follows. First, it briefly traces the antecedents of management thought on work and organisational reform, including developments from Taylorism, Quality of Working Life (QWL), to contemporary HRM. Secondly, the idea that ‘people management’ leads to some ‘performance outcome’ will be critically scrutinised. In other words, what HPWS is and what it looks like will be discussed. Thirdly, the chapter defines and highlights some of the more prominent complexities associated with previous research into high performance work systems, leading to a broader definition and deeper understanding of the phenomenon that is grounded in a richer historical pedigree. Given this review and discussion, the chapter argues that because much of the extant research is managerially biased, there is a need to rebalance the HPWS debate in order to reintroduce the employee as a neglected ‘subject’ in terms of people management and performance research. This then sets the agenda for the main research focus of the study by examining employee reactions to HPWS.

#### **2.2 A brief contextual understanding of work reform, human resource management and performance**

Much of the current HPWS research implies that many of its central ideas have been developed only recently, particularly the people management-performance connection. However, interest in this area has a long history (Cappelli and Neumark, 2001; Barley and Kunda, 1992). In order to fully contextualise and understand some of this history – and what it means for contemporary debates surrounding HPWS – it is first necessary to appreciate the ways in which management have sought to shape organisation structure and work design in order to achieve efficiency, effectiveness and performance. Therefore, in this section some of the main contributors are considered such as Scientific Management, the Human Relations movement, QWL and Human Resource Management.

##### **2.2.1 Scientific management**

Modern management and the desire for efficiency and performance was the primary preoccupation of social and industrial engineers in the early twentieth century. The most visible aspect of managerialism during this period was the rise of methods which furthered managerial direct control over labour power (Friedman, 1977). This arose as a result of declining worker effort as employees

learned to treat their effort as a negotiable aspect of labour power and as more skilled workers organised (Friedman, 1977). In response to this, employers began experimenting with new systems of incentive payments and new systems of organising the work process in order to improve efficiency and performance. This form of production and work organisation was embodied in the scientific management principles of F.W. Taylor. In the industrial era, scientific management was the handmaiden of mass production (Frenkel et al, 1999) where jobs were routinised and coordinated by large bureaucracies with a strict distinction between management and labour in the planning and execution of work.

Scientific management implied little in the way of training or involvement on the part of low- or semi-skilled workers, who were perceived as mere cogs in the productive wheel (Belanger, Giles and Murray, 2002). It was also seen to largely ignore the psychology of individuals and what motivates people to work. In fact, on the whole, it could be said that employees were simply ignored, with more emphasis given to systems and processes. Thus, 'it was to be expected that employers, with their chief attention absorbed by questions relating to machines and methods, should neglect the greatest of all their assets ..... their employees' (Blackford and Newcomb, 1914, quoted in Delbridge and Lowe, 1997a:869). Other writers criticised the organisation of work saying that it is not possible to graft a 'high-trust' relationship onto a 'low-trust' system (Fox, 1974, 1985). Opposition to scientific management is most evident amongst the labour process writers, particularly Braverman (1974), Burawoy (1979), Friedman (1977) and Edwards (1979). Above all, they saw scientific management as not simply a system of job design, but as a means of control over alienated labour (Braverman, 1974). Friedman (1977:93) saw Taylorism as an advanced form of Direct Labour via the division of labour. The individual worker's motions are subdivided and reallocated among different workers where workers are viewed as all-purpose machines made up of so many motion units per unit of time. As time evolved, interest in scientific management waned due to its failure to reduce waste, lower costs or 'bring about an industrial utopia' (Barley and Kunda, 1992: 372). This led many advocates to modify their stance. A renewed interest in 'industrial betterment' emerged where motivation and satisfaction became important in management theory. This became known as the human relations school.

### **2.2.2 Human relations**

Human Relations writers believed that improvements in worker effectiveness could be achieved through focusing on the needs of workers, particularly by providing workers with more challenging jobs and an improved work environment. Human relations writers took account of macro level processes such as technology (e.g. the work of Elton Mayo in 1933); bureaucratisation of

management (Gouldner, 1954) and stratification and social systems (Warner and Low, 1947). Theoretically, this school of thought focused on treating the worker well and trying to construct a 'non-authoritarian environment in an authoritarian setting' (Perrow, 1984: 59). Human relations became a catch phrase for an assortment of philosophies ranging from Mayo's and Lewin's interest in work groups, Trist and Bamforth's (1951) interest in work groups and production technologies, to Maslow's (1954) theory of self-actualisation. In direct opposition to scientific management's ideals of rationalism and individualism, these micro level studies stressed influences of interpersonal ties and group norms on work and the informal social system of the workplace and its relation to the community (Simpson, 1989). This movement sought to transform the firm itself and management into a cohesive collective (through harnessing the power of work groups for management's interests). The group relations approach went beyond the early human relations work by emphasising the motivational potential for redesigned work and the effectiveness of the small work group (Appelbaum et al., 2000). Together they made a significant contribution to ideas about the organisational structures needed to channel the discretionary efforts of employees elicited by opportunities for self-actualisation (Bailey, 1993). This led to an increased focus on job design and satisfaction whereby more interesting and challenging work (through redesigned work and small work groups) would be its own reward and would lead to increased productivity.

Criticisms have been levelled at the human relations school however, and its attendant claims of improved performance through efficiency, productivity and performance. Human relations thought was seen as essentially a form of benevolent paternalism: strong on welfare but less interested in power sharing. Their writings were sometimes denounced as managerial sociology - that is, as sociology done to help management (Simpson, 1989). In a well cited summation of these criticisms, Braverman (1974) argued that the human relations school of thought was rhetoric for 'the maintenance crew for the human machinery' (1974: 87). Other critics warned that the cost of cohesive organisations was the loss of individualism and a homogenizing mediocrity, especially among white-collar employees (Mills, 1951). However, despite the criticisms it was significant in initiating interest in applying behavioural science principles to the study of organisational and worker behaviour, and ultimately examining how alienated worker behaviour could be modified and adjusted towards the achievement of goals for improved organisational effectiveness (Gunnigle, Heraty and Morley, 2002).

Related developments at this time focussed on the subjective state of workers, emphasising a pure science view. Many of the softer or qualitative approaches to understanding workers were regarded as unable to deal with issues of sampling, reliability and validity. As a result, methods that involved

quantification for the purposes of precision and generalisability began to be favoured in management writings from 1960s. Issues related to commitment, motivation, loyalty, values, meanings assigned to work, workforce militancy or cooperation, job autonomy and enrichment all became prominent in the management-performance lexicon. Studies which emerged in this wave of research included work by Blauner (1964), Goldthorpe, Lockwood, Bechhofer, and Platt, (1968) and Crozier (1964), among others. These writers looked at workers and how they adapted to their work in trying to define its meaning. One of the central themes in both Blauner's and Goldthorpe's work was structural ingredients of alienation and workers adaptation to them. Blauner (1964) examined the affect of industrialisation on workers exploring themes such as technology, division of labour and the bureaucratic organisation. He found a curvilinear relation of technology to alienation and autonomy, and proposed that relations between workers and machines were not a simple function of technological development but were somewhat influenced by worker relations with each other. Goldthorpe et al., (1968) examined a large scale manufacturing plant which employed high technology and high wages. Their findings suggested that employees experienced work mainly as alienated labour. This highlighted the problems of work systems that lacked intrinsic satisfaction and denied workers the possibility of freely developing their mental and physical energies.

### **2.2.3 Quality of working life**

This period also saw the emergence of the Quality of Working Life (QWL) approach to changes in the organisation of work and work relations. Authors such as Blauner (1964), Beynon (1973) and Goldthorpe et al. (1968) were beginning to suggest that organisations structured along classical lines as espoused by scientific management were not regarded by employees as particularly satisfying places to work. Within this, and notwithstanding oversimplification, the overarching belief was that intrinsic motivation was seen as critical to job satisfaction, and jobs were to be enriched by reintegrating maintenance tasks and providing some decision making opportunities (Herzberg, 1966). Job enrichment, for example, was established as an alternative work paradigm, the aim being to provide meaningful work for employees with some degree of control and feedback on performance (Buchanan, 1979). Job enlargement aimed to increase job 'scope' (Filley, House and Kerr, 1976), with the aim of providing not only greater work variety, but also to produce a sense of creating something and of using skills in the plural (Hales, 1987). Thus, the 'people management-performance' link retains a prominent focus within the QWL paradigm: only this time in terms of enriched job design, structure and assumed autonomy as the root to effectiveness and diminished worker alienation. However, some commentators have observed that under the aegis of QWL ideals such as job enrichment, changes in work practices have been introduced which are clearly Taylorist in their effect, if not their purpose (Braverman, 1974; Kelly, 1985). Others have identified the

potential for greater managerial control inherent in many programmes of employee participation (Braverman 1974; Ramsay, 1980) where the intention of ‘humanisation of work’ conceals the real aims of ‘rationalisation of work’ and ‘managerial control’ In their view, far from offering a humane alternative to, for example, traditional assembly line production, workers on a participative team ‘participate mainly in the intensification of their own exploitation, mobilizing their detailed firsthand knowledge of the labour process to help management speed up production and eliminate wasteful work practices’ (Milkman, 1997: 16). Many of the participatory elements espoused within the QWL movement have contributed greatly to subsequent HPWS practice and research. However, as a result, many of the ambiguities and debates surrounding QWL research have also surfaced within the HPWS research field as will be discussed later in section 2.3.

Many QWL writers drew heavily on the human relations theories previously outlined. For example, the socio-technical tradition as espoused by Trist et al, (1963) stressed the need to design both technical and social components alongside each other to optimise the two. The assumptions of human relations writers such as Maslow, Herzberg and McGregor also maintained that participation in the workplace and the ability to exercise self control over work would help satisfy needs such as self-actualisation (Watson, 1995). They argue that it is, ultimately, through these ideals that managers can gain improvements in employee work performance.

#### **2.2.4 Industrial democracy and new production methods**

However, there are some important variations in the topic of participation in the workplace. By the 1970s, concepts such as industrial democracy which emphasised workers’ rights to participate began to emerge, particularly in Europe. By the 1980s, new forms of participation were being developed which were less concerned with the concept of joint negotiation as espoused by industrial democracy writers. Instead they placed greater emphasis on employee involvement such as quality circles, team briefings and profit sharing as part of a wider set of reforms in working practices (Wilkinson, 1998). Worldwide changes during the 1970’s had called into question the viability of production methods built around scientific management principles (e.g. Fordist mass production). Consequently, a new production paradigm in the shape of flexible systems of work organisation was proposed. This new production paradigm was variously titled ‘new-Fordism’, ‘post-Fordism’ and flexible specialisation (Legge, 2005). Unlike industrial democracy of the 1970’s, now participation appeared to be relegated to forms of empowerment; negotiation downgraded to consultation; and consultation no more than shallow communication (Marchington and Parker, 1990). At the same time, other key human resource practices were also emerging as a clear managerial tool for competitive advantage (Pfeffer, 1994). Concepts such as empowerment, employee involvement,

training, rigorous selection, employee ownership and performance-related pay were now regarded as critical organisational success factors in the people-performance link. Moreover, these changes signified a move to a very different frame of reference which was increasingly unitarist and managerialist in its orientation, namely HRM (Legge, 1995; 2001; Marchington and Grugulis, 2000).

### **2.2.5 Human Resource Management**

The notion of human resource management (HRM) in its broadest sense refers to all those activities associated with the management of employment relationships (Grant and Shields, 2002). Although there are many debates over the meaning of HRM (Boxall and Purcell, 2003), for the purpose of this chapter it can be defined and understood as one approach to people management 'which seeks to achieve competitive advantage through the strategic deployment of a highly committed and capable workforce, using an integrated array of cultural, structural and personnel techniques' (Storey, 1995: 5). It is, therefore, important to our contextual understanding of the concept being investigated in this research - HPWS.

Simplistically, HRM is often explained as one of two variants that emerged in the writings of US academics in the early 1980s (Beer et al., 1984; Walton and Lawrence, 1985; Fombrun et al., 1984): (1) Soft HRM and (2) Hard HRM. Soft HRM emphasises the 'human resource' aspect of the term human resource management (Storey, 1992). Commentators suggest that the strategic orientation of HRM can be linked to the idea that it is some kind of 'developmental humanist' project (Grant and Shields, 2002; Legge, 2005). Under this approach, the importance of integrating HR policies with business objectives is acknowledged. However, rather than treating employees as any other resource, they are seen as valued and value adding resources (Beer et al, 1984; Storey, 1992; Guest, 1999) through their commitment, adaptability and high quality (of skills, performance and so on (Guest, 1987)). Soft HRM is associated with the human relations movement and has been equated with the concept of 'high commitment work systems' (Walton, 1985).

The Hard HRM variant is characterised by the integration of human resource considerations into strategic decision making to ensure maximum contribution to business performance. The emphasis in this HRM type is on the 'management' part of human resource management and reflects a utilitarian instrumentalism model (Legge, 2005). In this approach, HRM's focus is on the close integration of HR policies, systems and activities with business strategy to ensure that HRM systems being used 'drive the strategic objectives of the organisation' (Fombrun et al., 1984: 37). The organisation's human resources are treated in a similar way to any other resource. Thus, human

resources should be procured and managed in as cheap and effective a fashion as possible to ensure achievement of the organisation's 'bottom line' objectives. The 'hard model' emphasises the 'quantitative, calculative and business strategic aspects of managing the headcount resource in as rational a way as for any other economic factor' (Storey, 1987: 6). In this sense, the human resources appear passive - to be provided and deployed (Legge, 2005) - rather than as 'sources of creative energy in any direction the organisation dictates and fosters as emphasised in the soft model' (Tyson and Fell, 1986: 135).

The 'hard/soft' dichotomy is problematic on a number of levels however (Keenoy, 1999; Legge, 2005). It is not difficult to see the scientific management imprint in hard HRM, or the reminiscence of QWL writings in the soft HRM variant. However, as Keenoy (1990) suggests, at a surface level, even soft HRM can have hard outcomes in terms of job insecurity, work intensification and control. At a deeper level, Keenoy and Anthony (1992: 239) suggest that HRM is a 'rhetoric aimed at achieving employees' normative commitment to a politico-economic order, in which the values of the marketplace dominate all other moral values'. As a result of these controversies, Boxall and Purcell (2003) proclaim a preference for a broad, inclusive definition of HRM in order to 'produce a better theory and enable better practice, the academic discipline of HRM should identify and evaluate the variety of management styles that exists in contemporary workplaces' (pg. 184). One of the great controversies in contemporary HRM is whether new management techniques adopted in the 1980s have fundamentally transformed the climate of labour-management relations (e.g. Edwards and Heery, 1989; Millward and Stevens, 1986; Richardson and Wood, 1989). Guest (1999) addressed some of the critics of HRM by showing, on the basis of data from surveys of random samples of UK workers, that whether or not HRM might be construed as manipulative, it was consistently preferred by workers to circumstances in which few HR practices were present.

Perhaps because – or in spite – of the ambiguities and debates surrounding HRM previously outlined and its attractiveness as a source of competitive advantage, a series of new labels emerged: high commitment management; high involvement management; best practice HRM; best fit and so on. It is these concepts and labels that, for simplicity, are categories under the rubric HPWS, that require elaboration and more substantial critical scrutiny to aid our understanding of the people management – performance debate.

### **2.3 An examination of high performance work systems**

The discourse of people management practices – whether labelled soft HRM, high commitment management or high involvement management – is peppered with the premise that some sort of

competitive advantage can be derived from the way work, employees and the labour process is managed. It is this that lies at the heart of HPWS. This section will define and unpick the HPWS concept to ensure some deeper clarity of meaning.

### **2.3.1 Defining high performance work systems**

Agreement needs to exist on what high performance work systems represent in terms of subject matter and content. Strategic HRM is said to be devoted to understanding how human resource management practices affect organisation-wide outcomes (Combs, Liu, Hall and Ketchen, 2006; MacMillan and Schuler, 1985). Human resource practices that strategic HRM theorists consider performance enhancing are known as high-performance work systems (Huselid, 1995). Whilst, there is no single agreed upon definition of a high performance work system, existing approaches do share some common ideas (Osterman, 1994; Appelbaum et al., 2000; Wall and Wood, 2005). Most writers on the issue emphasise the sophisticated selection methods, appraisal, training, teamwork, communications, empowerment, performance related pay and employment security (Wall and Wood, 2005). Appelbaum and Batt (1994) categorise the elements of HPWS along four dimensions – management methods, work organisation, human resource management practices and industrial relations. ‘Management methods’ include employee involvement in quality improvement; ‘work organisation’ includes autonomous work teams and vertical task work; ‘human resource management practices’ includes cross training, employment security and compensation contingent on performance; and finally ‘industrial relations’ focuses on the unitary perspective that there is no conflict of interest between management and workers. Collectively, these individual practices are a bundle of mutually reinforcing, synergistic HR practices which help to facilitate employee commitment and involvement and subsequent organisational performance outcomes (MacDuffie, 1995).

HPWS, as a label, has been used to incorporate what Wood and Albanese (1995) and Walton (1985) term high commitment management. Other labels include high involvement management or work systems (Lawlor, 1992; Guthrie, Spell, and Nyamori, 2002), high investment HR systems (Lepak, Taylor, Tekleab, Marrone and Cohen, 2007), flexible work practices (Osterman, 1994), flexible production systems (MacDuffie, 1995) and the wider term, people management (Purcell, Kinnie and Hutchinson, 2003). According to Wood (1999) these are all terms used to describe the organisational form held to be the most appropriate for modern competitive conditions. Other researchers have published research in the HRM-performance area without specifically using any of the above terms (e.g. Guest, 1997, Bowen and Ostroff, 2004).



Recent practice has been to use the terms ‘high commitment management’ and ‘high performance work systems’ synonymously (Legge, 2005). However, some authors believe there is an important distinction between high commitment management (HCM) and HPWS, a distinction which mirrors the ‘hard’ and ‘soft’ HRM debates previously examined. HCM is seen to focus on job security, job design and employee development as the route to high productivity/profits and high employee commitment/satisfaction (Legge, 2005). Grant and Shields (2002) examine this concept by looking at the idealised image of the primary employee-object. With HCM, the discursive intent is to construct the employee-object as a valued and resourceful human with a link to performance through a ‘cultural/motivational’ perspective (Sparham and Sung, 2006). As a result, we would expect a preference for practices emphasising high involvement and competency-based staff development and reward (Grant and Shields, 2002). Conversely, Grant and Shields (2002) propose that HPWS is seen to focus on the performance outcome where the employee-object is constructed discursively as a costly resource. The chosen practices are most likely to include direct behavioural controls and hard, results-based approaches to performance and reward management such as incentive pay, de-emphasising job security and the use of internal labour markets (Harley, 1999). Some writers prefer the terms ‘high commitment’ or ‘high involvement’ over ‘high performance work systems’ and warn that the latter ‘can be misleading in the absence of clear empirical tests of their actual link to economic performance in a given situation’ (Pil and MacDuffie, 1996:423). These writings can also be divided into *high road* and *low road* work practices. High road work practices involve attaining high commitment whilst low road work practices involve short-term contracts, a lack of employer commitment to job security, low levels of training and low levels of human resource sophistication (Guest, 1997).

Recently, however, researchers have begun to utilise the expression ‘high performance work systems’<sup>1</sup> in an effort to broaden the focus away from commitment only, to encompass factors such as skill formation, work structuring, performance management and pay satisfaction. According to these authors (e.g. Wood, 1999; Guthrie, 2001), the work systems and employment models seen as supportive of high performance imply a mix of key practices: more rigorous selection and better training systems to increase ability levels, more comprehensive incentives (such as employee bonuses and internal career ladders) to enhance motivation and participative structures (such as self-managing teams and quality circles) that improve opportunity to contribute (Appelbaum et al., 2000). Pfeffer (1998) considered components of best practice HRM to include employment security

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<sup>1</sup> In this research, the term High Performance Work System will be used as an umbrella term encompassing terms such as HIM and HCM. It encompasses HR policies and practices together with how work is organised. Similar to the work of Marchington and Grugulis (2000), this research will take a wider definition of employee involvement beyond that examined in the US literature by incorporating the notion of employee voice (Marchington and Grugulis, 2000; Dundon et al., 2004).

and internal labour markets, selective hiring and sophisticated selection, extensive training, learning and development, employee involvement, teamworking, high compensation contingent on performance and reduction in status differentials. This research will define HPWS as a set of interrelated HR practices designed to enhance employees' skills, commitment, and productivity in such a way that employees become a source of sustainable competitive advantage. These practices include rigorous recruitment and selection procedures, performance contingent incentive compensation systems, management development and training activities linked to the needs of the business, and significant commitment to employee involvement (Becker and Huselid, 1998).

At the heart of HPWS is a form of work organisation that is seen to enhance discretion (Giles et al., 2002) which then impacts on performance. According to Appelbaum et al. (2000):

The core of a (HPWS)...is that work is organised to permit front-line workers to participate in decisions that alter organisational routines....Workers in an HPWS experience greater autonomy over their tasks and methods of work and have higher levels of communication about work matters with other workers, managers, experts.....Work organisation practices in an HPWS require front-line workers to gather information, process it and act on it (pp. 7-8).

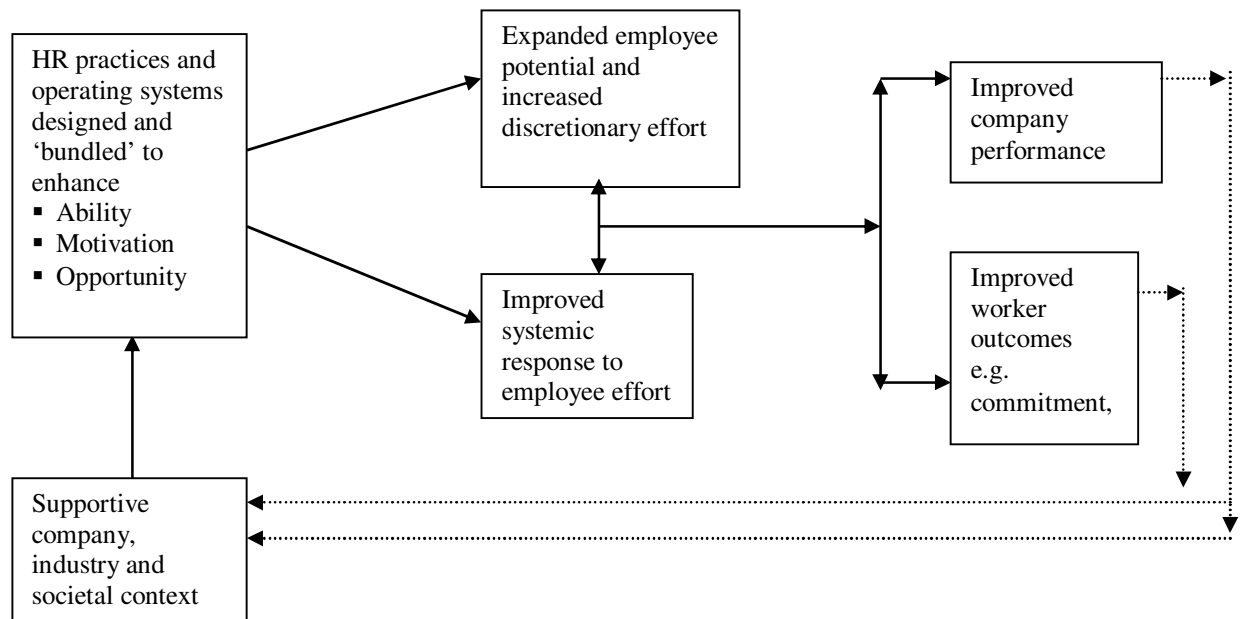
Thus, Appelbaum and other advocates (e.g. Bailey, Berg and Sandy, 2001) of HPWS argue that it is primarily through increasing employee autonomy that it yields gains in organisational performance through allowing employees to use 'their initiative, creativity, and knowledge in the interests of the organisation' (Appelbaum, 2002: 123). A map of the commonly hypothesised linkages in HPWS research is shown in Figure 2.1 below (taken from Boxall and Purcell, 2003:21). Consistent with the work of Appelbaum et al. (2000), the figure relies on the 'AMO' theory of performance. This states that performance is a function of employee ability, motivation and opportunity. Using the mathematical notation:

$$P = f(A, M, O)$$

Where people perform well when:

- they are able to do so (they *can do* the job because they possess the necessary knowledge and skills);
- they have the motivation to do so (they *will do* the job because they was to and are adequately incentivised);
- their work environment provides they necessary support and avenues for expression (for example, functioning technology and the opportunity to be heard when problems occur) (Boxall and Purcell, 2003:20)

**Figure 2.1: High Performance Work Systems: commonly hypothesised linkages**



(Boxall and Purcell, 2003:21)

Whilst significant debates exist surrounding the particular mix of high performance work practices, one of the key arguments running through the literature is that the relevant practices work much better when ‘bundled’ together (MacDuffie, 1995) or operate as a ‘system’ (Ichniowski et al., 1996). Wright and McMahan defined a HR system as ‘the pattern of planned human resource activities intended to enable an organisation to achieve its goals (1992: 298). The advocacy of bundles (or systems of HRM) is based on the argument that while individual HR practices might be beneficial in their own right, suites of practices that are mutually consistent will deliver performance outcomes greater than the sum of the outcomes of the individual practices used (Purcell, 1999: 27). The idea is that productivity is best served by the systematic interactions among the practices. Adding only one of the practices is likely ‘to have little or no effect on performance’ (Ichniowski et al., 1997: 311). The implication then is that individual HR practices will not generate competitive advantage in isolation but rather as part of a wider HPWS system which, when combined, has a positive effect on firm performance.

To date, there has been considerable evidence of a strong association between HPWS and organisational level outcomes through cumulative and synergetic effects among reinforcing bundles of HR practices (e.g. Arthur, 1992; MacDuffie, 1995; Delaney and Huselid, 1996; Ichniowski et al., 1997, Datta, Guthrie and Wright, 2005). Appendix A outlines the numerous studies conducted since 1994 that examine the impact of HPWS on firm outcomes. Many of these studies have originated

from US studies but similar results are being found elsewhere e.g. Patterson et al (1997), Guest et al., (2003) in the UK, Heffernan, Harney, Cafferkey and Dundon (2009) and Guthrie, Flood, Liu and MacCurtain (2009) in Ireland, Guthrie (2001) in New Zealand, Guerrero and Baraud-Didier (2004) in France, Boxall, Ang and Bertram in Australia and Den Hartog and Verburg (2004) in the Netherlands amongst others. A recent meta-analysis by Subramony (2009) provided further empirical evidence that HPWS bundles (defined as empowerment-, motivation-, and skills enhancing bundles in the meta analysis) had stronger relationships with business outcomes than their constituent individual HRM practices. Similarly, Combs et al. (2006) meta analysis of 92 studies found that an increase of one standard deviation in HPWS was associated with a 4.6 percent increase in return on assets, and a 4.4 percentage decrease in turnover Hence, they concluded that the HPWS impact 'on organisational performance is not only statistically significant but managerially relevant' (pg. 518). However, Wall and Wood (2005) and Paauwe (2009) caution that whilst evidence mounts to support the HPWS-performance relationship, significant methodological and theoretical challenges still exist with regard to understanding the relationship. Some of these debates and challenges will now be examined.

### **2.3.2 Debates in HPWS literature**

HPWS fundamentally argues that a system of HRM practices deliver improved performance outcomes. However, in the debate surrounding the linkage between HPWS and organisational performance it is often noted that, while substantial progress has been made, there remains significant problems or weaknesses in a number of key areas. Delery (1998) suggests that establishing that HPWS practices are linked to performance was just the first step, attention should now turn to understanding the mechanisms through which HRM practices influence effectiveness. We have already seen that arguments exist around the label 'HPWS' and what HR practices are included. Two more fundamental weaknesses cited are lack of theory and method issues in HPWS-performance research. Some authors have referred to this as the 'black box' problem, noting that the conceptual development of the mediating mechanisms through which HPWS has an impact on profitability has thus far eluded empirical testing (Purcell et al., 2003).

#### **Debate 1: Weak theoretical underpinning - The 'black box' issue**

Much of the HPWS research to date has focused on whether HPWS has positive implications for organisational performance (Arthur, 1994; MacDuffie, 1995; Huselid , 1995; Ichniowski et al., 1997), or on the conditions that appears most conducive to their diffusion (Osterman, 1994; Pil and MacDuffie, 1996). While these studies have been useful for demonstrating the potential value created through HPWS, they have revealed very little regarding the processes through which this

value is created (Wright and Gardner, 2003); in other words, how HPWS causes improvements in organisational performance. Some authors have referred to this as the 'black box' problem, noting that the conceptual development of the mediating mechanisms through which HRM has an impact on performance has not been firmly established. Boselie et al. (2005: 77) reviewed 104 research papers on the topic and found that while there were 'plenty of acknowledgements of the existence of the 'black box' and some speculation on its possible contents, few studies tried to look inside'. Hesketh and Fleetwood (2006: 678) point out that 'empirical evidence for the existence of an HRM-Performance link is inconclusive...a statistical association in, and of itself, constitutes neither a theory nor an explanation'.

At a theoretical level, the main thrust of the criticisms is that the theory is confused and, in treating HRM as a variable, HPWS researchers (particularly quantitative researchers) have not acted consistently at the level of theorising (Legge, 2005, Hesketh and Fleetwood, 2006). Boselie et al. (2005) identified the three most commonly used theories within HPWS-Performance research. The first ones focused on universalist versus contingency theory. One of the biggest debates in HPWS research has been whether HPWS universally outperform all other systems (best practice debate) or whether the optimal system is relative to the circumstances in the firm (best fit debate) (e.g. see Becker and Gerhart, 1996; Purcell, 1999). The 'best practice' versus 'best fit' debate questions whether specific bundles would vary by sector and/or business strategy (Arthur, 1994; MacDuffie, 1995; Youndt et al., 1996, Guthrie et al., 2002) or if a universalist, one-style-fits-all view exists (Pfeffer, 1994). The best practice view is consistent with institutional theory and arguments about organisational isomorphism (DiMaggio and Powell, 1983 cited in Legge, 2001). This is based on the assumption that organisations that survive do so because they identify and implement the most effective 'best' policies and practices. As a result, successful organisations get to look more and more like each other. Huselid's seminal study states that 'all else being equal, the use of high performance work practices and good internal fit should lead to positive outcomes for all types of firms' (1995: 664). This is supported by Delery and Doty (1996) who found strong support for the universalistic argument with regard to some practices. In their view only certain practices had a positive effect on performance all of the time – these were profit sharing, results oriented appraisals and employment security. In the UK, Wood and Albanese (1995) found that certain HR practices also had a universal effect.

Marchington and Grugulis (2000) proposed a major criticism of the universalist assumption of HPWS stating that the best practice definitions are drawn from industrial psychology and tend to be weak or silent on the collective issues of work organisation and employee voice. Purcell (1999) too

is skeptical of the universal claims stating it leads us ‘down a utopian cul-de-sac..... and ignores the powerful and highly significant changes in work, employment and society visible inside organisations and in the wider community’ (pg. 36). It has also been suggested that models advocating the ‘best fit’ school of HPWS overlook employees’ interests. They generally fail to recognise the need to align employee interests with the firm or company with prevailing social norms and legal requirements (Boxall, 1996). Furthermore, there is some indication that highly successful companies may not be those in which workers prefer to work (Guest, 1992), and companies focusing on a low cost strategy may also achieve high performance through low road HR policies (Guest and Conway, 1999). This confirms the existence of what Guest (1995) terms ‘black hole’ or Sissons (1993) ‘bleak house’, and thus the relevance of early developments such as Tayloristic control has more than perhaps a passing resemblance to these debates.

The second theory identified by Boslie et al. (2005) was the resource based view (RBV) of the firm proposed by Barney (1991, 1995). RBV, like contingency theory, examines HPWS at the organisational level. Using RBV, it is argued that few of the more traditional sources of sustainable competitive advantage (e.g., technology, access to financial resources) create value for an organisation in a manner that is rare, nonimitable, and nonsubstitutable. In the HPWS-Performance relationship, HR systems can contribute to sustained competitive advantage through facilitating the development of other capabilities that are firm specific, produce complex social relationships, are embedded in a firm’s history and culture and generate tacit organisational knowledge (Reed and De Fillippi, 1990; Barney, 1995; Wright and McMahan, 1992). Takeuchi et al. (2007), for example, used RBV to examine HPWS-performance effects in a survey of 76 businesses in Japan. They found that HPWS was positively related to overall firm performance by the mediating mechanisms of collective human capital and a high degree of social exchange within an organisation.

The third theory is the AMO framework discussed in section 2.3.1 which examines HPWS at the individual level. Other authors have endeavoured to theorise the HPWS-Performance relationship in terms of testing more complex theoretical arguments. Gittell, Seidner and Wimbush (2009), for example, propose relational theory where HPWS strengthen relationships among employees who perform distinct functions. They concluded that relational coordination mediated the association between these high-performance work practices and outcomes. Bowen and Ostroff (2004), in contrast, stress the importance of climate and ‘strength of the HR system’ in examining the HPWS-performance link.

## **Debate 2: Methodological criticisms**

A second criticism levelled at HPWS research is that of methods. While the goals of HPWS can be reasonably well defined, the related list of HR practices is far from clear (Guest, 1997). According to Guest (2001) this is one of the most difficult methodological issues in HPWS research. Little agreement exists among the proponents of this approach about what practices should be included within the scope of the term HPWS. Legge (2001) points out that of 15 high-commitment practices identified in the UK WERS 98 study, only seven appear in US studies. While Pfeffer (1998) stressed the importance of job security, it was not included in other lists (Delaney and Huselid, 1996; Patterson et al., 1997). This lack of a consensus among researchers is a problem; with no clear reasons as to why certain practices should be or are included. This links back to the primary problem of HPWS – its lack of theory. Inconsistencies within the lists exist. For example, within the United States where highly developed internal labour markets are a characteristic of the traditional, scientific management form of work organisation, it is common to see internal promotion systems, but some researchers within the United States now use the existence of a system of internal promotion as a characteristic of HPWS (Ashton and Sung, 2001). Capelli (1995) points to ambiguities surrounding the use of contingent pay as a HPWS practice: is it a ‘control’ or a ‘motivator’? Similar ambiguities exist when asking questions about job flexibility: does it reflect a utilitarian instrumentalist approach or a developmental humanist HRM strategy (Boselie et al., 2005). Both Boselie et al. (2005) and Guest (2001) believe this lack of consensus is created due to the fact that many researchers do not have any theoretical framework to explain why and how their conceptualisation of HPWS takes the form that it does. They identify studies by Arthur (1994) and Bailey et al. (2001) as good examples of HRM items chosen specifically to reflect the central tenets of the authors’ theoretical framework. Wall and Wood (2005) undertook a critical assessment of previous research and acknowledged that diversity in HRM dimensions exists. Nonetheless they did identify areas where commonality exists. From this study they identified the following: sophisticated selection, appraisal, training, teamwork, communication, job design, empowerment, participation, performance-related pay/promotion, harmonisation, and employment security. Guest (2001: 1097) considered the case for using a larger set of practices (including marginalised practices such as family friendly practices) despite the risk that it will decrease response rates. By having a larger set of practices it acknowledged that current theory provides a weak basis for deciding what to include and also leaves open the possibility of empirically driven theory refinement. This will not solve theoretical problems underpinning HPWS however, according to Fleetwood and Hesketh (2006).

Another methodological issue that needs to be resolved in the HPWS debate is the challenge surrounding measurement of HRM practices. Legge (2001) argues that studies of HPWS show confusion in their approach, in that individual practices such as contingent pay are measured in

different ways by different researchers. She cites the example of Huselid (1995) and Arthur (1992), where Huselid measures it using the proportion of the workforce covered by profit sharing, gain sharing and merit pay, and Arthur uses the percentage of employment costs accounted for by bonus or incentive payments. These issues need to be resolved before any confidence can be shown in the magnitude or causality of such relationships (Gerhart, 1999). Studies use a range of different proxies for the same HR practice. They can be measured by: (1) its presence (a dichotomous scale which usually employs a simple yes/no or absence/presence type measure); (2) its coverage (a continuous scale for the proportion of the workforce covered by it); (3) its intensity (a continuous scale for the degree to which an individual employee is exposed to the practice or policy). Questions surrounding the presence/absence of HRM are irrelevant because what matters is how they are used and what impact they have on the people employed. Asking questions on numbers of hours training per employee may not give the full story of training effectiveness. If the training provided is focused solely on showing the employee how to conform to strict rules and procedures (as shown in Sturdy et al's (2001) study of call centres) then this is hardly evidence of high commitment HRM (Marchington and Wilkinson, 2005). Few studies examine the intensity of HRM. Truss (2001) was one of the few who asked employees whether for example they received sufficient training to do their job. The question of policy versus practice is also an underdeveloped area. This examines the quality of the actual implementation of the practice as a necessary condition of its effectiveness.

Wright and Boswell (2002) suggest that while early HPWS research has revealed a number of interesting and provocative relationships, this emerging field can now benefit from more rigorous methodologies and techniques. The predominant methodological problems relate to the difficulty of establishing causality, measurement issues, the use of single respondents in questionnaires, the definition of performance and the time period, or lag, between HR activities and performance outcomes (Gerhart, Wright, McMahan and Snell, 2000a; Purcell and Kinnie, 2007). Whilst many of these issues will be explored in more detail in chapter 5, in order to understand the need for a refocus in HPWS research to incorporate the employee, we must consider the methodological decisions taken in existing research and the criticisms which have developed as a result.

A great deal of HPWS research has been quantitative and in order to achieve the large numbers required for statistical analysis many of the surveys rely on one respondent within the organisation to respond to questions about practices that operate throughout the organisation. This leads to questions about the reliability of the data (Guest, 2001). Huselid and Becker (2000) suggest that in many cases single respondents (i.e. senior HR executives) were the best placed to provide HR practice information across a number of jobs. This has led to a debate regarding the most valid



source of information (Wright and Gardner, 2003). Purcell (1999) questions whether one senior manager is in a position to know what practices are used throughout the organisation, especially in firms with diversified structures. Regarding the use of single respondents, Gerhart et al. (2000b) provided evidence calling into question the reliability of measures of HR practices stemming from single respondents stating that reliability may be close to zero. Wright et al. (2001) carried out studies which supported Purcell's (1999) and Gerhart et al.'s (2000b) concerns about the reliability of single rater measures of organisational HR practices. A number of researchers have attempted to overcome this shortcoming by including both HR managers and general managers in their sample (e.g. Guest, 2001; Guthrie et al., 2009).

Within this debate another issue has also emerged – the importance of recognising the distinction between HR policy and HR practice (Gerhart et al., 2000b). Huselid and Becker (2000) argued that the HPWS construct to be measured should be the HR practices actually being implemented in the firm rather than the espoused HR policies that were not necessarily carried out. HR policies represent the firms stated intention about the kinds of HR programs, processes, and techniques that should be carried out in the organisation. HR practice, on the other hand, consists of the actual programs, processes and techniques that actually get operationalised in the unit (Gerhart et al., 2000b; Huselid and Becker, 2000). Guest (1987) had already examined this issue within early HRM research. He clearly separated discourse (or espoused policy) and practice when he expressed his concern that the talk about HRM would outstrip its practice in the workplace:

There is a danger of . . . assuming that because human resource management is being talked about it is also being practiced. There is a risk that it will be 'talked' or 'written' into existence, independent of practice (1987: 505).

Wright and Nishii (2007) elaborate further by proposing a model that they believe provides a framework that allows researchers to identify some of the sub-processes through which HR practices impact on organisational performance. In this model, they differentiate between intended HR practices, actual HR practices and perceived HR practices. Wright and Nishii's model highlights the gap that can exist between espoused and enacted HR policies. Intended HR practices refers to the practices developed by policy makers and reflects the outcome of the development of an HR strategy that seeks to elicit desired employee behaviours. Actual HR practices refer to practices operationalised in organisations. There is recognition that not all intended HR practices are successfully implemented. Perceived HR practices are actual HR practices as perceived and interpreted subjectively by each employee in the focal group. The perceived HR practices then impact on employee reactions and consequently on performance. This had led Gerhart et al. (2000b) to suggest that if one seeks to assess the actual practices then using employees as the source of HR

practice data would be the more logical approach. Because employees can only respond to actual practices, any research attempting to demonstrate a relationship between HRM and firm performance stands on firmer ground when assessing the actual practices rather than the intended policies. This may imply that asking senior HR executives to indicate practices has less validity than asking employees themselves (Wright and Boswell, 2002).

However, the precise causal links remain problematic. Legge (1995, 2001) points out that it is at the level of causality that most of the attacks on the validity of research on HPWS have been concentrated. This first criticism identified centres on the prevalence of a positivist approach in previous research. Demonstrating that HPWS adds value requires a very specific or 'scientific' approach where HR practices and organisational performance are quantified using appropriate metrics and measurements, generating empirical proxies as data. Various statistical techniques are then employed on this data to identify the existence/non-existence of an association or link between HR practices and organisational performance via hypotheses testing. A central supposition for this scientific approach is causality – that is the cause of event  $y$  must be sought in terms of some prior event  $x$  (Fleetwood and Hesketh, 2010). Whilst none of the HPWS literature actually makes statements claiming causality, there are suggestions that causality is implied. For example, Huselid comments that his measures 'suggest that firms can indeed obtain substantial financial benefits from investing in the practices studied here' (1995: 667) which, without actually mentioning the word 'causation' implies the possibility of a causal claim.

Causality centres on giving information about the event(s) that preceded the phenomena. The explanation of the increase in productivity in HPWS literature simply requires information to the effect that 'teamwork was introduced' to establish efficient causality. Any further information (such as social relations in the team, control etc.) are ignored as they add no more information than is necessary to establish efficient causality (Fleetwood and Hesketh, 2008, 2010; Hesketh and Fleetwood 2006). Complex causality, in contrast, gives a causal history of a phenomenon through giving information about the underlying structures along with the human agency involved (Fleetwood and Hesketh, 2010). In establishing complex causality, the additional information is not superfluous but actually adds to the richness of the explanation and is absolutely necessary. Again returning to the productivity example, the explanation for the increase requires two kinds of information. The first is hermeneutic information which relates to the way the relevant agents interpret, understand, make sense of the workplace and as a result, initiate action. The second type of information centres on the context in which agents initiate action. In the team working example, this might include taking account of the economic or political environment of the firm, the industrial

relations system, the relationship between team members, management's commitment to team working so on. This form of explanation constitutes a richer explanation because it provides a clearer answer to the question 'why' and would be qualitative in nature (see Hesketh and Fleetwood, 2010 for a more thorough analysis). While Hesketh and Fleetwood (2010) make a call for more indepth interviews and case studies to determine the underly causal mechnisms underling the HPWS-performance relationships, Wood and Wall (2005) make a plea for 'big science' with a focus on large samples, and longitudinal research designs.

This call to examine causality using qualitative methods is driven by the fact that complex causality involves irregularity and incorporates the view that organisations operate within an open system. Empirical research presupposes a closed system where systems are characterised by event regularities, they do so by consistently suggesting that some HRM practices are statistically associated with increased performance (Hesketh and Fleetwood, 2006). Yet, event regularities and closed systems are extremely rare phenomena in the social world. Critical realists for example explain that human agents draw upon a number of social structures to transform the nature of the social world (Stones, 2005) and as a result reproduce and transform these same structures. These social structures include institutions, habits, procedures, resources and mechanisms. Due to this openness, events cannot be predicted as deductions as scientific HPWS research presupposes (Hesketh and Fleetwood, 2006). Hesketh and Fleetwood's (2006) examination of the use of scientific methods raises questions as to whether it supports the significance of some (quantifiable) variables at the expense of (unquantifiable) social practices at lower levels in the organisation. Paauwe (2004) calls for the development of theory to assess the relationship between a set of HRM policies and practices and to explore how these relate, interact, or are influenced by the 'context'. To do this, Hesketh and Fleetwood argue that we need to go beyond the scientific approach of association which is extensive in current HPWS research.

### **Debate 3: HPWS and organisational outcomes**

A central tenet of HPWS research is the measurement of the impact of HR practices and policies on organisational performance. Guest (1997) argues that it is more sensible to use the term 'outcomes' instead of performance as the former reflects better the broad range of dependent variables used in studies. By using the latter term, studies may be measuring quite different things under the positive sounding label of 'performance'. Given the importance of outcomes in HPWS research, Guest (2001) believes that the theory of outcomes is weak and therefore there is some uncertainty about what to measure. Most studies and articles adopt one or more measures with little or no justification

as to their choice (Guest, 2001) and a rather limited conceptualization based on productivity and financial performance (Legge, 2005, also see table A.1 in Appendix A).

Paauwe and Boselie (2005), who examined previous HPWS research, drew on work of Dyer and Reeves (1995) and draws a distinction between different types of outcomes in HPWS research: (1) financial outcomes (e.g. profit, sales, Tobin's Q); (2) organisational outcomes (efficiency, productivity, quality); and (3), HR-related outcomes (employee attitudes and behaviours such as commitment, job satisfaction, intention to quit). Legge (2005) also notes such outcomes can be found at different levels. Some researchers have examined the HPWS relationship at plant level (MacDuffie, 1995; Youndt et al., 1996); the business unit level (Wright and Gardner, 2003); and corporate level (Rogers and Wright, 1998). Becker and Huselid (1998) argue that the corporate level of analysis is valid as it enables the examination of shareholder wealth which is the *raison d'être* of the corporation. Financial measures of performance are also more publicly available. However, Wright et al. (2001) questions the validity of corporate level analysis by suggesting that there is a problem with variance between the business strategies across businesses within some corporations which, together with single respondent assessments makes assessing HR practices over a range of businesses within a corporation difficult. More recently, the issue of knowledge of firm performance impacting reports of HR practices has also emerged as an issue. A study by Gardner and Wright (2003) found evidence that reports of HR practices can be influenced by knowledge of the company's past performance.

Whilst this section examined organisation outcomes only, at the level of the employee, the focus is often on attitudes or reactions on the grounds that they are easier to measure than behaviour. If we do want to measure behaviour, it is tempting to use measures which offer specificity, such as labour turnover, absence or accidents (Guest, 2001). However, ignoring important individual attitudes will do little to advance the fields of HPWS research. The role of the employee in previous HPWS research will now be explored.

#### **2.4 HPWS and employee outcomes: Rebalancing the HPWS debate**

After examining previous literature and theory concerning HPWS, it is the author's contention that the bulk of previous research in this area has neglected the role of employees in the debate by taking a macro level approach focusing on firm-level outcomes only. As a result, previous theorising about people management and performance is flawed as it ignores the role of individual employees' actual experiences with these HPWS systems (Lepak, Liao, Chung and Harden, 2006). It can further be argued that even those studies that do locate employees as important agents in the HPWS chain, do

so from a particular viewpoint, often characterised as ‘win-win’ or premised on the idea of ‘mutual gains’, not too dissimilar to the unitarist ideal that if something is good for the organisation, then it must be good for employees. The basis of this view can be found, to varying degrees, in a variety of HPWS studies covering a range of industries (Kochan and Osterman, 1994; Huselid, 1995; Arthur, 1994; Delaney and Huselid, 1996; MacDuffie, 1995). For example, Appelbaum et al. (2000) suggest that HPWS affect five important worker and company outcomes: trust, intrinsic rewards, commitment, job satisfaction and stress.

Much of this ‘win-win’ literature has been questioned for its largely unitarist assumptions (Voos, 1996; Godard and Delaney, 2000; Delaney and Godard, 2001), whereby it is in the employer’s economic interest to create good jobs, because, although there may be costs in doing so, these costs are substantially exceeded by the potential benefits that accrue to both the organisation and employee. The strongest objection to the ‘win-win’ rhetoric of many HPWS writers comes from the labour process critique. Godard and Delaney (2000) believe that in adopting unitarist assumptions, proponents may have underestimated the importance of institutional design of the employment relationship as a relation of subordination under which employees and employers have often conflicting interests. Also, there has been no systematic research on whether or not the gains are shared and there is a counter-argument to suggest why they might not be (Wood, 1999; Wood and de Menezes, 1998; Ramsey et al., 2000). Clegg (1989) and Harley (1999) for example have argued that employee involvement and new found job discretion in HPWS is a myth with the end result being gradual work intensification, job insecurity and work stress.

Perhaps more cynically is the suggestion by Keegan and Boselie (2006) that many academic journals favour research findings that underpin this sort of dominant (managerialist, win win) discourse in HRM (i.e. prescriptive, positivist, managerial, functionalist and strategic). This is particularly evident having examined previous empirical research which is predominantly US-based and quantitative driven. For example, Wright and Boswell (2002) stressed the importance of considering the employee’s perspectives of HR practices within the organisation. The means by which they then sought to do this was to ask managers questions about ‘how strategic employee alignment is supported’. Somewhat unconvincingly, they then claim this allowed them to ‘consider the degree to which the actual human resources (i.e. employees) are aligned with and contributing to the organization’s strategic goals’ (pg. 265). In addition to the empirical validity of the claims made in this article, there are other epistemological and ontological concerns. Arguably, the approach adopted is premised on the assumption that employees are ‘objects’ which can be examined and modified to enable business strategy to be translated into some articulated managerial goal or

corporate strategy, without really asking employees what they think, or recognising they may actually be more active agents rather than passive objects of HPWS.

The dearth of research aimed at understanding employees' reactions to HPWS in previous HPWS research is clearly evident. It is certainly clear that during the 1990's the attention paid to the impact of HRM on organisational performance was far greater than the attention paid to the effects of HRM on employees (Bacon, 2003). This is partly due to the dominant research method, particularly in the American literature, which has emphasised large survey based studies that may have high reliability scores but somewhat, doubtful validity (Purcell, 1999). The restrictive focus of HRM on performance has thus encouraged the neglect of the effects of new working practices on employees (Godard and Delaney, 2000). As a result there is a disconnection between what managers and companies *say* they do as formal practices of HPWS and what individual employees *actually* experience (Liao, Toya, Lepak and Hong, 2009).

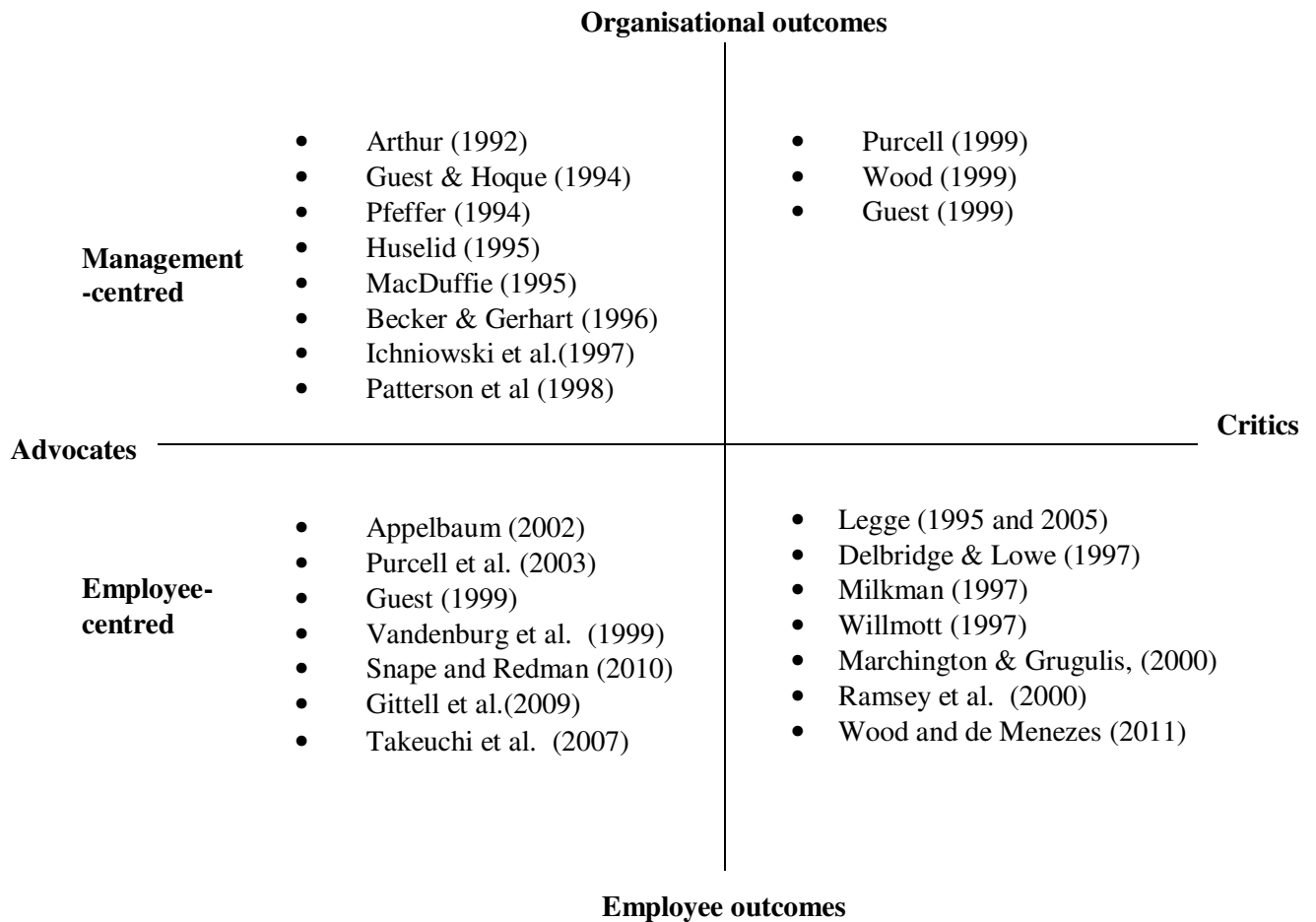
Appendix B provides a review of previous HPWS-employee outcome research with mixed findings. It shows that there are evident gains to employees from various HPWS practices: job satisfaction (Patterson et al., 1997), the intrinsic value of having a degree of job autonomy (Appelbaum et al., 2000), organisational commitment (Ashton and Sung, 2001) or 'new' skill acquisition that result from employee use of problem-solving methods, performance feedback and information sharing (Liao et al., 2009). However, there are also some serious limitations to previous research, many of which have been explained thus far in this chapter, that mean the theoretical assumptions and empirical methodologies on which these claims are founded cannot be taken as always robust, and therefore it is necessary to subject these claims to critical scrutiny (Godard and Delaney, 2000; Fleetwood and Hesketh, 2010). Because the workers' experience has not been studied as intensively as the impact on organisational performance, one cannot have the same degree of confidence in these results in all instances. Many researchers believe there is a potential for contradictory effects on workers in HPWS, instead of increased commitment occurring, there is increased control, and there is more than passing resonance with earlier managerial strategies to control worker behaviour and effort, such as Taylorism (Ramsey et al., 2000).

A further tension is that workers in HPWS workplaces report higher levels of intrinsic rewards from work and, at the same time, higher levels of stress and anxiety than do those in traditionally organised jobs (Appelbaum, 2002, Appelbaum et al., 1994). As workloads have increased along with greater responsibility for problem solving, workers are required to maintain an excessively fast pace of work, leading to increased intensity of work which results in higher levels of stress (Parker

and Slaughter, 1988). This work intensification view makes short shrift of the optimism of HPWS and argues that management intentions are not so noble, that an extension in management control is the primary motive and that there is no managerial need or desire for tapping into employees' discretionary efforts or tacit skills. The consequences of the introduction of new work structures and HPWS practices are seen to be detrimental to employees' welfare, resulting in job losses and effort intensification (Godard, 2001a, 2001b). It is claimed management's motives are the same as they have always been; all that has changed is the means by which management hopes to attain control (Geary and Dobbins, 2001). Peccei (2004) argues that the emphasis placed within HPWS literature on the achievement of business-oriented performance outcomes has obscured the importance of employee well-being in its own right.

In attempting to contextualise (and simplify) both the theoretical ambiguities and methodological controversies that have informed and shaped this thesis, Figure 2.2 delineates the various debates and points of disagreement within the extant literature concerning HRM and HPWS. This is by no means an exhaustive list and only a selected number of contributors have been used to illustrate the diversity. It is this diversity which serves to highlight the unbalanced focus in much of the previous HPWS literature.

**Figure 2.2: Advocates and Critics of HPWS**



This framework is developed using a number of dimensions. The two axes juxtapose advocates and critics of HPWS; and organisational outcomes and employee outcomes. The literature is further delineated by focusing on management-centred research and employee-centred research. In the upper left-hand quadrant we see the research examining systems of HR practices and organisational outcomes. These writers focus attention on understanding how HPWS can facilitate the accomplishment of a firm’s strategic goals. Huselid’s (1995) study on the relationship between HR practices and corporate financial performance serves as the seminal work in this area. This was soon followed by similar research conducted by MacDuffie (1995), Becker and Gerhart (1996), Ichniowski et al. (1997) and Patterson et al. (1998).

The upper right-hand quadrant is also management-centered and focusing on organisational outcomes. However, these authors criticise some of the literature from the previous quadrant. In particular, they view the universalist assumptions as being too simplistic and question the validity of a universalist relationship between HR practices and performance. Criticisms were also leveled at



the contingency approach of 'best fit' HRM. This approach was seen to be limited by the impossibility of modeling all the contingent variables and the difficulty at showing their interconnection. However, this research was still highly managerialist with a focus on gaining a 'better understanding of the synergistic combinations of HR policies (internal fit) and the link between HR systems and business and operations strategies (external fit) in dynamic contexts' (Purcell, 1999: 37).

The bottom two quadrants focus on research exploring HPWS at the individual level with particular reference to employee outcomes. The bottom right-hand quadrant reflects sympathy for the workers' viewpoint and adopts a critical perspective to HRM. This research seeks to undermine both the theoretical analysis of HRM and its application (Guest, 1999). Legge (1995, 1998) states that while management may claim the rhetoric of a new approach and a new concern for workers, the reality is harsher. Critics of HRM perceive workers as human resources to be exploited, with implications for exploitation through work intensification, downsizing and job insecurity (Ramsay et al., 2000, Milkman 1997, Delbridge, 1998; Godard, 2001b, 2004).

The bottom left-hand quadrant considers the beneficial outcomes of HPWS for employee outcomes. The literature driven by the management agenda referred to earlier does not shed light on why HRM has a positive link to performance and ignores employee outcomes. Where employees are mentioned, they are still associated with management outcomes e.g. employee turnover, employee absenteeism and commitment to their job. Both Guest (1999) and Appelbaum (2002) have sought to assess the worker's verdict of HRM. Guest (1999) reported the verdict as being positive with employees reporting a more positive psychological contract, greater satisfaction, job security and motivation as well as lower levels of work. Both proponents and critics of HPWS have fallen into the trap of treating employees as objects (idealised human resources) rather than as subjects (thinking and acting employees on whom HRM is practiced), with inadequate discussion given to the '*reactions of the workers as themselves, knowledgeable and capable agents*' (Giddens, 1982:40).

This framework illustrates a significant amount of literature focusing on management-led outcomes such as profitability and productivity. This research has already been discussed, whereby the work of Huselid (1995), Arthur (1994), Becker and Gerhart (1996) reflected a management agenda with an overall appeal to a management audience. In their research they held out the promise of HRM as a route to high performance. Where employees *are* mentioned, the outcomes are still very much management-led in terms of organisational gains (e.g. decreased turnover, absenteeism and lower opportunity costs). In overlooking the employee perspective, the current body of HPWS literature is

missing the opportunity to reveal underlying causal links and processes between employee actions and business success (Delbridge and Lowe, 1997b; Liao et al., 2009). If HPWS is to have credibility as a discrete field of academic endeavour, then the full range of participating actors must be incorporated (Delbridge and Lowe, 1997b; Paauwe, 2009), on the one hand, by incorporating work attitudes and behaviours in the study of the HPWS-performance relationship and on the other by paying serious attention to the association between HPWS and worker-related outcomes. As Vandenberg et al. (1999) note:

An organisation may have an abundance of written policies concerning HRM and top management may even believe it is practiced but these policies and beliefs are meaningless until the individual perceives them as something important to her or his organisational well-being (pg. 302).

## **2.5 Conclusion**

This chapter began by tracing the origins of high performance work systems from earlier management writings on management of work. In many ways there are some very wide differences between the approaches of Taylorism and the QWL movement or the human relations school. Yet in other ways there is a degree of overlap that is more than a passing similarity. The 1980s debate about the transformed workplace generated a focus on the need for a greater commitment on the part of workers, to be achieved by expanding their jobs and involving them in problem solving methods. Many of these methods have a pedigree in some of the models discussed above.

The chapter then defined high performance work systems and its various components and identified the main theoretical debates which have developed from previous research. Many writers on HPWS and performance have argued that effects are universal (i.e. applicable to all cases) (Pfeffer, 1998), direct (clear and tight causal links are assumed), one-way and unambiguous in respect of possible outcomes. An appraisal of research however suggests that HPWS are often poorly specified, performance is multi-dimensional, and any causal links are weaker and more context-dependent than is generally held (Gerhart et al., 2000b; Guest, 2001). Anxieties such as these mean that considerable caution is needed when interpreting conclusions from these quantitative studies (Wall and Wood, 2005). The chapter then showed that considerable attention has been paid in recent academic discourse to HPWS practices which are said to be mutually reinforcing and generate superior organisational performance (Becker and Huselid, 1998). In contrast, critics have suggested that these HPWS practices lead to work intensification, with any gains in employee discretion being marginal (Ramsey et al., 2000). This chapter considered both views of HPWS with the aim of examining the impact of HPWS on employees. A conceptual map of previous research was presented to suggest that the individual in organisations should become more prominent if a greater understanding of the

HPWS phenomenon is to be gained. The map also implies contradictions in much of the HPWS literature. It was argued that if HPWS is to have credibility as a discrete field of academic endeavour and be capable of withstanding theoretical scrutiny, then the full range of participating actors must be incorporated (Delbridge and Lowe, 1997b). From this premise it is proposed that an employee-focused theory incorporating organisational justice is a potentially lens to examine employee perceptions of HPWS. Before advancing a research framework applying organisational justice to human resource management practices, the origins of organisational justice and its key concepts must first be explored as appropriate for this research.

# THE EMERGENCE OF ORGANISATIONAL JUSTICE THEORY

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### 3.1 Introduction

In chapter 2, high performance work systems (HPWS) were defined and previous HPWS research was critiqued. It was argued that the employee in organisations should become more prominent in research if a greater understanding of the HPWS phenomenon is to be achieved. One of the core objectives of this thesis is to examine the employee as an active agent (subject) capable of interacting in a dynamic way to shape HPWS outcomes. In advancing this aim, organisational justice theory is proposed as a means of understanding the HR-performance link through employee perceptions and subsequent attitudes and behaviours to an experienced phenomenon. Organisational justice theory articulates how and why people react to a given HPWS outcome, process or interpersonal action by addressing perceptions of fairness in their employment relationship (Folger and Cropanzano, 1998). Employee perceptions about the fairness or unfairness of any HPWS practice will have a major influence on how they respond to that practice and also how they relate to the organisation overall (O'Donnell and Shields, 2002). Research has shown that justice perceptions can be classified into at least three broad families: fairness of outcomes (distributive justice), fairness of processes by which outcomes assigned (procedural justice) and interpersonal treatment (interactional justice). This chapter considers the theory and construct development of justice as a lens through which to assess HPWS. The chapter begins by briefly tracing the development of organisational justice theory from its philosophical origins. In section three, social scientific definitions of organisational justice will then be examined. This will help clarify organisational justice constructs in order to test its utility for understanding employee attitudes to human resource management. It is proposed that organisational justice theory will explain the process by which HPWS influences employee attitudes and behaviours towards HPWS and why these reactions occur, thereby addressing research questions 3 and 4. The chapter ends with a discussion of some of the key debates in justice research. Chapter 4 will examine the application of these organisational justice constructs to high performance work systems.

### 3.2 Philosophical and social scientific definitions

The concept of justice<sup>2</sup> has been prevalent in many of the great philosophical works on the nature of the good society and is ‘the origin from which the whole of Western political theory begins’ (Runciman, 1966: 254). Its importance is proposed by Rawls (1971: 3) who claims ‘justice is the first virtue of social institutions, as truth is of systems of thought’. The study of fairness and justice have been of great interest to both philosophers (e.g. Rawls, 1971) and social scientists (e.g. Deutsche, 1985) alike. Both social scientists and philosophers would agree that a ‘just’ act is one that is perceived to be good or righteous. Similarly both groups of scholars would also suggest that an act can be good without being fair (or unfair). However, divergence exists with regard to definitions of justice. Justice, in a philosophical sense, refers to the extent to which a given action, outcome or circumstance is in alignment with a certain ethical paradigm (Hosmer, 1995). Such philosophical writings are *prescriptive* or *normative* theories of justice because they attempt to specify what people *should* do by providing a standard by which individuals ought to act. For the social scientist however, an act is unjust only when observers judge it to be unfair. They see justice as a phenomenological appraisal of a given stimulus whereby an act is ‘just’ because someone thinks it is just and responds accordingly. This definition is *subjective* and socially constructed and is not based on some abstract ethical system (Folger and Cropanzano, 1998). Whilst a distinction between philosophical and social scientific views of justice<sup>3</sup> is important, a brief appraisal of the philosophical views of justice is useful in understanding some of the terminology of later organisational justice research.

#### 3.2.1 Justice as a philosophical concern

There is a widely shared belief that societies ought to be constructed in ways that reflect what is just through comparison with prevailing philosophical systems (Tyler, Boeckmann, Smith and Hou, 1997). However, there is no agreement among philosophers as to what that philosophical system should be. Western concepts of justice are derived from early Greek philosophical traditions. The work of Plato and Aristotle in particular were of enormous historical importance in philosophy. Plato’s ideas of the best organisation of a community for example still have an important place in political philosophy. The theme of Plato’s key work *The Republic* is justice (Grayling, 1995) where justice is derived from the order of society. Rather than asking what justice is in the individual, Plato proposed to ask about justice in a city (368c-369a). He had no conception of individual rights and assumes a hierarchy or order as the basis of legitimacy: ‘let us repeat that when each order –

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<sup>2</sup> In this thesis, the author treats “justice” and “fairness” as having the same meaning and sees the terms as being interchangeable.

<sup>3</sup> This research follows the social science view of justice where something is fair, not because it should be so, but because a person believes it to be (see Greenberg and Bies (1992) for a more detailed discussion).

tradesman, auxiliary, guardian - keeps to its own proper business in the commonwealth and does its own work, that is justice and what makes a just society' (Plato, the Republic, Chapter XII cited in Cross, 1964). Plato's logic suggests that democracy assumes an injustice, and thereby its distribution is 'a sort of equality to equals and unequals alike' (Foster, 1951).

Aristotle, who extended the work of Plato, was the first writer to coin the phrase *distributive justice* when considering resource allocation. His view of justice analysed what constituted fairness in the distribution of resources between individuals and proposed the primacy of merit as a criterion of fairness. For him, justice meant treating individuals in accordance with their deserts, treating equals equally and treating unequals unequally. He contrasted distributive justice with corrective justice. Distributive justice called for honour or political office or money to be apportioned in accordance with merit while corrective justice (or rectificatory justice) concerned punishment. Aristotle argued that distributive and corrective justice represents norms of equality. In the former case, the equality exists in the fact that everyone is rewarded in proportion to their merits, such that it is unjust for unequals in merit to be treated equally or equals in merit to be treated unequally. Justice for Aristotle was primarily a political concept. At the heart of this principle is 'merit', but Aristotle accepted that not all individuals define merit in the same terms and not all persons have equal merit (Cohen and Greenberg, 1982). Muller highlights that 'Plato and Aristotle would ... state the logic ...by arguing that justice consists not in giving equal rights to men naturally unequal, but in giving every man his due' (Muller, 1961: 59).

Other philosophers have been extremely influential in shaping the conceptual dynamics of organisational justice: Hobbes, Locke, Bentham, John Stewart Mill, Kant and Rawls (among others). Hobbes' theory of the social contract, founded on the hypothetical nature of the State, describes a set of Natural Laws necessary as preconditions for social order. He believed that there is no easy way that individuals can cooperate in large collectives: competition, self-interest, short-term gains, power, and inequality are inevitable and always obstruct. He called this the State of Nature which was unbearably brutal. Any government would be better than this state of nature to Hobbes, who lived through the hardship of dramatic political changes and English civil war (Hampton. 1986). The work of Hobbes and other social contract philosophers questioned Aristotle's distinction between rectificatory and distributive justice, saying 'as if it were injustice to sell dearer than we buy; or give more to a man than he merits' (Hobbes, 1965 cited in Cohen and Greenberg, 1982: 4). Whilst Aristotle's position was based on merit criteria such as birth and status, Hobbes believed that the value of things was determined by their demand.

While philosophers such as Locke, Bentham, Kant and Mills have debated the application of merit as a justice concept, it was the publication of Rawls *A Theory of Justice* (1972) that brought discussion of moral and political philosophy back into focus in the twentieth century. Rawls conception of justice is closely related to the theory of the social contract as found in the work of Locke and Kant, but with an attempt to allow individual interests greater weight in the argument (Woodall and Winstanley, 2001). His view of justice is that the good must be distributed with mutual consultation so that no people within society (or the organisation) are complete losers while others are clear winners. In an organisational setting, management must put in place a priority on long term interests of stakeholders and the survival of the organisation. Importantly, his principles of justice are to be maintained even at the loss of overall economic efficiency. Following Kant, Rawls claimed that nobody must be sacrificed in the name of the common good, or the achievement of economic advantages. That would entail the treatment of some individuals as ‘mere means’ and not ‘an end in themselves’ as Kantian ethics requires (Bonache, 2004).

Notwithstanding oversimplification of complex and debatable philosophical postures, such that Rawls’s views on justice may be countered with criticisms of infringing on peoples’ liberty, social scientists have developed the concepts of distributive and retributive justice based on some of these early philosophical debates. Aristotle and Rawls’ writings have advanced the focus of justice from one of normative definitions to phenomenological explanations (Cropanzano, Goldman and Benson, 2005). Justice as a concept is now seen to be very much subjective and socially constructed (Folger and Cropanzano, 1998). This subjective sense of what is right or wrong is the focus of the psychology of justice. In contrast to the objective principles of justice discussed above, subjective feelings about justice or injustice are not necessarily justified by reference to particular standards of authority, such as those proposed by Hobbes, Mill or Plato etc. It is concerned with understanding what people think is just or unjust, fair or unfair, and with understanding how such judgments are formulated and rationalized that may shape action and behaviour (Tyler et al., 1997). Therefore, justice as a perceptual phenomenon in the mind’s eye of employees or managers is ultimately subjective. Research concerned with the rules of underlying justice judgments has mostly focused on situational goals, rather than on philosophical or ethical orientations and frameworks (Leventhal, Karuza and Fry, 1980; Greenberg and Bies, 1992).

Studies of people’s feelings about what is just and unjust has been found to have many important social consequences and impact on people’s behaviours – both positively and negatively. Questions about justice arise particularly whenever decisions are made about the allocation of resources. Given the centrality of these outcomes for workplace relations, it is not surprising that fairness is often

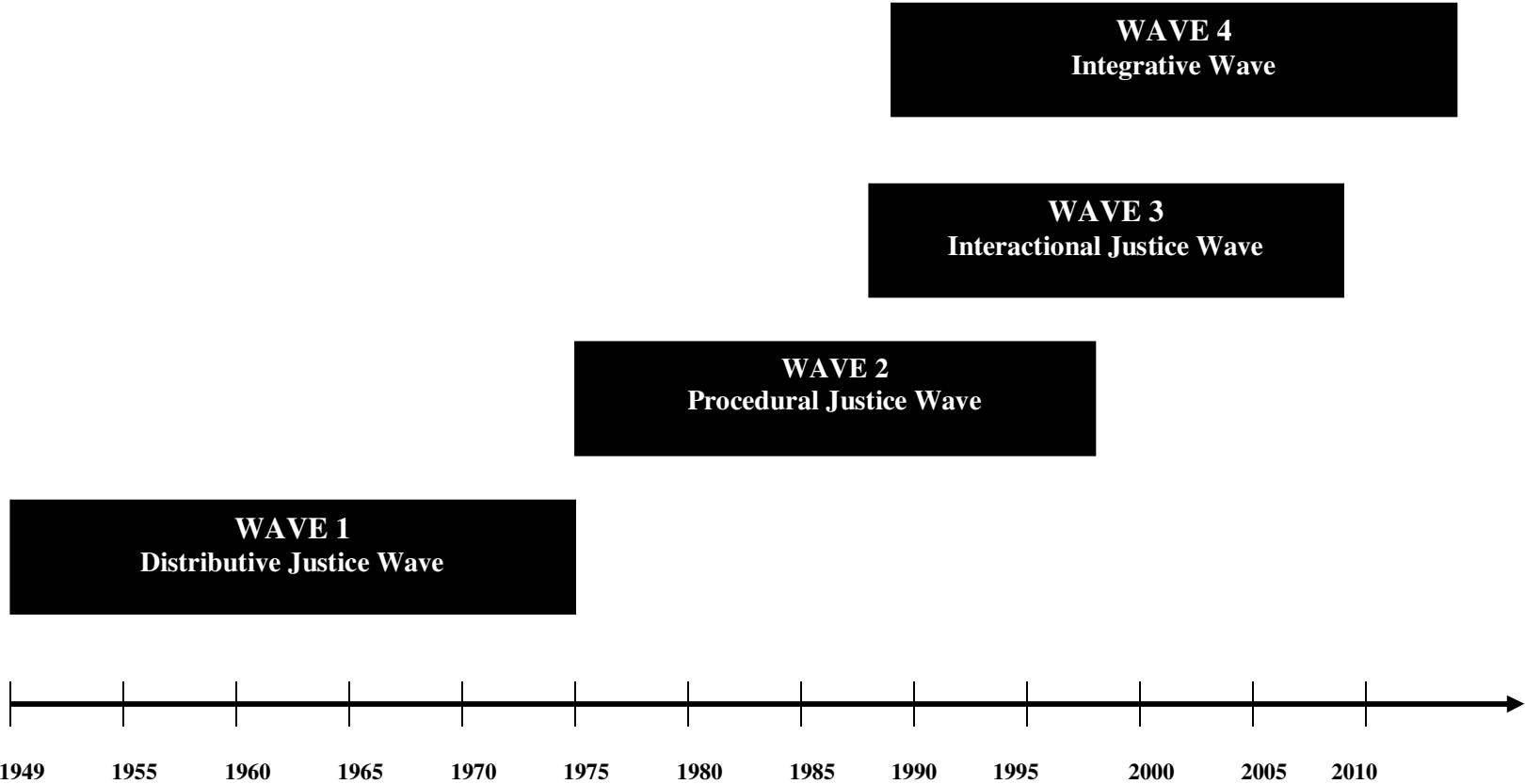
something that individuals use to define their relations with employers. It was with this in mind that Greenberg (1987) coined the term '*organisational justice*' to refer to theories of social and interpersonal fairness that may be applied to understanding behaviour in organisations. The concept of organisational justice will now be discussed.

### **3.3 Developing organisational justice constructs**

In comparison to the long history of the philosophical treatments of justice, the study of justice in a social science framework is a much more recent phenomenon. Concern for the fairness of outcomes was the first form of justice to capture the attention of organisational scientists (Greenberg, 1987). Individuals' evaluations of outcomes can be referred to as judgements of *distributive justice* (Leventhal, 1976). People's perceptions of the fairness of the procedures used to determine allocations are referred to as *procedural justice* (Thibaut and Walker, 1975). A third element to organisational justice concerns the quality of the interpersonal treatment employees receive at the hands of decision-makers – what researchers have referred to as **interactional justice** (Bies and Moag, 1986). These dimensions of organisational justice seek to examine the influence of judgements about justice and injustice on people's feelings and attitudes. They all focus on the degree to which people's feelings and attitudes are shaped by justice judgements. They also highlight the meaning of justice by identifying the criteria that people employ in judging the fairness of outcomes and procedures (Tyler et al., 1997). The history of organisational justice research has unfolded in at least four waves (see figure 3.1) according to Tyler et al. (1997). The first wave saw the rise of distributive justice research. The second wave emphasised procedural justice. The third wave was dominated by the emergence of interactional justice. Colquitt et al. (2005b) suggest a fourth wave they call the integrative wave which is a stream of research which seeks to combine aspects of various organisational justice dimensions. The following section utilises the dimensions of organisational justice using Tyler's wave metaphor as an organising framework in developing the constructs to advance the following research questions: (3) what are the processes that influence employee attitudes and behaviours towards HPWS; and (4) why do such attitudes and behaviours occur?



**Figure 3.1: The four waves of organisational justice theory and research**



Adapted from Tyler et al. (1997)

### 3.3.1 Distributive justice

From Figure 3.1 we can see that the earliest attention to matters of justice in social science research concerned the fairness in the distribution of rewards or distributive justice. Research in this area spanned the 1940s through to the 1970s and contemporary interest in the study of distributive justice can be traced back to the seminal work on relative deprivation by authors such as Merton, Stouffer and Homans (Cropanzano and Randall, 1993).

Relative deprivation theory states that individuals experience deprivation when they compare the rewards they (or their groups) receive to the rewards received by reference groups and find that they have received less than they deserve (Martin, 1981; Crosby, 1984). Greenberg (1987) classified relative deprivation (RD) theory as a reactive content theory of distributive justice, in that it focuses on how individuals respond to unfair treatment in terms of outcome distributions. Crosby (1979: 88) defines RD as referring to 'the emotion one feels when making negatively discrepant comparisons'. It highlights the view that deprivation is relative, not absolute, in that people's reactions to outcomes depend less on the absolute level of those outcomes than on how they compare to the outcomes of others against whom people judge themselves (Crosby, 1979). Runciman (1966) stresses that RD should always be understood to mean a *sense* of deprivation; a person who is 'relatively deprived' need not be 'objectively' deprived. One of the major contributions to the field of justice research was the work carried out by Stouffer, Suchman, DeVinney, Star and Williams (1949) on American soldiers. Their research suggests that subjective satisfaction is not a simple reaction to the objective quality of a person's outcome when dealing with others (Merton and Kitt, 1950). Instead people evaluate the quality of their outcomes by comparing them to the outcomes received by others.

The concept of RD was an important development in the emergence of organisational justice theory because it reflected a change in the image of the social perceiver which makes theories about the origins of social feelings and behaviours more consistent with emerging cognitive models of cognition, judgment and decision-making (Tyler, 2000). People compare their situations with other possibilities using some principles that describe what ought to be (Tyler et al., 1997). However, the theory is incomplete as it does not explain how people know whether something is deserved. Without knowing what principles people use to make comparisons, it is impossible to say whether a discrepancy will lead people to feel that an outcome is unjust. An important advance in organisational justice theory was the principles underlying people's judgements of whether their outcomes are fair or not, which relates to issues of equity in exchange relationships (Walster, Berscheid and Walster, 1973; Blau, 1964; Adams, 1965).

Adams formalised the notion of equity in human exchange relationships by focusing on the ‘causes and consequences of the absence of equity’ (1965: 276). Adams equity theory develops more fully the ideas of distributive justice proposed by Homans (1961). Like Homans (1961), Adams recognised that an exchange relationship can potentially be perceived as being unfair by the parties involved, with multiple ‘inputs’ (e.g. effort, time and investment in education, and seniority) and ‘outputs’ (e.g. pay, job status and intrinsic satisfaction). Adams (1965) posits that people compare their own input-output ratio to that of another person. Therefore, individuals base their evaluation of distributive justice not only on what they receive but on what they receive *relative* to some standard or referent. Blau (1964: 93) discussed exchange relationships by distinguishing between two types of exchanges: ‘economic exchanges (which are contractual in nature and stipulate in advance the exact quantities to be exchanged) and social exchanges (favours that create diffuse future obligations, not precisely specified ones and the matter of the return cannot be bargained about but must be left to the discretion of the one who makes it)’.

However, a number of problems surround issues of equity as applied to distributive justice. Firstly, how inputs and outcomes are defined is subjective and often controversial. In particular, people involved in social exchanges may not agree in their judgments about what constitutes a contribution as inputs are multidimensional (Leventhal, 1976). People may also disagree about how much of a contribution each person is making. More importantly, people tend to exaggerate their personal contributions to collective efforts, leading to inevitable and widespread conflicts (Lerner, Somers, Reid, Chiriboga, and Tierney, 1991). The chief criticism of equity theory is that it employs a one-dimensional concept of distributive justice. Equity perceptions assume that an individual judges the fairness of his/her own or others rewards solely in terms of a contribution/merit principle of distributive justice, as first suggested by Aristotle. Therefore, it is a theory which assumes that the universal value underlying systems of distributive justice is that people believe that outcomes should be distributed among individuals in proportion to their inputs or contributions. Various other social psychological theorists (Deutsch, 1974, Leventhal, 1976) have indicated that equity is one of many values that underlie systems of distributive justice.

The conceptualisations above of equity and relative deprivation have focused primarily on people’s reactions to perceived inequity thus ignoring the possible role of other standards of justice that influence people’s perceptions of distributive fairness. Consequently, a number of theorists recognised the need for a multidimensional concept of distributive fairness (e.g. Deutsch, 1985; Leventhal, 1976) from the perspective of the individual making the allocation (Leventhal, 1976). This shifted the focus to decision making rules of allocators in distributing resources. Some

researchers argued that the equity norm was one of a few allocation standards that may be followed and its use was not always appropriate (Leventhal, 1976, 1980). Sampson (1975) points out that it is incorrect to think of the equity principle as the only solution to the distributive problem and points to situational and cultural as well as historical variability in the use of different justice principles. Equality could be described as the most basic formal principle of justice as it ensures consistent treatment across persons (Frankena, 1962; Cohen and Greenberg, 1982). For this thesis, distributive justice is defined as the fairness of the outcomes received as a result of an allocation decision.

### **3.3.2 Focus on procedural justice**

The second primary category of organisational justice is procedural justice, which is defined as an individuals' perception of the procedural components of the social system that regulate the allocative process (Leventhal, 1976). In the previous discussion of distributive justice, we focused on outcomes and frames of reference used for the purposes of evaluating the fairness of outcomes. However, the process and procedures through which these outcomes are determined can also impact on justice perceptions (Greenberg and Folger, 1983). Often the term connotes structural features of the decision-making process, such as the amount of employee voice (Folger and Lewis, 1993), the appropriateness of evaluative criteria (Greenberg, 1986) and the accuracy of the information used to render a decision (Greenberg, 1987). The pioneering work of Thibaut and Walker (1975) on procedural preference in a legal setting is credited with introducing the procedural justice construct, anchored on the conceptual understanding as to whether or not a procedure allowed people some control over the decision-making process. They advanced two criteria for procedural justice: *process control* (e.g. the ability to voice ones views and arguments during a procedure) and *decision control* (e.g. the ability to influence the actual outcome itself). In the legal setting, decision control (referred to as 'choice') refers to the individual's ability to have a say in the determination of an outcome during the decision state of the dispute resolution process. Process control refers to individual's ability to control the nature of evidence presented on their behalf in the process stage of the dispute resolution process. Thibaut and Walker (1975) contend that procedures that vest process control in those affected by the outcome of the procedure are viewed as more fair than are procedures that vest process control in the decision maker. Process control was identified as an important determinant in procedural justice.

Thibaut and Walker's (1975) work on procedural fairness has been criticised in terms of its focus on the 'outcomes' of fairness. It has since been proven that procedural fairness on its own is actually more important than the outcome (Lind and Tyler, 1988). In the pioneering research by Folger and colleagues (e.g., Folger, 1977; Folger, Rosenfield, Grove, and Corkran, 1979), the focus shifted

from the concept of process control toward investigating whether or not people have an opportunity to voice their opinion in the decision-making process (Thibaut and Walker had focused on dispute resolution procedures only). Folger (1977) focused on how procedural differences in opportunities for voice influence people's reactions to their experiences. The concept of 'voice' can refer to any manner of communicating with a decision maker (e.g. conveying opinions) and was borrowed from Hirschman (1970) who defined it as 'the political process, par excellence' (pg.16). As an end in itself, being given an opportunity to express one's own opinion is shown to be an important mediator (e.g. reflecting a certain amount of esteem that the other person implicitly acknowledges; obtaining access to rights that, if denied, would indicate being held in low esteem). It suggests that the opportunity to speak may have value in and of itself, even if its influence on the final decision outcome is minimal (Tyler, 1987). This 'voice effect' has been observed even when people have been told that their voice can have no influence on the decision since it has already been made (Lind, Kanfer, and Earley, 1990).

Leventhal (1980) developed this line of inquiry by applying procedural justice concepts to non-legal settings. In this, he found that procedural justice involves more than control issues and was also affected by other formal characteristics of procedures as well as by nuances of interpersonal behaviour (Lind and Tyler, 1988). The paradigm proposed by Leventhal for assessing perceptions of procedural fairness has two steps. He distinguishes between *structural components* of a procedure and the *procedural justice rules* that are used to evaluate whether a procedure is fair. A procedural rule was defined as 'an individual's belief that allocative procedures which satisfy certain criteria are fair and appropriate' (Leventhal, 1980: 30). If the rules were upheld, the procedure was just (Leventhal, 1980). For the structural components, a person may cognitise a number of regulatory features in a particular context (e.g. pay raise, promotion). Leventhal's framework distinguishes six justice rules for procedural fairness (see Table 3.1 for a brief summary).

**Table 3.1: Procedural justice rules**

<b>Justice rule</b>	<b>Operational rule descriptor</b>
<b>1. The Consistency Rule</b>	This rule dictates that allocative procedures must be applied consistently across persons and time. The rule of consistency can be applied to any of the structural components. Leventhal gives the example of a situation where, when gathering information about job applicants, some are given more difficult aptitude tests than others
<b>2. The Bias Suppression Rule</b>	Decision makers must be neutral and avoid self interest of ideological preconceptions
<b>3. The Accuracy Rule</b>	This rule dictates that it is necessary to base the allocative process on as much good information and informed opinion as possible. Information must be gathered and processed with minimum error. This rule is also important with regard to safeguards that deter people from violating fair procedures. This highlights issues of accountability, monitoring (through record keeping for example) and sanctions
<b>4. The Correctability Rule</b>	This dictates that opportunities must exist to modify or reverse decisions made e.g. appeal procedures exist for correcting bad outcomes. Leventhal claims that the perceived level of fairness will be increased by the presence of appeal procedures that allow for review and modification of decisions at various stages of the allocative process
<b>5. The Representation Rule</b>	This rule dictates that all subgroups in the population affected by the decision are heard from and their basic concerns and values must be considered during the allocation process. For example, decision making bodies or committees should include representatives of important subgroups. The application of this rule brings up issues of power sharing and participatory decision making. Research has shown that employees attribute greater fairness to allocative procedures where there is genuine participatory decision making and frequent consultation with management
<b>6. The Ethicality Rule</b>	This predicts that the procedures uphold personal standards of ethics and morality of the individual. Leventhal (1980) provides

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the example of procedures that involve bribery are seen as unfair when related to a larger intrapsychic system of moral and ethical values and standards

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Adapted from Leventhal (1980)

According to Leventhal (1980), individuals apply these procedural rules selectively, and follow different rules at different times. Thus, in some situations one procedural rule might be seen to be more relevant than another, say the correctability rule over the conspiracy rule. As with the notion of voice, research has offered support for many of these procedural justice principles (Greenberg, 1986). Research supports Leventhal's suggestion that procedural justice judgements are multifaceted (Fry and Cheney, 1981). It was also found that when different procedural criteria are compared, the control judgements central to Thibaut and Walker's theory are not the most important (Tyler and Smith, 1998). With above considerations in mind, for this thesis procedural justice is defined as the fairness of the procedures used to make allocation decisions.

So far the literature has maintained that individuals base their justice judgements on the outcomes they have been granted (distributive justice) and the procedures they experience (procedural justice). However it has been suggested that when people make fairness evaluations they appear to be sensitive to two distinct 'focal determinants' (Greenberg, 1993): *structural determinants* (those dealing with the environmental context within which interaction occurs) and *social determinants* (those dealing with the treatment of individuals). Because *social aspects of procedures* are also important to justice theory (Bies, 1987; Bies and Moag, 1986; Greenberg, 1993), informal sources of the fairness that employees encounter needs to be explored (Blader and Tyler, 2003). The following section deals with the third wave of organisational justice, termed interactional justice.

### **3.3.3 Emergence of interactional justice**

Bies and Moag (1986) suggested that any allocation decision is really a sequence of three events: (1) the following of a procedure; (2) the interaction between allocator and allocation recipient(s); and (3) the allocation of the outcome. They further suggested that certain principles should be followed during the interaction phase, in order to promote perceptions of fairness – these were the principles of social sensitivity (or interpersonal treatment) and adequate explanations (informational justice). Mikula et al. (1990) suggest that the quality of interpersonal treatment people receive in interactions and encounters with others, are regarded as important concerns of people's justice judgements. Colquitt et al. (2001) have supported the claim that honesty and conduct fulfilling the standards of

respect and politeness generally increases interpersonal justice perceptions. Greenberg (1994), in a field experiment, had company officials explain a pending company-wide smoking ban to workers in a manner that demonstrated either high or low levels of sensitivity to the nature of the disruption they were likely to face. He found that employees were more accepting of the ban, believing it to be fairer, when higher levels of sensitivity were shown. It was also found to impact retaliation behaviours of employees in response to a perceived unfair outcome. In another study, Greenberg (1993) studied theft reactions following from underpayment. Although all underpaid people stole, those who were treated in a disrespectful manner stole objects that were of no value to themselves but were of value to their employers.

Bies and Shapiro (1988) were among the first to distinguish the role of structural justice (i.e., voice) from that of informational justice (i.e. providing mitigating justifications). With informational justice, it was believed that individuals appear more tolerant of an unfavourable outcome if they receive an adequate justification for it (Bies and Shapiro, 1988; Shapiro, 1991). Tyler and Bies (1990) called ‘providing an account for (or explanation for) the decision’ an aspect of making sure that the formal decision-making procedure has been enacted properly. Informational justice involves social accounts – providing an explanation of the procedures used to make decisions (Bies and Shapiro, 1988) and research has identified a number of antecedents of justice perceptions e.g. clarity, adequacy and sincerity of communications regarding a decision. Much of this research has measured *explanation provision*, defined as the extent to which an explanation is given for a decision (Shaw, Wild and Colquitt, 2003). Other research has measured *explanation adequacy*, which is defined as the extent to which provided explanations are clear, reasonable, and detailed. The medium through which information is conveyed has also been found to contribute to reactions to unfair situations. Shapiro, Buttner and Barry (1994) compared the perceived adequacy of accounts presented in face-to-face verbal interaction and in written notes. They found that the added richness of face-to-face verbal interaction enhanced perceptions of the adequacy of messages compared to those in written form.

In the late 1990s, debate arose as to whether interactional justice was a distinct justice construct made up of interpersonal and informational justice. Some researchers returned to the basic distinction between fairness of process and fairness of outcome and suggested that interactional justice is really a subcomponent of procedural justice which has been labelled social aspects of procedural justice (Cropanzano and Greenberg, 1997). For example, Greenberg (1993) used the term information justice to describe the social aspects of procedural justice and interpersonal justice to describe the social aspects of distributive justice. Other researchers such as Bies and Moag (1986)



however treated them as separate justice constructs from distributive and procedural justice. Colquitt (2001) measurement model results support their argument. His findings suggest that interactional justice is a distinct justice component which should be further broken down into its interpersonal and informational justice components, as they had differential effects. In this thesis, interactional justice is defined as the interpersonal treatment received at the hands of decisions makers with a focus on social sensitivity and informational justification.

### **3.4 Integrating the theories of organisational justice**

Gilliland and Chan (2001) claim that there is no organisational justice theory. Instead, there are a collection of constructs that are discussed under the heading of organisational justice. These constructs (distributive justice, procedural justice, interpersonal sensitivity and informational justice) have been the primary focus of researchers studying organisational justice. This is apparent from the literature discussed in the previous sections of this chapter. To overcome this problem, some researchers have attempted to develop a number of frameworks that integrate related constructs into a broader theoretical overview of organisational justice. This represents the fourth wave of organisational justice research. Greenberg (1987) proposed a taxonomy of justice, for example, which distinguished proactive and reactive approaches to studying justice and content versus process approaches. Others have attempted to develop a theory of organisational justice. Gilliland and Chan (2001) argue that a good theory of organisational justice should explain both *why* people are concerned about justice and *how* people react to just or unjust situations, referred to by Cropanzano, Byrne, Bobocel and Rupp (2001) as ‘content theories’, briefly outlined next.

#### **3.4.1 Process theories: the ‘how’ perspective of theory development**

This category of organisational justice theory focuses on how people make fairness judgements. Cropanzano et al (2001) classify process theories on a control-automatic continuum. They acknowledge that human judgements range from those that carefully and consciously evaluate all available information in order to make a deliberate and effortful judgment (a *controlled* or *systematic* process), to those who rely on information that is readily available for making quick and efficient judgments (an *automatic* process). The three major process theories fall at various points on this continuum: *equity theory*, *fairness theory*, and *fairness heuristic theory*. Equity theory proposes that conscious and careful evaluation of one’s self determines fairness judgments (controlled process) (Colquitt et al., 2001). Equity theory has already been explored earlier in this chapter.

Folger, in revising a related theoretical construct (referent cognitions theory), proposes *fairness theory*, which maintains that social injustice occurs when an individual is able to hold another

accountable for a situation in which their well-being (either material or psychological) has been threatened (Folger and Cropanzano, 1998, 2001). Fairness Theory integrates equity theory, relative deprivation and Leventhal's (1980) six justice rules along with relational aspects of justice (Chan, 2000). In particular, the theory argues that individuals assign blame by comparing what happened to what might have been (Folger and Cropanzano, 1998, 2001). Under the umbrella of 'fairness theory' three counterfactuals are often contrasted: 'would', 'could' and 'should'. These three necessary processes must all occur before a situation can be interpreted as unjust. It should be noted however, that little empirical testing has been conducted on the various elements of the 'would-could-should' counter balance. Skarlicki and Folger's (1997) study found results that were in support of fairness theory. The study indicated that retaliation was strongest when there was a three-way interaction among distributive, procedural and interactional justice, and all three components of justice were low. Shaw et al. (2003) carried out research on fairness theory and results suggest that it had some utility as an integrative theory of reactions to decision events.

In addition, *fairness heuristic theory* has been explicitly designed to provide a deeper understanding of procedural and distributive judgement issues by integrating the two research domains. By analysing both procedural and distributive constructs together it was thought to yield previously unidentified and unexplored explanations of established research findings (Van de Bos and Prooijen, 2001). Fairness heuristic theory argues that individuals are often in situations where they must cede to authority, and ceding authority to another person provides an opportunity to be exploited. This situation puts individuals in what Lind (2001) referred to as the fundamental social dilemma. That is, contributing personal resources to a social entity can help facilitate one's goals, obtain better goals and secure one's social identity, but (due to the cessation to authority that joining a social entity entails) it simultaneously puts a person at risk of exploitation, rejection, and a loss of identity (Cropanzano et al., 2001; Lind 2001). These identity dilemmas are becoming increasingly important given the current trend toward team-based and matrixed organisational forms. It seems more likely that intraorganisational identity conflicts will become more common. The other source of concern is that by allowing one's own outcomes to depend on the actions and choices of other, people run the risk that others will take more than they give. If one chooses to behave cooperatively one would like some guarantee (or at least some expectation) that other will not exploit that cooperative behaviour (Lind, 2001). As a result individuals are often uncertain about their relationships with authority. This uncertainty leads to questions as to whether authority can be trusted, if the authority will treat the person as a legitimate member of the organisation or work group. The information required to make such decisions or evaluations is often unavailable or incomplete (Van den Bos et al., 1997; 2001). As a result, people have to rely on heuristics or cognitive shortcuts to guide their subsequent

behaviours. They use impressions of fair treatment as a heuristic device. These impressions are used as a guide to regulate a person's investment and involvement in various relationships to match the level of fairness that they experience.

The process theories above provided key insights into how individuals formulate justice judgements. These models were cognitive as they dealt with the processing of fairness related information. However, Campbell & Pritchard (1976) believe they provide an incomplete view of human behaviour as they do not examine why people engage in goal-oriented behaviour in the first place (cited in Cropanzano et al., 2001). Historically, organisational justice researchers have provided two answers to the 'why' question. Individuals concern themselves with justice because (a) it is in their economic best interest (instrumental model) and (b) it affirms their identity within valued groups (relational model). These have been integrated into content models of organisational justice.

### **3.4.2 Content theories: the 'why' perspective of organisational justice theory development**

Content models of organisational justice explain the motives for why workers are concerned with organisational justice. Instrumental, relational and moral explanations have been proposed. All three models share a common form: justice matters to the extent that it serves some important psychological need (Cropanzano et al., 2001).

The *instrumental model* (or self interest model) emphasises economic concerns as the primary motive in explaining organisational justice. People are motivated to seek control and controlling procedures can be seen to maximise the favourability of outcomes. Therefore, the opportunity to exercise voice over procedures has been explained as enhancing perceptions of procedural justice because it may lead to equitable outcomes (as suggested by Thibaut and Walker, 1978) or because it enhances control over desired outcomes (Brett, 1986). The model extends this assumption by hypothesizing that people will not always maintain complete control over their outcomes when interacting with others. When people join and remain in groups they come to recognise that other people's outcomes must sometimes be accepted and their own desires must sometimes be delayed. Greenberg (1986) found that people believe that the outcomes resulting from unfair procedures are themselves unfair, but only when those outcomes are trivial; more beneficial outcomes were believed to be fair regardless of the fairness of the procedures. In essence, the model views procedures as mechanisms for making difficult decisions in ways that permit the individual to continue to forego pure self-interest in the interest of long-term gain through social intercourse (Lind and Tyler, 1988). According to the instrumental model, individuals are concerned about fairness

because it is a control mechanism to ensure predictability and favourability of their (long-term) outcomes (Tyler, 1987) i.e. when they enhance a person's economic self-interest.

In contrast, the *relational model* (formerly called the group value model) offers a different explanation for why people care about justice. Its basic assumption is that group membership is a powerful aspect of social life and people are strongly affected by identification within groups. Individuals care about fairness because fair treatment indicates status and worth within a group. Process control can enhance procedural justice not just because it is believed to have an impact on decisions, but because it has 'value-expressive' elements (Tyler, 1987). This idea forms the basis for the group value model, which stipulates that people value long-term relationships with groups because group membership is a means for obtaining social status and self-esteem. It suggests that people are more concerned with how they are treated by authorities than with the favourability of their outcomes (Tyler and Lind, 1992).

The relational and instrumental theories differ in terms of whether procedural justice and distributive justice judgments are inter-related. For example, the instrumental model asserts that perceptions of distributive justice influence perceptions of procedural justice, while the group value model does not. The role of trust is differently emphasised by each of the theories. Trust is a central explanatory construct in the relational model, for example, but not in the instrumental model. However, they are both similar in that both perspectives are driven by self-interest but with an emphasis on different types of outcomes. The instrumental model emphasises economic concerns and the relational model emphasises social concerns. Table 3.2 illustrates the key justice components and relevant theories

**Table 3.2: Fairness Theory and its Component Justice Concepts and Theories**

<b>Justice dimension</b>	<b>Theories</b>
<b>Distributive Justice</b>	Equity Theory (Adams, 1963, 1965)
	Relative Deprivation Theory (Crosby, 1984; Martin, 1981)
	Justice Judgment Model (Leventhal (1976; 1980)
<b>Procedural Justice</b>	Process control (Thibaut & Walker, 1975) or voice (Folger, 1977)
	Six justice rules (Leventhal, 1980)
<b>Interactional Justice</b>	Explanations (Bies & Shapiro, 1988; Shapiro, 1991; Shapiro, Buttner & Barry, 1994)
	Interpersonal sensitivity (Greenberg, 1993)
<b>Content theories of organisational justice</b>	Instrumental model (Thibaut & Walker, 1975)
	Group-Value Model (Lind & Tyler, 1988)
	Relational Model of Authority in Groups (Tyler & Lind, 1992)
<b>Process theories of organisational justice</b>	Fairness Theory (Folger & Cropanzano, 1998)
	Fairness Heuristics Theory (Lind, 2001; Van de Bos et al., 1997)

Adapted from Chan, M. (2000: 71) based on information from Folger and Cropanzano (1998) and Cropanzano et al (2001).

The past twenty years have seen the development of a number of theoretical ideas that promise to shed new light on existing findings in the organisational justice literature through comprehensive theories of organisational justice (Gilliland and Chan, 2001; Greenberg, 1990). This section highlighted a number of key theories developed. These were categorised as process and content theories of organisational justice. The conceptual integration of the justice constructs have advanced a theory (or rather a number of theories) of organisational justice, which has led to ‘some orphaning and abandonment of the penultimate constructs that led to the integration’ (Greenberg, 1990: 424). This can lead to confusion regarding the status of the discarded conceptions although Greenberg (1990) believes conceptual integration will minimise confusion in the long run.

### **3.5 Debates in justice research**

As the previous section shows, there has been a proliferation of studies on organisational justice in recent years focusing on differing theoretical perspectives. This has raised concern that justice scholars may be ‘losing the forest for the trees’ (Colquitt et al., 2001: 427). A number of debates can be identified within the justice literature including construct discrimination and problems of measurement. Each of these concerns will now be examined.

#### **3.5.1 Distinctiveness of justice dimensions**

The first issue surrounds the distinctiveness of the justice dimensions. As previously mentioned, some researchers have returned to the basic distinction between fairness of process and fairness of outcome (Folger and Cropanzano, 1998), whilst others have made no effort to separate procedural and distributive justice (Martocchio and Judge, 1995). The construct discrimination concern applies to an even greater degree to procedural and interactional justice, which has a bearing on the development of organisational justice as a lens through which to assess HPWS.

Perhaps the oldest debate in the justice literature concerns the distinction between procedural and distributive justice. Greenberg (1990) believes that one of the most basic tasks faced by justice researchers is establishing that the distinction between distributive justice and procedural justice is more than a theoretical convenience but a real one from the perspective of workers who are likely to encounter a phenomenon, such as HR or HPWS practices. Some studies have revealed high correlations between the two justice dimensions, suggesting that they may not be distinct (Folger, 1987) whilst other studies have determined that questionnaire measures of procedural justice and distributive justice are statistically independent of each other (Alexander and Ruderman, 1987; Tyler and Caine, 1981). Greenberg (1990) contends that it is important to determine whether employees are intuitively aware of the distinction. He examined this through examining the different consequences that procedural and distributive justice appeared to have: procedural justice was linked to system satisfaction whereas distributive justice was linked to outcome satisfaction. Sweeney and McFarlin (1993) dubbed these different affects *the two-factor model*. This was presented as a model to explain the relationship between distributive and procedural justice dimensions and outcomes. Although procedures and outcomes are both important determinants of justice, they were found to affect different factors. Procedural justice predicts more system-referenced outcomes (e.g. organisational commitment) and distributive justice predicted more person referenced outcomes (e.g. pay satisfaction).

The two-factor conceptualization of organisational justice gained currency for its greater degree of specification utility (Greenberg, 1990). Sweeney and McFarlin (1993) compared four different models evaluating the relationship between distributive and procedural justice: in addition to examining the two-factor model, they looked at an additive model, a procedural primacy model, and a distributive halo model. Their data supported the two-factor model. Based on their reading of the relevant literature where research participants were asked to describe fair and unfair events in their lives, van den Bos, Lind, Vermunt, and Wilke (1997) concluded that people themselves do make a distinction between procedural and distributive justice. Distributive justice is likely to exert greater influence on more specific, person referenced outcomes such as satisfaction with a pay rise or performance evaluation. In contrast, procedural justice is likely to exert greater influence on more general evaluations of systems and authorities (Greenberg, 1990). Despite the above evidence however, some researchers (e.g., Cropanzano and Ambrose, 2001) believe that a monistic perspective is the more defensible and informative approach. Their monistic perspective notes that procedural evaluations are based in part on outcomes attained and that the same event can be seen as a process in one context and an outcome in another. They proposed distinguishing justice effects (e.g., economic vs. socio-emotional) rather than distinguishing justice types (e.g., distributive justice and procedural justice). Ambrose and Arnaud (2005) argue that although procedural and distributive justice are conceptually distinct and have differential effects, they are interdependent. Building upon this, the authors suggest that there is much to be gained from research looking at overall fairness, rather than focussing on differences between justice types.

The second construct discrimination debate centres on interactional justice and procedural justice. After the introduction of interactional justice, some researchers (e.g. Tyler and Bies, 1990) argued that, as it produces the same type of perceptual outcomes, it should be considered a facet of procedural justice rather than as a separate dimension. As a result, some researchers have considered it a subset of procedural justice (e.g. Moorman, 1991; Tyler and Bies, 1990). Others have treated interactional justice as a separate third type of justice (e.g. Aquino, 1995; Bies and Shapiro, 1987). Still others have used separate measures of procedural and interactional justice but have combined them because of high intercorrelations (e.g. Skarlicki and Latham, 1997). While Cropanzano and Greenberg (1997) note that it is difficult to distinguish interactional justice from structural procedural justice as both could be seen as part of the process by which an allocation decision is made, calls have been made to explore possible distinctiveness (Bies, 2001, Colquitt, 2001). Bies (2001) argues that although peoples' perceptions of fairness of decision procedures and the fairness of interpersonal treatment are interrelated, people can and do make distinctions. Blader and Tyler (2003) advocate their separation because they represent different conceptual clusters of concerns, are

empirically distinguishable, and have different patterns on various outcome measures. Logically, if the two variables predict different criteria, then they should be viewed as separate constructs (Cronbach and Meehl, 1955), even if they are empirically correlated (McCormack, 1956). Part of the confusion in relating interactional justice and procedural justice appears to be describing how they differ from each other. Interactional justice focuses on both 'issues of treatment' and on 'supervisory roles'. As such, issue-treatment is conceptually analogous to informal quality of treatments experienced, while traditional procedural justice is conceptually similar to formal or structured supervisory decision making. Drawing on social exchange theory, Masterson et al. (2000) reasoned that individuals in organisations were involved in two types of exchange relationships: exchanges with their immediate supervisors and exchanges with the larger organisation. Interactional justice is expected to predict reactions to decision making agents (citizenship behaviours directed at supervisor) and procedural justice was used to decide how to react to decision making systems (citizenship behaviours directed at the organisation and organisational commitment). Greenberg (1993) has also suggested that interactional justice consisted of two distinct types of treatment: treatment of people (interpersonal justice) and explanations provided to people (informational justice). Thus, while the jury still seems to be out as to whether there is both a conceptual and empirical distinction, this thesis picks up the call to explore procedural and interpersonal distinctiveness, which can help refine and add richness to what and why workers experience justice (Colquitt, 2001). According to Bies (2005), research that measures all four constructs of justice has the potential better understand the dynamics of informational and interpersonal justice. It also gives scope to re-examine work where procedural and interactional justice dimensions have been combined.

### **3.5.2 Measurement**

Complicating debates over the dimensionality of organisational justice has been inconsistent and poor measurement. It is clear that the structure of justice has implications for how the construct is measured. Research by Colquitt (2001) has led to an acceptance that justice can be defined by four dimensions, however measurement problems centre on three issues: (1) inconsistency of measurement scales; (2) type of research undertaken and (3) level of analysis undertaken. This theme will be examined further in chapter 5 when discussing the research strategy chosen and issues to consider during construct operationalisation. Nonetheless, it is important to briefly examine some of the key methodological debates which have arisen from previous research.



### *Inconsistency of measurement*

Lind and Tyler (1988:245) noted that 'there is too little attention devoted to constancy of measurement across studies'. The first issue in the measurement debate is the increased complexity in operationalisation as new and different conceptualisations have been introduced over the years. This problem involves measuring organisational justice and in particular the issues associated with the design and adaptation of scales to measure justice constructs. Early conceptualisations of procedural justice for example, have moved from Thibaut and Walker's view that it is driven by process control, to Leventhal and his colleagues' arguing that fairness perceptions were created by adherence to six different criteria. Furthermore, Bies and Moag (1986) suggested that fairness perceptions were created by the proper enactment of procedures in terms of interpersonal and informational justice.

Some researchers collapse process control, Leventhal criteria and interpersonal and informational justice into a single variable (e.g. Brockner et al., 1995; Folger and Konovsky, 1989). However, this makes it impossible to gauge the relative influences of each element on procedural fairness perceptions (Colquitt, et al 2001). Colquitt (2001) identifies several studies in which measures of one construct actually contained items measuring the other constructs. For instance, Moorman's (1991) scale of interactional justice includes items assessing aspects of a supervisor's decision making, while his procedural justice scale includes items that were more representative of interactional concerns. Such confusion in construct measurement makes attribution of effects difficult and, as Barling and Phillips (1993) point out, many of the findings attributed to interactional justice may actually be more directly related to procedural justice. Greenberg (1990) noted this phenomenon when stating that many measurement efforts are plagued by items that attempt to measure one type of justice but that seem more applicable to another. Overall there appears to be a lack of a standardised instrument with which to measure perceptions of justice (Greenberg, 1993).

The second measurement problem involves the issue of generic versus domain specific scales. Generic scales of justice consist of general attitudinal items that are 'context free'. These items require the respondent to indicate their fairness perceptions without locating them to a specific context. In contrast, the domain specific scales consist of context specific items where a respondent is requested to indicate their fairness perceptions in a specific context e.g. pay. Greenberg (1996) argued against investigating justice in a context free manner and advocated studying justice issues as they apply to specific contexts e.g. performance appraisals. Generic items were believed to be less informative, since they do not tell us the specific aspect of the work situation the respondents had in mind when reporting their fairness perceptions (Gilliland and Chan, 2001).

### *Type of research undertaken*

Perhaps the most significant gap in the literature is the infrequent use of qualitative methods. Organisational justice research typically considers justice as an object, a measurable pseudo-scientific construct. With such a view it is possible for justice-based perceptions to be present or absent according to a generalisable theory of rules. However, justice, as played out in the workplace, has a complex dynamism that is difficult to stimulate in a laboratory or to capture with traditional, quantitative typologies (Taylor, 2001). Justice can also be seen as a social construction that is always in a state of flux and re-configuration through the interactions of the actors themselves (Berger and Luckmann, 1966). Saunders (2005) highlights this issue and suggests that qualitative research methods may also have much to offer to the future of organisational justice research and theory. Taylor (2001) suggests that justice literature might benefit significantly from qualitative studies of the etiology of justice in real life events:

such settings and methodologies would allow us to examine, in depth and over time, how actors, targets and observers evaluate fairness of extremely unfavourable, adversarial, even catastrophic events, how they form attributions of responsibility for such events, how justice judgements about events are related to those made about the entities held responsible for them and how they develop both attitudinal and behavioural responses (pg. 251).

At the same time, there is considerable utility in quantitative methods, especially when the objective is to capture a large sample of attitudinal values and employees behavioural intentions. In these situations, established and previously validated measures and scales have an important role in exploring the various dimensions of justice perceptions and testing potential relationships between these attitudes and HPWS practices and outcomes. It seems the main problem is not so much a failure of quantitative approaches but the dominance of such methods to the neglect of other research methods which are equally important in understanding organisational justice perceptions and their impact on employee attitudes and behavioural outcomes. This is explored further in chapter 5, where a mixed method approach will be explained, which utilises both quantification and qualitative interpretations of related phenomena.

### *Level of analysis*

Whilst much of the research on organisational justice has been undertaken at an individual level, there is an increased proliferation of new constructs at a multiple level (e.g. work group, organisation). Mossholder et al. (1998) suggest that just as instrumental and noninstrumental aspects of procedural justice may concurrently influence individuals' reactions to treatment by their organisation, so too may individual and unit-level justice components. By their very nature, organisations involve multiple levels of nested relationships. As a result, many organisational

constructs may operate at more than one level (Klein, Dansereau and Hall, 1994). Chan (1998) suggested that each higher-level construct is composed from the established construct at the individual level (Chan, 1998). Therefore, the individual group members' justice perception scores are summed or averaged to represent the groups score on procedural justice. According to Chan (1998), how they are composed depends on the definition of the higher-level construct. For example, if by group procedural justice, we mean the average of justice perceptions of individual group members, then the additive composition expressed above is relevant. However, there are other definitions, such as group cohesion or procedural justice climate strength, which shift the focus from individual perceptions to within group consensus in justice perception scores (see Gilliland and Chan, 2001). This is a topic which is only beginning to be introduced to conceptual and measurement issues concerning level of analysis and debate still exists as to how multilevel constructs be composed.

### **3.6 Conclusion**

This chapter examined the concept of justice as a potential lens through which to examine the effects on, and employee reactions to, HPWS. Widespread agreement exists about justice being a central theme in all social settings, however much less agreement exists over exactly how justice may be understood and accomplished. This chapter addressed different perspectives of justice proposed by both philosophers and social scientists. This chapter traced the development of organisational justice from its normative philosophical roots to its subjective applications in social science research. Three distinct justice constructs were examined and each established the influence of judgements about justice and injustice on people's feelings and attitudes. These constructs were distributive justice, procedural justice, and interactional justice. Theoretical considerations established the meaning of justice and identified the criteria that people employ in judging the fairness of outcomes, procedures and punishments. As the chapter illustrated, different consequences follow from procedural, distributive and interactional justice and injustice.

The concern for social justice arises because studies show that judgements are at the heart of people's feelings, attitudes and behaviours in their interactions with others. Perceptions of justice are closely related to feelings of anger, and self esteem (Tyler and Smith, 1998). Further, judgements of fairness are significantly related to people's interpersonal perceptions and political attitudes. This chapter examined people's treatment of justice – their perceptions of what constitutes fairness and their reactions to unfair situations. Questions about justice arise whenever decisions are made (Cropanzano and Greenberg, 1997). Decisions made in organisational settings may animate justice concerns. The very fact that people work in order to receive economic gain (e.g. pay) and social benefits (e.g. status) suggests that organisations are settings in which matters about fairness and

justice are likely to be salient (Greenberg and Tyler, 1987). The previous chapter highlighted how the use of different HPWS arrangements focuses on efficiency as the basic object of analysis. As Legge (1998) points out, such literature, following a utilitarian philosophy, assumes that what is efficient for companies is fair and good for both employees and society. This assumption can be answered through organisational justice theory. Within organisations, justice is about rules and social norms governing how outcomes (e.g. rewards and punishments) should be distributed, the procedures used for making such distributions and how people are treated (Bies and Tripp, 1995). It serves as a useful orientation that allows for a fuller understanding of workplace behaviour. The following chapter will examine applications of justice specific to HPWS organisational settings.

Having established the importance of justice in social settings and examined the criteria by which justice judgements can be made, it is now necessary to apply the concepts of justice to high performance work systems and practices. Chapter 4 will expand the concepts of justice as applied to high performance work systems and examine the consequences of (in)justice on employee attitudes and behavioural outcomes in the workplace.

## CHAPTER FOUR

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# INTEGRATING ORGANISATIONAL JUSTICE AND HIGH PERFORMANCE WORK SYSTEMS – A RESEARCH FRAMEWORK

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### 4.1 Introduction

Chapter 3 examined the evolution of the justice concept and illustrated that organisational justice refers to perceptual or subjective phenomena across four families of justice perceptions – outcomes (distributive), processes (procedural), interpersonal interactions (interpersonal) and justifications/explanations (informational). This chapter examines these organisational justice dimensions and their application to high performance work systems. The three major components of organisational justice theory presented in chapter 3 are used to structure much of the discussion in this chapter. Justice as an important determinant of a variety of important employee outcomes will also be explored, together with two mediating influences – leader-member exchange and perceived organisational support - which research has shown to be important in the HRM → organisational justice → employee outcome relationship. This discussion relates to research questions 3, 4 and 5 as described in chapter 1. The chapter concludes with the presentation of the research framework and corresponding research hypotheses.

### 4.2 Organisational justice and high performance work systems

Chapter 2 discussed the emergence of the HPWS concept as a means of facilitating organisational performance. These emerging HPWS practices are said to provide organisations with a source of sustained competitive advantage (Barney, 1995). However, as noted previously, the majority of this research has focused on the degree to which HPWS enhances organisational performance with little exploration of the psychological processes by which these bundles of HR practices influence employee attitudes and behaviours as a whole. The notion of organisational justice was proposed in chapter 3 as a means of explaining these psychological processes in the context of human resource management practices. It is fitting to recall that:

Although HRM practices are often guided by technical, financial, legal and strategic concerns, most employees do not have the information or expertise to evaluate practices from these perspectives. Employees evaluate HRM practices from the users' perspective that is largely driven by desires for fair and equitable treatment (Bowen, Gilliland and Folger, 1999: 3).

High performance work systems include many of the features that are likely to affect justice perceptions of the employee. In applying justice concepts to a broad set of organisational policies,

Greenberg (1996) argues that: (1) we have a valuable way of learning about those phenomena themselves; (2) unique aspects of justice are likely to arise in specific organisational context and; (3) we have the perfect opportunity to assess their generalisability. As discussed in chapter 2, typically HPWS entails several components including employment security, the active participation of employees in the work process, together with arrangements for information sharing, selective hiring and sophisticated selection, extensive training, learning and development, teamworking, developmental performance appraisals and externally competitive and internally equitable compensation systems contingent on performance (Arthur, 1994; Huselid, 1995; Pfeffer, 1998). These components of a HPWS, while found to influence skill and motivation, can also be impact on employee perceptions of distributive, procedural and interactional justice and subsequent attitudinal and behavioural outcomes, as considered in chapter 3. The rationale concerning the theoretical integration of justice and HPWS literatures is therefore important. A starting point for this is given in Table 4.1, which outlines the components of organisational justice (introduced in chapter 3), which are subsequently discussed in the context of HPWS, where appropriate.

**Table 4.1: Components of Organisational Justice**

<b><i>1. Distributive justice: Appropriateness of outcomes</i></b>
<ul style="list-style-type: none"> <li>• Equity: Rewarding employees based on their contributions</li> <li>• Equality: Rewarding employees about the same compensation</li> <li>• Need: Providing a benefit based on one’s personal requirements</li> </ul>
<b><i>2. Procedural justice: Appropriateness of the allocation process</i></b>
<ul style="list-style-type: none"> <li>• Consistency: All procedures applied consistently across persons and time</li> <li>• Lack of bias: No person or group is singled out for discrimination or ill treatment</li> <li>• Accuracy: Decisions are based on accurate information</li> <li>• Representation of all concerned/voice: Appropriate stakeholders have input into a decision (implies voice or process and decision control)</li> <li>• Correction: There is an appeals process or other mechanism for fixing mistakes</li> <li>• Ethics: Norms of professional conduct are not violated</li> </ul>
<b><i>3. Interactional justice: Appropriateness of treatment one receives from authority figures</i></b>
<ul style="list-style-type: none"> <li>• <i>Interpersonal justice</i>: Treating an employee with dignity, courtesy and respect</li> <li>• <i>Informational justice</i>: Sharing relevant information with employees</li> </ul>

Adapted from Cropanzano, Bowen and Gilliland (2007:36)

### **4.3 Distributive justice and high performance work systems**

Distributive justice refers to the fairness of the outcomes received as a result of an allocation decision. This is usually judged with respect to some referent standard (Greenberg, 1990). As such it has the potential to have strong implications in an organisational context where distribution of outcomes are frequent and play an integral part. Three rules in particular have received a great deal

of attention in connecting distributive justice and HPWS: *equality*, *equity* and *need*. More specifically, research highlights that the perceived fairness of outcomes has been examined across a number of HPWS practices (e.g. selection, pay, promotion decisions, downsizing). Appendix C outlines some key examples of organisational justice research across individual HR practices that make up the high performance work system.

In a selection setting, distributive justice could be operationalised as the perceived accuracy of evaluation and appropriateness of the hiring decision, as viewed by candidates' self-perceived qualifications for the position. Gilliland (1993) suggests that equity-based rules were important in hiring situations where applicants were not so much concerned about the absolute level of outcomes per se but whether those outcomes were fair when compared to a referent other (Colquitt et al., 2001). Equality based rules in the selection context shows that all individuals competing for a job should receive equal treatment and have an equal chance of obtaining the job through non biased evaluation (Anderson, Born, Cunningham-Snell, 2001). Singer (1990), for example, found that both professionals and students rated avoidance of nepotism and equality of opportunity to be highly important determinants of perceived fairness.

In the performance appraisal (PA) context, distributive justice can be operationalised as people's reactions to their formal rating when judged by the following principles: (a) ratings should meet employees' expectations; (b) outcomes should be based on ratings; and (c) outcomes should meet employees' expectations (Bowen, Gilliland and Folger, 1999). Negative perceptions of distributive justice in a PA setting can increase the level of burnout experienced by employees (Gabris and Ihrke, 2001). In their study of white collar professional employees, Gabris and Ihrke (2001) found that when best performing employees did not receive rewards linked to highest performance appraisal scores (i.e. distributional equity) they became more anxious over the fairness of the compensation system. Under such circumstances some employees lessened their productivity but others exhausted themselves by working harder which heightened burnout levels.

The application of distributive justice to employee pay and benefits suggests that employees 'evaluate the perceived inputs and outcomes of referent others and through this process identify benefit types and levels they consider appropriate or desirable' (Miceli and Lane, 1991:20). Fair pay outcome could relate to pay level, pay range, merit increase, or any other compensation or reward outcome. Sweeney (1990) examined employees' distributive justice perceptions regarding pay in terms of the equity rule proposing a curvilinear relationship between fairness ratings and pay level satisfaction. His three stage study found that perceived fairness of pay was strongly related to pay

satisfaction. Employees who perceived their pay level was about what they deserved were relatively satisfied with their pay. Those who perceived that they were paid less than they deserved were found to be relatively dissatisfied with their pay. Finally, employees who thought they were paid more than they deserved also reported less satisfaction with their pay although this association was not significant. Research has shown that perceptions of pay equity relate to some of the main alleged HPWS predictors, such as job satisfaction, (Agho, Mueller and Price, 1993; Sweeney and McFarlin, 1997; Tekleab, Bartol and Liu, 2005), organisational commitment (Alexander and Ruderman, 1987) and increased workload (Brockner et al., 1994).

#### **4.4 Procedural justice and high performance work systems**

Whilst distributive justice is concerned with the fairness of the amount of resources distributed, procedural justice focuses on the fairness of the procedures used to make allocation decisions (Greenberg, 1987). Chapter 3 examined a number of process attributes that are said to lead to positive perceptions of procedural fairness. These include procedures that are consistently applied, correctable, free from bias, representative, allow opportunities for 'voice' (Folger, 1977; Van den Bos et al., 1996). The weight of evidence examining procedural justice appears to be strongly related to HPWS concepts: selection (Gilliland, 1993, 1994); performance appraisals (Greenberg, 1986; Erdogan et al., 2001); promotion decisions (Bagdali, Roberson and Paoletti, 2006); career management (Crawshaw, 2006), pay (McFarlin and Sweeney, 1992), and layoffs (Brockner et al., 1994).

In a performance appraisal context a number of justice rules have been explored that resonate with HPWS outcomes. High opportunity for voice was identified as one of the most important procedural justice rules. Opportunity for voice can be operationalised as having supervisors ask subordinates to comment on their performance during the rating period. Low opportunity for voice is operationalised by not giving subordinates a chance to comment on their performance (Holbrook, 2002). Cawley, Keeping and Levy (1998) meta-analysis found that when employees had a voice they were more satisfied, saw the process as more fair and were more motivated to do better. This was found even when participation could not affect the final rating received. Similar studies found voice procedures were perceived as fairer than mute procedures including participatory decision-making (Greenberg and Folger, 1983), performance appraisal and compensation plans (Folger and Greenberg, 1985), and conflict management (Sheppard, 1985). Furthermore, research has shown that voice can lead to positive perceptions of procedural justice (Folger and Greenberg, 1985; Korsgaard and Roberson, 1995) regardless of the final decision.



The importance of procedural justice in pay contexts is also shown to be an important dynamic in the HPWS-justice connection. Studies show that the effect of procedural justice perceptions in the field of compensation explains a large portion of variance in pay satisfaction (Dyer and Theriault, 1976; Tremblay et al., 2000). Cloutier and Vilhuber (2008) identified four dimensions that impact on procedural justice perceptions of salary determination in their study of 297 Canadian workers, who also draw on Leventhal's justice rules considered in chapter 3. These are: (a) perceived characteristics of allocation procedures (including accuracy of information about work content, relevance of evaluation criteria and consistency of application); (b) perceived characteristics of decision makers (including impartiality and perceived competence of decision maker); (c) system transparency (access to information on procedures and outcomes) and; (d) appeal procedures (correctability, availability of information on how to file a complaint and security to make complain without fear of reprisals). In addition, Welbourne (1998) found a direct effect between procedural justice and pay in her study of gainsharing where procedural fairness was positively associated with gainsharing satisfaction. Researchers such as McFarlin and Sweeney (1992) and Greenberg and Folger (1983) found support for the idea that fair procedures might minimise dissatisfaction resulting from poor pay outcomes.

In team settings, Naumann and Bennett (2000) found that perceived cohesion and supervisor visibility were positively associated with procedural justice in teams. Price et al. (2006) highlighted the importance of instances of multi level decision making in a team, where voice could be allowed both at the team level and by organisational authorities. People's reactions and fairness judgements were most beneficial when people were allowed voice in their team and the team in turn was given voice by the organisational authorities. Colquitt and Jackson (2006) suggest that a team context may influence the choice of justice norms that individuals within the team apply to assess procedural justice. From their study, they found that in team contexts, equality, consistency, and decision control became more important rules. The number of people in a team and its composition also impacted on the choice of justice rules used to assess fairness. The accuracy rule as suggested by Leventhal (1980) was seen as more important in small teams, whereas consistency and bias suppression rules were more important in diverse teams.

Studies have also shown that procedurally unfair practices are associated with poorer work attitudes among employees, illustrating the connections between people management practice and justice perceptions are not all positively biased (Ambrose and Cropanzano, 2003; McEnrue, 1989). This view coincides with the pessimistic view of HRM (e.g. Ramsey et al., 2000; Peccei, 2004) which sees HRM as benefiting the employer only or worse, that it reduces employee wellbeing in the

workplace. Researchers examining promotion systems and procedural justice have discussed issues of how much opportunity employees perceive for personal advancement in the organisation, what criteria they perceive being used in the promotion process and the fairness of both the procedures and outcomes of promotion systems. For example, Bagdali, Roberson and Paoletti (2006) found perceptions of procedural justice in promotion processes negatively affected commitment. A similar relationship between procedural justice and employee outcomes has been found for other HR practices such as teamworking (Shapiro and Kirkman, 1999); career management (Crawshaw, 2006); talent management (Slan-Jerusalim and Hausdorf, 2006); grievance procedures (Shapiro and Brett, 1993); and layoffs (Brockner et al., 1994)

#### **4.5 Interactional justice and high performance work systems**

Bies and Moag (1986) claimed that procedural justice theory and research did not capture the breadth of people's concerns about a fair process. While procedural justice was important in terms of people's concerns about the formal procedures or structural aspects used in decision making processes, social aspects of how procedures work in practice is important. Interactional justice is defined as the interpersonal treatment received at the hands of decision makers with a focus on social sensitivity and informational justification. Because interactional justice emphasises one-on-one transactions employees often seek it from their supervisors. Bies and Moag (1986) identified two social aspects in particular: interpersonal justice and informational justice. Numerous studies have been conducted in both laboratory and field settings, demonstrating the connections with expected HPWS outcomes at different (individual and the firm) levels (Cropanzano et al., 2001).

##### **4.5.1 Interpersonal justice and HPWS**

Interpersonal justice focuses on the interpersonal treatment received during the enactment of organisational procedures. For example, Bies and Moag (1986) and Greenberg (1993) explore the mediating effect of respectful and sensitive treatment. In a selection context research has shown that interpersonal effectiveness at the recruiting, screening, selection and decision making are important factors shaping the fairness of procedures and outcomes. At the individual level, research has found that recruiters that possess greater interpersonal skills and warmth seem to be an important reason why applicants decide to accept job offers subsequently (Barber, 1998; Taylor and Collins, 2000).

For performance management contexts, research by Cobb, Vest and Hills (1997) found that the way in which procedures are enacted is as important in influencing fairness judgements as the procedures themselves. Key interpersonal justice determinants for performance appraisals include punctuality, tone of voice of rater, and attentiveness of the rater where kindness and respectfulness of the rater

towards ratee is important (Erdogan et al., 2001). Aryee et al. (2007) suggest that injustice or justice may trickle down an organisation depending on people's experiences with their supervisor. They found that the perceived interactional fairness of a supervisor (i.e. the supervisor's perception of how fairly they were treated by their manager) was related to the interactional fairness of their subordinates. That is 'supervisors who experience interactional injustice at the hands of their immediate bosses may take out their frustration on subordinates' (Aryee et al., 2007: 192).

In terms of the pay setting process, interpersonal justice relates mainly to the communication between the direct supervisor and the employee on issues concerning pay setting. Research shows that the greater the respect shown by the supervisor in connection with performance reviews and every day work performance feedback, the greater the sense of interpersonal justice for the employee (Andersson-Straberg et al., 2007). In a change context, Kernan and Hanges (2002) suggest that taking care to provide support to employees who are severely impacted by reorganisation relates to the value-expressive component of justice where such activities (career counselling, outplacements) suggest respect and sensitivity on the part of management for employees, thereby heightening perceptions of interpersonal fairness. Their study of a major multinational pharmaceutical corporation undergoing change found that employee input, support for staff and communication were strong predictors of interpersonal justice. Interpersonal justice in turn impacted on trust in management. Similar findings have been reported with regard to variable pay (Cox, 2003), grievance handling (Nabatchi, Blomgren Bingham and Good (2007), layoffs (Brockner et al., 1994), dismissals (Darcy, 2005), and work team settings (Byrne, 2001).

#### **4.5.2 Informational justice and HPWS**

Informational justice refers to whether a person is truthful and provides adequate justifications when things go badly (Cropanzano, Bowen and Gilliland, 2007). In a selection setting, Gilliland (1993, 1994) highlights the importance of timeliness, selection information, and honesty in determining informational justice. During the recruitment phases, Arvey and Sackett (1993) and Bauer et al. (1998) argue that reducing uncertainty about unfamiliar procedures makes applicants more likely to attribute poor performance to themselves rather than the situation and not knowing what to expect. Gilliland and Hale (2005) contend that dishonesty in informing applicants at the recruitment phases diminishes trust and increases perceptions of unfairness (Lind and Tyler, 1988). Providing candidates with information about the selection process, why particular tests are being used, information on scoring and the way in which scores are used in decision making together with a justification for a particular selection decision contribute to applicant perceptions of fairness (Bauer

et al., 1998; Gilliland et al., 2001). When candidates have a lack of knowledge of the basis of the selection decision, it can engender a sense of injustice (Cropanzano and Wright, 2001).

In a performance appraisal context, research has shown that informational justice is also important (Bies and Shapiro, 1988). Holbrook (1999) and Bies and Shapiro (1988) highlighted the role of explanations or justifications where aspects of the subordinates performance is explained to them as the basis for the rating received. Bies and Shapiro (1988) for example found that unfavourable events were more likely to be perceived as fair if acceptable explanations are provided than if no explanations are given. Holbrook (1999) suggests, however, that not all explanations are effective and some have negative influence responses. He differentiates between internal and external explanations. Internal explanations (or justifications) focus on the characteristics of the subordinate, whereby the decision recipient (the ratee) has forced the decision maker's hand through their actions and performance. External explanations (or excuses) focus on factors other than subordinate characteristics and suggests that control over the rating decision was taken away from the decision maker (e.g. historical precedent, organisational directive). When outcomes are favourable an internal explanation for the decision was found to enhance positive feelings for the outcome. His second proposition that the presence of an explanation (either internal or external) would lead to more positive reactions was not supported. External explanations were found to lead to similar or less positive reactions than failing to provide any explanation.

Kernan and Hanges (2002) study of survivor reactions to reorganisation found that informational justice added unique variance to the prediction of trust in management. Quality of information during reorganisation (voice and communication) and implementation (consistency of management action) were positively related to informational justice. Lind et al.'s (1998) examination of recently terminated employees showed that those employees who accepted the economic rationale associated with job loss did not blame their employer. What was also found to be important was where jobs had to be lost; employees perceived that they were dealt with fairly and in a dignified fashion. This included giving employees adequate notice of layoffs, helping employees find alternative jobs and treating departing employees with dignity and respect. Folger and Skarlicki (1998) note that this is often forgotten when managers deliver bad news as they prefer to distance themselves through minimising interpersonal contact with a lay off victim rather than delivering the message in a sensitive manner.

In respect to pay, regular opportunities for supervisors to explain the basis for pay decisions (Holbrook, 1999) were found to impact fairness perceptions. Several studies have demonstrated that

when employees are provided with information that justifies the need for negative outcomes such as pay freezes or pay cuts they tend to regard those outcomes as being fair (e.g. Schaubroeck et al., 1994; Greenberg, 1990). Schaubroeck et al. (1994) for example found the presence of explanations reduced turnover intentions, maintained perceptions of procedural justice, general satisfaction and organisational commitment when a pay freeze was continued.

#### **4.6 Outcomes of organisational justice**

Chapter 2 highlighted that the common assumption of HPWS is that HR practices have a positive impact on firm outcomes. Underlying this view is the argument that HR practices affect organisational performance through employee responses such as changes in work related attitudes and behaviours (Guest, 1999; Macky and Boxall, 2008). HPWS and employee outcomes were examined in chapter 2 with the conclusion that there is a dearth of research evidence based on employee responses to HR (Gould-Williams and Mohamed, 2010; Boon et al., 2011; Li, Frenkel and Sanders, 2011). By ignoring these employee responses, researchers are unwittingly contributing to the 'black box' issue within HPWS where 'critical human interactions inside the opaque and complex realm of organizations that account for performance outcomes' are ignored (Boxall, Ang and Bartram, 2010: 2). The current research aims to open the 'black box' by taking a process based approach to HR which highlights the importance of employee responses to HR through psychological processes (Gould-Williams and Mohamed, 2010; Boon et al., 2011; Li, Frenkel and Sanders, 2011 ). By focusing on organisational justice research it is hoped to shed light on the mechanisms through which HPWS impacts employee outcomes. Researchers have consistently demonstrated that perceptions of justice in the workplace are predictive of many attitudes, emotions and behaviours of employees (Gilliland and Chan, 2001). This link between HR, justice and various employee responses integrated social exchange theory where there is a sort of reciprocation where an employee repays the actions of others with corresponding actions of their own (Blau, 1964). When employees are treated fairly they are more likely to cooperate, support decisions and offer assistance when they need it (Tyler and Smith, 1998). However, when employees are treated unfairly they are more likely to seek revenge (Bies and Tripp, 2001), take legal action (Lind et al., 2000), steal (Greenberg, 1993) and show withdrawal behaviours and emotional exhaustion (Cole et al., 2010). Three different meta-analytic reviews have summarised much of this research (see Cohen-Charash and Spector, 2001; Colquitt et al., 2001; Viswesvaran and Ones, 2002) with trust, organisational citizenship behaviours, job performance, theft and counter productive behaviours being strongly correlated with organisational justice. Appendix D identifies some of the key employee outcomes of previous justice research ranging from positive attitudes and behaviours to more serious counter-productive employee behaviours. The employee outcomes in justice research

are similar to those examined in HPWS research. Within HPWS literature, there is a growing awareness of the need to consider the potential of negative as well as positive effects of HR practices on employees. Previous researchers have identified stress and work intensification in particular as possible negative consequences of HPWS (e.g. Ramsey et al., 2000; Godard, 2001b; Gould-Williams and Mohamed, 2010). In this research, five employee outcomes will be explored in the context of high performance work systems and justice. These will encompass both positive (commitment, job satisfaction and effort) and negative (turnover intention, work intensification) outcomes. These will be examined as part of the conceptual framework in section 4.7.

#### **4.7 Towards developing a mutli-level research framework**

The current research has two primary objectives (1) to examine the impact of HPWS on organisational outcomes and (2) to examine the effects of HPWS on employees. The objectives led to the formulation of five key research questions. These are:

1. How do HPWS policies affect performance outcomes?
2. Is the relationship between HPWS and organisational performance dependent on other factors?
3. What are the processes that influence employee attitudes and behaviours towards HPWS?
4. Why do such attitudes and behaviours occur?
5. How does the relationship between employees, supervisors/managers and the organisation effect employee perceptions of HPWS?

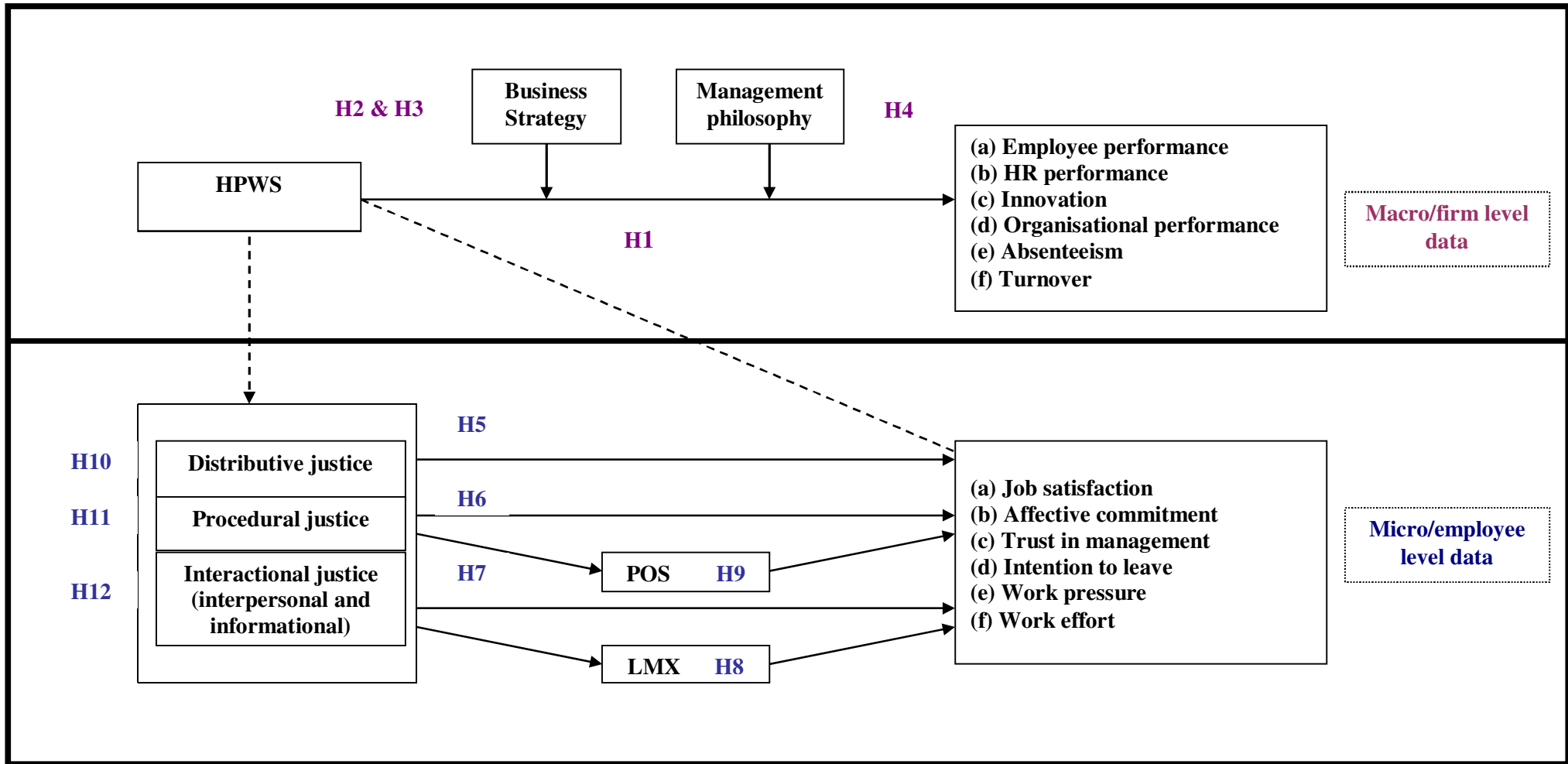
It was argued in chapter 2 that there is a need to put the employee back into the HPWS debate and examine the mechanisms by which HPWS practices make a difference in organisations. To do this, organisational justice was proposed as a robust theoretical lens for exploring the processes that influence the effects of HPWS practices on employee attitudes and behaviours. A further important contribution of this thesis is the opportunity to test for possible mediating effects using cross level data and analysis techniques. To this end, a research framework (see Figure 4.1) has been devised that will examine the variable relationship discussed thus far, using a fourfold level of analysis, as follows:

1. Macro level data at company level: this will examine the influence of HPWS on organisational outcomes (as examined in chapter 2)
2. Micro level data at individual employee level: this will examine the influence of HPWS on employee attitudes and behavioural outcomes through organisational justice theory (as

- examined in chapters 3 and 4) and the relationship between employees, supervisors/managers, the organisation and their effects on employee perceptions of HPWS
3. Cross-level mediation analysis: this will examine whether organisational justice (individual level) mediates the relationship between HPWS (macro/firm level) and employee attitudes and behavioural outcomes (individual level).

Each of these analytical approaches and levels are hypothesised next, and summarised in Figure 4.1.

Figure 4.1: Hypothesized multi level model of HPWS, organisational justice and employee outcomes



—————> Denotes a correlation and regression relationship

- - - - -> Denotes a cross-level inference of the relationship between firm level HPWS investment and employee level outcome variables



#### **4.7.1 Macro level data at company level: The influence of HPWS on firm outcomes**

Chapter 2 examined the extant research showing positive results for investment in HPWS and firm outcomes at the macro or firm level (e.g. Guthrie, 2001; Huselid, 1995; Patterson et al., 1997). A HPWS system which covers practices designed to build and retain human capital and to influence employee behaviour (e.g. motivation and empowerment) will have positive effects on performance. Thus, it is hypothesised that:

H1a-f: Greater adoption of HPWS will be positively associated with (a) employee performance; (b) HR performance, (c) innovation and (d) organisational performance (e) absenteeism and (f) turnover

In addition to testing the hypotheses proposed above, the potential moderating effect of business strategy will be examined. Chapter 2 examined previous research on HPWS and firm performance with arguments suggesting that these positive effects are either universal or contingent on firm strategy (best practice versus best fit). According to the contingency approach, an organisation's strategy moderates the effect of human resource practices on firm performance (Hitt et al., 2001; Huselid, 1995; Schuler and Jackson, 1987). Research has found that the positive relationship between HPWS and performance is dependent on business strategy (Michie and Sheehan, 2005). Guthrie, Spell and Nyamori (2002) examined HPWS in organisations with 100 employees or more in New Zealand. Their results indicated that where organisations were pursuing a differentiation business strategy, greater use of HPWS was associated with larger levels of firm productivity. Becker and Huselid (2006) called for the reintroduction of strategic orientation as a key variable in HPWS-performance research, and according to Subramony (2009), this call has been unanswered. In his meta analysis, he reports a lack of significant studies examining moderating effects of environmental factors other than industry (Datta et al., 2005 being the exception). Wall and Wood (2005: 452) suggest that if theory predicts strategic fit then tests of interactions are relevant as 'investigating possible interaction effects is a means of more fully understanding the nature of any observed relationship between HRM practices and performance, and enhancing the construct validity of the study'. In line with the value-chain theory (Porter, 1985), it is argued that HPWS will contribute more to performance where the firm pursues a differentiation strategy, because HR practices can be especially valuable in implementing a differentiation strategy. Responding to the work of Chan, Shaffer and Snape (2004), who just measured one type of competitive strategy, this research will examine both differentiation strategy and low cost strategy to determine stronger relationships with the HPWS. Therefore, it is hypothesised that:

H2a-d: Differentiation strategy will moderate the relationship between HPWS and the following performance outcomes; a) employee performance; b) HR performance; c) innovation, d)

organisational performance, e) absenteeism and f) turnover, such that the positive relationship between HPWS and outcomes will be stronger when differentiation strategy is high relative to when differentiation strategy is low

H3a-d: Low cost strategy will moderate the relationship between HPWS and the following performance outcomes; a) employee performance; b) HR performance; c) innovation and d) organisational performance, e) absenteeism and f) turnover, such that the positive relationship between HPWS and outcomes will be stronger when low cost strategy is low relative to when low cost strategy is high.

Writers in HPWS commonly associate investment in HPWS with underlying organisational philosophies or values which view employees as human assets to be developed rather than disposable factors of production (Roche, 1999; Wood, 1999). HPWS is said to reflect an underlying unitarist belief (that management and labour share common interests) whilst acknowledging pluralist values by providing mechanism such as employee involvement schemes that provide more opportunity for employee voice. There is an assumption that a management philosophy that is employee centred strengthens the effectiveness of HPWS and subsequent performance outcomes as opposed to those based on a bleak house philosophy (Marchington and Wilkinson, 2005). Support has been found for a link between management ideologies or philosophies of senior management regarding employees and the effectiveness of HPWS (e.g. Godard, 1997; Osterman, 1994). Thus:

H4a-d: Management philosophy will positively moderate the relationship between HPWS and performance outcomes a) employee performance; b) HR performance; c) innovation and d) organisational performance e) absenteeism and f) turnover

#### *Individual practice affects*

Chapter 2 shows that most studies of the HRM–performance relationship aggregate individual practices into multi-component scales or indexes (e.g. Huselid, 1995; Way, 2002) in order to test for effects on performance. This fits with the strategic HRM literature which proposed a more macro approach to viewing HRM with the focus on the entire HR system rather than single HR practices (Allen and Wright, 2007). This composite macro approach to HR was argued to have a greater impact on overall organisational performance than any single HR practice. However, these single HR practices are still important contributors to performance and one or more of these sub HR functions within a HPWS system may account more for any observed effect of the overall HRM system on performance, or whether all are an integral part of the whole (Faems et al., 2005). Therefore, an additional research question within the macro level study is to assess the

relative contribution the different HPWS components has on organisational performance outcomes.

#### **4.7.2 Micro level data at individual employee level: Organisational justice perceptions of HPWS and impact on employee attitudes and behavioural outcomes**

Boselie, Dietz and Boon (2005) suggest that HPWS affects organisational performance through changes in employee attitudes and behaviours in response to their experience of HR practices. The review of HPWS research in chapter 2 however, showed that there is still a dearth of research evidence based on employee responses to HR with evidence mixed as to whether outcomes of HPWS are positive or negative (e.g. Ramsay et al., 2000; Godard, 2004; Guest, 1999).

By studying HPWS effects on employee attitudes and behaviours through organisational justice theory, this research works towards explaining the HPWS 'black box' by developing a better understanding of the mediating behaviours that explain the relationship between HPWS, employee responses and firm outcomes. Attitudinal outcomes pertain to attitudes employees hold toward their job and their employer. Behavioural outcomes emerge from these attitudinal outcomes (Purcell et al., 2009) and include organisational citizenship behaviour, remaining in the job and discretionary effort. Previous research has shown that HPWS can have positive effects on discretionary effort through creation of opportunities to participate, skill development and incentives (Appelbaum et al., 2000). A recent review by Van De Voorde et al. (in press) recommended that future research examining the effects of HPWS on employees needs to take a more balanced approach. They argue that many researchers try to test the mutual gains perspective and ignore the possible negative consequences of HPWS on employees. For example, research has shown some negative consequences of HPWS. Ramsey et al. (2000) found an association between HPWS and stress among workers using UK WERS data. Green (2001) reported empirical evidence of more intensive work. From the literature analysis in chapters 2 and 3, six employee attitudes and behavioural outcomes have been identified and will be explained in the following sections (these are job satisfaction, affective commitment, trust in management, intention to leave, work pressure and work effort).

##### ***Job satisfaction***

Previous research has shown that HPWS has a pronounced effect on job satisfaction (e.g. Guest, 1999; Appelbaum et al., 2000; Kalni and Kauhanen, 2008) where it is seen as one of the mechanisms that explain some of the associations between HPWS and organisational performance (Boxall and Purcell, 2003). High performance work systems, with their emphasis on enriched jobs, opportunities for skill development and employee involvement, have been shown to impact on job satisfaction in a number of studies (e.g. Wood and de Menezes, 2011,

Macky and Boxall, 2007). Organ (1988) suggests that job satisfaction is influenced by perceived fairness. Fassina, Jones and Uggerslev (2008) conducted a meta-analysis to examine the relationship between job satisfaction, perceived fairness and citizenship behaviours from 45 studies and 50 independent samples containing relevant data. They found consistent support for their proposition that organisational justice perceptions predict job satisfaction. Therefore, the following can be hypothesised:

H5a: Distributive justice perceptions of HPWS will be positively associated with job satisfaction

H6a: Procedural justice perceptions of HPWS will be positively associated with job satisfaction

H7a: Interactional justice (interpersonal and informational) perceptions of HPWS will be positively associated with job satisfaction

### *Affective commitment*

Meyer and Allen (1991:67) define commitment as ‘a psychological state that (a) characterises the employee’s relationship with the organisation and (b) has implications for the decision to continue membership with that organisation’. There are variations in the conceptualisation of organisational commitment by researchers but Wasti (2005:304) found ‘an increasing consensus that organisational commitment is a multidimensional construct’ including affective, normative and continuance commitment. Affective commitment has been identified as the most desirable form of commitment as it is based on emotional attachment which leads to positive behavioural outcome performance by the employee for the benefit of the organisation and has been linked to issues such as employee engagement (Kahn, 1990; Saks, 2006). Research has examined the impact of HPWS policies and practices on commitment with studies examining recruitment (Premack and Wanous, 1985), socialisation (Van Maanen and Schein, 1979), training (Tannenbaum et al., 1991), promotion (Gaertner and Nollen, 1989) compensation (Buchko, 1992) and the HPWS system overall (Tsui et al., 1997). Zaleska and de Menezes (2007), for example, found that employees had higher levels of commitment when their organisations provided them with growth opportunities and helped them develop skills, knowledge and abilities. Several studies have also examined the relative strength of organisational justice on organisational commitment. Using their two factor model, McFarlin and Sweeney (1992), for example, found that procedural justice had strong effects on organisational commitment. Therefore, organisational justice and affective commitment can be hypothesised thus:

H5b: Distributive justice perceptions of HPWS will be positively associated with affective commitment

H6b: Procedural justice perceptions of HPWS will be positively associated with affective commitment

H7b: Interactional justice (interpersonal and informational) perceptions of HPWS will be positively associated with affective commitment

### ***Trust in management***

Trust can be defined as a psychological state with both affective and motivational components that are important for efficient performance (Kramer, 1999). Trust in management 'entails a state of perceived vulnerability or risk that is derived from individuals' uncertainty regarding the motives, intentions and prospective actions of others on whom they depend' (Kramer, 1999: 571). The degree of trust an employee has in their superiors has been found to affect a number of work outcomes, such as individual work performance, discretionary behaviour, satisfaction and organisational commitment (Kramer and Tyler, 1996; Dirks and Ferrin, 2001; Innocenti et al., 2011). Previous authors have examined trust in management as a means (e.g. Innocenti et al., 2011) or an end in itself (Mayer and Davis, 1999). Research has shown that distributive, procedural and interactional justice are positively associated with trust (e.g. Alexander and Ruderman, 1987; Sweeney and McFarlin, 1993; Saunders and Thornhill, 2003). Therefore, it can be hypothesised:

H5c: Distributive justice perceptions of HPWS will be positively associated with trust in management

H6c: Procedural justice perceptions of HPWS will be positively associated with trust in management

H7c: Interactional justice (interpersonal and informational) perceptions of HPWS will be positively associated with trust in management

### ***Turnover intentions***

HPWS have been found to favourably impact on employee turnover (Guthrie, 2001; Huselid, 1995; Datta et al., 2005). Using social exchange theory, a relationship between organisational justice and turnover intention has been identified in previous justice literature (e.g. Masterson et al., 2000; Alexander and Ruderman, 1987). According to social exchange theory, people perceiving higher levels of organisational justice are less likely to seek alternative employment and leave the organisation. Conversely, those who perceive organisational injustice are more likely to think about leaving the organisation. This suggests that organisational justice is negatively related to turnover intention, implying a potential relationship with possible behavioural outcomes underpinning the HPWS model. A large number of studies have found that interactional and procedural justice are significant predictors of turnover intentions and related cognitions (e.g. Konovsky and Cropanzano, 1991). Alexander and Ruderman (1987) found that procedural and distributive justice perceptions were correlated with job satisfaction, evaluations of supervisors, trust in management and intentions to turnover with procedural

justice being a stronger predictor of attitudes than distributive justice in all but turnover intentions. Pare and Trembley (2007) states that procedural justice partially mediates the effect of high-involvement HR practices on the turnover intentions of employees. Based on the above it is hypothesised that:

H5d: Distributive justice perceptions of HPWS will be negatively associated with intention to leave

H6d: Procedural justice perceptions of HPWS will be negatively associated with intention to leave

H7d: Interactional justice (interpersonal and informational) perceptions of HPWS will negatively associated with intention to leave

### ***Work pressure***

Chapter 2 showed that the positive implications of HPWS on employee outcomes may not be as mutually beneficial as originally thought. Godard (2004) concluded that the positive outcomes are at best uncertain. Critical authors such as Ramsey et al. (2000) and Godard (2004) counter the optimistic mutually beneficial rhetoric of some authors by suggesting that the performance gains of HPWS were through increased control and work intensification rather than increased discretionary effort or job satisfaction for example. Danford (1998), for example, showed how the introduction of teamworking resulted in increased work intensification. Guest (2007) acknowledges that there is some evidence that HPWS increases the demands of the job, which can be associated with slightly higher work pressure and work stress. Findings from cross sectional and longitudinal studies suggest that procedural and interactional injustice are major sources of psychosocial stress at work and interactional injustice in particular has been linked as an effective predictor of self reported health and absenteeism (Elovania et al., 2002). In their study, the authors co-varied out other stressors such as workload and job control and concluded that justice was an important predictor of strain above and beyond other stressors. Therefore, it can be hypothesised that:

H5e: Distributive justice perceptions of HPWS will be negatively associated with work pressure

H6e: Procedural justice perceptions of HPWS will be negatively associated with work pressure

H7e: Interactional justice (interpersonal and informational) perceptions of HPWS will be negatively associated with work pressure.

### ***Work effort***

HPWS researchers have suggested that HPWS are designed to elicit greater discretionary effort to achieve organisational goals by providing employees with the ability, motivation and opportunities (Purcell et al., 2009; Combs et al., 2006; Arthur and Boyles, 2007). Social exchange research suggests that the motivation behind such behaviours is strongly influenced by the quality of the employment relationship (e.g. Coyle-Shapiro et al., 2004). Organisational justice has been shown to contribute to these quality relationships. Some studies have linked employee perceptions of fairness of HRM practices to levels of employee effort in their job (Konovsky and Cropanzano, 1993). For that reason, it is hypothesised that:

- H5f: Distributive justice perceptions of HPWS will be positively associated with work effort
- H6f: Procedural justice perceptions of HPWS will be positively associated with work effort
- H7f: Interactional justice (interpersonal and informational) perceptions of HPWS will be positively associated with work effort

### **4.7.3 Mediating factors impacting HPWS, organisational justice, and employee outcomes**

Research continues to examine relationships between organisational justice and attitudes but is now looking at more complex mediating relationships rather than simple regressions. A review of the justice literature identified a number of possible mediating variables that might impact justice and employee outcomes. Two potentially significant mediators are '*leader-member exchange*' and '*perceived organisational support*'. Looking at these two mediating variables will allow the research to identify sources of justice or source effect where one can differentiate between the actions of the organisation versus the actions of the supervisor/line manager. Research has come to accept that justice is evaluated based on the behaviour of two sources in particular: the organisation and the leader (Colquitt et al., 2001). This is due to the nature of the employment relationship as an exchange relationship where one person does another a favour with the expectation of some return (Blau, 1964; Gouldner, 1960). Two social exchange relationships have been identified as the primary relationships employees are involved in at work. They are leader-member exchange (employee-supervisor relationship) and perceived organisational support (employee-organisation relationship). Both LMX and POS have been shown to be key mediators in explaining justice and employee work outcome relationships (Aryee et al., 2002). Despite conceptual similarities between POS and LMX, Wayne, Shore and Liden (1997) have shown that they are differentially related to particular employee attitudes and as such are distinct concepts.

### **Justice and Leader-member exchange (LMX)**

LMX refers to the quality of the supervisor-employee relationship (Graen and Scandura, 1987) and highlights the important role of the line manager. Boxall and Purcell (2008) point out that

line manager action or inaction is often responsible for the difference between espoused HR policies and enactment. As a result, their role and their behaviour in enacting HR policies are extremely important in HPWS-organisational performance research (Hutchinson and Purcell, 2007) as they exert greater influence over employee behaviour (Redman and Snape, 2005).

The LMX relationship is formed by social exchange processes between supervisor and employee and is usually supervisor oriented. Thus interactional justice is most closely linked to LMX. There are two types of leader-follower relationships identified in the literature: (1) low quality relationships where contributions offered by both the leader and the follower only rise to the level of that required in the job and (2) high quality relationships where leaders seek to offer followers influence and support beyond what is called for in the employment contract (Graen and Cashman, 1975). Previous research has examined the relationship between fairness, LMX and important work related outcomes (e.g. Cohen-Charash and Spector, 2000; Colquitt, et al., 2001, Masterson et al., 2000). Researchers have drawn on the notion that high quality LMX fosters trust between supervisor and employee where trust 'provides the condition under which cooperation, higher performance and/or more positive attitudes and perceptions are likely to occur' (Dirks and Ferrin, 2001: 455). Masterson et al. (2000), for example, found that interactional justice perceptions were positively related to LMX which in turn was a mediating variable in the relationship between interactional justice and supervisor-directed organisational citizenship behaviour and job satisfaction. Managers often fail to incorporate principles of organisation justice in their activities and often neglect to share information as they feel personally threatened (Kim and Mauborgne, 1997). Previous research has also identified LMX as a strong predictor of job satisfaction (Gerstner and Day, 1997; Sparr and Sonnentag, 2008), commitment (Lee, 2005), turnover intentions (Ferris, 1985), job depression and feelings of control at work (Sparr and Sonnentag, 2008). Greenberg and Lind (2000) have found it difficult to convince managers that their own behaviour may be contributing to the very problems they seek to solve. In this current study, the quality of the leader-member exchange as a mediator in the relationship between interactional fairness perceptions of HPWS and employee outcomes will be examined. Therefore, the following hypotheses are proposed:

H8a-c, f: LMX will positively mediate the relationship between interactional (interpersonal and informational) justice perceptions of HPWS and a) job satisfaction, b) affective commitment and c) trust in management and f) work effort

H8d-e: LMX will negatively mediate the relationship between interactional (interpersonal and informational) justice perceptions of HPWS and d) intention to leave, e) work pressure



### **Justice and perceived organisational support (POS)**

POS is defined as the extent to which employees perceive that the organisation values their contributions and cares about their well-being (Eisenberger, Huntington, Hutchinson and Sowa, 1986). While examining the exchange relationships at supervisor level through LMX seems a logical suggestion, as employees will always appraise the actions of their supervisor, Cropanzano et al. (2001) suggest that the notion of organisational level exchanges might be more dubious. Levinson (1965), however, suggested that workers often anthropomorphize the employing organisation and think of it as a social entity; that is a reification, and therefore capable of behaviour in its own right (Coleman, 1993). Eisenberger et al. (1986) proposed that exchanges at the organisational level do occur and they termed this perceived organisational support. It is believed that POS inspires a social exchange norm (Blau, 1964) so that employees feel they should reciprocate by acting in positive ways toward the organisation (Randall, Cropanzano, Bormann and Birjulin, 1999). POS is important within HPWS research as employees take note of organisational attempts to construct or engineer the work environment through HR practices. Depending on the general perception held by employees of POS, these changes to work practices can be viewed as positive and beneficial or as manipulative and negative (Butts et al., 2009). Evidence suggests that individual HR practices do impact on employee perceptions of organisational support. For example, investment in training and development and time given by management to appraising the performance and training needs of employees sends strong messages that they are valued organisational assets (Rhoades and Eisenberger, 2002). Reward strategies associated with HPWS such as pay for performance or paying above market rates (Pfeffer, 1998) also suggest to the employee that they are valued by the organisation. Eisenberger et al. (1986) argued that high levels of POS created feelings of obligation whereby employees felt that they ought to be committed to their employers but also feel an obligation to return the employers commitment by engaging in behaviours that support organisational goals. Research has found that employees with high POS are more likely to exhibit organisational citizenship behaviours and increased discretionary work effort (Eisenberger et al., 1986; Eisenberger, Fasalo and Davis-LaMastro, 1990), lower intentions to quit and have positive associations with rewards and procedural justice, supervisor support, and affective commitment (Rhoades et al., 2001). It is argued that POS is an important mediating influence between procedural justice perceptions, HPWS practices and employee outcomes as procedural justice is the structural dimension of justice. Strong support also exists for the argument that employees become affectively committed to their organisation because of favourable POS perceptions (Eisenberger et al., 1990; Shore and Tetrick, 1991). Indeed, in numerous studies POS has been found to be more strongly related to commitment and intentions to quit than LMX (Wayne, Shore and Liden, 1997). Therefore, the following hypotheses are proposed:

H9a-c,f: POS will positively mediate the relationship between procedural justice perceptions of HPWS and a) job satisfaction, b) affective commitment and c) trust in management and f) work effort

H9d-e: POS will negatively mediate the relationship between procedural justice perceptions of HPWS and d) intention to leave and e) work pressure.

#### **4.7.4 Cross-level analysis: mediating role of organisational justice in HPWS-employee relationship**

Paauwe and Boselie (2005) argue that multilevel analysis is simply unavoidable when looking at the sequence of boxes that reflect the HRM and performance linkage (e.g. those proposed by Guest, 1997; Appelbaum et al., 2000; Wright and Nishii, 2007) due to the need to consider aspects of the organisations social system (Takeuchi et al., 2009). In Wright and Nishii's model, for example, the differentiation between *intended* HR practices, *actual* HR practices, and *perceived* HR practices implicitly reflects analyses at different levels of the organisation. For example, Li-Yun et al. (2007) examined the impact of HPWS systems on voluntary labour turnover and productivity as mediated by service oriented OCB in the hotel sector in China. The high performance HR systems were evaluated by managers at the hotel level. Turnover and productivity were also at the hotel level. Service oriented OCB were reported evaluated at the supervisor level. There was no analysis at the employee level. Takeuchi et al. (2009) examined the relationship between establishment level HPWS and employee job satisfaction and affective commitment (at the individual level) when mediated by establishment level concern for employee climate in Japan. Their findings support the argument that there are 'multiple multilevel pathways through which HPWS benefit the organisation' (pg. 22). Snape and Redman's (2010) study of the influence of HRM practices on organisational citizenship behaviour as mediated by perceived organisational support and perceived job influence also uses multi-level analysis. HRM is conceptualised at the workplace level as reported by the HR manager. Perceived job influence, perceived organisational support and OCB were evaluated at the employee level. Ostroff and Bowen (2000) and Wright and Boswell (2002), stress the importance of blending both levels of research, suggesting an integration of both perspectives would enhance the understanding of the linkages between HR individual responses and firm effectiveness. Given these arguments, it was clear that HPWS research, particularly those examining HPWS-employee relationships, cannot avoid being the subject of multilevel analysis. Therefore, it can be hypothesised that:

H10a-f Distributive justice will mediate the relationship between establishment level HPWS and (a) job satisfaction, (b) affective commitment, (c) trust in management (d) intention to leave (e) work pressure and (f) work effort

H11a-f Procedural justice will mediate the relationship between establishment level HPWS and (a) job satisfaction, (b) affective commitment, (c) trust in management (d) intention to leave (e) work pressure and (f) work effort

H12a-f Interactional justice will mediate the relationship between establishment level HPWS and (a) job satisfaction, (b) affective commitment, (c) trust in management (d) intention to leave (e) work pressure and (f) work effort

#### **4.8 Conclusion**

This chapter examined the application of organisational justice theory to the high performance work systems. It is clear that few organisational practices have escaped scrutiny from the lens of organisational justice. Human resource management practices including performance evaluations (Folger, Konovsky and Cropanzano, 1992), selection (Gilliland, 1993), job security (Kausto et al (2005), employee involvement (Dietz and Fortin, 2007), pay systems (Alexander et al., 1995), teamwork (Colquitt and Jackson, 2006) and downsizing (Folger and Skarlicki, 2001) have all been examined from the perspective of organisational justice. Numerous studies show that when fairness is not present, managers and employees are in a 'lose-lose' situation where neither benefits (Cropanzano, Goldman and Benson, 2005). This raises important issues in relation to the alleged 'win-win' concept of HPWS regimes proposed by many HPWS proponents and highlights the 'competing perspectives' view of HPWS (Van De Voorde, Paauwe and Van Veldhoven, in press). Research has not, however, provided any general framework to assess the 'justice' of the high performance work system (Bonache, 2004). This chapter attempted to rectify this gap by presenting a multi-level conceptual framework for assessing the role of organisational justice in the high performance work system, and assign their potential impact on employee attitudes and behavioural outcomes. In total, twelve hypotheses were developed with a number of sub-hypotheses clustered within each building on this multi-level approach. In the context of this conceptual framework and the twelve hypotheses, Chapter 5 will outline the overall research design and methodology employed in the research. Key methodological debates in HPWS research will be revisited. The phases of the research design will be outlined and all scales used in questionnaires will be described.

### METHODOLOGICAL APPROACH

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#### 5.1 Introduction

The principal aim of the current study is to investigate the impact of HPWS on employee attitudes and behaviours by focusing on the mediating influence of organisational justice. Based on the extant literature, twelve hypotheses clusters were developed and presented in chapter 4. These hypotheses were developed to assist in answering the following research questions:

- 1 How do HPWS policies affect performance outcomes?
- 2 Is the relationship between HPWS and organisational performance dependent on other factors?
- 3 What are the processes that influence employee attitudes and behaviours towards HPWS?
- 4 Why do such attitudes and behaviours occur?
5. How does the relationship between employees, supervisors/managers and the organisation affect employee perceptions of HPWS?

This chapter describes and defends the methodological choices made to answer the research questions outlined above. The purpose of this chapter is to examine the philosophical foundations of this study and describe its methodological choices. The chapter begins with an examination of mixed methods research as an alternative to other research approaches. It argues for the appropriateness of using both quantitative and qualitative methods given the research questions in this study. The second part of the chapter presents the research design chosen. Data collection methods, measurement items and data analysis methods are outlined.

#### 5.2 Philosophical foundations of this research

Before discussing the research approach and methods used in this study, it is important to first outline the philosophical foundations of this research. Guba and Lincoln (1994:105) argue that ‘questions of method are secondary to questions of paradigm, which we define as the basic belief system, or world view that guides the investigation, not only in choices but in ontologically and epistemologically fundamental ways’. This chapter is not going to examine in detail the philosophies of social science research but will briefly examine two extremes and explore the best approach given the research questions being explored in *this* study.

Research paradigms can, in simple terms, be seen as embodying competing methodological approaches classified along a research continuum. Positivism and interpretivism can be seen as the two extremities of a continuous line of paradigms that can exist simultaneously (Collis and Hussey, 2009; Morgan and Smircich, 1980). The *positivist* philosophy reflects the principles of natural science where the researcher works with ‘an observable social reality and that the end product of such research can be law-like generalisations similar to those produced by the physical and natural scientists (Remenyi et al., 1998:32). It rests on the assumption that social reality is singular and objective (Collis and Hussey, 2009). Under positivism, the research process involves a deductive process with a view that theories provide the basis of explanation (Bryman and Bell, 2011). Since it is assumed that social phenomena can be measured, positivism is strongly associated with quantitative research methods.

In contrast, interpretivism is critical of the application of the scientific model to the study of the social world. This paradigm represents a view that social sciences are fundamentally different to the natural sciences and therefore require a different logic of research procedure, ‘one that reflects the distinctiveness of humans against the natural order’ (Bryman and Bell, 2011: 16). Other labels that correspond, or may be variants on, the interpretivist paradigm are constructivism, naturalism, post-positivism, post-modern, hermeneutics and phenomenology (Creswell, 2009; Saunders et al., 2009). Interpretivists are concerned with grasping the subjective meaning of social action. In contrast to the positivist focus on measurement and statistics, the information collected under a qualitative paradigm consists of the researcher’s observations of a phenomenon and the views of informants with particular attention being paid to the context of the phenomenon (Creswell, 2009). Interpretivism is not without its critics also. It is often criticised for its subjectivity as the results are more easily influenced by the researcher’s personal biases and idiosyncrasies (Creswell, 2009).

To date, much of the social and behavioural research has been largely dominated by quantitative methods with positivism as its dominant worldview (Tashakkori and Teddlie, 2003). This is particularly the case in much of the HRM-performance research where a phase of survey-based statistically analysed studies into HRM and performance began to appear in the 1990’s. This dominance was highlighted in Chapter two and Table A.1 which outlined the extant research in the HPWS-performance domain worldwide, most notably in the US. Conway (2003) also illustrated a similar research trend in Ireland and the UK where HRM research has also largely been consistent with a positivist paradigm, with a reliance on survey method and the questionnaire design.

Many criticisms have been levelled at positivism in HRM research and HPWS positivist studies in particular in recent years (for a full review see Becker and Huselid, 2006; Purcell and Kinnie,

2007; and Fleetwood and Hesketh 2010). For example, Godard (1989: 18) criticises the positivist tradition for its acquisition and manipulation of data where 'data becomes an end in itself rather than a means to understanding and explaining the subject matter it is intended to represent'. Marchington and Wilkinson (2005) and Fleetwood and Hesketh (2006) hold the view that while it is possible for surveys to demonstrate the links between certain HR practices and performance, they are unable to explain in detail *why* this relationship might happen. Fleetwood and Hesketh (2010:22) argue that the important features of HRM practices and organisational performance are 'naturally qualitative, inherently complex, multidimensional, evolving and often subjective'. These critics of positivism call for a philosophical and methodological approach that moves away from positivism, as they argue that the social world cannot be measured. Instead, they advocate that a more qualitative approach should be used in examining HPWS which gives detailed and hermeneutic information, namely, information relating to the way different agents (who are involved in the phenomenon) interpret, understand and make sense of various issues (Batt, 2002; Wall and Wood 2005; Fleetwood and Hesketh, 2006, 2008; Hesketh and Fleetwood 2006; Paauwe 2009).

The decision on which paradigm to use is based on the research beliefs held by the researcher and on the nature of the research questions (Saunders et al., 2009). As mentioned, quantitative HPWS research has been criticised for its application of science to the investigation of HPWS in organisations. The purpose of this study is to test a model that explores the impact of HPWS on employees work related attitudes and behavioural outcomes using organisational justice as a theoretical lens. To address this study, the major research questions addressed by this study are: (1) How do HPWS policies affect performance outcomes?; (2) Is the relationship between HPWS and organisational performance dependent on other factors?; (3) What are the processes that influence employee attitudes and behaviours towards HPWS?; (4) Why do such attitudes and behaviours occur?; and (6) How does the relationship between employees, supervisors/managers and the organisation effect employee perceptions of HPWS?

This research, therefore, addresses a number of different types of questions. Firstly, organisational justice theory was used to develop a number of hypotheses in order to answer questions 3 and 4. Thus, the core of this research is deductive where a conceptual and theoretical structure is developed prior to its testing through empirical observation (Gill and Johnson, 2009). This suggests a quantitative method with a focus on measurement of variables and analysis to test relationships between variables. Secondly, the research addresses more open ended questions in seeking answers to *how* and *why* questions (e.g. why do employees perceive work pressure as higher when interactional justice is low?). This suggests a more qualitative approach.

As different research methods appear to be suitable to investigate the various questions in this study, a pragmatist paradigm was adopted using a mixed methods approach. As a philosophy, pragmatism has emerged as the foundational philosophy of most mixed methods research (Bryman, 2009). Some researchers hold the view that research methods are interconnected with certain epistemologies and are not reconcilable (the incompatibility thesis). This posits that qualitative and quantitative research paradigms, including their associated methods, cannot and should not be mixed (Howe, 1988). Whilst the previous discussion shows that quantitative and qualitative research are shown to be connected with very different epistemological and ontological assumptions, in this research, a pragmatic view is taken where research methods are seen not to be necessarily tied to one particular world view. Instead, on the research continuum with qualitative research anchored at one extreme and quantitative research anchored at the other, mixed methods research covers the large set of points in the middle area (Johnson and Onwuegbuzie, 2004). Pragmatism is viewed as freeing the researcher to select whichever methods and data sources might reasonably be used to explore a research problem in pursuit of rigorous and comprehensive findings (Bryman, 2009). Different methods are suitable to investigate each type of question in a single study. Mixed methods research (the research strategy most associated with pragmatism) is defined here as the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language (Johnson and Onwuegbuzie, 2004: 17).

Fundamental to mixed method research design is that it potentially provides a vast array of data collection and investigative processes that can contribute both quantitatively and qualitatively 'toward a richer understanding of key issues and dynamics involved' (Haynes and Fryer, 2000: 242) together with capturing a rich tapestry and meaningful characteristics of real life events (Yin, 2009). Mixed methods involve the use of both qualitative and quantitative approaches in tandem so that the overall strength of a study is greater than either qualitative or quantitative research (Creswell and Plano Clark, 2007). Therefore, in order to address the major limitations of previous HPWS research addressed above, this research takes a mixed method approach. Regarding mixed methods research, Singleton and Straits (2005:245) asserted that it is a 'way the weaknesses of one mode may be offset by the strengths of another mode' and helps build a more comprehensive view of the phenomena being investigated. However, it too is not without its weaknesses. It can be time consuming and requires the researcher to have knowledge of both quantitative and qualitative methods.

### **5.3 Mixed methods approach**

When multiple data collection methods are used in a study, a decision must be made on whether the data are collected all at once (simultaneously) or in stages (sequentially). Mixed method research studies use qualitative and quantitative data collection and analysis techniques either in

parallel or sequential phases (Tashakkori and Teddlie, 2003). When a parallel or simultaneous approach is used, the quantitative and qualitative methods are used at the same time and the information is amalgamated. On the other hand, when the sequential approach is adopted, one method is used to further explore or elaborate on the findings of another method. Table 5.1 outlines the types of multimethod design choices available to the researcher. Testing of hypotheses is the core research purpose in this study and therefore, quantitative methods will be the dominant method, with qualitative methods used sequentially with a deductive theoretical drive.

**Table 5.1: Types of multi-method design**

Inductive theoretical drive	Deductive theoretical drive
1. QUAL + qual <sup>4</sup> for two qualitative methods used simultaneously, one of which is dominant or forms the base of the project as a whole	1. QUAN + quan for two quantitative methods used simultaneously, one of which is dominant
2. QUAL → qual for two qualitative methods used sequentially, one of which is dominant.	2. QUAN → quan for two quantitative methods used sequentially, one of which is dominant
3. QUAL + quan for a qualitative and a quantitative methods used simultaneously with an inductive theoretical thrust	3. QUAN + qual for a quantitative and a qualitative method used simultaneously with a deductive theoretical drive
4. QUAL → quan for a qualitative and a quantitative method used sequentially with an inductive theoretical thrust	4. QUAN → qual for a quantitative and a qualitative methods used sequentially with a deductive theoretical drive.

Adapted from Morse (2003)

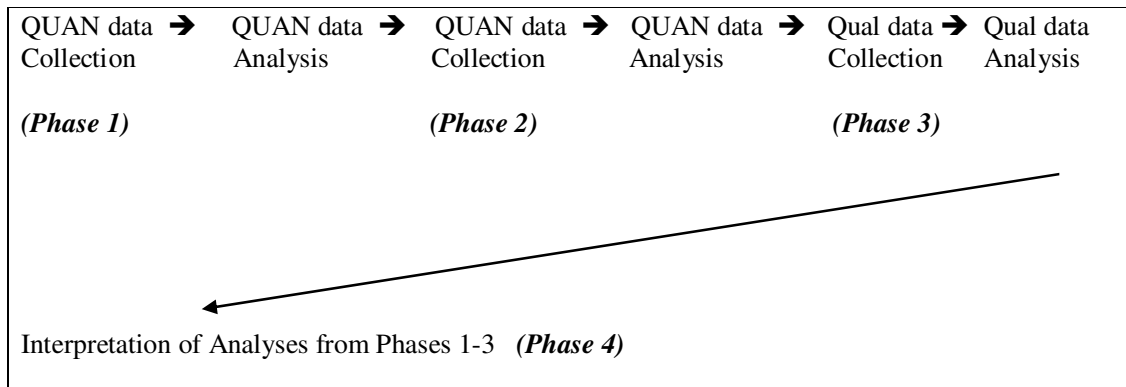
This research study adopted a sequential approach and was conducted in three phases. Phase one embraced quantitative methods and comprised of a survey of HR managers seeking information on HPWS policies and practices and organisational characteristics. This phase sought to answer research questions 1 and 2 by examining the prevalence of HPWS in Irish organisations and exploring how HPWS policy affects performance outcomes. It also assesses the range of possible variables that may influence HPWS and organisational outcomes. In Phase two, quantitative data were collected in three organisations using an employee survey. Phase three adopted qualitative research methods and involved interviews with employees, line managers and HR managers within the three selected organisation. Documentary analysis was also

<sup>4</sup> In mixed methods research the notational systems employed by Morse (1991) is used. The abbreviations QUAN and QUAL are used for quantitative and qualitative. The use of the plus sign (+) indicates that data are collected simultaneously. The use of the arrow indicates that data collection occurs sequentially. Use of uppercase (e.g. QUAN) denotes more priority given to that orientation.



conducted within Phase 3. Data collected in phases two and three were used to answer research questions 3, 4 and 5 by measuring employee perceptions of organisational justice together with employee attitudes and behaviours. Investigating the process by which HPWS impacts employees' attitudes and behaviours and why such reactions occurs suggests that a qualitative research approach (in Phase 3) would be beneficial as a range of contextual variables can be incorporated. Priority is given to quantitative methods however, which are supported by qualitative data and collected sequentially. These methods will be discussed in more detail later in the chapter. Figure 5.1 sets out the sequence of mixed methods used in this research. Use of upper case (*QUAN*) denotes more priority given to this method. The arrow ( $\rightarrow$ ) indicates that data collection occurs sequentially.

**Figure 5.1: Sequence and priority of mixed methods used in this research**



Note: QUAN denotes quantitative as dominant method; Qual denotes qualitative method.  
 Source: Adapted from Creswell (1994)

Table 5.2 outlines the collection methods used in each phase of the research. These will be described in more detail in the following sections.

**Table 5.2 Overview of research strategy**

Phase	Research method used	Output
<p><b>Phase 1</b></p>	<ul style="list-style-type: none"> <li>• <b>Quantitative methods: Survey</b></li> </ul> <p>High Performance Work Systems in Ireland – a national survey of 169 organisations in Ireland</p>	<ul style="list-style-type: none"> <li>• Obtained objective information on the extent to which certain people management policies and practices are being utilised in Irish organisations.</li> <li>• Platform developed for phase 2 research</li> </ul>
<p><b>Phase 2</b></p>	<ul style="list-style-type: none"> <li>• <b>Quantitative methods: Survey</b></li> </ul> <p>Employee questionnaire distributed in three organisations identified from phase 1</p>	<ul style="list-style-type: none"> <li>• Obtained quantitative information regarding employees’ perceptions of HPWS implementation, organisational justice and attitudes and behaviours.</li> </ul>
<p><b>Phase 3</b></p>	<ul style="list-style-type: none"> <li>• <b>Qualitative methods:</b></li> <li>• Interviews with employees, line managers and HR managers</li> <li>• Documentary analysis</li> </ul>	<ul style="list-style-type: none"> <li>• Obtained qualitative data from HR managers on <i>espoused</i> HR policy</li> <li>• Obtained qualitative data on <i>enacted</i> HPWS from line managers</li> <li>• Obtained rich qualitative data on employee <i>experiences</i> of HPWS</li> <li>• Organisational and HR documents providing overview of HR policies, recent company changes.</li> </ul>

The use of mixed methods in this study seeks to overcome some of the criticisms levelled at previous HPWS examined in chapter two. It is acknowledged that survey research design is useful for the collection of large amounts of information and data on a variety of subjects by asking questions and recording the answers (Leedy and Ormrod, 2005). Therefore, as outlined in Table 5.2, quantitative methods were used in phases one and two. Peccei (2004) argues that the emphasis placed on firm performance outcomes has diminished the importance of employee wellbeing resulting in a one sided focus on organisational outcomes at the expense of employees. Guzzo and Noonan (1994) suggest that employees can interpret HRM practices in unintended and idiosyncratic ways. As a result, it is important to collect both the HR function’s view of HPWS policy and the employees’ views of HPWS practices rather than just relying on HR policy directives. Thus, phase 2 of this study particularly focuses on gathering employee perception data. Another criticism of HPWS research methods is that it is usually from just one informant (Gerhart, 2007). This research addresses the need for multiple sources of information about both the presence and the implementation of HR practices (Guest, 2011). This research

sought to address this shortcoming by surveying HR managers and employees and interviewing HR managers, employees and line managers as agents of HPWS.

The qualitative data in phase three is critical in explaining the key propositions (the events and behaviours from HPWS and justice and the outcomes in an evaluative case). Becker and Gerhart (1996: 796) suggest a need for 'deeper qualitative research to complement the large-scale, multiple-firm studies that are available'. Winch (1999, cited in Llewellyn and Northcott, 2007) was of the view that identifying behavioural regularities in social science must encompass the perspective of the agent. This, in turn, makes reference to the cultural context within which the agent acts, as understanding social phenomena involves an appreciation of the context within which they occur. This is important for both understanding how HPWS is implemented in organisations and how it is experienced by employees. It is also important for understanding justice perceptions of employees. The largest gap in organisational justice research has been the infrequent use of qualitative methods. Similar to previous HPWS studies, organisational justice research typically considers justice as an object, a measurable construct and tend towards the positivist paradigm. However, justice, as played out in life, has a complexity and dynamism that is difficult to stimulate in a laboratory or to capture with traditional, quantitative typologies (Taylor, 2001). Justice can also be seen as a social construction (Berger and Luckmann, 1966); a concept that is always in the process of being demonstrated through the interactions of the actors themselves. Saunders (2005) highlights this issue and suggests that qualitative research methods may also have much to offer to the future of organisational justice research and theory development. Taylor (2001) suggests that justice literature might benefit significantly from qualitative studies in real life events as it would:

allow us to examine, in depth and over time, how actors, targets, and observers evaluate the fairness of extremely unfavorable, adversarial, and even catastrophic events, how they form attributions of responsibility for such events, how justice judgments about events are related to those made about the entities held responsible for them, and how they develop both attitudinal and behavioral responses (pg. 251)

As a result of Taylor's call, this research study will use semi structured qualitative interviews in phase 3 to add meaning to the quantitative findings from phases 1 and 2. Qualitative research can reach areas of reality that would otherwise remain inaccessible such as people's subjective experiences and attitudes (Creswell, 2004). The following sections will describe each phase of research conducted.

#### **5.4 Phase 1: High performance work systems survey of Ireland**

The primary aim of the first research phase was to establish the prevalence of HPWS in Irish organisations and determine if HPWS did significantly impact organisational performance variables. This phase adopted a quantitative approach similar to the work of Huselid (1995) and

Guthrie (2001) and involved the design and administration of a survey. The High Performance Work Systems in Ireland survey was designed and administered in March 2006. There are a number of benefits and limitations associated with the questionnaire survey method (Kerlinger, 1986). The cost of administering surveys is relatively low and respondents have an opportunity to think about their answers. Surveys can also provide access to a widely dispersed sample and promotes anonymity and confidentiality (Bryman and Bell, 2011). Questionnaires, through standardisation and validation, can also produce large amounts of data from sample populations. There are, however, a number of limitations including lack of opportunity to probe (Kidder, 1981), lack of interviewer control and potential for poor response rates (Fowler, 2002).

#### **5.4.1 Design stage (Phase 1)**

Attention was given to the questionnaire design process to ensure content clarity, ease of use, confidentiality and a high response rate. Both Van Geest et al. (2007) and Roberson and Sundstrom, (1990) emphasise the importance of questionnaire design for surveys and response rates. Attention was given to ensuring the questionnaires were not overly long to ensure it was respondent friendly. The layout of the HPWS in Ireland survey was done to ensure maximum use of space. Instructions were inserted before each section to ensure there was no confusion over how to answer a question or why a question was being asked. Confidentiality was maintained by not asking questions that might identify the respondent. For the HPWS in Ireland survey, an ID number was assigned to each organisation (although respondents did have the option of identifying themselves if they wished to receive a feedback report on preliminary findings). Finally, the cover letter attached to the survey was used to introduce the researcher and explain what the research was about and why it was a worthwhile exercise to participate in the study. See Appendix E for a copy of the HR survey and letter.

#### **5.4.2 Measurement of HPWS in Ireland survey variables**

Bourque and Fielder (1995) recommend that ‘whenever possible, questions be either adopted or adapted from other studies’. As such, this research used or adapted previous validated scales to measure study variables. This section describes the measures that were used in the company level High Performance Work Systems in Ireland survey, which captured various aspects of HPWS, organisational characteristics and company outcomes. The description of these scales and the justification for using them will be discussed in the ensuing paragraphs.

##### *HPWS measure*

Little agreement exists about what practices should be included within the scope of the term HPWS (Harney, 2009; Purcell and Kinnie, 2007). Most HPWS researchers construct a list of HR practices but there is no agreement on what or which practices to include. However, Wall and Wood (2005: 435) argue that ‘nonetheless, there is much commonality as studies typically cover

a substantial range of the following: sophisticated selection, appraisal, training, teamwork, communication, job design, empowerment, participation, performance-related pay/promotion, harmonization, and employment security’.

In terms of deriving the list of practices to include in the survey, a list was created based on previous empirical research using Huselid’s (1995) seminal work as a base. This list included Arthur’s (1994) ten practices, Huselid and Rau’s (1997) seventeen practices, Guest et al.’s (2000) eighteen practices and Guthrie’s (2001) eighteen practices. These practices were then cross checked against reviews of empirical work (such as Boselie et al., 2005; Wood, 1999). Boselie et al. (2005) highlight 26 general categories of practice indicating that the top four, in order, were training and development, contingent pay and reward schemes, performance management (including appraisal) and careful recruitment and selection. Of particular concern was the issue that some practices are often absent from research in HRM. These include employment security, diversity and work-life balance (as noted by Boselie et al, 2005). Having identified the practices, previously validated measures from previous research were used (e.g. Huselid and Rau, 1997; Guthrie, 2001; Jackson et al, 1989). Ultimately, 28 practices were identified for inclusion covering employee resourcing, training and development, performance management and remuneration, communication and involvement and work-life balance.

In order to capture the breadth and depth of HPWS practices employed, responses were segregated by employee category as suggested by Jackson et al., (1989). Whilst Jackson et al., used four categories of employees, the approach used in this study is similar to that of Huselid and Rau, (1997), Michie and Sheehan, (2005), Guthrie (2001), and Flood and Guthrie (2005). Responses were segregated into two employee categories: group A consisted of production, maintenance, service and clerical employees; and group B consisted of executives, managers, supervisors and professional/technical employees. Research which focuses on two distinct categories overcomes the limitations of studies which treat all employee groupings equally.

These 28 practices were used to create a single index (on a continuous scale) representing an overall measure of HPWS for each organisation. Using the number of employees in each occupational group, a weighted average for each practice was computed. The mean of these 28 weighted averages represented a firm’s high performance work systems score (consistent with Guthrie, 2001; Datta et al. 2005). As noted by Guthrie (2001: 183), this means that ‘organisations may range from those making no use of high-involvement practices to those using *all* of the practices for *all* of the employees.’

### *Organisational outcome measures*

Guest (1997) argues that it is more appropriate to use the term organisational ‘outcomes’ than organisational ‘performance’ when determining HPWS dependent variables as it is a broader term which reflects the wide range of dependent variables that can be used in studies. The HPWS in Ireland survey included a number of performance outcome measures as dependent variables. These included respondent’s subjective evaluation of their firm’s (a) employee performance relative to competitor, (b) HRM performance relative to competitor, (c) innovation, (d) organisational performance relative to competitors, (e) absenteeism, and (f) turnover. These outcome variables are consistent with those used in other HPWS research (see Boselie et al., 2005).

- (a) The *employee performance* variable utilised a scale developed by Guest et al. (2000) with additional items from Huang (2001) which assessed areas such as quality of employees, level of employee output, flexibility of employees and identification with the organisations core values and goals.
- (b) *HR performance* was measured using a three item scale developed by Delaney and Huselid (1996) and included subjective evaluations of the organisation’s ability to attract and retain employees, management employee relations and relations among employees in general.
- (c) *Innovation* was measured by the proportion of organisation’s total sales coming from products or services introduced within the previous 12 months (Jackson et al., 1989).
- (d) *Organisational performance* was created in the form of an averaged index of eight variables. These eight variables measured the subjective evaluation by the respondent of the performance of their organisation against competitors in the same industry in terms of: (1) profitability; (2) growth in sales; (3) market share; (4) quality of products/services; (5) development of new products and services; (6) % sales spent on R&D; (7) satisfaction of customer or clients and (8) operating costs (from Guest et al., 2000; Bennett et al., 1998; Delaney and Huselid, 1996).
- (e) *Absenteeism* was measured across both employee groups by assessing the average number of days per year employees are absent.
- (f) *Turnover* was measured across both employee groups by asking the respondent to estimate their annual employee turnover rate. Both employee turnover measures and absenteeism was created using a weighted average across two groups of employees.

Reservations have been raised about the use of subjective performance measures due to their potential for social desirability bias (Gerhart, et al., 2000b) with some authors concluding that objective performance data are preferable to subjective judgement calls (Boselie et al., 2005; Guest, 2001). However, Purcell and Kinnie (2007) believe it is premature to write off subjective evaluations and rely exclusively on objective performance or profit measures. Similarly, Wall et

al., (2004) found that subjective self reports compared favourably with objective measures in terms of reliability.

*Moderating variables:*

Whilst previous research has shown that a linear causal relationship exists between HPWS and performance, it is suggested that moderator variables may alter the strength of this causal relationship. This research examines two moderator variables in particular, (a) business strategy and (b) management philosophy.

- (a) *Business Strategy*. This is measured by identifying if an organisation pursues a predominantly differentiation or low cost strategy. It has been acknowledged that there are a number of ways to assess organisational strategies. For example, Snow and Hambrick (1980) suggest selftyping using written classifications 'to allow the organizations managers (specifically its top managers) to characterize the organizations strategy' (Snow and Hambrick, 1980:533). In this research, the approach adopted by Huselid and Rau (1997) was used. Respondents were asked to indicate the proportion of their firm's annual sales derived from each of these strategies (low cost and/or differentiation strategy) where responses were constrained to equal 100%.
- (b) *Management philosophy* in this study measured the organisations view of employees as reflected by Ostermans (1994) commitment philosophy where employees are seen as an important strategic resource. This was measured using a 5 item scale combining items by Huselid and Rau (1997) and Datta et al., (2005). Items included 'Management in this organisation view employees as a strategic resource' and management views its employee's primarily as a cost of doing business (reverse coded)'.

*Control variables*

A number of external variables were included in the research design to isolate the impact of HPWS on the dependent variables and identify factors that might influence the HPWS-performance relationship. This study controlled for sector, age, size, country of origin, unionisation (see Boselie et al., 2005; Guthrie, 2001).

- (a) Firm age was measured with the following question; 'How long has your organisation been in operation (in Ireland)?'
- (b) Total number of employees employed was used to indicate firm size. Datta et al., (2005) argue that size should be included as a control as it can be an important determinant of sophisticated HR. The size variable is referred to as the natural logarithm of the number of total employees in the organisation. To calculate this, a log transformation was used. The log of this variable is taken so that a few large firms would not affect the results disproportionately (Fey et al., 2000).

- (c) Unionisation was measured by asking respondents to indicate ‘What proportion of your workforce is unionised?’ A weighted average of responses for Group A and Group B was used to compute unionisation. A variable was then created where unionisation was coded 1 and non union was coded as 0.
- (d) To capture country of ownership, respondents were asked to indicate whether their organisation was Irish owned, US owned, European owned or other. A dummy variable was then created with Irish companies coded as 1 and foreign-owned companies coded as 0.
- (e) Industry sector was measured by asking respondents to indicate which category best describes their primary industry sector. Twelve industry categories were sourced from (PriceWaterhouse-Cranfield, 1995). Sectors included: (1) chemical products (2) agriculture/forestry/fishing/energy/water, (3) metal manufacturing (4) retail and distribution, (5) banking and finance. The companies were dummy-coded to show their membership in one of either manufacturing or services sector (Michie and Sheehan, 2005).

#### **5.4.3 Administration of survey (Phase 1)**

This survey uses the firm as the unit of analysis and facilitated the collection of a large amount of data across many organisations and industries operating in Ireland. A sample of organisations was identified using stratified sampling techniques which excluded those companies which did not meet the criteria for inclusion. The primary criterion for inclusion in the study was that organisations in the sample were identified as ‘high performing’. The sample was also devised to ensure that a representative set of Irish-based operations across multiple sectors. The final sample was identified using the top 2,000 performing companies in Ireland (drawn from Irish Times Top 1,000 companies, Kompass Directory and Top 500 Places to Work Survey 2006). After pilot testing, 1,995 surveys were posted to a senior HR manager (or senior manager with responsibility for human resource issues) in each organisation by post. Following follow-up letters and calls, 175 usable surveys were returned. Due to large amounts of missing responses on some of the key areas required for the analysis (particularly the variables needed for the creation of HPWS index), the usable number of respondents for the study was reduced to 169. This represents a response rate of 8.5 percent. This will be discussed in more detail in section 6.2 of chapter 6.

#### **5.4.4 Exploratory factor analysis and Cronbach’s alpha test (Phase 1)**

This section presents the factor analysis and Cronbach’s alpha results for the key study variables in phase 1 through descriptions of factor analysis results as advocated by Ford et al. (1986) and Hunter (1980). Factor analysis is the most commonly used analytic technique for data reduction and refining constructs in research (Hinkin, 1995) and provides evidence of construct validity (Cronbach and Meehl, 1955). Factor analysis using principal component analysis with varimax



rotation was conducted on both the HR survey and the employee-level data to reduce the number of variables by finding the common factors among them (Punch, 2005). In addition, the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) and Bartlett's Test of Sphericity were calculated using SPSS. KMO measures sampling adequacy to examine the appropriateness of factor analysis. Kaiser (1970, 1974) recommend accepting a KMO statistic of 0.5 or more for factor analysis with higher scores indicating the pattern of correlations are relatively compact thus yielding distinct and reliable factors. Bartlett's test of sphericity tests whether the correlation matrix is an identity matrix, which would indicate that the factor model is inappropriate as variables would be perfectly independent from one another. Only variables with factor loadings greater than .40 on one factor are used in defining that factor (Comrey, 1978). The factors should have eigenvalues greater than one (Kaiser, 1970) and the explained variance should exceed 0.50. Field (2009) advises that if you are using a factor analysis to validate a questionnaire, it is important to also check the reliability. Despite some limitations, Cronbach's coefficient alpha is the most widely used measure of scale reliability (Peterson, 1994). The reliability for all the multi-item constructs was established through calculating a Cronbach's alpha and are reported in the factor analysis tables below. From a statistical perspective, a Cronbach's alpha coefficient of 0.70 or more indicates acceptable internal consistency (Pallant, 2001, Nunnally, 1978).

*Factor analysis for independent variables*

Factor analysis results for the independent variable, High Performance Work Systems (HPWS) is shown in Table 5.3. A one factor solution emerged with factor loadings of .631 or higher. A reliability test was carried out and the composite measure had a Cronbach's alpha of .826.

**Table 5.3: Factor analysis of HPWS index**

Items	Mean	SD	Factor 1
Employee resourcing	47.51	19.16	.786
Training and development	49.67	18.74	.667
Performance management and remuneration	31.88	21.81	.653
Communication and involvement	51.64	24.18	.819
Work life balance	50.13	46.38	.631
<i>Eigen value:</i>			2.55
<i>Total explained variance (%)</i>			51.1
<i>Cronbach's alpha coefficient:</i>			.826
Extraction Method: Principal Component Analysis (PCA) Rotation Method: Varimax KMO (0.78) and Bartlett's Test ( $p=0.000$ ) Only factor loadings 0.4 and above are used			

*Factor analysis for dependent variables*

Table 5.4 shows the factor loadings for the employee and HR performance scales. Two factors emerged. Factor one included 7 items and accounted for 46 percent of total variance. This was labelled 'employee outcomes'. The scale reliability of this measure was Cronbach's alpha .85.

Factor two had 3 items with factor loadings of .74 or higher and was labelled ‘HR outcomes’. The scale reliability of this measure was Cronbach’s alpha .75.

**Table 5.4: Factor analysis of employee and HR performance variables**

Items	Mean	SD	Factor 1 Employee outcomes	Factor 2 HR outcomes
Position relative to competitors - attract and retain staff	3.65	.777		.748
Position relative to competitors - management and employee relations	3.83	.716		.848
Position relative to competitors - relations among employees	3.84	.696		.756
Relative to competitors - levels of employee motivation	3.58	.724	.623	
Relative to competitors - employee identification with organisation’s values	3.55	.807	.546	
Relative to competitors - quality of employees	4.03	.661	.616	
Relative to competitors - level of output achieved by employees	3.87	.673	.722	
Relative to competitors -extent of innovative ideas from employees	3.14	.842	.642	
Relative to competitors - flexibility of employees to adapt to changes	3.65	.898	.818	
Relative to competitors - flexibility of employees to move between jobs	3.67	.826	.695	
<i>Eigen value</i>			4.60	1.23
<i>Total explained variance (%)</i>			46.03	12.36
<i>Cronbach’s alpha coefficient</i>			.848	.753
Extraction Method: Principal Component Analysis (PCA) Rotation Method: Varimax KMO (0.84) and Bartlett’s Test ( $p=0.000$ ) Only factor loadings 0.4 and above are used				

Table 5.5 shows the factor loadings for the eight subjective organisational performance items. A one factor solution emerged. Two items (highlighted below) had factor loadings of less than .40 and were not included in the organisational performance variable. The one-factor solution accounted for 49.45 percent of total variance. The Cronbach’s alpha for this measure was .81.

**Table 5.5: Factor analysis of organisational performance variable**

Items	Mean	SD	Factor 1
Position relative to competitors – profitability	3.58	.873	.499
Position relative to competitors – growth in sales	3.62	.835	.665
Position relative to competitors - market share	3.49	.885	.719
Position relative to competitors - quality of products/services	4.00	.713	.592
Position relative to competitors - development of new products/services	3.56	.881	.746
Position relative to competitors - % sales spent on R&D	3.06	.929	.777
Position relative to competitors - satisfaction of customers/clients	3.87	.733	.187
Position relative to competitors - operating costs	3.23	.835	-.140
<i>Eigen value</i>			3.15
<i>Total explained variance (%)</i>			49.45
<i>Cronbach's alpha coefficient</i>			.812
Extraction Method: Principal Component Analysis (PCA) Rotation Method: Varimax KMO (0.72) and Bartlett's Test ( $p=0.000$ ) Only factor loadings 0.4 and above are used			

Table 5.6 presents the factor analysis results for the moderating variable, management philosophy. The five items loaded on to one factor with reporting factor loadings of .415 or more. This factor explained 48 percent of variance and had a reliability alpha of .708.

**Table 5.6: Factor analysis of moderator variable (management philosophy)**

Items	Mean	SD	Factor 1
This firm has a clear strategic mission that is well communicated and understood at every level throughout the organisation	3.30	1.12	.719
Management in this organisation views employees as a strategic resource.	3.89	1.03	.852
People issues are a top priority for management ahead of either finance or marketing issues.	3.29	.993	.779
Management views its employees primarily as a cost of doing business (R)	3.32	.992	.608
Management look outside the organisation (e.g. what competitors are doing) to identify people management trends and future needs.	2.56	1.13	.415
<i>Eigen value</i>			2.39
<i>Total explained variance (%)</i>			47.83
<i>Cronbach's alpha coefficient</i>			.708
Extraction Method: Principal Component Analysis (PCA) Rotation Method: Varimax KMO (0.75) and Bartlett's Test ( $p=0.000$ ) Only factor loadings 0.4 and above are used			

## 5.5 Phase 2: High performance work systems in practice

Phase 2 of the research sought to examine HPWS at the micro level across a number of organisations by exploring the processes that influence employee attitudes and behaviours

towards HPWS and the role organisational justice, the supervisor and the organisation has on these attitudes and behaviours. This phase utilised employee surveys. Phase 2 of the research proved problematic for the researcher, largely due to the employee survey element of the research strategy. The HPWS index mentioned above was calculated for all usable responses to the Phase 1 organisational survey. This HPWS index was the primary criterion used to identify and select prospective companies for involvement in Phase 2. A number of companies were initially approached to participate. However, after initial agreement from a number of organisations, the timing of their own employee attitude surveys meant significant delays in getting access. Issues around job security and potential redundancies in two organisations also meant that the HR managers felt it was not a good time to survey or interview employees given the sensitive environment in which they were operating. Eventually, after much negotiation, three organisations were identified as suitable for investigation and access for data collection was successfully agreed.

### **5.5.1 Design stage (Phase 2)**

The logic underlying the use of multiple case studies is that each case is selected so that it predicts contrasting results but for anticipatable reasons (Yin, 2009). This decision is a reflection of case replications needed for the study – in this instance, a two tail design in which cases from both extremes of HPWS utilisation have been deliberately chosen together with a case sitting in the middle of the HPWS continuum. It was anticipated that this would offer contrasting situations and not seek direct replications. Kaufman (2010), for example, presents a model where each firm compares the extra productivity and revenue generated by using an additional unit of HRM practice in production with the extra costs occurred. For some firms, given size, technology of production, skill and demographic characteristics of the workforce, profits could very well be maximised with zero HRM practices. For other firms, the intermediate level may be the level of profit maximisation or, given size, technology and other internal and external factors high levels of HRM practices are needed to maximise profit. A second criterion for selection was that each organisation should operate within the service sector. A review of the literature in chapter 2 showed that the majority of HPWS research has focused on HPWS in the manufacturing sector (e.g. Appelbaum et al., 2000; MacDuffie, 1995) with little empirical work drawing on data from the services sector (Harley et al., 2007). To overcome this gap in HPWS research, it was important to focus on organisations operating in the services sector.

All three organisations chosen had participated in HPWS in Ireland survey from phase 1. As outlined, the most important criterion for selecting potential cases was the HPWS index (i.e. to show the extent to which a firm invests little or nothing in HRM practices, invests an intermediate level or a high level) and operating in the service sector. It was decided to choose these three case organisations as they represent these three levels – low HPWS investment,

intermediate HPWS investment and high HPWS investment. These organisations and their HPWS score are as follows:

Food Co	Low HPWS index (29.75)
InsureCo	Medium HPWS index (59.04)
ProfCo	High HPWS index (77.46)

Similar to phase 1, attention was given to the questionnaire design process in terms of variables, layout and response rates. The pretest of the employee survey was conducted on 5 employees in companies similar to the participating companies (i.e. 1 employee in food retail, 2 in insurance and 2 in professional services/law). The pretest involved giving self administered questionnaires to the participants, followed by an interview. Respondents were encouraged to identify ambiguous items and suggest necessary changes. The wording of a number of questions was refined as a result of the pretest.

### **5.5.2 Measurement of employee level survey variables**

This section describes the measures that were used in the employee-level survey, which captured various aspects of HPWS implementation, perceptions of fairness and a number of employee outcomes. Similar to the measures discussed in phase 1, the employee survey also used previously validated scales. The description of these scales and the justification will now be discussed.

#### *Organisational justice measures*

A number of debates can be found in the justice literature on issues concerning construct discrimination, measurement and analysis of organisational justice. These were considered by the author when developing the organisational justice scales, whilst also acknowledging the importance of the research questions being addressed.

The first issue surrounds the distinctiveness of the justice dimensions. As previously discussed in chapter 3, some researchers have returned to the basic distinction between fairness of process (procedural) and fairness of outcome (distributive), disregarding interactional justice (Folger and Cropanzano, 1998). Others have made no effort to separate procedural and distributive justice and instead treat them as one overall justice concept (Martocchio and Judge, 1995). A similar construct discrimination concern applies to procedural and interactional justice, where some researchers have treated interactional justice as a third type of justice (e.g. Aquino, 1995; Bies and Shapiro, 1987) whilst others have considered it a subset of procedural justice (e.g. Moorman, 1991; Tyler and Bies, 1990). Colquitt (2001) explored the dimensionality of organisational justice and found that it was best conceptualised as four distinct dimensions:

distributive justice, procedural justice, interpersonal justice and informational justice. Bies (2005) also emphasises the importance of research studies that measure all four constructs of justice. As a result of the work of Colquitt et al., (2001) and Cohen-Charash and Spector (2000), this research divides the social aspects of justice from the formal aspects and uses four justice constructs with procedural and interactional (informational and interpersonal) justice being treated as separate constructs. Thus, four justice scales were used to measure (1) distributive justice, (2) procedural justice, (3) interpersonal justice and (4) informational justice.

A second issue to consider was that of the context in which fairness is to be judged (Colquitt and Shaw, 2005) where questions around generic versus domain specific scales arise. Generic scales of justice constructs consist of general attitudinal items that are 'context free'. These items require the respondent to indicate their fairness perceptions without providing them with specific contexts. Therefore, the respondent is not asked to refer to some specific aspect of the work environment but must instead appraise their supervisor or the organisation as a whole. In contrast, the domain specific scales consist of context specific items. These items require the respondents to indicate their fairness perceptions in a specific context. For example, a respondent may be asked to assess distributive justice in the pay context: 'The salary I receive is a fair reward of what I do on the job' (Gilliland and Chan, 2001). Greenberg (1996) and Gilliland and Paddock (2005) have argued against investigating justice in a context free manner and advocated studying justice issues as they apply to specific HR contexts, e.g. performance appraisals. Generic items were believed to be less informative, since they do not tell us the specific aspect of the work situation the respondents had in mind when reporting their fairness perceptions (Gilliland and Chan, 2001). As a result, a decision was made in this study to ask for fairness perceptions across each individual HPWS practice as defined in chapter 2 (e.g. compensation, performance management, recruitment and selection). This decision of context was particularly important, as this research aims to investigate the impact of a bundle or system of HPWS practices on employee outcomes with a focus on HR as a *system* rather than a series of individual practices. The argument being that employees are typically exposed to a host of HR practices simultaneously, and these practices do not always influence the employees independently (Takeuchi et al., 2007). As a result, any empirical investigation of HR activities or HPWS and their subsequent outcomes should operate at the system level (Ichniowski et al., 1997). Therefore, unpicking justice perceptions across each HPWS domain was important in order to assess through applying questions to specific HPWS contexts. This was important as research questions 3 and 4 sought to examine the processes that influence employee attitudes and behaviours to the HPWS system as a whole and why such reactions occur.

The next issue to consider was which HPWS practices to include. The researcher built on the HPWS in Ireland survey (Phase 1) and included questions on employee resourcing, performance

management, compensation, communication and involvement and promotion. As one of the organisations had no work life balance (WLB) policies in place it was decided to leave questions on WLB out. The choice of HPWS practices was also determined by other authors. Boselie, et al.'s (2005: 73) analysis of HPWS research between 1995 and 2003 found that the top four HPWS categories, in order, were 'training and development, contingent pay and reward schemes, performance management (including appraisal) and careful recruitment and selection'. Also, Guest et al. (2004) discriminates between HPWS practices and HPWS techniques. For example, 'selection' is a HPWS practice that can entail a number of techniques within that category (e.g. aptitude tests, assessment centres). Therefore, the questionnaire asks for perceptions of practices in general rather than specific techniques.

Finally, the issue of direct versus indirect measures of justice required consideration (Lind and Tyler, 1988). Direct measures explicitly ask 'how fair' the outcome, procedure or interpersonal treatment was. Indirect measures, in contrast, assess fairness by using the rules of justice identified in previous research that were found to foster fairness perceptions (e.g. procedural justice rules of bias suppression and consistency identified by Leventhal (1980)). Colquitt's (2001) organisational justice scale is another example of a scale that measures justice indirectly (e.g. 'have you been able to appeal the outcome arrived at by those procedures?'). In this research, the scales for measuring distributive, procedural, informational and interactional justice used direct measures predominantly with some indirect measures. Where an indirect measure was used, it focused on a dimension deemed important in the research. For distributive justice, the equity rule was examined. For procedural justice, the voice rule was assessed as it is acknowledged that this is the one procedural dimension used most frequently in procedural justice scales (Fields, 2002). This decision to focus on direct measures where criteria or rules for assessing fairness were deliberately not provided was made partly because of restrictions in questionnaire length and partly in order to allow employers to use their own reasoning to assess fairness. The question of whether researchers should include items measuring *every* justice rule has been discussed in justice literature with no clear consensus. The general agreement however is that justice is context specific and certain rules may not be applicable to all decision making settings (Colquitt and Shaw, 2005). Direct measures also overcame the problem of contamination (Colquitt and Shaw, 2005) where one measure of justice can contain items that are actually measuring another. The following scales were taken and adapted from measures by Price and Mueller (1986), Colquitt (2001), Gilliland (1994), McFarlin and Sweeney (1992):

- (a) *Distributive justice* was measured using an 11 item scale measuring distributive fairness of decisions across the following HPWS practices: employee resourcing, training and development, performance management, pay, employee involvement, grievance and disciplinary, succession planning and job security. These measures focused on the

assessment of the degree to which rewards received by employees are perceived to be fair related to performance inputs. Thus, in assessing pay, respondents were asked to identify the extent to which they agreed or disagreed with the following item: 'I am fairly paid for the amount of work I do'. This applies the equity rule to distributive justice perceptions (Colquitt, 2001). All items were assessed using a 5 point likert scale where 1 equals strongly disagree and 5 equals strongly agree.

- (b) Perceptions of *procedural justice* were measured by 14 items adapted from Sweeney and McFarlin (1993) and Tyler and Lind (1992). This scale used both direct and indirect justice measures. An example of a direct justice item included was, 'In my opinion, procedures used to evaluate my performance are fair' (Sweeney and McFarlin, 1993). Indirect procedural justice items examined voice perceptions in particular. Gilliland and Paddock's (2005) review of justice and individual HR policies identified voice as the most consistently important criterion for procedural justice across all of the HR practices they reviewed. For example, an item assessing voice in performance appraisals included 'my supervisor gives me the opportunity to express my views and feelings during my performance evaluation'.
- (c) *Informational and interpersonal justice* assess Bies and Moag's (1986) rules of interactional justice indirectly by assessing whether the authority figure enacting the HR procedure (usually a supervisor) treated the employee with dignity and respect and explained decisions clearly. Items used in the survey were taken from Colquitt (2001) and adapted to certain HR contexts. Informational justice items included 'My supervisor lets me know my appraisal outcomes and provides justification'. Interpersonal items include 'My supervisor treated with me respect and dignity during pay determination'.

#### *Employee outcomes*

To study the effects of HPWS, Paauwe and Boselie (2005) argue that it is preferable to use outcome variables that are closely linked to these interventions, for example: attitudinal outcomes (e.g., employee satisfaction, motivation, commitment, trust), behavioural outcomes (e.g., employee turnover, absence), and quality of services or products. The following workplace attitudes and behavioural outcomes were measured in order to answer research questions 3 and 4.

- (a) *Job satisfaction* was measured by a three item scale adopted from the Index of Organizational Reactions (Dunham and Smith, 1979). This scale included items such as 'All in all, I am satisfied with my job'. Responses ranged from (1) strongly disagree to (5) strongly agree.
- (b) *Organisational affective commitment* was measured by five items from Meyer and Allen (1997). Examples of items asked include 'I feel a strong sense of belonging to my



organisation' and 'Working at this organisation has a great deal of personal meaning to me'. Previous studies show reliability values of between .77 and .88 (Fields, 2002).

- (c) *Trust in management* was measured using a three item scale adapted from the 2004 Work Employment Relations Survey (WERS) survey (see Guest et al., 2008) which included items concerning the level of trust in management by employees. Items included 'Management delivers on its promises'. A five point Likert-type scale was used from strongly disagree (1) to strongly agree (5).
- (d) *Turnover intention* was measured by a three item scale adapted from Cammann et al. (1983). This scale measures the degree to which participants are thinking of quitting, intend to search, and intend to quit. Each item was presented with a five-point response scale ranging from 1 (strongly disagree) to 5 (strongly agree).
- (e) *Work intensification and effort* was measured using a seven item scaled adapted from Green (2001), Burchell (2002) and Danford et al. (2005). The scale include items tapping into discretionary effort (I often put effort into my job beyond what is required) and constrained effort (My job requires that I work very hard) as reported by Green (2001). Other items tapped into perceptions of work pressure as defined by Burchell (2002) including, 'I feel under pressure from my managers and supervisors in my job' and 'I feel under pressure from the sheer quantity of work I have'. Finally, 3 items by Danford et al. (2005) adapted from WERS 1998 survey were included to tap into employee experiences of work place stress. For example 'I never seem to have enough time to get my job done'.

#### *Mediating variables*

Research question 5 seeks to examine how the relationship between employees, supervisor/manager and the organisation affect employee perceptions of HPWS. Leader member exchange and perceived organisational support are the two mediating variables being tested at the employee level to determine supervisor and organisation affects. The purpose of testing for mediation is to understand the mechanism through which the initial variable affects the outcome (Baron and Kenny, 1986) through process analysis.

- (a) The most consistently used measure of *leader-member exchange* (LMX), the seven-item LMX-7 scale developed by Graen et al. (1982) was used in the questionnaire (see Graen and Scandura (1987) for a full review). Two illustrative LMX items are 'I always know how satisfied my supervisor is with what I do' and 'My supervisor recognises my potential some but not enough (reverse coded)'. Employees responded to a five point scale with anchors of 1 (strongly disagree) to 5 (strongly agree). One item was removed following factor analysis.
- (b) The shortened version of the *perceived organisational support* scale developed by Eisenberger et al, (1986) was used. These items measure an employee's perception of the degree to which the organisation values the workers contributions and the actions that the

organisation might take to affect the well being of employees. This shortened version, using just nine items, has been used in previous research (Ferris et al., 1999; Eisenberger et al., 1997). Employees indicated their degree of agreement to these items on a five point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Sample items include 'My organisation is willing to extend itself in order to help me perform my job to the best of my ability' and 'My organisation cares about my general satisfaction at work'.

#### *Control variables*

The employee data included a number of control variables. These were gender, age, education, organisational tenure and nature of employment contract. Research has shown that these variables demographic characteristics of the perceiver were found to be related to job attitudes or relationships involving job attitudes (e.g. Mathieu and Zajac, 1990) particularly in organisational justice research (Greenberg and Wiethoff, 2001). Similarly, Boselie et al. (2005) found that individual-level HPWS studies tended to control for personal characteristics such as age, gender, tenure and educational attainment.

*Gender* was measured where male equals 1 and female equals 0. For sensitivity reasons, *age* was measured using categorical variables. These variables were then dummy coded where all participants aged 25 or under were coded 1; all other respondents were coded zero. The 25-45 year category was coded 1; all other respondents were coded zero. Finally, all respondents over 45 were coded 1, all other respondents are coded zero. The 25-45 and >45 categories were the two dummy variables entered into regression analysis. *Educational attainment* was measured by a categorical variables with categories ranging from 'none/primary level' to 'doctoral level. This was then coded into one dummy variable where primary degree or higher equaled 1 and no primary degree equaled zero. To calculate tenure, respondents were asked to indicate how many years they had worked at their present organisation. Finally, respondents were asked to indicate which employee category best applied to them. Options included full time (permanent), full time (fixed term/temporary contract), part time, agency worker and other. This was then recoded where full time permanent equalled 1 and non full time permanent equalled zero.

#### **5.5.3 Administration of survey (Phase 2)**

Data collection in the three companies took place between May 2008 and December 2009 and the researcher used both traditional paper and pencil and web-based questionnaires. The HR manager in each organisation was the contact point to give employees advance notice of the questionnaire, help distribute questionnaires (in hard copy or electronically) and send follow up messages to encourage non respondents to reply. In both InsureCo and ProfCo, web-based questionnaires were sent to employees by email. For this purpose, a web-based questionnaire was constructed by using the survey monkey software (<http://www.surveymonkey.com>).

Instructions on both the paper and web based survey informed participants that the survey was part of a study to learn more about employees' perceptions of Human Resource practices, how they are implemented in their company and how employees feel about their workplaces. Each survey began with instructions on how to complete the survey, how long it should take and informed employees that it was voluntary and all responses were confidential and would be treated in aggregate. This was followed by demographic questions such as gender, age, and education level. Part 2 assessed implementation of HRM using instruments to assess employee perceptions of organisational justice across a number of HPWS practices. Part 3 examined employee perceptions of their job and the workplace using measures such as affective commitment, job satisfaction and work intensification. Finally parts 4 and 5 examined the employees' view of their supervisor and their organisation using instruments assessing leader-member exchange and perceived organisational support (See Appendix F for a copy of the employee questionnaire). Participants were initially given one week to complete the questionnaire. After the first week, the relevant managers sent a reminder to the participants through e-mail (or face to face in FoodCo), reminding the non-respondents to complete the questionnaire.

In both ProfCo and InsureCo the employee questionnaire was administered using an online survey. In relation to organization size, ProfCo had multiple units across Ireland. Following negotiation with the HR manager, permission was given to survey a subsection of employees from their headquarters in Dublin only. Thus, the researcher only had access to a sample of 400 employees (across professional service employees and internal firm services). InsureCo has just one unit operating in Dublin with 85 employees. All 85 employees were surveyed. The HR managers in both InsureCo and ProfCo were of the opinion that maximum response rates might be achieved if they emailed the link to the questionnaire to their employees. A week before the link was emailed, advance notice was sent via email informing the participants about the study and the researcher.

In contrast to InsureCo and ProfCo, Foodco had over 350 sites operating across the country. Fifteen sites were initially identified by the HR manager as potential participants in the study. In the end, ten sites agreed to participate across their three major business categories – health, education and commercial. The majority of sites surveyed were based in Dublin city or the greater Dublin area with two based in Cork and one in Galway. Fieldwork in FoodCo took place between May and October 2008. Hard copies of the survey were distributed to employees in FoodCo by their unit manager as the nature of their job meant they did not have access to email during work hours. Issues around different shift patterns were also considered when distributing the questionnaire to ensure all employees in each unit were targeted. Addressed envelopes were provided to each employee to ensure their responses were returned to the researcher and

remained confidential. The employees could then return the survey in a sealed envelope directly to the researcher by post or to their unit manager. The line manager then either returned them via post by an agreed date or the researcher personally revisited the site and collected them.

Table 5.7 highlights the number of potential respondents in each organisation and the actual response rate. Since there was no available data for the non respondents, it was difficult to compute any measures of a non response bias. The overall weighted average response rate was 34 percent.

**Table 5.7: Response rate for employee level survey by company**

No	Company	Total Population	Targeted sample	Final Sample	Response rate %	Questionnaires eliminated	Final sample size
1	FoodCo	4000	315	120	38%	13	107
2	InsureCo	85	85	45	53%	6	39
3	ProfCo	2300 (1700 in Dublin office)	400	46	11.5%	5	41
	Total		800	211	Weighted average = 34.1	24	187

#### **5.5.4 Exploratory factor analysis and Cronbach's alpha test (Phase 2)**

This section presents the factor analysis and Cronbach's alpha results for the key study variables in phase 2 using procedures already discussed in section 5.4.4.

##### *Factor analysis for organisational justice variables*

Earlier in this chapter, the choices inherent in choosing measures for use in organisational justice research were outlined. Four justice types were measured – distributive, procedural, interpersonal and informational justice. The context of justice was also considered important (Greenberg, 1996) which resulted in items being chosen to tap into specific events or contexts that make up a HPWS in which fairness is judged. These contexts included selection decisions, performance evaluation events, training and compensation. Finally, items were taken from a number of previously validated scales with a primary focus on direct (how fair) items with some indirect items (focusing on justice rules such as equity and voice in particular). Arguments for these choices have been put forward whilst also acknowledging limitations. A four factor solution from all of the justice items was desirable to fit with the four justice types discussed in the literature review. However, two and three factors models of justice have also been conceptualised in the literature (Ambrose et al., 2007). The results of the factor analysis performed on the justice data in this study produced more than four factors. From the scree plot, it was clear that one major factor was explaining over 47 percent of variance. Ford et al.'s (1986) review of factor analysis in psychological research identified a number of suggestions for

improvement in factor analysis and reporting of results. One strategy was to use a number of decision rules and examine a number of solutions prior to coming to a final conclusion on which items to retain. Chapter 2, which examined the high performance work system, suggested that there was no general consensus as to what practices constitute a coherent high performance work system (Boselie et al., 2005) with items included in the 'bundle' of HPWS varying considerably across studies (Snape and Redman, 2010; Wood and Wall, 2007). However, it has been shown that core elements of HPWS include staffing, performance management and remuneration; training and development and employee involvement (see Datta et al., 2005; Guthrie et al., 2011; Paauwe and Boselie, 2005). These practices are among the most popular in both the research literature and organisational practice (Birdi et al., 2008; Wall et al., 2004). Having examined the employee level data, a decision was made to remove items pertaining to justice perceptions of job security and grievance procedures. Six items measuring justice perceptions of recruitment and selection, training and development, performance management, compensation, succession planning and employee involvement practices were retained. Further analysis of the data through confirmatory factor analysis of the items in Tables 5.8 and 5.9 using structural equation modelling was not possible due to the sample size.

Using these six HPWS practices, individual items measuring distributive justice were factor analysed and loaded onto two factors (see Table 5.8). One factor measured employee perceptions of distributive fairness for a bundle of HR practices: staffing, performance management, succession planning, training and development and employee involvement. This factor explained 46.90 percent of variance and is labelled 'Relational Distributive Justice<sup>5</sup>' justice (Cronbach's alpha = .877). The remaining items loaded onto a second factor relating to distributive fairness of compensation (eigenvalue = 1.36, % of variance = 15.11%). This factor has been labelled as Transactional Distributive Justice (Cronbach's alpha = .830). Factor 2 was labeled Transactional Distributive Justice as it tapped into HPWS practices that are considered economic in nature i.e. pay and compensation, which has a short-term focus. Factor 1 contains HPWS practices relating to training, performance management, employee involvement and succession planning which focus on supporting employee growth to ensure a long-term career path within a firm (Robinson, Kraatz and Rousseau, 1994). This factor was labeled Relational Distributive Justice.

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<sup>5</sup> The author draws on terms used by psychological contract researchers such as Rousseau (1989) and Robinson, Kraatz and Rousseau (1994) where a transactional psychological contract focuses on economic exchange such as pay and relational psychological contracts relate to social exchanges such as job security and training.

**Table 5.8: Factor analysis of distributive justice scale**

Items	Mean	SD	Factor 1 Relational DJ	Factor 2 Transactional DJ
I am fairly paid for the amount of work I do	3.19	1.19		.716
Relative to others doing the same job in my company I believe I am fairly paid for the work I do	3.27	1.20		.670
Given my ability and experience, I believe I was not evaluated correctly by the selection process (R)	2.49	1.58	-.496	
I am provided with sufficient opportunities for training and development	3.47	1.23	.708	
Given my performance, opportunities for training offered are fair	3.60	1.20	.796	
My most recent performance evaluation was justified given my performance	3.74	1.08	.767	
In my opinion, outcomes from employee involvement and teamwork (e.g. team based pay, group based recognition) are fair	3.74	1.08	.770	
I believe I would be fairly considered for a vacancy in the organisation for which I am qualified	3.48	1.01	.694	
Promotions in this organisation usually depend on how well a person performs in his/her job	3.71	.997	.770	
<i>Eigen value</i>			4.22	1.36
<i>Total explained variance (%)</i>			46.90%	15.11%
<i>Cronbach's alpha coefficient</i>			.74	.83
Extraction Method: Principal Component Analysis (PCA) Rotation Method: Varimax KMO (0.781) and Bartlett's Test ( $p=0.000$ ) Only factor loadings 0.4 and above are used DJ = Distributive Justice				

Similarly, the items measuring procedural justice across these six HPWS practices were factor analysed and were again found to load onto two factors showing a similar pattern as the factor analysis for distributive justice (see Table 5.9). One factor measured employee perceptions of procedural fairness of relevant HR bundles (staffing, performance management, succession planning, training and development and employee involvement). This factor explained 53.58 percent of variance and was labelled 'Relational Procedural Justice' (Cronbach's alpha = .877). The remaining items loaded onto a second factor relating to procedural fairness of compensation (eigenvalue = 1.08, % of variance = 10.82%). This factor has been labelled as 'Transactional Procedural Justice'. (Cronbach's alpha = .806).

**Table 5.9: Factor analysis of procedural justice scale**

Items	Mean	SD	Factor 1 Relational PJ	Factor 2 Transactional PJ
In my opinion procedures used to determine pay and salary increases are fair	3.20	1.18		.857
The pay plan in this company is administered fairly	3.33	1.10		.863
My supervisor gives me the opportunity to express my views and feelings on pay setting issues and pay decisions	3.26	1.29		.696
In my opinion, recruitment and selection practices in this company are fair	3.86	1.07	.617	
In my opinion procedures used to determine training and development opportunities in this organisation are fair	3.51	3.51	.727	
In my opinion, procedures used to evaluate my performance are fair	3.67	.995	.734	
My supervisor gives me the opportunity to express my views and feelings during my performance evaluation	3.90	1.02	.794	
In my opinion, procedures used to ensure employee involvement in decision- making are fair	3.54	1.04	.746	
I am provided with reasonable opportunities to express new ideas, concerns or become involved in decision making	3.58	1.04	.753	
In my opinion procedures used to determine promotions in this organisation are fair	3.31	1.12	.645	
<i>Eigen value</i>			5.35	1.08
<i>Total explained variance (%)</i>			53.58%	10.82%
<i>Cronbach's alpha coefficient</i>			.877	.806
Extraction Method: Principal Component Analysis (PCA) Rotation Method: Varimax KMO (0.893) and Bartlett's Test ( $p=0.000$ ) Only factor loadings 0.4 and above are used PJ = Procedural Justice				

The results of the factor analysis above show that distributive and procedural justice perceptions of compensation are seen as a separate component of the fairness judgement of HPWS.

Finally, the interpersonal and informational items from the six HPWS practices outlined above were factor analysed. As discussed in chapter three, debates exist as to whether interpersonal and informational justice are independent concepts as suggested by Colquitt (2001) or are a single concept known as interactional justice (Bies and Moag, 1986; Kuenzi and Schminke, 2009). Table 5.10 shows that the items loaded on to one factor with factor loadings of .580 or higher. One item 'I was offered an explanation of the types of factors that affected the hiring decision' had a factor loading of less than .4 and was removed. The one-factor solution for interactional justice accounted for 53.42 percent of total variance. This uni-dimensional factor had a Cronbach's alpha of .924.

**Table 5.10: Factor analysis of interactional justice scale**

Items	Mean	SD	Factor 1 IJ
I was offered an explanation of the types of factors that affected the hiring decision <sup>a</sup>			.350
I was treated honestly, openly and with respect during the selection process			.589
My supervisor explains procedures clearly and provides useful feedback on the pay decision	3.46	1.22	.763
My supervisor treats me with honesty, respect and dignity during pay determination	3.64	1.13	.771
My supervisor provides me with timely feedback about training/development decisions and their implications	3.48	1.12	.780
I am treated honestly, openly and with respect during discussions about training opportunities	3.76	1.10	.775
My supervisor treats me with honesty, respect and dignity during my performance appraisal	3.95	1.02	.857
My supervisor lets me know my appraisal outcomes and provides justification	3.65	1.02	.671
My supervisor treats people with honesty, respect and dignity during team briefings or any other employee involvement meetings	3.89	1.00	.727
My supervisor provides reasonable, timely and respectful information on all promotion opportunities in my organisation	3.44	1.21	.755
My supervisor treats me with honesty, respect and dignity during a promotion opportunity	3.94	1.02	.860
<i>Eigen value:</i>		5.87	
<i>Total explained variance (%)</i>		53.42%	
<i>Cronbach's alpha coefficient</i>		.924	
Extraction Method: Principal Component Analysis (PCA) Rotation Method: Varimax KMO (0.847) and Bartlett's Test ( $p=0.000$ ) Only factor loadings 0.4 and above are used <sup>a</sup> Item has been removed			

*Factor analysis for mediating variables*

The employee survey in phase 2 examines two mediating variables – leader member exchange and perceived organisational support. Table 5.11 presents the factor analysis results for leader member exchange through descriptions of factor analysis results as advocated by Ford et al. (1986). The seven indicators were factor-analysed and reduced to a single LMX index (following the removal of item 3 as highlighted due to low factor loading). The one-factor solution accounted for 57.8 percent of total variance. The final LMX measure had a coefficient alpha reliability ( $\alpha$ ) of .901 which was well within the range of normally reported LMX alpha values (Graen and Uhl-Bien, 1995).



**Table 5.11: Factor analysis of leader member exchange scale**

Items	Mean	SD	Factor 1 LMX
I always know how satisfied my supervisor is with what I do	3.68	1.17	.807
My supervisor understands my problems and needs well enough	3.72	1.15	.826
My supervisor does not adequately recognise my potential (R) <sup>a</sup>	2.87	1.21	-.154
My supervisor would personally use his/her power to help me solve my work problems	3.84	1.11	.798
I can count on my supervisor to 'bail me out' at his/her expense when I really need it	3.35	1.20	.754
I have enough confidence in my supervisor to defend and justify his/her decisions when he/she is not present to do so	3.71	1.10	.869
My working relationship with my supervisor is extremely effective	3.91	1.03	.856
<i>Eigen value</i>		4.05	
<i>Total explained variance (%)</i>		57.8%	
<i>Cronbach's alpha coefficient</i>		.901	
Extraction Method: Principal Component Analysis (PCA) Rotation Method: Varimax KMO (0.878) and Bartlett's Test ( $p=0.000$ ) Only factor loadings 0.4 and above are used <sup>a</sup> Item has been removed			

Table 5.12 shows the factor loadings for the nine perceived organisational support items. All items loaded on to one factor. Three items had factor loadings of .380 or less and were not included. The one-factor solution accounted for 58.42 percent of total variance. The coefficient alpha value for the scale was .78 which compares favorably to those of other studies where values ranged from .74 to .95 (Cropanzano et al., 1997; Ferris et al., 1999).

**Table 5.12: Factor analysis of perceived organisational support**

Items	Mean	SD	Factor 1 POS
The organisation is willing to extend itself in order to help me perform my job to the best of my ability	3.44	1.06	.781
The organisation cares about my general satisfaction at work	3.44	1.14	.829
This organisation shows very little concern for me (R) <sup>a</sup>	3.39	1.27	.380
The organisation cares about my opinions	3.31	1.07	.731
Even if I did the best job possible, the organisation would fail to notice (R)	3.20	1.17	.369
Help is available from management when I need it <sup>a</sup>	3.83	1.04	.210
Management strongly considers my goals and values	2.92	1.29	.539
In this organisation management cares about my well being	3.44	1.06	.777
The organisation takes pride in my accomplishments at work	3.50	1.04	.767
<i>Eigen value</i>		3.64	
<i>Total explained variance (%)</i>		58.42	
<i>Cronbach's alpha coefficient</i>		.823	
Extraction Method: Principal Component Analysis (PCA) Rotation Method: Varimax KMO (0.748) and Bartlett's Test ( $p=0.000$ ) Only factor loadings 0.4 and above are used <sup>a</sup> Item has been removed			

*Factor analysis for employee outcomes variables*

This section outlines the employee outcome variables measured. These include job satisfaction, affective commitment, intention to leave, job pressure and trust in management. Firstly, items measuring job satisfaction and affective commitment were factor analysed together to assess relations between the two attitudinal dimensions as debate exists as to whether they are two distinct constructs (see Morrow, 1983 for example). Two distinct factors emerged from the analysis (see Table 5.13) reinforcing previous research by Brooke, Russell and Price (1988) that commitment and job satisfaction are two empirically distinct constructs. The five items measuring affective commitment loaded onto one factor with factor loadings ranging from .691 to .828. The total percentage of explained variance was 71 percent. The job satisfaction items loaded onto one factor with factor loadings ranging from .513 to .850. The total percentage of explained variance was 6.8 percent. A KMO measure of .921 indicated a high sampling adequacy for the factor analysis. Bartlett's test of sphericity, which tests whether the correlation matrix is an identity matrix, is significant ( $p < .000$ ). This indicates that the two factor model for the affective commitment and job satisfaction (Cronbach's alpha of .889) variables (Cronbach's alpha value of .932) is appropriate.

**Table 5.13: Factor analysis of job satisfaction and affective commitment scales**

Items	Mean	SD	Factor 1 AC	Factor 2 JS
I feel a strong sense of belonging to my organisation	3.50	1.121	.691	
I feel personally attached to my work organisation	3.38	1.182	.764	
Working at this organisation has a great deal of personal meaning to me	3.34	1.058	.785	
I would be happy to work at this organisation until I retire.	3.23	1.184	.760	
I really feel that problems faced by my organisation are also my problems	3.31	.988	.828	
Overall, I would rate my satisfaction with my current job as high	3.49	1.149		.850
In my present job, I am satisfied with my co-workers	3.76	1.047		.513
All in all, I am satisfied with the job itself	3.62	1.112		.803
Compared to most jobs, mine is a pretty good one.	3.72	1.070		.817
<i>Eigen value</i>			6.42	.604
<i>Total explained variance (%)</i>			71.32	6.71
<i>Cronbach's alpha coefficient</i>			.932	.889
Extraction Method: Principal Component Analysis (PCA) Rotation Method: Varimax KMO (0.921 and Bartlett's Test ( $p=0.000$ )) Only factor loadings 0.4 and above are used				

Table 5.14 presents the factor loadings for the trust in management scale. All three items loaded on to one factor with loadings of .803, .884 and .888. The factor explained 73.8 percent of variance. A Cronbach's alpha of .823 was obtained.

**Table 5.14: Factor analysis of trust in management scale**

Items	Mean	SD	Factor 1 Trust
Management delivers on its promises	3.77	1.12	.888
Management actions match its words	3.56	1.05	.884
Management is ethical and honest	3.29	1.03	.803
<i>Eigen value</i>	2.21		
<i>Total explained variance (%)</i>	73.8%		
<i>Cronbach's alpha coefficient</i>	.823		
Extraction Method: Principal Component Analysis (PCA) Rotation Method: Varimax KMO (0.693) and Bartlett's Test ( $p=0.000$ ) Only factor loadings 0.4 and above are used			

The two items measuring intention to leave loaded onto one factor and explained 69 percent of variance (See Table 5.15). The scale reported factor loadings .83 and .83 but a Cronbach's alpha of only .55. This may be due to the number of items. Nunnally (1978) argues that the larger the number of items in a scale, the more reliable the scale will be and relevant results should be treated with caution or ignored (Tabachnick and Fidell, 1996: 642). It was decided to retain this factor in the analysis at this stage and reassess its contribution to overall findings once correlation analysis and analysis of variance was completed.

**Table 5.15: Factor analysis of intention to leave**

Items	Mean	SD	Factor 1 Intention to leave
I intend to keep working at this organisation for at least the next 3 years. (R)	3.45	1.316	.831
It is likely that I will leave my employment with this organisation within a year.	3.61	1.291	.831
<i>Eigen value</i>	1.38		
<i>Total explained variance (%)</i>	69.01%		
<i>Cronbach's alpha coefficient</i>	.551		
Extraction Method: Principal Component Analysis (PCA) Rotation Method: Varimax KMO (0.50) and Bartlett's Test ( $p=0.000$ ) Only factor loadings 0.4 and above are used			

Table 5.16 presents the results of the factor analysis of the work intensification scale. This scale assessed employee's views about work pressure, emotional exhaustion and job demands. These items have been shown to be indicative of high levels of burnout (Moliner et al., 2005). These items loaded onto two factors. Factor one has been labelled work pressure and measures employees views of pressure at work and emotional exhaustion (eigenvalue= 3.92; total variance explained = 49.02 percent). Factor two is a two item factor which measures work effort

(eigenvalue = 1.58; total variance explained = 19.8). Work pressure revealed a Cronbach's alpha of .870, while work effort reported a Cronbach's alpha of .830.

**Table 5.16: Factor analysis of job demands scale**

Items	Mean	SD	Factor 1 Work pressure	Factor 2 Work Effort
I feel under pressure from my managers/ supervisors in my job	2.93	1.25	.827	
I feel under pressure from my work mates/colleagues in my job	2.60	1.18	.829	
I feel under pressure from the sheer quantity of work I have	3.00	1.26	.805	
I worry a lot about my work outside working hours	2.65	1.30	.756	
I feel very tired at the end of a work day	3.42	1.31	.718	
I never seem to have enough time to get my job done	2.81	1.24	.749	
I often put effort into my job beyond what is required	4.02	1.06		.925
My job requires that I work very hard.	4.01	1.00		.898
<i>Eigen value</i>			3.92	1.58
<i>Total explained variance (%)</i>			49.02%	19.8%
<i>Cronbach's alpha coefficient</i>			.87	.83
Extraction Method: Principal Component Analysis (PCA) Rotation Method: Varimax KMO (0.693) and Bartlett's Test ( $p=0.000$ ) Only factor loadings 0.4 and above are used				

### 5.6 Phase 3: Qualitative methods

The final phase of the data collection process used qualitative methods. The main aim of this phase was to contextualise the quantitative survey data and help to identify examples in relation to survey findings through exploring people's perceptions of HPWS in their organisation together with fairness perceptions of HPWS. Semi-structured interviews were chosen to allow the researcher to pre-prepare questions relating to HPWS and justice themes in advance whilst also being flexible allowing the researcher to use probes to follow-up important topics as they arose (Smith and Osborn, 2003). It also allowed the researcher give some meaning to the quantitative findings by understanding the dynamics present within the various settings across each organisation (Eisenhardt, 1989). These interviews closed the loop on the data collection stage.

Across each organisation, interviews were conducted with a HR manager and a number of line managers and employees. The purpose of the HR interview was primarily to explore 'intended' HPWS practices and understand the organisational context and formal HR policies within the organisation. Line manager and employee interviews explored implemented and experienced HPWS practices to highlight key determinants of successful/unsuccessful HPWS implementation and subsequent outcomes. See Appendix G for interview schedules used. Twenty three interviews took place. Table 5.17 provides some background details on interviewees across the three organisations. Convenience sampling was the sampling strategy

chosen where the HR manager (or unit manager in FoodCo) assisted with the selection of the interviewees.

**Table 5.17: Background details of interview respondents**

	Title	Gender	Tenure	Company
1	Unit front line manager 1 (Site 1)	Female	7 months	FoodCo
2	Employee 1 (Site 1) – Catering Supervisor	Female	15 years	FoodCo
3	Unit front line manager (Site 2)	Female	10 years	FoodCo
4	Employee 2 (Site 2) – Cashier	Female	23 years	FoodCo
5	Employee 3 (Site 2) – Cashier	Female	12 years	FoodCo
6	Unit front line manager 2 (Site 3)	Male	7 years	FoodCo
7	Employee 4 (Site 3) - Catering Assistant	Female	4 years	FoodCo
8	Employee 5 (Site 3) - Catering Assistant	Female	2.5years	FoodCo
9	HR Manager	Female	5 years	FoodCo
10	Team leader 1 (New Business)	Male	3 years	InsureCo
11	Employee 1 (Underwriting)	Female	5 years	InsureCo
12	Team leader 2 (Sales Support)	Female	27 years	InsureCo
13	Employee 2 (New Business)	Female	2 years	InsureCo
14	Manager 1 (Underwriting)	Female	8 years	InsureCo
15	Senior HR Consultant	Female	1 year	InsureCo
16	Senior Manager 1 (Assurance)	Male	12 years	ProfCo
17	Senior Manager 2 (Advisory)	Male	3 years	ProfCo
18	Director	Female	14 years	ProfCo
19	Manager 1 (Assurance)	Female	7 years	ProfCo
20	Senior Manager 3 (Corporate Tax)	Male	7 years	ProfCo
21	Senior Manager 4 (Finance – internal firm services)	Male	9 years	ProfCo
22	Employee 1 (Business Development and Marketing – internal firm services)	Female	20 years	ProfCo
23	HR Director	Male	1 year	ProfCo

Each interviewee was contacted and provided with details of the study. It was made clear to each interviewee that participation was completely voluntary and that non participation would not have any subsequent negative consequences for them in the workplace. Interviews began with an explanation of the research, followed by discussion of confidentiality and voluntary participation. The interview progressed by asking participants general questions about their backgrounds, the organisation, their job and day to day activities. Some prompts listed were job description, discretion, relationship with colleagues and manager, work pressure, work changes, identification with organisation and job satisfaction. Attention then turned to high performance work systems. Some of the themes explored mirror those of Purcell et al.'s (2003) study of HPWS. These include recruitment, pay, training and development, performance management, employee involvement, team work, job security and communication. Not all interviews covered all of these issues and the order in which questions were asked varied according to the flow of the conversation. A direct question was asked about fairness/justice in the workplace towards the start of the interview to allow employees to identify whether they thought the organisation was fair and describe why they thought so. This allowed the interviewees to outline *their* perceptions

of what constitutes fairness in the workplace and what they consider to be important justice rules in determining whether HPWS is fair. The interviews lasted between 25 and 70 minutes depending on the flow of the conversation and the time available.

The majority of the 23 interviews were recorded using an MP3 voice recorder and took place in meeting rooms or in their own offices (in the case of managers). Employees interviewed in FoodCo were interviewed in the canteen. The two HR interviews with ProfCo and InsureCo were not recorded. Instead, the researcher met with each HR manager on two occasions and spoke with them informally. The researcher took in-depth notes each time which were typed up immediately following the meetings. All interviews were transcribed. The first five interviews were transcribed by the researcher. The remainder was transcribed by a transcription company thanks to funding secured from DCU Business School Research Committee to support the cost of transcriptions. Consideration was given to the security and sensitivity of transcripts and recordings as guarantees had been given to protect the anonymity of research participants (Grinyer, 2002). Transcripts were not labeled with real names, organisations or people. When actual names were mentioned in interviews (by either the interviewer or interviewee) these were not disguised by the external transcription service. However, when typed transcripts were sent back to the researcher and rechecked, names were changed to keep real identities confidential. In some instances, qualifiers were inserted where relationships were important to qualify in the quotations. For example, where an employee made a comment about John (not real name): 'Yeah. John is good but for his own people', his name was changed and his position clarified; 'Yeah, David (supervisor) is good but for his own people'.

### **5.6.1 Data analysis of qualitative data**

Veal (2005) notes that there are various ways to analyse interview transcripts. The key guiding principle of the qualitative analysis procedure used in this research was the conceptual framework and research questions previously outlined at the end of Chapter 4. As such, the qualitative data were sorted and evaluated in relation to the concepts identified in the conceptual framework. NVivo was initially considered as a tool for the qualitative analysis stage of the research. However, a number of factors favoured the use of manual analysis over computer aided qualitative data analysis software. Firstly, whilst this research uses mixed methods, the qualitative data are not the dominant approach. The author also considered the time required to learn how to set up the system for an individual project and the quantity and complexity of the qualitative material collected. After taking all of these factors into consideration, a decision was made to analyse the data manually. Transcripts were examined numerous times and analysis was done by hand on hard copy transcripts initially. Handwritten notes and Post-it notes were first used to mark key sections and code the data. Microsoft word was then used to add comments, locate key words and phrases and code and cross reference quotes. Themes corresponding to the

variables tested through surveys were identified and provided the researcher with the means to establish the existence of relationships and determine reasons behind these relationships through what individual interviewees said and the contexts in which they worked.

### **5.7 Data Analysis of Quantitative Data (Phase 1 and 2)**

The careful preparation of data is fundamental for conducting an honest analysis of quantitative data and producing undistorted statistical results (Tabachnick and Fidell, 2007). Factor analysis and Cronbach's alpha results for the key study variables in phases 1 and 2 have already been described to show the data are valid and reliable (Nunnally and Bernstein, 1994). The next step in quantitative analysis involves the statistical analysis of the data. The data analysis steps taken in this study will now be outlined.

#### **5.7.1 Correlation analysis**

Frequencies and means were first examined to get an overview of the data and also to check for missing values and errors in data entry stage. Attention then turned to bivariate correlations. Correlations are inferential statistics that are used to assess the association or relationships between two variables using Pearson's correlation coefficient  $r$  which lies between -1 and +1 (Norusis, 2005). A coefficient of +1 indicates a perfect positive relationship whilst a coefficient of -1 indicates a perfect negative relationship. The correlation analysis serves two purposes. First, it provides initial evidence as to whether the hypothesized relationships between variables are significant and in the expected direction. Second, this analysis can be useful to detect problems of multicollinearity (when two independent variables are highly correlated). Some authors suggest that correlations of .75 or higher suggests multicollinearity. Others are more lenient (e.g. Saunders et al., 2009, Farrar and Glauber, 1967) and suggest that a correlation of above 0.90 may indicate multicollinearity.

#### **5.7.2 Test of the hypothesized model**

The researcher considered a number of statistical techniques to examine the hypothesized model described in chapter 4. Wood, Goodman, Beckman and Cook's (2008) review of the literature identified (1) hierarchical regression analysis; and (2) structural equation modeling as the two most widely used statistical techniques available. The use of structural equation modeling was rejected due to the small sample sizes of both datasets ( $N = 169$  and  $N = 187$ ). Breckler's (1990) study of 172 SEM papers found that the median sample size was 198 with arguments that for more complex models, sample sizes that exceed 200 can be considered appropriate (Kline, 2005). Similarly, Harris and Schaubroeck (1990) recommend a minimum sample size of 200 to guarantee robust structural equation modeling. The research model for this current study had a large number of variables and the sample size ( $N = 187$ ) was relatively small. Thus, in view of this fact, a decision was made to use hierarchical regression analysis to test the research model.

Before discussing hierarchical regression however it must first be established that the data was normally distributed. Field (2009) argues that the researcher needs to ensure that the regression model fulfils the following assumptions to be able to draw conclusions. These are:

- Normally distributed data
- Normality of the error term
- Linearity
- Multicollinearity
- Independent errors or autocorrelation

The first assumption seeks to establish the normality of the sample distribution. A visual examination of the curves provided an indication of the type of distribution concerned. This revealed no significant deviation from normality. A second test was undertaken to examine the skewness and kurtosis scores. De Vaus (2002) suggest that, as a rule of thumb, a skewness of greater than one indicates a non symmetrical distribution. The skewness and kurtosis scores for the dependent, independent, moderating and mediating variables are outlined in Tables 5.18 to 5.21 below. A variable is said to be normally distributed if the values of the skewness and kurtosis equals zero (Kline, 2005). The results for this study indicate that all but one of the variables under consideration are normally distributed. Innovation is positively skewed with a value of greater than 1.

**Table 5.18: Distribution skewness and kurtosis scores: HPWS survey variables (Phase 1)**

Variables	N	Skewness		Kurtosis	
		Statistic	Std Error	Statistic	Std Error
HPWS	163	-.109	.190	-.512	.378
Differentiation strategy	150	-.178	.199	-1.253	.395
Low cost strategy	150	.249	.199	-1.191	.395
Management philosophy	167	-.605	.188	.223	.374
Employee performance	164	-.496	.190	.767	.377
HR performance	166	-.626	.188	1.793	.375
Innovation	122	2.468	.219	6.439	.435
Organisational performance	157	-.433	.194	.884	.385



**Table 5.19: Distribution skewness and kurtosis scores: independent variables in employee survey (Phase 2)**

Independent variable	N	Skewness		Kurtosis	
		Statistic	Std Error	Statistic	Std Error
Distributive Justice (Trans)	187	-.491	.178	.029	.354
Distributive Justice (Rel)	187	-.491	.178	.029	.354
Procedural Justice (Trans)	187	-.308	.178	-.382	.354
Procedural Justice (Rel)	187	-.327	.178	-.132	.354
Interactional justice	187	-.511	.178	.099	.354

**Table 5.20: Distribution skewness and kurtosis scores: mediating variables in employee survey (Phase 2)**

Mediating Variable	N	Skewness		Kurtosis	
		Statistic	Std Error	Statistic	Std Error
Leader-member exchange	179	-.857	.184	.667	.365
Perceived organisational support	178	-.287	.184	.102	.365

**Table 5.21: Distribution skewness and kurtosis scores for dependent variables in employee survey (Phase 2)**

Dependent variable	N	Skewness		Kurtosis	
		Statistic	Std Error	Statistic	Std Error
Job satisfaction	180	-.421	.181	-.179	.360
Affective commitment	183	-.384	.180	-.399	.357
Trust in management	180	-.400	.182	-.145	.362
Intention to leave	180	.197	.182	-.685	.361
Work pressure	185	-.115	.179	-.401	.355
Work effort	184	-.973	.179	.471	.356

As the dependent variable 'innovation' is positively skewed, it violates the assumption of normality. However, many authors acknowledge that, in the social sciences, true normality rarely occurs due to the perceptual nature of the data being collected (Morgan and Griego, 1998). Researchers can aim to improve normality through the use of transformations (Field, 2009). The variable 'innovation' was transformed using logarithmic transformation ( $\log(X)$ ) to correct the positively skewed variable (Kline, 2005). The comparison between the transformed and non-transformed variable is provided in Table 5.22. The results show that skewness levels improved through the application of logarithmic transformation.

**Table 5.22: Skewness and kurtosis for transformed and non-transformed variable**

Variable	N	Skewness		Kurtosis	
		Statistic	Std Error	Statistic	Std Error
Non transformed innovation variable	122	2.468	.219	6.439	.435
Transformed innovation variable	122	-.369	.243	.230	.481

The second assumption assumes that the residuals in the model are random, normally distributed variables with a mean of zero (Field, 2009). This normality of error term was tested through the visual inspection of the normal probability plots. A strong linear trend in the plot is indicative of no significant departure from normality (Hair et al., 1998). The P-P plots and Q-Q plots for all variables fell close to the ‘ideal’ diagonal and so normality of the sample is established. See Appendix H for examples of P-P and Q-Q plots.

In addition, Kolmogorov-Smirnov tests were conducted to test the normality assumption. Results were statistically insignificant, thus it can be assumed that the distribution of the sample is not significantly different from a normal distribution (p values ranged from .104 to .200). Scatter plots were used to determine whether or not the relationship between the dependent variables and each of the independent variables was linear. The assumption of multicollinearity was verified by computing the variance inflation factor (VIF) which indicates whether a predictor has a strong linear relationship with the other predictor(s) (Field, 2009). If the value of VIF is less than 10, it can be inferred that multicollinearity is not a serious problem (Hair et al., 1998; Myers, 1990). In the current study, the values of VIF obtained from all the regression models were below two (2.0), with adequate tolerance levels, which indicated the absence of multicollinearity. Finally, autocorrelation was tested with the Durbin-Watson coefficient d test. Field (2009) suggests that, as a rule of thumb, d values less than 1 or greater than 3 should be a cause for concern. In this study, the Durbin-Watson test statistic for each regression ranged from 1.87 to 2.25.

### 5.7.3 Moderation analysis

Baron and Kenny (1986: 1174) define a moderator as ‘a variable that affects the direction and/or strength of the relation between an independent or predictor variable and a dependent variable’. Moderator effects are typically estimated through the use of interaction terms which are new variables defined as the product of a predictor/independent variable and a moderator variable (Aiken and West, 1991). The HPWS in Ireland data set (Phase 1) had three moderators – low cost strategy, differentiation strategy and management philosophy. A new interaction variable was computed for each moderator by multiplying the independent variable by the moderating variable. As all predictor variables and/or moderator variables in this study were continuous variables, Aiken and West (1991) suggest that researchers should first centre those predictors by

subtracting the mean from each value, creating two new centred variables. This helps reduce the problem of multicollinearity or too high correlations among predictors. Hierarchical multiple regression was used to examine moderator effects by entering variables into the regression equation through a steps (Aiken and West, 1991). The first step, includes the control variables, in step 2 the predictor/independent and moderator variables were entered. Finally, in step three, in the interaction term is included in the regression model (West et al., 1996). Frazier, Tix and Baron (2004) recommend that the predicted values obtained from this moderation regression model should then be used to create a figure summarizing the form of the moderator effect. These figures were developed using excel worksheets which used procedures by Aiken and West (1991) and Dawson and Richter (2006) to plot the interaction effects<sup>6</sup>.

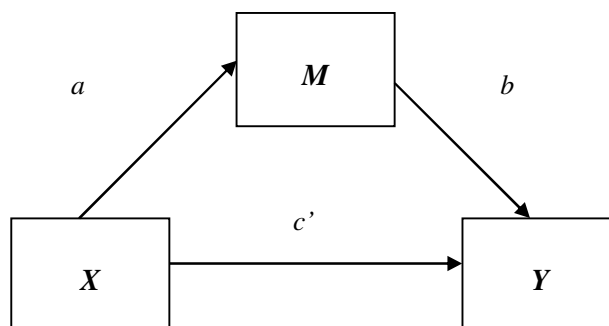
#### 5.7.4 Mediation analysis

Mediators are ‘variables through which the influence of an antecedent variable is transferred to a criterion’ (Mathieu and Taylor, 2007: 142) and are often critical to explanations (James, 2008) as they go ‘beyond the merely descriptive to a more functional understanding of the relationships between variables’ (Preacher and Hayes, 2004: 717). Baron and Kenny (1986) proposed several conditions to be met for a variable to function as a mediator:

- (a) The independent variable must be directly related to the mediator;
- (b) The independent variable must be related to the dependent variable;
- (c) The mediator must be related to the dependent variable; and
- (d) The independent variable must have no effect on the dependent variable when the mediator is held constant (full mediation) or should become significantly smaller (partial mediation)<sup>7</sup>.

Figure 5.2 provides an illustration of the steps for single level mediation analysis and Paths *a*, *b* and *c*.

**Figure 5.2: Baron and Kenny’s (1986) Steps for Single-Level Mediation Analysis**



X = independent variable; Y = dependent variable and M = mediating variable

<sup>6</sup> Excel sheets sourced from <http://www.jeremydawson.co.uk/slopes.htm>

<sup>7</sup> Kenny et al. (1998) have since stated that the second step is not required for mediation (i.e. that the independent variable must affect the dependent variable). It was decided to retain the IV-DV step as per the Baron and Kenny model due to proximal nature of IV and DV as suggested by Shrout and Bolger (2002).

Criticisms have been levelled against Baron and Kenny's (1986) four step causal model as it does not explicitly provide a numerical value of the strength of the mediated effect (MacKinnon and Fairchild, 2009). As a result, this research goes beyond the causal step approach proposed by Baron and Kenny by conducting Sobel (1982) tests for significance of the change in the coefficient due to the addition of the mediator. Preacher and Hayes (2004) maintain that a Sobel test is a more statistically rigorous method by which mediation hypotheses can be assessed as it has greater statistical power. The Sobel test is conducted by comparing the strength of the indirect effect of X on Y to the point null hypothesis that it equals zero (Preacher and Hayes, 2004). The Sobel test was calculated using the interactive calculation tool by Preacher and Leonardelli<sup>8</sup>. The unstandardized regression coefficients for the association between IV and mediator (a) and the mediator and the DV (b) together with the standard errors for a and b were used in the calculations. Thus, in the present study, both these approaches were followed to test the mediation hypotheses.

### **5.7.5 Cross level analysis**

This study is designed using multi level data sources. Chapter 2 showed that the majority of HPWS studies tend to focus on a single level of analysis, usually at the organisational level (Combs et al, 2006). There is little empirical work adopting a multi level approach addressing the gap between macro and micro level research. This research seeks to redress this by examining macro level hypotheses, micro level hypotheses and then the relationships between variables at different levels (integrating macro and micro level data). There were a number of options available to the researcher including hierarchical linear modelling. However, this approach to examine multi level relationships would not have been sensible; primarily due to the sample size of the highest level of the research which was just three organisations. This was not sufficient for hypotheses testing. Having attended an MLwiN workshop in 2009 which examined multilevel modelling, the researcher was directed towards the use of cross level effects using fixed effects to overcome the problem of small sample size at the higher level. A *cross-level direct effect model* suggests that a predictor variable at one level of analysis influences an outcome variable at a different level of analysis (Mossholder and Bedeian, 1983). Therefore, the strategy employed in this study to examine cross level effects is that suggested by Mossholder and Bedeian (1983) who suggest using regression analysis procedures to examine group effects. Firstly, group-level variables (at the organisation/establishment level), represented by the organisation mean level of the variable (HPWS), were assigned to each individual nested within each organisation. For example, all employees in FoodCo were assigned an organisational mean for HPWS of 29.75 (as reported at organisational level by HR manager). Fixed effect methodologies were used to study variations in this establishment effect as this allows for the exploration of relationships between variables that can characterise a complex system (Farron,

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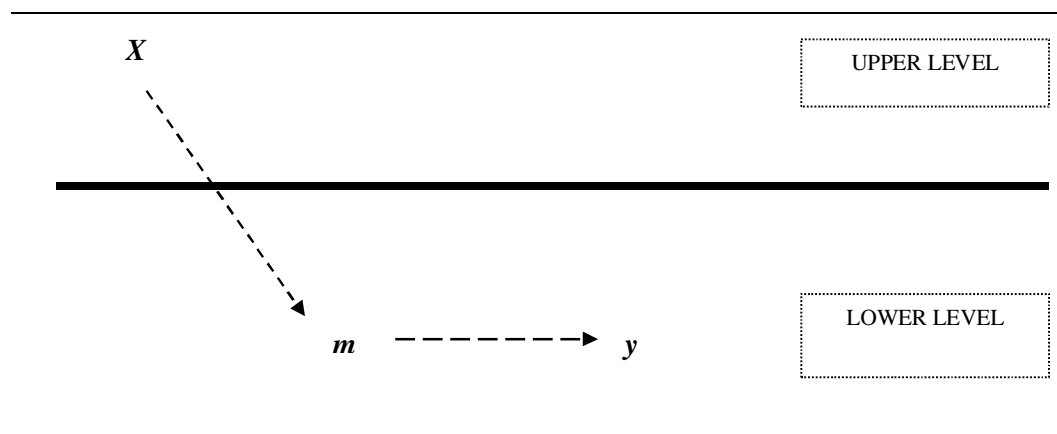
<sup>8</sup> Accessed online at following website: <http://www.quantpsy.org/sobel/sobel.htm>

1997). Fixed effects were examined by creating dummy variables. As there are three groups (high HPWS, medium HPWS and low HPWS), two dummy variables were created – ‘Dummy HPWS High’ and ‘Dummy HPWS Low’ to allow for fixed effects. For variable ‘Dummy HPWS High’, employees in ProfCo were coded as 1 indicating high HPWS score at establishment level with employees in FoodCo and InsureCo coded 0. For variable ‘Dummy HPWS Low’, employees in FoodCo were coded as 1 (indicating low HPWS score at establishment level) with employees in InsureCo and ProfCo being coded 0).<sup>9</sup>

### 5.7.6 Cross level mediation

To establish cross-level mediation, cross level analysis steps were used as outlined above in conjunction with recommended steps to test mediation by Baron and Kenny (1986). Mediation analysis has conventionally been used to study relationships within a single level of analysis. However, Matthieu and Taylor (2007) refer to *cross level mediation, lower-level mediator*, where  $X$  is an upper level variable that exerts an influence on a lower level criterion as transmitted through a lower level mediator (i.e.,  $X \rightarrow m \rightarrow y$ ). See Figure 5.3 for an illustration of cross level mediation (lower level mediator). A Sobel test was also conducted to examine whether the indirect effect of the independent variable (i.e., establishment level HPWS) on the dependent variables (i.e., individual outcomes) via the mediators (i.e., organisational justice) is significantly different from zero.

**Figure 5.3: Cross level mediation models**



Where  $X$  = establishment level independent variable;  $m$  = individual level mediator; and  $y$  = individual level dependent variable.

<sup>9</sup> Feedback on procedures used and preliminary findings was sought from Dr Jeremy Dawson, Statistician and RCUK Academic Fellow at Aston University. Email correspondence indicated that procedures used were a ‘perfectly good approach’.

Similar cross level mediation (*cross level mediation, upper-level mediator*) was conducted in Takeuchi, Chen and Lepak's (2009) study of establishment level HPWS (*X*) and employee outcomes (*y*) as mediated by establishment level concern for employees (*M*).

## **5.8 Conclusion**

In this chapter, the philosophical approach taken in this research has been outlined, together with a full justification of the methodology used to investigate the research questions and hypotheses. A pragmatic paradigm was chosen with a primary focus on quantitative methods. While this study adopts a largely positivist paradigm, the potential contribution of methods available under the interpretivist paradigm was not ignored. Specifically, qualitative data was collected through interviews in order to determine the views of multiple stakeholders in the organisation on their experiences of HPWS.

The study consisted of three phases. The first phase involved a national survey of HR managers which sought to obtain objective information on the extent to which HPWS policies and practices are being utilised in Irish organisations. The core of the study consists of the employee survey (phase 2) which was used to test the hypotheses that HPWS organisational justice perceptions impact workplace employee attitudes and behaviours. Semi-structured interviews with stakeholders in the organisation (phase 3) were used to provide richer information on concepts that were identified by theoretical framework and quantitative findings. The weakness of the methodology and methods used has been briefly discussed together with the steps taken to ensure rigour of research findings. The following chapters will present the results of the analyses undertaken.

**HPWS IN IRELAND: THE MACRO LEVEL PERSPECTIVE**

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**6.1 Introduction**

This chapter presents the findings of the High Performance Work Systems in Ireland survey which provides data to answer the first two research questions of this study: (1) how do HPWS policies affect performance outcomes? and (2) is the relationship between HPWS and organisational performance dependent on other factors? It also describes the extent to which firms in Ireland utilise High Performance Work Systems (HPWS) and categories of employees covered. The survey design and collection methods were explained in chapter five. This chapter begins by analysing sample and non-response bias issues in the dataset. Descriptive statistics are then presented followed by correlation and regression analyses. Finally, the moderating effects of business strategy and management philosophy on the HPWS- performance link are examined.

**6.2 Sample Representativeness and Non-Response Bias**

This section looks at the representativeness of subsequent survey respondents and the potential for non response bias. Viswesvaran, Barrick, and Ones (1993) argue that if the respondents are not representative of the population, showing a nonresponse bias, the generalization of the findings of the research to the larger population is questionable (see also Werner, Praxedes and Kim, 2007). The original sample was identified using stratified sampling techniques which excluded those companies which did not meet the key criteria for inclusion (i.e. organisations which, on face validity, were 'high performing' and representative of Irish-based operations across all sectors). As explained in chapter 5, 1,995 surveys were administered to senior HR managers with 175 surveys being returned. Because of missing responses on some of the key areas required for the analysis, the usable number of surveys for the study was reduced to 169. This represents a response rate of 8.5 percent. While this is relatively low compared to other studies in HRM research, it is still within the 6 to 28 percent range identified by Becker and Huselid (1998) who reported an average response rate of 17.4 percent for similar surveys. Notwithstanding the low response rate, a number of steps were taken to check nonresponse bias as suggested by Armstrong and Overton (1977). A one -way analysis of variance (ANOVA) for firm size across early and late respondents yielded insignificant F-values of .91 for number of employees and 2.8 for industry. Thus it can be concluded that although our sample is small (at just 8.5 percent of the overall population), no evidence of nonresponse bias was found.

### 6.3 Overview of Respondents and Organisational Context

This section provides an overview of the structural characteristics of the workplaces in the High Performance Work Systems in Ireland survey. Table 6.1 shows the profile of respondent companies across a number of variables.

**Table 6.1: Overview of Respondents**

	<i>Sample establishments</i>	
	No.	%
<i>Establishment size</i>		
Under 50	10	5.9
50-99	46	27.2
100-199	54	32.0
200-499	31	18.3
500+	28	16.6
Total	169	100
<i>Industrial Sector</i>		
Agriculture/forestry/fishing	4	2.4
Banking, finance, insurance services	24	14.2
Building and civil engineering	17	10.1
Chemical products	10	5.9
Energy and water	1	0.6
Health services	6	3.6
Metal Manufacturing	20	11.8
Other Manufacturing	34	20.1
Personal, domestic, recreational services	2	1.2
Retail and distribution; hotels	22	13.0
Transport and communication	4	2.4
Other services (e.g. R&D, television, radio)	10	5.9
Other	15	8.8
Total	169	100
<i>Country of origin</i>		
Irish owned	109	64.5
US owned	25	14.8
European/UK owned	29	17.2
Other	6	3.5
Total	169	100
<i>Years in operation</i>		
<5 years	4	2.4
5-9 years	18	10.7
10-25 years	42	24.8
>25 years	105	62.1
Total	169	100
<i>Unionisation</i>		
No union	75	46.2
Less than 25%	18	11.1
26-50%	26	16.0
Greater than 50%	43	26.5
Total	162	100



The size of an organisation is crucial to understanding a wide range of human resource management and employment relations phenomena. Size is defined here as the total number of full time employees in the organisation and the data are categorised in a format similar to the 1998 Work Employment Relations Survey (WERS) (see Cully et al., 1999). Table 6.1 shows that the majority of organisations employ less than 200 employees (65 percent). At 32 percent, organisations with 100-199 employees represent the largest category in the dataset. Almost 35 percent of the sample employs 200 employees or more. In terms of classification of employees, respondents were asked to indicate the total number of full time employees across two groups. Group A consisted of production, maintenance, service, clerical employees while Group B consisted of executives, managers, supervisors, and professional/technical employees. The average number of employees in Group A was 221. The average number of employees for Group B was 115 employees. Therefore, the largest employee category is production and clerical employees.

Cully et al. (1999: 17) argue that industry is an important category for HR research as ‘the output of a workplace and the environment in which it operates can be important determinants of how work is organised and the character of employment relations.’ The overall profile of respondents shows that the largest group of respondents were from the metal and other manufacturing categories at almost 32 percent of the sample with banking, insurance and financial services the second highest at 14 percent.

As Table 6.1 highlights, the majority of organisations were Irish owned (64.5 percent) followed by UK and rest of Europe (17.2 percent), and US owned companies (14.8 percent). Other company origins included Japan, Canada and Israel. Most organisations have been in operation in Ireland for twenty five years or more. The oldest organisation was two hundred years old whilst the youngest organisation has been operating in Ireland for just three years. Length of time, for multinational companies (MNCs) operating in Ireland in particular, can be an important proxy for the extent to which they are influenced by the traditional patterns of employee relations in Ireland (Lavelle, 2008). Over 50 percent of the organisations sampled were unionised. Over 37 percent of Group A (clerical, production, service employees) were union members while only 12 percent of Group B (managers, executives, supervisors) were union members.

### **6.3.1 The HR Function**

This section considers the HR function and its integration with the business strategy of the organisation. As noted in chapter 2, the underlying concept of strategic human resource management is the idea that human resources are not just a major operating cost but also a crucial factor in achieving organisational performance. HRM becomes strategic when ‘human

resources are elevated to a position where the firm sees and treat these (human resource) issues as a source of competitive advantage' (Kochan and Dyer, 1993: 570), where HR issues are considered in top level decision making and are considered part of the formulation of business strategies at an early stage (Brewster, 1994). Over 70 percent of respondents indicated they have a formal HR department. The largest HR department in the sample employed 45 full time HR staff with the overall mean being 3 full time HR staff. Almost 72 percent of companies indicated a HR presence at the level of the Board of Directors (or equivalent) which would suggest that HR considerations were integrated with corporate strategy at the highest level and that HR was involved in decisions at an early stage. Table 6.2 explores this further by examining the percentage of firms who have formal written corporate and HR strategies.

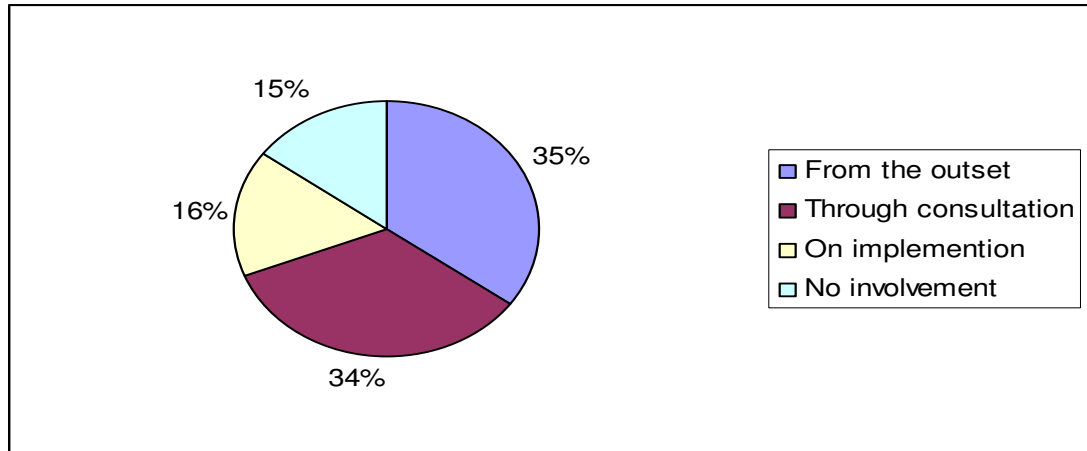
**Table 6.2: Strategic integration of HRM at senior level of organisation**

	Written %	Unwritten %	None %	Don't know %
Mission statement	73.2	8.9	17.9	0
Corporate Strategy	63.4	20.4	13.2	3.0
Personnel/ HR Management Strategy	47.0	27.1	24.1	1.8
A Personnel/HR strategy that is translated into work programmes and deadlines	38.6	19.9	38.5	3.0

n = 169

Organisations with written mission statements and corporate strategies which are then linked to HR strategy and translated into work programmes should have high degrees of integration between HRM and business strategy. Corporate strategy appears to be well developed with almost 64 percent of respondents indicating that their organisations have a formal written corporate strategy. However, only 47 percent of respondents have a formal HR management strategy with almost 26 percent reporting that there is no HR strategy in place. There appears to be a connection between having the director of HR (or equivalent) on the board and having a written HR strategy. Figure 6.1 illustrates that 69 percent of organisations involve HR in corporate strategy formulation, either from the outset or through consultation. However, 31 percent only involve HR when corporate strategy is either being implemented or not at all.

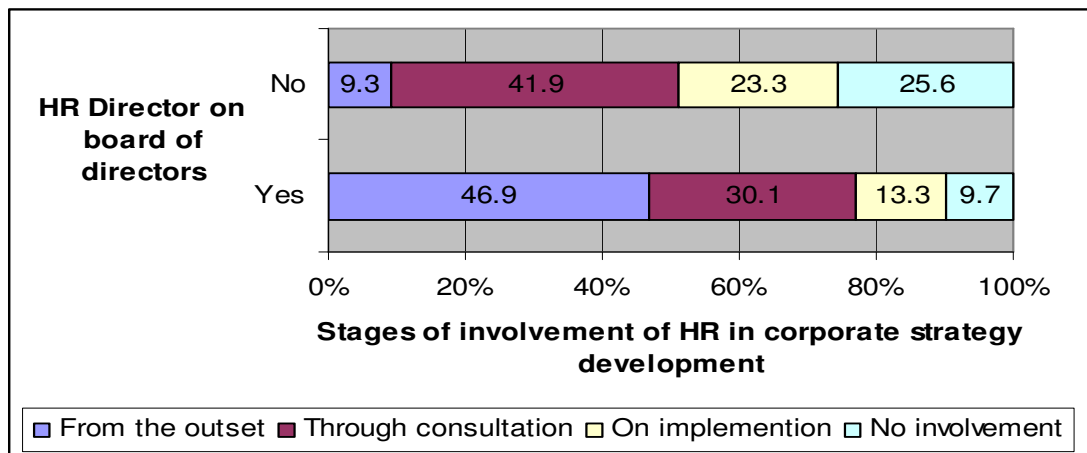
**Figure 6.1: Involvement of HR in corporate strategy development**



N = 169

Figure 6.2 breaks this down further by examining HR Board level influence on HR involvement in strategy formulation.

**Figure 6.2: HR involvement in corporate strategy development by HR representation at board level**



N = 169

Almost half of the HR Directors with Board level responsibility for HR indicate that they were involved in corporate strategy development from the outset (46.9%) showing participation of HR at the strategic level in the organisation. A further 30.1 percent had early involvement through consultation. However, almost a quarter (23 percent) of HR Directors (or equivalent) who have board membership reported little involvement in corporate strategy development indicating that they have little influence at strategic decision making level.

#### 6.4 Diffusion of High Performance Work System Practices

This section describes the existence of the individual HPWS practices across the combined employee categories. The findings described in Table 6.3 broadly indicate that practices such as inductions and company specific training, were widely used, while less than one-third of firms used validated employment tests, had a skill or knowledge based pay system, paid a premium wage or administered employee attitude surveys on a regular basis. In addition, workers were covered by family-friendly or work-life balance practices in only 50 percent of workplaces.

**Table 6.3: Diffusion of HRM**

What proportion of your employees....		Mean
<b>1</b>	<b>EMPLOYEE RESOURCING</b>	
	Are interviewed during the hiring process using <b>structured, standardized interviews</b>	64.78
	Are administered one or more validated <b>employment tests</b>	24.19
	Hold jobs which have been subjected to a <b>formal job analysis</b> to identify position requirements	54.14
	Hold <b>non-entry level jobs</b> as a result of <b>internal promotions</b>	36.41
	Hold <b>non-entry level jobs</b> due to promotions based <b>upon merit or performance</b>	39.22
	Can expect to <b>stay in this organisation for as long as they wish</b>	66.63
	On leaving the firm are subjected to a <b>formal exit interview</b>	50.47
<b>2</b>	<b>TRAINING AND DEVELOPMENT</b>	
	Receive <b>formal induction training/</b> socialisation to the organisation	86.01
	Have been <b>trained in a variety of jobs or skills</b> (cross trained) and/or routinely perform more than one job	53.13
	Have received <b>training in company-specific skills</b>	78.27
	Have received <b>training in generic skills</b> (e.g., problem-solving, communication skills, etc)?	38.43
	Receive specific training as a <b>direct result of their performance appraisal</b>	41.70
	Have been involved in a <b>Total Quality Management programme</b>	30.56
<b>3</b>	<b>PERFORMANCE MANAGEMENT AND REMUNERATION</b>	
	Receive <b>formal performance appraisals</b> on a routine basis	61.72
	Receive <b>formal performance feedback</b> from <b>more than one source</b>	30.68
	Receive <b>compensation partially contingent on individual merit</b> or performance	45.21
	Receive <b>compensation partially contingent on group performance</b>	37.79
	Have options to obtain <b>shares of your organisation's stock</b>	18.91
	Are paid primarily on the basis of a <b>skill or knowledge-based pay system</b>	27.31
	Are paid a <b>premium wage</b> in order to attract and retain them	27.26
	What proportion of the average employee's <b>total annual remuneration</b> is <b>contingent on performance</b>	12.89
<b>4.</b>	<b>COMMUNICATION AND INVOLVMENT</b>	
	Are involved in programmes designed to <b>elicit participation and employee input</b>	35.33

	Are provided relevant <b>financial performance information</b>	53.86
	Are provided relevant <b>strategic information</b>	59.35
	Are administered <b>attitude surveys</b> on a regular basis	31.74
	Have access to a formal <b>grievance/complaint</b> resolution procedure or system	90.91
	Are organised in <b>self-directed work teams</b> in performing a major part of their work roles	41.27
<b>5</b>	<b>WORK LIFE BALANCE</b>	
	What proportion of workforce covered by <b>family-friendly or work-life balance practices</b>	52.67
<b>6</b>	<b>HIGH PERFORMANCE WORK SYSTEMS</b>	
	<b>Average HPWS Index Score</b>	<b>46.33</b>

\*These percentages represent weighted averages across the two employee groups

The higher the score on the HPWS index, the greater the utilisation of HPWS. On average, the utilisation of HPWS was 46.33 percent (s.d. = 16.17) out of a maximum of 100. As described in chapter 5, this score represents the combined weighted average of each item for each employee group. The results compare favourably with those from the U.S (mean = 49.58; s.d. = 15.27) reported by Datta et al., (2005). Among the Irish sample, the maximum HPWS score was 84.07 percent (representing high investment in HPWS) while the minimum HPWS score was 7.75 percent. However, Table 6.3 does not take account of differences in employee category. Table 6.4 provides further information by describing the extent to which HPWS practices are used to manage the different employee categories (Managerial/Professional and Clerical/Production). It shows that the application of HPWS is largely equivalent across both employee categories. Exceptions to this trend include the practices such as individual performance related pay, formal performance appraisals and the provision of financial and strategic information which were more prevalent in management and professional employee categories

**Table 6.4 Diffusion of HPWS by employee category**

What proportion of your employees....		Group A	Group B
<b>1</b>	<b>EMPLOYEE RESOURCING</b>	<b>47.56</b>	<b>53.56</b>
	Structured, standardized interviews	62.57	71.56
	Validated employment tests	23.53	29.80
	Formal job analysis	56.99	63.73
	Internal promotions	33.13	39.66
	Promotions based upon merit or performance	35.98	43.03
	Job security	66.00	66.36
	Formal exit interview	49.17	54.50
<b>2</b>	<b>TRAINING AND DEVELOPMENT</b>	<b>54.93</b>	<b>56.07</b>
	Formal induction training	86.54	81.94
	Trained in a variety of jobs or skills (cross trained)	56.69	42.06
	Training in company-specific skills	79.32	75.85
	Training in generic skills	30.54	51.80
	Specific training as a result of their PA	39.73	45.63
	Total Quality Management programme?	29.63	32.50
<b>3</b>	<b>PERFORMANCE MANAGEMENT &amp; REMUNERATION</b>	<b>38.06</b>	<b>47.63</b>
	Formal performance appraisals	58.10	73.15
	Formal performance feedback from more than one source	29.78	34.17
	Compensation partially contingent on individual merit	38.94	60.72
	Compensation partially contingent on group performance	35.26	46.61
	Options for shares of organisation's stock	17.18	21.56
	Paid primarily on the basis of a skill or knowledge-based pay system	25.04	32.77
	Paid a premium wage	24.21	30.39
	Remuneration contingent on performance	10.78	16.94
<b>4.</b>	<b>COMMUNICATION AND INVOLVMENT</b>	<b>50.91</b>	<b>60.93</b>
	Programmes designed to elicit participation and employee input	32.43	41.51
	Financial performance information?	47.54	71.83
	Strategic information	54.03	74.25
	Administered attitude surveys	31.40	31.80
	Formal grievance/complaint resolution procedure	90.61	89.75
	Self-directed work teams	36.19	45.52
<b>5</b>	<b>WORK LIFE BALANCE</b>		
	Family-friendly or work-life balance practices?	52.61	53.56
<b>6</b>	<b>HIGH PERFORMANCE WORK SYSTEMS</b>		
	Average HPWS Index Score	<b>47.79</b>	<b>53.17</b>

T-tests were carried out to test whether the overall HPWS scores and individual HPWS practice scores above significantly differed across the two employee categories. The t-test results described in table 6.5 shows that the diffusion of some individual HPWS practices did differ according to employee category. We can see that the mean difference between groups for employee resourcing is -6.00. The value of t is -6.16 (d.f = 166) and is significant ( $p < .001$ ). Hence, existence of sophisticated recruitment and selection techniques for group B employees is higher than that of group A employees. The same is true for performance management and remuneration ( $t = -8.32$ ;  $p < .001$ ), communication and involvement ( $t = -8.29$ ;  $p < .001$ ) and the overall HPWS score ( $t = -8.76$ ;  $p < .001$ ). This suggests that production, maintenance and clerical employees are exposed to a second tier of HPWS practices in terms of pay, performance and communication with more sophisticated HPWS practices being exclusively applied to managerial and professional employees.

**Table 6.5: T-test results for HPWS across employee category**

	Group	N	SD	df	t-value	P
<b>Employee resourcing</b>	A	167	20.15	166	-6.16	.000***
	B	167	20.41			
<b>Training &amp; Development</b>	A	167	20.77	166	-.762	.447
	B	167	27.23			
<b>Performance Management &amp; Remuneration</b>	A	166	78.70	164	-8.32	.000***
	B	166	78.24			
<b>Communication &amp; involvement</b>	A	166	26.53	165	-8.29	.000***
	B	166	24.07			
<b>Work Life Balance</b>	A	162	46.96	157	-.917	.361
	B	162	46.76			
<b>HPWS</b>	A	168	19.43	167	-8.76	.000***
	B	168	19.62			

\* $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $P < .001$

Table 6.6 below presents the average HPWS score by key organisational characteristics. Previous research has found that larger, foreign owned and older workplaces invest more in HPWS, as they have a greater capacity to do so in terms of resources and organisational learning (Guthrie et al., 2002). The data in this research supports these findings and show that larger firms tended to be characterised by greater use of formal HR policies. Organisations with more than 500 employees had a mean HPWS score of 50.24 percent. Firm size was categorised using categories defined by OECD (2005) and Wu, Hoque and Bacon, (2011). Small firms were those with fewer than 50 employees; medium-sized firms are those employing between 50 and 249 employees; large firms were those employing 250 employees or more.

**Table 6.6: HPWS score by organisational characteristic**

<i>Organisational Characteristic</i>	<i>Average HPWS Index score</i>
<i><u>Establishment size</u></i>	
Under 50 employees	38.38
50-249 employees	45.47
Greater than 250 employees	50.24
<i><u>Industrial Activity</u></i>	
Agriculture/forestry/fishing	35.83
Other Manufacturing	39.40
Building and civil engineering	45.77
Chemical products	56.20
Energy and water	59.21
Health services	46.90
Metal Manufacturing	41.32
Personal, domestic, recreational services	44.24
Retail and distribution; hotels	48.80
Transport and communication	47.25
Other services (e.g. R&D, television, radio)	40.21
Other	48.95
Banking, finance, insurance services	56.49
<i><u>Country of origin</u></i>	
Irish owned	43.67
US owned	51.46
European owned	51.49
Other	48.75
<i><u>Level of Unionisation</u></i>	
No union	50.32
Unionised	42.49
<i><u>Pressure for change</u></i>	
Low	40.69
High	48.55

Industry sector represents a further important influence on the firm's approach to management and on the employment practices deployed. Boxall (2003) argues that we should look beyond HPWS being a category that is exclusive to certain elite industries. As Table 6.6 shows, the banking, insurance and financial services invest the most in high performance work systems with a mean of 56.49. This sector operates as a large employer of knowledge workers who have high



levels of autonomous discretion (Kubo and Saka, 2001). According to Boxall (2003:14), this sector is the ‘natural home of high-performance work systems in the service sector’. Energy and water (mean = 59.21) and organisations manufacturing chemical products (mean = 56.20) also invest highly in HPWS. In high-technology or capital intensive manufacturing, researchers have found that investment in HPWS is cost-effective (Arthur, 1994; MacDuffie, 1995; Osterman, 1994). In contrast, sectors such as those operating in ‘other manufacturing’ have lower levels of investment in HPWS as their focus is on labour intensive parts of manufacturing which results in Tayloristic work systems and inexpensive HR practices (Boxall and Purcell, 2003). The personal, domestic, and recreational services sector also has below average investment in HPWS (at 44.24 percent) within the services sector.

The ownership of workplaces has been shown to be an important contextual factor in HPWS research as it has important implications for HR and the organisation of work. Many researchers have shown the impact of country of origin effects of MNCs on employment relations in host countries in both Ireland and across Europe (see for example Almond et al., 2005). In this study, Irish indigenous organisations have the lowest investment in HPWS a 43.67 percent. As expected, US owned organisations scored higher with a mean of 51.46. European owned organisations were the highest users of HPWS with a score of 51.49.

The relationship between unionisation and HPWS adoption has yielded inconsistent results in previous research. Verma (2005) argued that unions might lead to more progressive HRM in organisations. In contrast, Godard (2004) argues that unions are not positively linked to HPWS adoption as the individualism that characterises much of the HPWS model serves to undermine collective employment systems. Machin and Woods (2005) WERS study in the UK showed no difference between union and non union sectors and patterns of HRM. Table 6.6 shows that organisations that are non unionised do report higher levels of HPWS compared to unionised organisations. This is supportive of work by Liu et al (2009) who reported that as union coverage in their sample of Irish firms increased, HPWS use decreased.

## **6.5 High Performance Work Systems and Organisational Outcomes**

This section considers associations between the HPWS practices and the outcome variables. The hypotheses to be tested (as described in section 4.7) are revisited below and illustrated in diagrammatic form in Figure 6.3:

- H1a: Greater adoption of HPWS will be positively associated with employee performance
- H1b: Greater adoption of HPWS will be positively associated with HR performance
- H1c: Greater adoption of HPWS will be positively associated with innovation

- H1d: Greater adoption of HPWS will be positively associated with organisational performance
- H1e: Greater adoption of HPWS will be negatively associated with absenteeism
- H1f: Greater adoption of HPWS will be negatively associated with turnover

**Figure 6.3: Hypothesised model of HPWS and organisational outcomes**

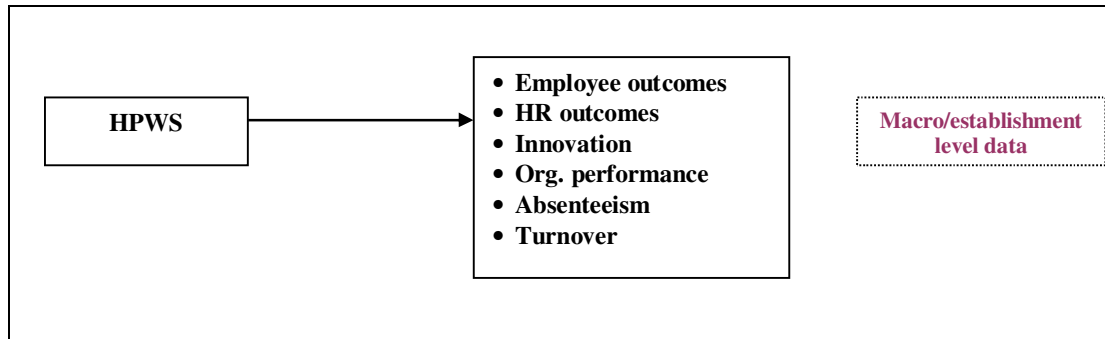


Table 6.7 presents the means, standard deviations, and correlation matrix for this study's key variables: control variables (sector, size, ownership, years in operation, unionisation), the independent variable (HPWS), moderating variables (business strategy, management philosophy) and dependent variables (workforce turnover, absenteeism, organisational performance, HR performance, employee outcomes and innovation). The correlations reported are largely in accordance with expectation and with previous research. Table 6.7 shows that HPWS is correlated positively with three control variables: sector ( $r = .127, p < .05$ ), size ( $r = .195, p < .05$ ) and ownership ( $r = .222, p < .01$ ). The HPWS index correlated negatively with unionisation ( $r = -.242, p < .01$ ). This suggests the organisations that adopt HPWS are more likely to be larger, non-Irish owned, non union organisations operating in the service sector.

**Table 6.7: Means, standard deviations and pearson product moment correlations of variables**

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Sector	-	-	1															
2. Firm age	37.49	33.1	.081	1														
3. Firm Size	5.16	1.07	.208**	.070	1													
4. Ownership	-	-	-.112	-.191*	-.068	1												
5. Unionisation	-	-	-.197	.078	.177*	.011	1											
6. HPWS	56.40	32.60	.179*	-.092	.195*	.222**	-.242**	1										
7. Low cost strategy	42.24	32.34	-.262**	-.067	-.089	-.136	.147	-.278**	1									
8. Differentiation strategy	56.40	32.60	-.056	-.040	-.123	.163*	-.139	.184*	-.607**	1								
9. Strategic Integration	1.31	.59	.200**	.010	.270**	.137	-.007	.537**	-.142	.097	1							
10. Mgt philosophy	3.48	.804	-.008	-.077	.082	.023	-.066	.384**	-.147	.116	.328**	1						
11. Turnover	11.7	31.3	.176*	-.142	.044	-.132	-.144	-.020	-.026	-.062	-.137	-.070	1					
12. Absenteeism	7.35	11.9	.095	-.068	-.083	-.047	.028	-.091	.104	-.044	-.067	-.143	.037	1				
13. Organisation Performance	3.55	.520	.113	-.159	.100	-.021	-.152	.283**	-.076	.129	.149	.393**	.055	-.036	1			
14. HR Performance	3.75	.640	.025	-.080	-.020	-.053	-.123	.227**	.032	-.042	.146	.386**	-.031	-.039	.352**	1		
15. Employee outcomes	3.64	.566	.023	-.132	-.012	-.063	-.106	.334**	-.169*	.241**	.202**	.561**	-.030	-.051	.401**	.533**	1	
16. Innovation	16.11	21.5	-.095	-.130	.074	.211*	.058	.281**	-.277**	.384**	.161	.044	.002	-.064	.111	-.034	.088	1

\*p < .05; \*\* p < .01; \*\*\* p < .001

Table 6.7 also shows that the HPWS index correlated positively with a number of dependent variables identified previously, namely organisational performance ( $r = .283, p < .01$ ), HR performance ( $r = .227, p < .01$ ), employee performance ( $r = .334, p < .01$ ) and innovation ( $r = .281, p < .01$ ). However, two of the performance variables – employee turnover and absenteeism – were negatively correlated with HPWS but are not significant. Organisations operating a differentiation strategy were found to correlate positively with HPWS. In contrast, those organisations pursuing a low cost business strategy had lower levels of HPWS investment. To further test these significant associations, hierarchical regression was used. For each regression model, all control variables were simultaneously entered (Step 1), followed by the independent variables (Step 2).

Table 6.8 outlines the results of the regression analysis. For each model, the control variables relating to size, age and ownership, sector and unionisation were entered in the first step and HPWS was entered in the second step. The results show a direct and positive relationship between HPWS and all four dependent variables. More specifically, HPWS was positively related to HR performance ( $\beta = .289, p < .05$ ), employee performance ( $\beta = .401, p < .001$ ), innovation ( $\beta = .240, p < .001$ ), and organisational performance ( $\beta = .266, p < .001$ ). The variance explained by HPWS in each model was 7 percent (HR performance), 13 percent (employee performance), 24 percent (innovation), and 27 percent (organisational performance). Therefore, the results provide support for hypotheses 1a to 1d, which posited that HPWS would positively impact employee performance, HR performance, innovation and organisational performance.

Having established that HPWS has a significant positive effect on organisational outcomes, individual HR practices were examined to establish which practices have greater utility in improving performance for organisations. After controlling for contextual factors in step 1, five HR practices were added to the model and tested. The results show that when employee resourcing, training and development, performance management and remuneration, communication and involvement and work life balance were added in step two, only communication and involvement was found to have a significant impact on three of the four dependent variables. The findings (see table 6.9) reveal that communication and involvement HR practices were positively and significantly associated with: employee performance ( $\beta = .346, p < .01$ ), HR performance ( $\beta = .233, p < .05$ ) and organisational performance ( $\beta = .320, p < .01$ ).

**Table 6.8: Results of Hierarchical Regression Analysis for HPWS and dependent variables**

Step	Variables	Employee Performance		HR Performance		Innovation		Organisational Performance	
		Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
	<b>Control variables</b>								
<b>1</b>	Sector	.035	.001	.046	.017	-.133	-.155	.067	.058
	Firm age	-.138	-.122	-.091	-.083	-.054	-.060	-.166	-.173*
	Firm size	-.019	-.122	-.051	-.121	.107	.046	.117	.055
	Ownership	-.094	-.198*	-.072	-.146	.210*	.140	-.034	-.116
	Unionisation	-.099	.008	-.025	.052	-.129	-.063	-.126	-.042
	<b>Independent variable</b>								
<b>2</b>	HPWS		.401***		.289***		.240*		.266***
	<b>R<sup>2</sup></b>	<b>.039</b>	<b>.169</b>	<b>.016</b>	<b>.084</b>	<b>.086</b>	<b>.132</b>	<b>.065</b>	<b>.120</b>
	<b>(Adj R<sup>2</sup>)</b>	<b>.006</b>	<b>.135</b>	<b>-.016</b>	<b>.047</b>	<b>.045</b>	<b>.085</b>	<b>.028</b>	<b>.078</b>
	<b>Δ R<sup>2</sup></b>	<b>-</b>	<b>.130</b>	<b>-</b>	<b>.068</b>	<b>-</b>	<b>.046</b>	<b>-</b>	<b>.055</b>
	<b>F</b>	<b>1.19</b>	<b>4.99***</b>	<b>.500</b>	<b>2.27*</b>	<b>2.07</b>	<b>2.77*</b>	<b>1.77</b>	<b>2.89*</b>

\* = p < .05 \*\* = p < .01 \*\*\* = p < .001 (standardised coefficients reported).

Sector (1 = service; 0 = others); Ownership (1 = Irish owned; 0 = others); Unionisation (1 = union; 0 = non union)

**Table 6.9: Results of Hierarchical Regression Analysis for individual HPWS practices and dependent variables**

Step	Variables	Employee Performance		HR Performance		Innovation		Organisational performance	
		Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
	<b>Control variable</b>								
<b>1</b>	Sector	.008	-.041	.016	-.017	-.117	-.121	.065	.085
	Firm age	-.167	-.158	-.103	-.082	-.069	-.061	-.168	-.169
	Firm size	-.023	-.124	-.065	-.172	.118	.083	.132	.043
	Ownership	-.143	-.240**	-.117	-.201	.166	.137	-.079	-.162
	Unionisation	-.050	.014	-.057	-.005	-.149	-.049	-.127	-.138
	<b>Independent variables</b>								
<b>2</b>	Employee resourcing		-.023		.013		-.075		-.161
	Training & Development		-.006		.127		.098		.090
	Performance Mgt & Remuneration		.140		.035		.185		.193
	Communication & Involvement		.346**		.233*		-.003		.320**
	Work life balance		.038		.044		.086		-.085
	<b>R<sup>2</sup></b>	<b>.209</b>	<b>.448</b>	<b>.169</b>	<b>.369</b>	<b>.272</b>	<b>.353</b>	<b>.072</b>	<b>.201</b>
	<b>(Adj R<sup>2</sup>)</b>	<b>.007</b>	<b>.137</b>	<b>-.009</b>	<b>.068</b>	<b>.030</b>	<b>.036</b>	<b>.030</b>	<b>.125</b>
	<b>Δ R<sup>2</sup></b>		<b>.157</b>	-	<b>.108</b>		<b>.050</b>	-	<b>.129</b>
	<b>F</b>	<b>1.18</b>	<b>3.31***</b>	<b>.767</b>	<b>1.99**</b>	<b>1.67</b>	<b>1.41</b>	<b>1.71</b>	<b>2.64**</b>

\* = p < .05 \*\* = p < .01 \*\*\* = p < .001 (standardised coefficients reported)

Sector (1 = service; 0 = others); Ownership (1 = Irish owned; 0 = others); Unionisation (1 = union; 0 = non union)

### 6.5.1 Moderating effects

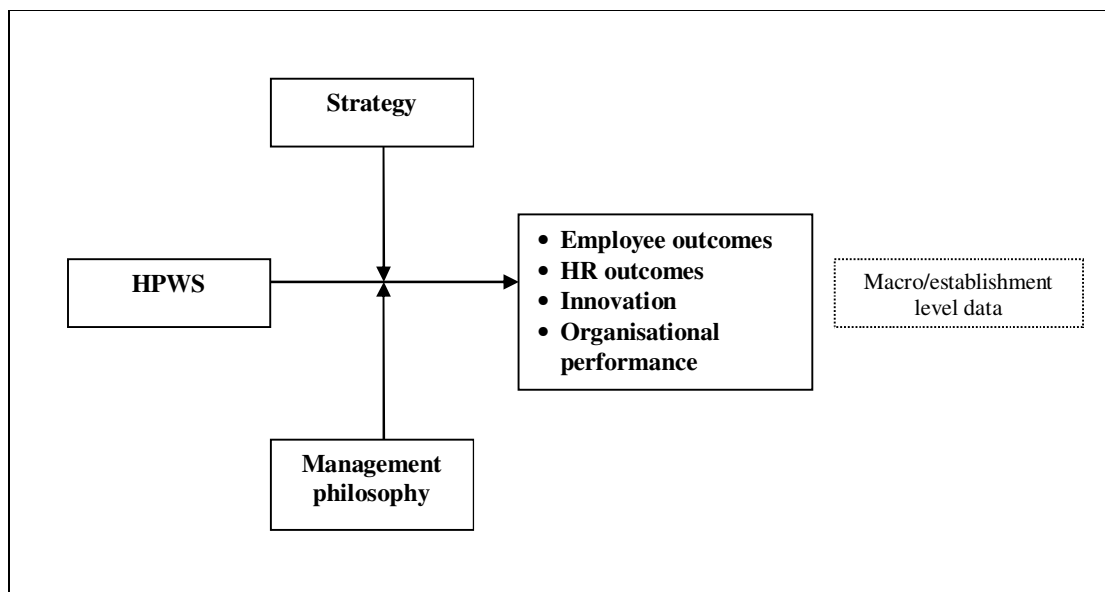
The previous section tested the direct effects of HPWS on a number of organisational outcomes. Significant positive effects were found between HPWS and organisational performance, HR performance, employee performance and innovation thus supporting hypotheses 1a to 1d. The hypotheses testing moderating effects are outlined below and are illustrated in Figure 6.4. These help answer research question 2 and were presented and discussed earlier in section 4.7.1.

H2a-d: Differentiation strategy moderates the relationship between HPWS and the following performance outcomes; a) employee performance; b) HR performance; c) innovation and d) innovation, such that the positive relationship between HPWS and outcomes will be stronger when differentiation strategy is high relative to when differentiation strategy is low.

H3a-d: Low cost strategy moderates the relationship between HPWS and the following performance outcomes; a) employee performance; b) HR performance; c) innovation and d) innovation, such that the positive relationship between HPWS and outcomes will be stronger when low cost strategy is low relative to when low cost strategy is high.

H4a-d: Management philosophy moderates the relationship between HPWS and the following performance outcomes; a) employee performance; b) HR performance; c) innovation and d) innovation, such that the positive relationship between HPWS and outcomes will be stronger when management philosophy is high relative to when management philosophy is low.

**Figure 6.4: Hypothesised model of moderating effect of strategy and management philosophy on HPWS and organisational outcomes**



Hypotheses 2a-d suggests that differentiation strategy will positively moderate the relationship between HPWS and performance outcomes a) employee performance; b) HR performance; c) innovation and d) organisational performance. In contrast, hypotheses 3a-d posits that a low cost strategy will negatively moderate the relationship between a HPWS and performance outcomes: a) employee performance; b) HR performance; c) innovation and d) organisational performance. As discussed in chapter 2, according to the 'best fit' literature, when adopting a HPWS, firms should take into account the desirability of fit between these practices and firm strategy (Baird and Meshoulam, 1988). This contingency perspective leads to the expectation that the competitive strategy the firm pursues moderates the relationship between HPWS and performance (Schuler and Jackson, 1987, Guthrie et al., 2002). Moderation analysis is used to test this contingency perspective as it involves research on situational conditions that influence the strength of the relationship between a predictor and an outcome (Edwards and Lambert, 2007; Aiken and West, 1991).

To test for moderation in regression analysis, three equations were simultaneously entered into the regression analysis in the following order: 1) regress the dependent variable on the independent variable, 2) regress the dependent variable on the moderator, and 3) regress the dependent variable on the product of the moderator and independent variable (the interaction variable). Moderation effects were shown if the third regression equation and the change in R<sup>2</sup> were significant. For example, Hypotheses 2a sought to test the interactive effect of HPWS (the independent variable) and differentiation strategy (the moderator variable) on a number of organisational outcomes. Consequently, to test the moderating effect of the moderator variables on the HPWS – performance relationship, new interaction variables were created following the steps outlined in chapter five. Table 6.10 shows the results of the analysis examining the moderating role of differentiation strategy on the HPWS-performance relationship. The control variables were entered in Step 1, the predictor variable (HPWS) and moderator variable (differentiation strategy) were entered in Step 2, and the interaction variable (centred HPWS\*centred differentiation strategy) was entered in Step 3. We can see from Table 6.10 that the addition of the moderator variable accounts for a statistically significant amount of additional variance for employee performance ( $\beta = .161, p < .05$ ) and innovation ( $\beta = .195, p < .05$ ).

Table 6.11 examines the moderating role of low cost strategy on the HPWS-performance relationship. An interaction variable was calculated (centred HPWS\*centred cost reduction strategy). Findings suggest that low cost strategy moderates the relationship between HPWS and employee performance ( $\beta = .164, p < .05$ ) and innovation ( $\beta = -.190, p < .05$ ). The moderating role of management philosophy was also examined and was found not to moderate the HPWS-performance relationship (see Appendix I for details of findings).



**Table 6.10: Results for Hierarchical Regression Analysis for moderating role of differentiation strategy on outcomes**

Step	Variables	Employee Performance		HR Performance		Innovation		Organisational Performance	
		Model 2	Model 3	Model 2	Model 3	Model 2	Model 3	Model 2	Model 3
	<b>Control variables</b>								
<b>1</b>	Sector	-.009	-.027	-.016	-.026	-.159	-.151	.050	.044
	Firm age	-.080	-.085	-.060	-.063	-.077	-.072	-.180*	-.182*
	Firm size	-.104	-.090	-.088	-.082	.078	.065	.080	.082
	Ownership	-.223	-.235	-.124	-.133	.107	.124	-.080	-.085
	Unionisation	.038	.009	.053	.037	-.073	-.049	-.031	-.041
		.361			.				
<b>2.</b>	<b>Independent variable</b>								
	HPWS	.282***	.354***	.285**	.279**	.177	.205*	.200*	.200*
	Differentiators	-.009**	.284**	-.018	-.019	.299**	.320**	.090	.087
<b>3.</b>	<b>Interaction</b>								
	HPWS x differentiation		.161*		-.094		.195*		-.050
	<b>R<sup>2</sup></b>	<b>.225</b>	<b>.250</b>	<b>.068</b>	<b>.076</b>	<b>.217</b>	<b>.253</b>	<b>.104</b>	<b>.106</b>
	<b>Δ R<sup>2</sup>j</b>	<b>.183</b>	<b>.203</b>	<b>.018</b>	<b>.019</b>	<b>.164</b>	<b>.194</b>	<b>.050</b>	<b>.045</b>
	<b>Δ R<sup>2</sup></b>	<b>.205</b>	<b>.025</b>	<b>.018</b>	<b>.019</b>	<b>.123</b>	<b>.036</b>	<b>.044</b>	<b>.002</b>
	<b>F</b>	<b>5.319***</b>	<b>5.292***</b>	<b>1.356</b>	<b>1.335</b>	<b>4.045**</b>	<b>4.278***</b>	<b>1.940*</b>	<b>1.725</b>

\* = p < .05 \*\* = p < .01 \*\*\* = p < .001 (standardised coefficients reported)

Sector (1 = service; 0 = others); Ownership (1 = Irish owned; 0 = others); Unionisation (1 = union; 0 = non union)

**Table 6.11: Results for Hierarchical Regression Analysis for moderating role of low cost strategy on outcomes**

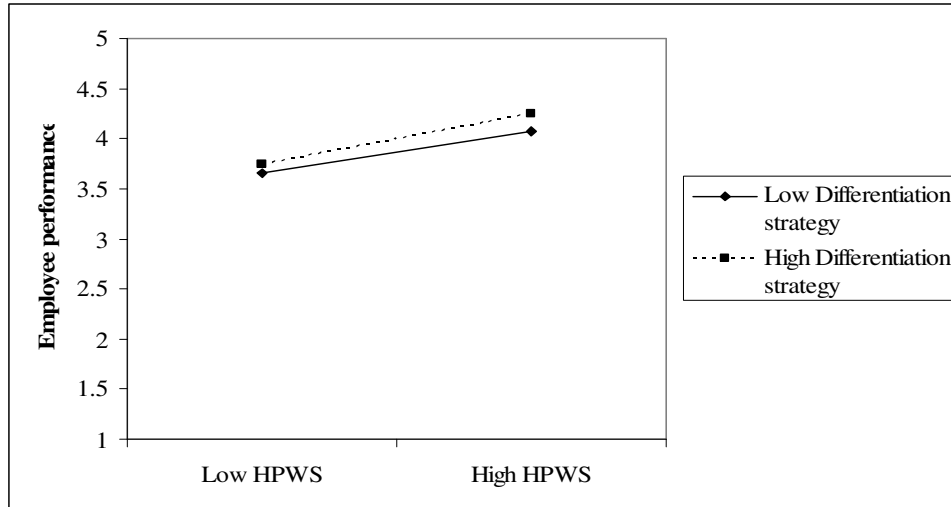
Step	Variables	Employee Performance		HR Performance		Innovation		Organisational Performance	
		Model 2	Model 3	Model 2	Model 3	Model 2	Model 3	Model 2	Model 3
	<b>Control variables</b>								
<b>1</b>	Sector	-.016	-.032	-.014	-.025	-.163	-.156	.046	.043
	Firm age	-.076	-.081	-.059	-.063	-.074	-.069	-.180*	-.181*
	Firm size	-.101	-.085	-.088	-.079	.084	.071	.081	.083
	Ownership	-.220*	-.228**	-.120	-.128	.112	.126	-.084	-.088
	Unionisation	.035	.013	.051	.035	-.066	-.049	-.029	-.036
	<b>Independent variable</b>								
<b>2</b>	HPWS	.365***	.359***	.288**	.282**	.182	.210*	.194	.193*
	Low cost	-.267**	-.263**	.034	.040	-.310*	-.334***	-.117	-.113
<b>3.</b>	<b>Interaction</b>								
	HPWS x low cost		.164*		.122		-.190*		.044
	<b>R<sup>2</sup></b>	<b>.218</b>	<b>.224</b>	<b>.069</b>	<b>.083</b>	<b>.224</b>	<b>.258</b>	<b>.109</b>	<b>.111</b>
	<b>Adj R<sup>2</sup></b>	<b>.175</b>	<b>.196</b>	<b>.019</b>	<b>.027</b>	<b>.171</b>	<b>.199</b>	<b>.056</b>	<b>.049</b>
	<b>Δ R<sup>2</sup></b>	<b>.197</b>	<b>.026</b>	<b>.064</b>	<b>.015</b>	<b>.129</b>	<b>.034</b>	<b>.049</b>	<b>.002</b>
	<b>F</b>	<b>5.091***</b>	<b>5.121***</b>	<b>1.372</b>	<b>1.467</b>	<b>4.205***</b>	<b>4.382***</b>	<b>2.042</b>	<b>1.806</b>

\* = p < .05 \*\* = p < .01 \*\*\* = p < .001 (standardised coefficients reported)

Sector (1 = service; 0 = others); Ownership (1 = Irish owned; 0 = others); Unionisation (1 = union; 0 = non union)

To illustrate these interactions and aid the interpretation of the findings in Tables 6.10 and 6.11, interactions were plotted in diagrammatic form. Regarding employee performance (Figure 6.5), the direction of the interaction effects of differentiation strategy aligned with hypotheses 2a such that the relationship between HPWS and employee performance was more positive for organisations pursuing a high differentiation strategy.

**Figure 6.5: The interaction between differentiation strategy and HPWS in relation to employee performance**



As predicted, the positive relationship between HPWS and innovation was stronger when organisations displayed high differentiation strategy (see Figure 6.6) compared to low differentiation strategy.

**Figure 6.6: The interaction between differentiation strategy and HPWS in relation to innovation**

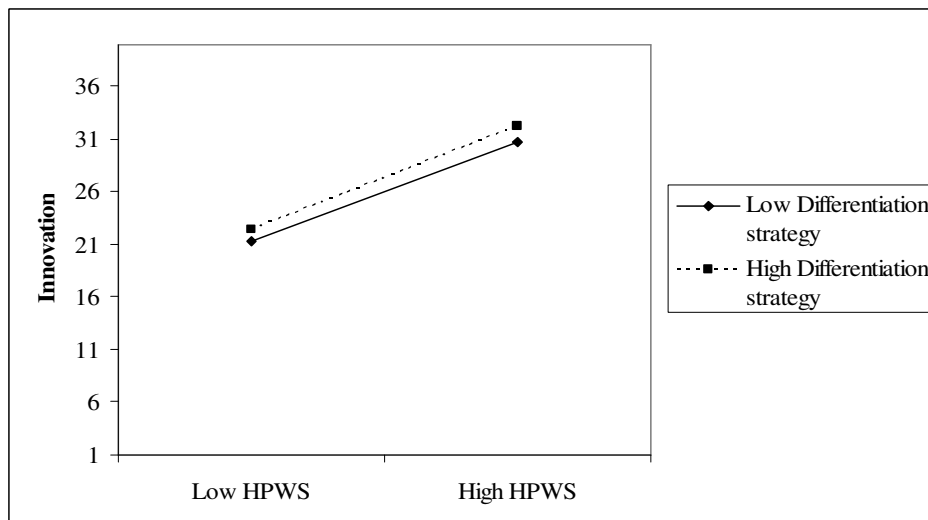


Figure 6.7 plots the interaction term between HPWS and low cost strategy and its relationship to employee performance. A somewhat unexpected effect for low cost strategy was found regarding the relationship between HPWS and employee performance. Contrary to expectation, the direction of the interaction effect of low cost strategy was not consistent with hypothesis 3a. Instead, the relationship between HPWS and employee performance was more positive among organisations pursuing a low cost strategy.

**Figure 6.7: The interaction between low cost strategy and HPWS in relation to employee performance**

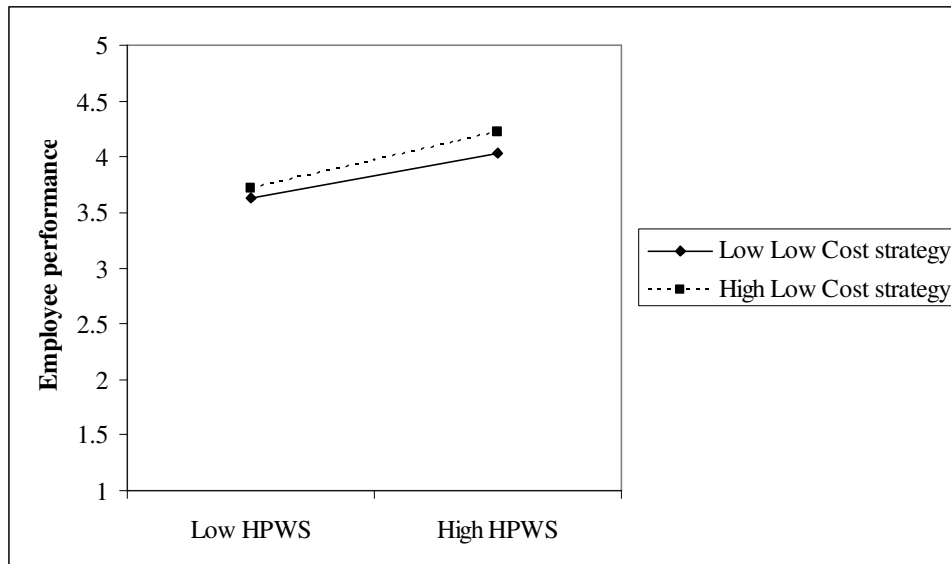
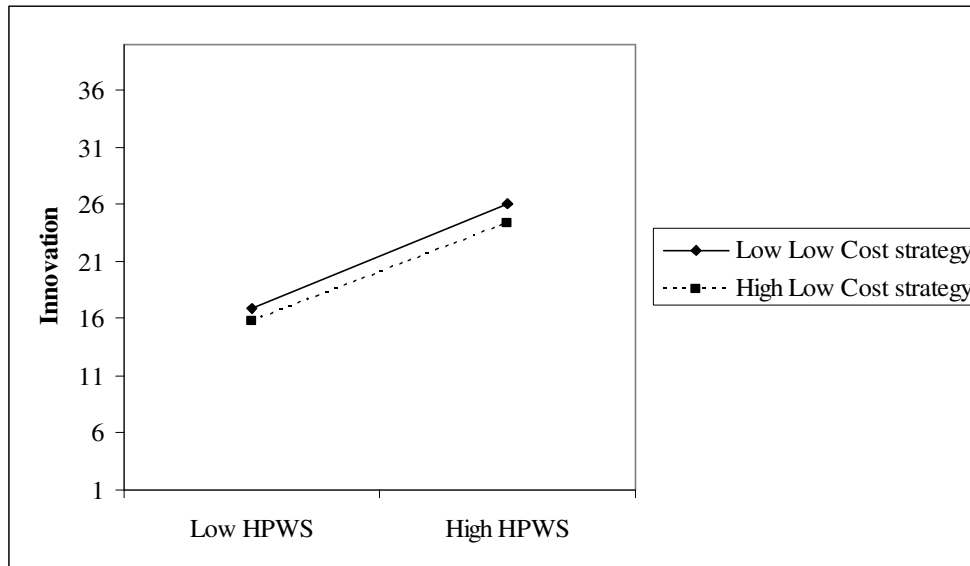


Figure 6.8 illustrates the nature of the slopes for different values of low cost strategy and HPWS on innovation. A moderating effect was established where organisations with high investment in HPWS and a small emphasis on a strategy competing on the basis of lower costs, reported higher levels of innovation.

**Figure 6.8: The interaction between low cost strategy and HPWS in relation to innovation**



In summary, Hypothesis 2a, 2c and 3c were fully supported, suggesting that strategy does moderate the HPWS-performance relationship. This helps answer research question 2 which sought to find out if the HPWS-organisational outcome relationship was dependent on business strategy. Surprisingly, low cost strategy did moderate the relationship between HPWS and employee performance but not in the direction the author had anticipated. Because no interaction effect was found for management philosophy, Hypotheses 4a -4d were not supported. Findings for these moderating effects are reported in Appendix I. Table 6.12 summarises the key findings from this chapter.

**Table 6.12: Summary of hypotheses results from macro level data**

	<b>Hypotheses</b>	<b>Findings</b>
H1a	Greater adoption of HPWS will be positively associated with employee performance	Supported
H1b	Greater adoption of HPWS will be positively associated with HR performance	Supported
H1c	Greater adoption of HPWS will be positively associated with innovation	Supported
H1d	Greater adoption of HPWS will be positively associated with organisational performance	Supported
H2a-d	A differentiation strategy will positively moderate the relationship between a high performance work systems and outcome variables such that a high focus on	Supported (employee performance and innovation only)

	<b>Hypotheses</b>	<b>Findings</b>
	differentiation will be associated with higher a) employee performance; b) HR performance; c) innovation and d) innovation	
H3a-d	A low cost strategy will negatively moderate the relationship between a high performance work systems and performance outcomes such that a high focus on low cost strategy will be associated with lower a) employee performance; b) HR performance; c) innovation and d) innovation	Supported for innovation only. Positive moderating relationship found for employee performance
H4a-d	Management philosophy will positively moderate the relationship between HPWS and performance outcomes a) employee performance; b) HR performance; c) innovation and d) innovation	Not supported

## **6.6 Conclusion**

The first part of chapter 6 presented the descriptive data from the High Performance Work Systems in Ireland survey which illustrates the incidence of HPWS in Irish organisations. The descriptive statistics reveal that organisations have a rather moderate to low adoption of the full-scale HPWS model that is advocated in the literature; a finding that is comparable to other international studies (Datta et al., 2005; Kersely et al., 2006). The average level of HPWS in this study was 46.33 out of a possible 100. HPWS was more prevalent in large, non union organisations. Both US and UK/European organisations showed higher investment in HPWS than Irish owned organisations. The highest incidence of HPWS was found in the financial services sector. In terms of the diffusion of individual HPWS practices, the findings indicate very high level usage of practices such as company inductions and organisation specific training, while less than one third of firms surveyed used validated employment tests, had a skill or knowledge based pay system, paid a premium wage or administered employee attitude surveys on a regular basis. There were significant differences in HPWS investment across employee categories with higher investment in HPWS for managerial and professional employees.

The key finding of this chapter reveals that the use of HPWS in organisations influences performance in organisations. Regression findings supported the hypotheses that by using HPWS, organisations can improve employee performance, HR performance, innovation and organisational performance. The findings also show that the strategy of the firm does play a moderating role between HPWS and some dependent variables (employee performance and innovation only). However, in some instances the positive effects of adopting HPWS for companies are equally significant both for firms that base their strategy on low cost and for

companies that focus on differentiation. These findings assisted in answering research questions 1 and 2 by establishing the prevalence of HPWS in Ireland and showing how HPWS policy affects performance outcomes.

Having established that HPWS at the macro level has performance effects for organisations, attention now turns to the micro level and employee experiences of HPWS. The core objective of this thesis is to restore employees' experience of work to 'the heart of HRM research and practice' (Boselie et al., 2005: 82). To this end, chapter 8 will present the findings from the employee level dataset, which takes an explicitly micro dimension to the research by focussing on employee experiences of HPWS across three organisations that were part of the macro level data set. Before examining this data however, the following chapter will firstly briefly describe the background to the three organisations that are part of the micro level research dataset.

**MICRO LEVEL HPWS: OVERVIEW OF COMPANIES**

---

**7.1 Introduction**

This chapter introduces the three organisations selected for the analysis of HPWS at the micro level which will provide data to help answer the remaining research questions which explore HPWS processes, their impact on employees and why such reactions occur. The three organisations were chosen in order to provide comparative evidence regarding the effects of HPWS on employees. As explained in chapter five, the criteria for the selection of suitable firms were (1) that each potential organisations was known to be ‘high performing’ in terms of their range of HPWS policies and practices, (2) all were privately owned companies operating in the service sector of the Irish economy, and finally, (3) there was variation of HPWS implementation, evidenced by HPWS measures derived from the macro level survey findings reported in chapter 6.

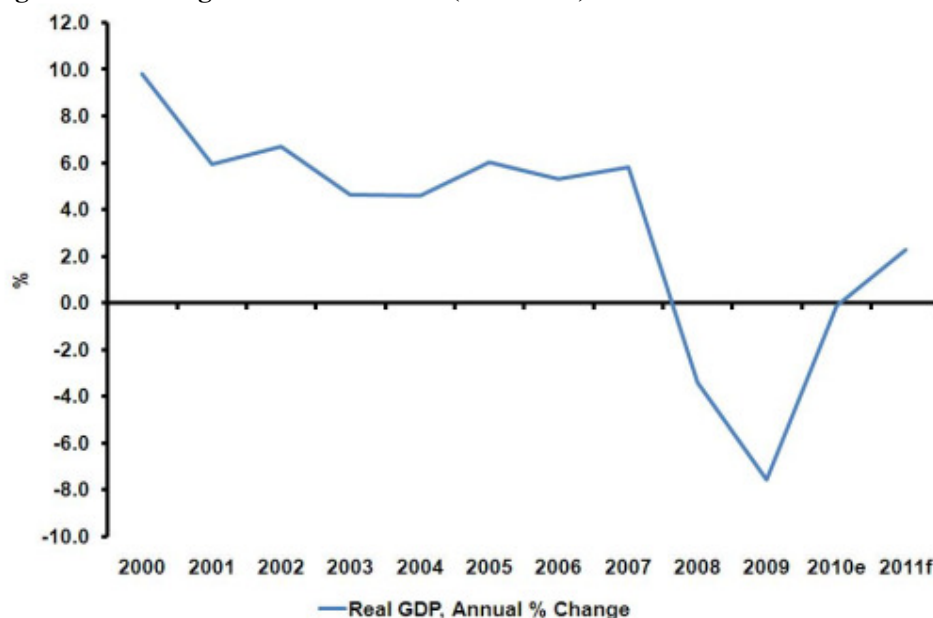
**7.2 Time frame**

It is important to discuss the time frame of this study, as Ireland’s economy underwent major changes between the period of the first phase of data collection in 2006 and the second phase (between 2008 and 2009). The High Performance Work Systems in Ireland survey was administered in 2006 when Ireland was still experiencing the benefits of the ‘Celtic Tiger’. As a result, economic conditions in Ireland were still quite favourable, with HR managers stating a major concern was their ability to attract and retain qualified job candidates in a tight labour market. Consequently, employers were focusing on promising attractive outcomes to their employees (both implicit and explicit) to ensure they attracted good candidates. In the second half of 2007, however, the pace of economic growth in Ireland decelerated, largely due to a slow down in the housing sector and the banking crisis. Figure 7.1 shows Ireland’s GDP growth between 2000 and 2007 (CSO, 2010). In 2008, output fell for the first time since 1983, and the recession further deepened in 2009 with Ireland said to be experiencing ‘the most severe economic contraction in its history’ (Considine and Dukelow, 2010: 1). As a result, this has had knock-on consequences for how people are managed at work and HR’s role in this changing economy with a new focus on wage and employment adjustment, voice and engagement and downsizing (Roche et al, 2011). During the second phase of this study, data were collected in Foodco and ProfCo just as Ireland was officially entering recession (Q2 in 2008). As a result, the difficulties and changes reported by Roche et al (2011) had not yet been fully experienced by employees in the study. There had been no wage adjustments, pay freezes or redundancies in



FoodCo or ProfCo at that point in time. However, payment of bonuses was not being guaranteed. Data were collected in InsureCo in 2009. By this stage, the economic crisis had impacted the organisation with pay freezes, non payment of bonuses and changes to some HR policies. There had been no employment adjustments or redundancies however. The following section will give an overview of each organisation involved in phase two of the study.

**Figure 7.1: Change in GDP in Ireland (2000-2011)**



\*2010 is an ESRI estimate and 2011 is a forecast (Source: ESRI, 2010).

### 7.3 FoodCo

FoodCo is one of Ireland's largest contract caterer and professional services suppliers and has been operating in Ireland for over 40 years. It began as a small Irish owned family business providing food services. In 2000, it entered into a joint venture with one of the world's leading food services and facilities management companies serving more than 15 million people worldwide. It was subsequently acquired by this US organisation in 2005. As a result, the company now operates with an Irish management team ensuring in-depth local market knowledge, backed by the resources and expertise of a worldwide leader. FoodCo has five distinct services – FoodCo Property, FoodCo Workplace Solutions, FoodCo Food Services, FoodCo Environmental and FoodCo Healthcare. This research will focus on FoodCo Food Services only which delivers food services across four primary business sectors in Ireland: Business and Industry, Education, Healthcare and Government. It employs over 4000 people in Ireland, 200 of who are on fixed term or casual contracts. There are 2500 fulltime employees who can be categorised as Group A (production, maintenance, service, clerical employees), the remainder are executives, managers, supervisors, professional/technical employees (Group B). In terms of the organisation's strategic approach, 60 percent of the organisation's total sales

(turnover) was achieved through a differentiation strategy whilst 40 percent was through a low cost strategy.

### 7.3.1 HR in FoodCo

FoodCo has a formal human resources department with 5 full time staff members based in Dublin. The Director of HR sits on the Irish top management team of the organisation. According to the HR manager, the acquisition by the US organisation had knock-on consequences for the organisation to ensure it has ‘*a more US approach to customer service.....delivering and exceeding value to our customers*’. She argued that HR had a strong role in changing the culture of the organisation, enacting values espoused in the mission statement, corporate strategy and HR strategy. The HR function is involved in the development of corporate strategy from the outset. The organisation is partially unionised, with 30 percent of production, service, and clerical staff belonging to a union. No professional/managerial employees belong to a union. In terms of FoodCo’s range on the HPWS index, it scores the lowest of the three organisations at 29.75 out of 100. Table 7.1 shows the HPWS breakdown for each employee category in FoodCo.

**Table 7.1 Diffusion of PWS by employee category in FoodCo**

<i>HPWS Practice</i>	<i>Group A</i>	<i>Group B</i>
	<i>%</i>	<i>%</i>
Employee Resourcing	24.29	51.43
Training & Development	56.67	46.67
Performance Management & Remuneration	5.25	35.63
Communication & Involvement	37.50	54.17
Work Life Balance	0.00	0.00
<b>HPWS Index</b>	<b>24.74</b>	<b>37.58</b>
<b>Overall HPWS index</b>	<b>29.75</b>	

Investment in HPWS is low for both categories which is similar to a finding by Harley et al. (2007) that high skilled are no more likely to be subjected to HPWS than low skilled employees in particular service organisations. The largest discrepancy between the two categories is performance management and remuneration. For example, only 20 percent of Group A employees receive a performance appraisal on a regular basis. The HR manager explained that performance management:

goes from director level down as far as regional manager at the moment and all our functional staff. It will go down to front line managers later this year..... at the moment there’s nothing formal in place there for (catering assistants and chefs).

Group A employees do not have any payment system that is related to skill, group outcomes and only 10 percent are paid a premium wage. Neither category of employee has access to work-life balance policies.

#### **7.4 InsureCo**

InsureCo is a mutual insurance company that has been in operation in Ireland for over 140 years, although through mergers and acquisitions it is now a UK-owned multinational organisation. Its key products are life assurance, mortgage protection, and business assurance policies. It operates in the service sector with a large number of employees with finance, actuarial and insurance backgrounds. It is UK owned having been taken over by a leading UK Mutual Society in 2000 becoming a subsidiary of the parent organisation, whilst maintaining its original name and products. InsureCo has 85 full time employees in Ireland and 4 employees on fixed term contracts. The majority of their staff (49) belongs to the Group A category employees (service/clerical employees). These employees either provide administrative support to the brokers and actuarial staff or are in sales selling the products directly to brokers and/or clients. InsureCo recognises a union with around 30 percent of service/clerical staff unionised and 10.5 percent of management and professional staff who are union members. In terms of the organisation's strategic approach, 40 percent of total sales (turnover) was achieved through a differentiation strategy whilst 60 percent was through a low cost strategy. Since 2011, InsureCo and its parent company have merged with the largest mutual life and pensions company in the UK. At the time of this study, there were rumours circulating that a merger may be about to take place but nothing had been made public. This, coupled with a slow down in business, meant that a climate of uncertainty and insecurity existed in the company with fears for the business and individual jobs. As one employee pointed out:

We're all getting a bit freaked out, you know. It's kind of playing on all our minds. Because we're sitting there literally.... I would say our department would probably get hit if they were making redundancies.

Other changes taking place included changes to job families and pay levels which meant a move away from their traditional 16 level incremental system to a new system with five job families which operate over three levels. The underlying reason for this change was to:

look at the roles and pay the market rate for the role .....So that's been difficult because it's impacted on people, so it's sometimes hard then to keep the positivity if people have been red-circled because that means no pay increases (HR Manager, InsureCo).

##### *7.4.1 HR in InsureCo*

InsureCo has a formal human resources department at its parent headquarters in the UK. Up until 2008, there was no HR person working in the Dublin office and all queries were directed to the UK. During the time period of this research, there was one HR manager in InsureCo in Ireland.

A month after the research finished, however, this HR manager was made redundant and not replaced. A senior manager with responsibility for HR sits on the board of directors (at parent company). There is a formal written mission statement, HR strategy and HR strategies are translated into work programmes with specific deadlines. It was explained that the HR function is involved in the development of the corporate strategy on implementation. InsureCo is ranked second of the three suitable forms on the macro level HPWS index, with a score of 59.04, which is above the Irish average. Table 7.2 shows the diffusion of HPWS to each employee category in InsureCo.

**Table 7.2: Diffusion of HPWS by employee category in InsureCo**

<i>HPWS Practice</i>	<i>Group A</i>	<i>Group B</i>
	<i>%</i>	<i>%</i>
Employee Resourcing	81.43	74.29
Training & Development	36.67	40.00
Performance Management & Remuneration	41.19	41.19
Communication & Involvement	70.83	93.33
Work Life Balance	90.00	80.00
<b>HPWS Index</b>	<b>64.02</b>	<b>65.76</b>
<b>Overall HPWS index</b>	<b>59.04</b>	

Similar to the other two organisations, professional and managerial employees have greater HPWS coverage at 65.76 percent. Similar to ProfCo, investment in HPWS for administrative staff is also relatively high relative at 64 percent, which is above the Irish average. Relative to the other two organisations, investment in training and development appears to be quite low across both categories of employee. This was supported by qualitative data where both employees and managers agreed that formal training was limited in InsureCo as one line manager confirms ‘*there’s no real formal training in place here.*’

## **7.5 ProfCo**

ProfCo is a professional services firm belonging to the ‘Big Four’ management and professional services consultancies worldwide. Whilst it operates in Ireland as a stand-alone Irish owned partnership, it is connected to a larger global firm which employs 144000 people worldwide. ProfCo has seven sites across Ireland in Dublin, Cork, Waterford, Wexford, Kilkenny, Limerick and Galway. Its primary business activity is consultancy providing a wide range of client services, including audit, tax, and advisory services. As such it is a service organisation populated by well educated and highly qualified knowledge workers who engage in the production of intangible knowledge-based services (Alvesson, 2004; Donnelly, 2009). ProfCo

employs 2300 employees in total in Ireland and is non-unionised. The majority of their staff (1850) belongs to the Group B category (executives, managers, supervisors, professional/technical employees). This category of employee encompasses the professional service employees who liaise with external clients and professional and management employees from internal firm services (Finance, IT, HR, GTS infrastructure) who run the business internally. The remainder are clerical employees. Approximately 100 employees are on fixed term or temporary contracts. Almost 45 percent of the overall workforce is male with 55 percent being female. In terms of management, females also make the largest percentage of management positions representing 54 percent. At senior management and partner level however, female participation decreases to just 30 percent. The largest job title of fulltime employees is that of associate. This is the entry level title in ProfCo. Success in this position would then move the associate to senior associate, manager, senior manager, associate partner and finally partner. Professional service organisations operate the up-or-out system of promotions together with a strong component of face to face interactions with clients which is said to distinguish the professional service firm from other organisations (Maister, 1982; Stumpf, 1999).

#### *7.5.1 HR in ProfCo*

ProfCo has a formal human resources department with 27 full time staff members. A senior partner with HR responsibility sits at senior management of the organisation. The organisation, as one of the largest professional services in Ireland, recognises the importance of HR for the organisation. According to the Director of HR:

Our people are at the heart of our business.

This is echoed by one line manager interviewed who commented:

The firm deals in people, sells people's expertise and its assets are people and knowledge.

The organisation has a written mission statement, corporate statement and HR strategy which are translated into work programmes and deadlines. Employees are seen as the organisation's key asset and not a cost of doing business. In terms of the organisation's strategic approach, 80 percent of total sales (turnover) were achieved through a differentiation strategy rather than a low cost strategy. ProfCo scores the highest of all three firms on the HPWS index, with a score of 77.46 out of 100. Table 7.3 shows the diffusion of HPWS to each employee category in ProfCo.

**Table 7.3: Diffusion of HPWS by employee category in ProfCo**

<i>HPWS Practice</i>	<i>Group A</i>	<i>Group B</i>
	<i>%</i>	<i>%</i>
Employee Resourcing	82.86	82.86
Training & Development	78.00	90.00
Performance Management & Remuneration	29.38	56.25
Communication & Involvement	79.17	87.50
Work Life Balance	100.00	100.00
<b>HPWS Index</b>	<b>73.88</b>	<b>83.32</b>
<b>Overall HPWS index</b>	<b>77.46</b>	

Professional and managerial employees have greater HPWS coverage at 83 percent although investment in HPWS for administrative staff is also high relative to the Irish average (at 73.88 percent). A lot of emphasis is placed on the culture of the organisation with ProfCo becoming:

increasingly people focused over the past 5 years in particular. In 2005, we launched a programme of people initiatives, which have now been implemented (HR Manager).

One of these initiations was a more comprehensive career model. The HR Manager explained that the career model was designed:

to ensure than an employee's career is managed and developed in a structured environment, and tailored to meet the needs of the individual. The following information is contained in the career model process: Work Assignment Appraisals, Annual Performance Plans, Annual Development Plans and Training requirements from a technical and personal development perspective.

## **7.6 Conclusion**

This chapter sets the scene and explains the HR and corporate context of the micro level phase of the research. All three organisations operate within the service sector, although there is measured differentiation in terms of their investment in HPWS practices, unionisation levels, occupational categories, and employee skill sets. The chapter shows that the common argument often made that the uptake in HPWS by service organisations is low is incorrect, and therefore further empirical investigation is warranted. One important contextual distinction is the difference in HPWS investment for high skilled and low skilled employees, with the former (professional-type workers) experiencing more humanistic HR practices (Boxall, 2003) compared to lower skilled occupations. Having set the organisational context in which the micro level data was collected, the following chapter presents the findings of the micro level data which explores HPWS, organisational justice and employee outcomes.

**MICRO LEVEL HPWS: EMPLOYEE OUTCOMES**

---

**8.1 Introduction**

Two primary research questions explored in this study relate to the processes that influence employee attitudes and behaviours towards HPWS and the role of supervisors and the organisation in employee perceptions of HPWS. Having established a relationship between HPWS and organisational level outcomes in chapter 7, this chapter presents the results of the employee level data addressing the questions above. The chapter begins by outlining the descriptive statistics. Correlations between variables will then be discussed. Finally, the employee level hypothesized model is tested through hierarchical multiple regression analysis. The qualitative data from the interviews will be presented in conjunction with the quantitative data to illustrate, elaborate and explain the quantitative findings.

**8.2 Demographic characteristics of sample**

Chapter 5 outlined the population and sampling frame used in the employee survey. A total of 800 questionnaires were distributed to employees across the three organisations. In total, 211 questionnaires were returned, representing an overall response rate of 26.3 percent. However, 24 responses were eliminated due to excessive missing data and therefore, the final sample size for testing the hypotheses was 187 (weighted average response rate of 32.7 percent). These 187 responses were pooled together and treated as one dataset (whilst controlling for the three organisations). Chapter 5 presents full details of response rates for the employee level survey.

**Table 8.1: Demographic characteristics of sample (n=187)**

Characteristics	Frequency	%
<b>Gender</b>		
Male	75	40.1
Female	112	59.9
<b>Age</b>		
Under 25 years	42	23.1
26 to 35 years	76	41.8
36-45 years	42	23.1
46-55 years	18	9.9
56 years or more	4	2.2
<b>Education</b>		
Primary	11	6.3
Secondary	52	29.7
Certificate/Diploma	45	25.7
Bachelors degree	48	27.4
Masters degree	17	9.8
Doctoral degree	2	1.1
<b>Employment status</b>		
Full time permanent	148	80.0
Full time (fixed term/temporary contract)	15	8.1
Part-time	22	11.9
<b>Length of employment</b>		
Under 1 year	40	24.8
1 to 5 years	64	39.8
6 to 10 years	34	21.1
11 to 15 years	12	7.5
16 to 20 years	5	3.1
Over 20 years	6	3.7

Over half of the respondents were female (59.9 percent). Approximately 64 percent had a higher level of education beyond secondary. Of the 11 respondents who indicated primary level education only, ten were employed by Foodco and one was an employee of ProfCo. Over 40 percent of respondents were aged between 26 and 35 years. Almost 65 percent of respondents have worked in their organisation for 5 years or less (mean = 5.27 years) with the maximum length of employment being 34 years. The majority of respondents were full time employees.

### 8.3 Correlation Analysis

Table 8.2 presents the means, standard deviations, sample size and correlations for the studies variables. The bivariate correlations indicate fairly strong associations between transactional distributive justice and intention to leave ( $r = -.209$ ,  $p < 0.01$ ), work pressure ( $r = -.216$ ,  $p < 0.01$ ), affective commitment ( $r = .293$ ,  $p < 0.01$ ), job satisfaction ( $r = .348$ ,  $p < 0.01$ ) and trust in management ( $r = .352$ ,  $p < 0.01$ ), together with the mediating variables, LMX and POS. Relational distributive justice was also associated with intention to leave ( $r = -.225$ ,  $p < 0.01$ ),



work pressure ( $r = -.196, p < 0.01$ ), affective commitment ( $r = .489, p < 0.01$ ), job satisfaction ( $r = .455, p < 0.01$ ) and trust in management ( $r = .473, p < 0.01$ ), together with the mediating variables, LMX and POS. Only relational distributive justice was found to have a positive correlation with work effort ( $r = .160, p < 0.05$ ).

Transactional procedural justice was found to correlate positively with affective commitment ( $r = .435, p < 0.01$ ), job satisfaction ( $r = .442, p < 0.01$ ) and trust in management ( $r = .434, p < 0.01$ ), together with the mediating variables, LMX ( $r = .423, p < 0.01$ ) and POS ( $r = .484, p < 0.01$ ). There was no significant correlation with work effort. Transactional procedural justice was negatively and significantly correlated with work pressure ( $r = -.270, p < 0.01$ ) and intention to leave ( $r = -.179, p < 0.05$ ). Relational procedural justice correlation results indicated positive associations with affective commitment ( $r = .555, p < 0.01$ ), job satisfaction ( $r = .579, p < 0.01$ ), work effort ( $r = .214, p < 0.01$ ), trust in management ( $r = .575, p < 0.01$ ) and the two mediating variables, LMX ( $r = .622, p < 0.01$ ) and POS ( $r = .675, p < 0.01$ ). Table 8.2 also shows negative associations between relational procedural justice and intention to leave ( $r = -.294, p < 0.01$ ) and work pressure ( $r = -.265, p < 0.01$ ).

Some significant and positive correlations were found between interactional justice and work effort ( $r = .258, p < 0.01$ ), affective commitment ( $r = .588, p < 0.01$ ), job satisfaction ( $r = .622, p < 0.01$ ) and trust in management ( $r = .578, p < 0.01$ ), together with the mediating variables, LMX ( $r = .667, p < 0.01$ ) and POS ( $r = .659, p < 0.01$ ). Interactional justice correlated negatively with work pressure ( $r = -.246, p < 0.01$ ) and intention to leave ( $r = -.306, p < 0.01$ ). The control variables of gender, age, and education were not found to have any association with the justice variables. Employee category showed a negative correlation with transactional distributive justice suggesting that those employees who were non permanent showed higher levels of distributive fairness perceptions in relation to pay than permanent employees. Tenure was found to have small positive correlations with transactional distributive justice ( $r = .198, p < .05$ ), relational procedural justice ( $r = .165, p < .05$ ) and interactional justice ( $r = .162, p < .05$ ). This supports the argument proposed by Cohen-Charash and Spector (2001: 302) that demographic characteristics play only a minor role in justice perceptions such that 'regardless of age, gender, race, education level, and tenure, people tend to perceive justice similarly'.

As expected, all of the justice components were highly correlated. One of the most established debates in the justice literature according to Colquitt et al., (2001), concerns the independence of both procedural and distributive justice and procedural and interactional justice. From their meta analysis of justice research, Cohen-Charash et al., (2001) argue that distributive, procedural, and interactional justice whilst strongly related, are distinct constructs due to differing relationships with outcome variables.

**Table 8.2: Means, standard deviations and correlations for study variables**

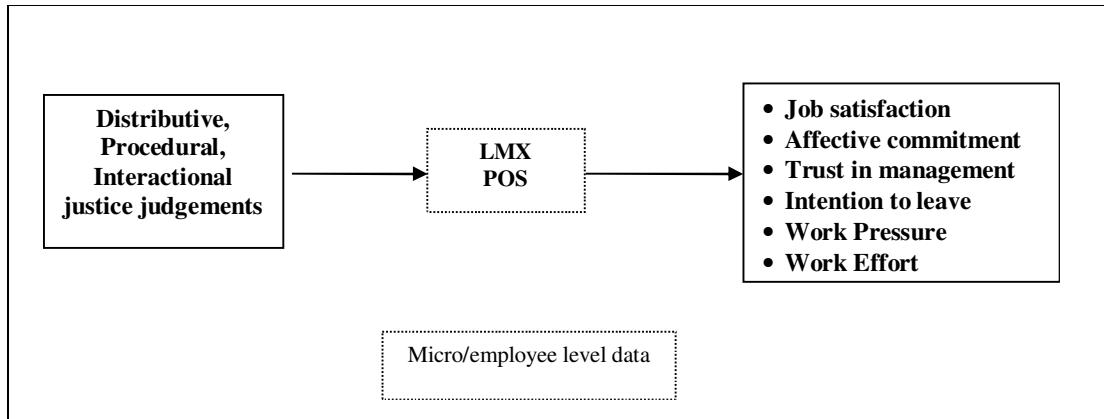
Variable	X	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Gender	-	-	1																
2. Age	-	-	.017	1															
3. Education	-	-	-.064	-.064	1														
4. Employee Category	-	-	.058	.112	.030	1													
5. Tenure	5.27	5.82	-.008	<b>.540**</b>	.000	<b>.242**</b>	1												
6. DJ (Trans)	3.24	1.11	.015	.140	-.084	<b>-.162*</b>	<b>.198*</b>	1											
7. DJ (Rel)	3.44	.683	-.037	.004	-.038	-.097	.137	<b>.406**</b>	1										
8. PJ (Trans)	3.26	1.00	.010	-.008	.009	-.132	.096	<b>.758**</b>	<b>.554**</b>	1									
9. PJ (Rel)	3.62	.809	-.045	.084	-.032	-.081	<b>.165*</b>	<b>.483**</b>	<b>.811**</b>	<b>.639*</b>	1								
10. IJ	3.73	.831	-.042	.043	-.067	-.083	<b>.162*</b>	<b>.471**</b>	<b>.795**</b>	<b>.656**</b>	<b>.911**</b>	1							
11. LMX	3.70	.939	-.071	<b>.174*</b>	-.046	-.046	.153	<b>.257**</b>	<b>.451**</b>	<b>.423**</b>	<b>.622**</b>	<b>.667**</b>	1						
12. POS	3.34	.826	-.080	.123	-.082	-.094	<b>.192*</b>	<b>.418**</b>	<b>.576**</b>	<b>.484**</b>	<b>.675**</b>	<b>.659**</b>	<b>.680**</b>	1					
13. AC	3.35	.980	-.052	<b>.236**</b>	-.049	-.010	<b>.283**</b>	<b>.293**</b>	<b>.489**</b>	<b>.435**</b>	<b>.555**</b>	<b>.588**</b>	<b>.643**</b>	<b>.662**</b>	1				
14. JS	3.65	.943	.014	<b>.232**</b>	-.029	-.032	<b>.249**</b>	<b>.348**</b>	<b>.455**</b>	<b>.442**</b>	<b>.579**</b>	<b>.622**</b>	<b>.629**</b>	<b>.631**</b>	<b>.833**</b>	1			
15. Intention to leave	2.47	1.09	.027	<b>-.256**</b>	.005	.005	<b>-.272**</b>	<b>-.209**</b>	<b>-.225**</b>	<b>-.179*</b>	<b>-.294**</b>	<b>-.306**</b>	<b>-.362**</b>	<b>-.385**</b>	<b>-.450**</b>	<b>-.553**</b>	1		
16. Work Pressure	2.88	.980	.139	-.054	<b>-.179*</b>	<b>.147*</b>	.060	<b>-.216**</b>	<b>-.196**</b>	<b>-.270**</b>	<b>-.265**</b>	<b>-.246**</b>	<b>-.160*</b>	<b>-.266**</b>	<b>-.218**</b>	<b>-.156*</b>	.114	1	
17. Work Effort	3.97	.998	<b>.160*</b>	.037	.113	-.022	.131	-.007	<b>.160*</b>	.045	<b>.214**</b>	<b>.258**</b>	<b>.222**</b>	<b>.175*</b>	<b>.251**</b>	<b>.399**</b>	<b>-.308**</b>	<b>.248**</b>	1
18. Trust in mgt.	3.53	.925	-.017	<b>.184*</b>	-.141	-.033	<b>.187*</b>	<b>.352**</b>	<b>.473**</b>	<b>.434**</b>	<b>.575**</b>	<b>.578**</b>	<b>.556**</b>	<b>-.661**</b>	<b>.651**</b>	<b>.579**</b>	<b>-.401**</b>	<b>-.233**</b>	<b>.174*</b>

\* p < 0.05, \*\* p < 0.01

#### 8.4 Test of research hypotheses

To further test the correlations set out in Table 8.2, hierarchical regression was used by entering variables into the regression in steps. Chapter 5 described the analysis conducted to ensure the data did not violate the assumptions necessary for hypothesis testing. This section presents the results for the hierarchical multiple regression analyses carried out. Before testing each hypothesis, the relationship between the dependent variables and the control variables were first examined. For each regression model, all control variables were simultaneously entered into the model (Step 1), and then the independent variable(s) of interest were entered into the model (Step 2). Figure 8.1 illustrates the hypothesised model for the employee level data.

**Figure 8.1: A hypothesised model of organisational justice, mediators and individual-level attitudes and behavioural outcomes**



The hypotheses to be tested are revisited below:

H5a-c, f: Transactional and relational distributive justice will be positively associated with a) job satisfaction; b) affective commitment; c) trust in management; and f) work efforts.

H5d-e: Transactional and relational distributive justice will be negatively associated with d) intention to leave and e) work pressure.

H6a-c,f: Transactional and relational procedural justice will be positively associated with a) job satisfaction; b) affective commitment; c) trust in management; and f) work efforts.

H6d-e: Transactional and relational procedural justice will be negatively associated with d) intention to leave and e) work pressure.

H7a-c, f: Interactional justice will be positively associated with a) job satisfaction; b) affective commitment; c) trust in management; and f) work efforts.

H7d-e: Interactional justice will be negatively associated with d) intention to leave and e) work pressure.

#### **8.4.1 Distributive and procedural justice and employee outcomes**

As both distributive and procedural justice were found to comprise two separate factors (relational and transactional aspects), hierarchical regression was first used to separately examine the relationship between each individual justice dimension and the dependent variables. In table 8.3, whilst controlling for variables such as gender, education, tenure, employee category, company and age, the results of step 2 suggest a direct relationship between transactional distributive justice and three dependent variables. Hypotheses 4a predicted that the transactional distributive fairness of the HPWS system would significantly and positively impact job satisfaction whilst controlling for variables such as gender, age and education ( $\beta = .265, p < .01$ ) The findings also show that transactional distributive justice perceptions of the HPWS system were positively and significantly associated with both affective commitment ( $\beta = .213, p < 0.05$ ) which explained 18 percent of variance and trust in management ( $\beta = .411, p < 0.001$ ) which explained over 22 percent of variance. Work pressure was not significant ( $\beta = -.162, ns$ ). Hypotheses 4d and 4e proposed that distributive justice will have a significant negative relationship with both intentions to leave the organisation and work pressure. The results from model 2 for intention to leave show that transactional distributive justice did not significantly impact intention to leave ( $\beta = -.051, ns$ ) and work effort ( $\beta = -.098, ns$ )

Relational distributive justice proved to be a stronger influence on the employee outcomes than transactional distributive justice. Similar to transactional distributive justice, relational distributive justice was not found to have a significant affect on work effort and intention to leave (see Table 8.4). However, a positive relationship was found between relational distributive justice and work effort ( $\beta = .169, p < .05$ ). The relationship between relational distributive justice and job satisfaction ( $\beta = .387$ ), affective commitment ( $\beta = .432$ ) and trust in management (.427) were all significant at the 99.9% confidence level ( $p < .001$ ).

**Table 8.3: Results of regression examining effects of transactional distributive justice on employee outcomes**

Step	Variables	Job Satisfaction		Affective commitment		Trust in Management		Intention to Leave		Work Pressure		Work Effort	
		Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>1</b>	Gender	.044	.050	-.041	-.036	-.004	.013	-.050	-.051	.168*	.165*	.238	.236
	Age (Dummy1)	-.044	-.002	-.014	.021	-.057	.014	.049	.032	.005	-.021	.038	.023
	Age (Dummy2)	.186	.204*	.159	.173	.023	.030	-.119	-.126	-.055	-.065	.057	.051
	Education	.002	.012	-.020	-.012	.032	.037	-.044	-.048	-.086	-.092	.078	.075
	Employee category	-.093	-.028	-.033	.019	.004	.115	.085	.059	.083	.043	-.179	-.203
	Tenure	.220*	.165**	.281**	.236*	.245	.164	-.231*	-.209*	-.011	.024	.119	.140
	Comp_high	-.292**	-.236**	-.217*	-.170	.051	.141	.025	.001	.229*	.193	.056	.035
	Comp_low	-.203	-.153	-.078	-.037	.222	.298	.156	.137	-.042	-.072	-.176	-.194
							.		-.105				
<b>2</b>	Transactional Distributive Justice		.265**		.213*		.411***		-.051		-.162		-.098
	<b>R<sup>2</sup></b>	<b>.156</b>	<b>.216</b>	<b>.150</b>	<b>.189</b>	<b>.082</b>	<b>.225</b>	<b>.136</b>	<b>.145</b>	<b>.098</b>	<b>.120</b>	<b>.136</b>	<b>.144</b>
	<b>Adj R<sup>2</sup></b>	<b>.108</b>	<b>.166</b>	<b>.102</b>	<b>.137</b>	<b>.029</b>	<b>.174</b>	<b>.086</b>	<b>.090</b>	<b>.047</b>	<b>.065</b>	<b>.088</b>	<b>.090</b>
	<b>Δ R<sup>2</sup></b>		<b>.060</b>		<b>.039</b>		<b>.143</b>		<b>.009</b>		<b>.023</b>		<b>.008</b>
	<b>F</b>	<b>3.160**</b>	<b>4.291***</b>	<b>3.138*</b>	<b>3.651***</b>	<b>1.535</b>	<b>4.385***</b>	<b>2.745**</b>	<b>2.609**</b>	<b>1.941</b>	<b>2.161*</b>	<b>2.816**</b>	<b>2.661**</b>

\*p<0.05 \*\*p<0.01 \*\*\*p<0.001; Gender (1=male; 0 = female); Education (1 = primary degree 0 = no degree); (1 = permanent; 0 = non permanent).

**Table 8.4: Results of regression examining effects of relational distributive justice on employee outcomes**

Step	Variables	Job Satisfaction		Affective commitment		Trust in Management		Intention to Leave		Work Pressure		Work Effort	
		Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>1</b>	Gender	.044	.057	-.041	-.027	-.004	.015	-.050	-.054	.168*	.163*	.238**	.244**
	Age (Dummy1)	-.044	-.047	-.014	-.016	-.057	-.054	.049	.050	.005	.006	.038	.038
	Age (Dummy2)	.186*	.229**	.159	.206*	.023	.038	-.119	-.136	-.055	-.073	.057	.077
	Education	.002	-.006	-.020	-.029**	.032	.012	-.044	-.041	-.086	-.084	.078	.075
	Employee category	-.093	-.059	-.033	.005	.004	.043	.085	.072	.083	.070	-.179*	-.164*
	Tenure	.220*	.108	.281**	.156	.245*	.138	-.231*	-.188*	-.011	.032	.119	.070
	Comp_high	-.292**	-.208*	-.217*	-.122	.051	.147	.025	-.009	.229*	.196	.056	.093
	Comp_low	-.203	-.218*	-.078	-.095	.222*	.201	.156	.162	-.042	-.036	-.176	-.182
	Relational Distributive Justice												
			.387***				.432***						.169*
	<b>R<sup>2</sup></b>	<b>.156</b>	<b>.291</b>	<b>.150</b>	<b>.318</b>	<b>.082</b>	<b>.247</b>	<b>.136</b>	<b>.158</b>	<b>.098</b>	<b>.118</b>	<b>.136</b>	<b>.162</b>
	<b>Adj R<sup>2</sup></b>	<b>.108</b>	<b>.246</b>	<b>.102</b>	<b>.274</b>	<b>.029</b>	<b>.197</b>	<b>.086</b>	<b>.103</b>	<b>.047</b>	<b>.062</b>	<b>.088</b>	<b>.109</b>
	<b>Δ R<sup>2</sup></b>		<b>.135</b>		<b>.167</b>		<b>.165</b>		<b>.022</b>		<b>.020</b>		<b>.026</b>
	<b>F</b>	<b>3.260*</b>	<b>6.389***</b>	<b>3.138**</b>	<b>7.293***</b>	<b>1.535</b>	<b>4.957***</b>	<b>2.735**</b>	<b>2.869**</b>	<b>1.941</b>	<b>2.115*</b>	<b>2.816**</b>	<b>3.047**</b>

\*p<0.05 \*\*p<0.01 \*\*\*p<0.001; Gender (1=male; 0 = female); Education (1 = primary degree 0 = no degree); (1 = permanent; 0 = non permanent).

Attention then turned to the procedural justice variables. Again, transactional and relational procedural justice variables were examined individually. Table 8.5 presents the results of the multiple regression equations predicting transactional procedural justice's relationship with the outcome variables (whilst controlling for gender, company, age, tenure, education and employment contract). Four of the hypotheses were supported. As predicted, transactional procedural justice impacted positively on job satisfaction ( $\beta = .369, p < .001$ ), affective commitment ( $\beta = .372, p < .001$ ) and trust in management ( $\beta = .447, p < .001$ ) supporting hypotheses 5a, 5b and 5c. Transactional procedural justice was also found to have a negative impact on work pressure ( $\beta = -.249, p < .01$ ) such that employee perceptions of pressure in the workplace decreased the more procedurally fair they perceived the HPWS system.

As shown in Table 8.6 the results for relational procedural justice show support for all of the hypotheses as it significantly affects all of the outcome variables. The results reveal that relational procedural justice was positively related to job satisfaction ( $\beta = .512, p < .001$ ), affective commitment ( $\beta = .505, p < .001$ ), trust in management ( $\beta = .572, p < .001$ ) and work effort ( $\beta = .217, p < .01$ ). A negative relationship was found for relational procedural justice and both intention to leave ( $\beta = -.203, p < .05$ ) and work pressure ( $\beta = -.236, p < .01$ ).

**Table 8.5: Results of regression examining effects of transactional procedural justice on employee outcomes**

Step	Variables	Job Satisfaction		Affective commitment		Trust in Management		Intention to Leave		Work Pressure		Work Effort	
		Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>1</b>	Gender	.044	.052	-.041	-.035	-.004	.005	-.050	-.051	.168*	.166*	.238	.238**
	Age (Dummy1)	-.044	-.028*	-.014	.003	-.057	-.035	.049	.044	.005	-.005	.038	.037
	Age (Dummy2)	.186*	.205	.159	.178*	.023	.019	-.119	-.125	-.055	-.065	.057	.056
	Education	.002	.019	-.020	-.002	.032	.039	-.044	-.049	-.086	-.097	.078	.077
	Employee category	-.093	-.035	-.033	.025	.004	.077	.085	.067	.083	.044	-.179*	-.182*
	Tenure	.220*	.175*	.281**	.238**	.245*	.196*	-.231*	-.216*	-.011	.021	.119	.122
	Comp_high	-.292**	-.193	-.217*	-.120	.051	.167	.025	-.008	.229*	.164	.056	.051
	Comp_low	-.203	-.127	-.078	.000	.222	.308**	.156	.133	-.042	-.091	-.176	-.180
<b>2</b>	Transactional Procedural Justice		.369***		.372***		.447***		-.115		-.249**		-.022
	<b>R<sup>2</sup></b>	<b>.156</b>	<b>.282</b>	<b>.150</b>	<b>.278</b>	<b>.082</b>	<b>.268</b>	<b>.136</b>	<b>.148</b>	<b>.098</b>	<b>.155</b>	<b>.136</b>	<b>.137</b>
	<b>Adj R<sup>2</sup></b>	<b>.108</b>	<b>.236</b>	<b>.102</b>	<b>.232</b>	<b>.029</b>	<b>.219</b>	<b>.086</b>	<b>.093</b>	<b>.047</b>	<b>.102</b>	<b>.088</b>	<b>.082</b>
	<b>Δ R<sup>2</sup></b>		<b>.126</b>		<b>.128</b>		<b>.185</b>		<b>.012</b>		<b>.057</b>		<b>.000</b>
	<b>F</b>	<b>3.260**</b>	<b>6.108***</b>	<b>3.138**</b>	<b>6.047***</b>	<b>1.535</b>	<b>5.523***</b>	<b>2.735**</b>	<b>2.666**</b>	<b>1.941</b>	<b>2.903**</b>	<b>2.816**</b>	<b>2.495*</b>

\*p<0.05 \*\*p<0.01 \*\*\*p<0.001; Gender (1=male; 0 = female); Education (1 = primary degree 0 = no degree); (1 = permanent; 0 = non permanent).



**Table 8.6: Results of regression examining effects of relational procedural justice on employee outcomes**

Step	Variables	Job Satisfaction		Affective commitment		Trust in Management		Intention to Leave		Work Pressure		Work Effort	
		Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>1</b>	Gender	.044	.067	-.041	-.020	-.004	.036	-.050	-.058	.168*	.158*	.238**	.247**
	Age (Dummy1)	-.044	-.022	-.014	.008	-.057	-.033	.049	.041	.005	-.005	.038	.048
	Age (Dummy2)	.186*	.209*	.159	.181*	.023	.047	-.119	-.128	-.055	-.066	.057	.067
	Education	.002	-.047	-.020	-.068	.032	-.027	-.044	-.024	-.086	-.064	.078	.057
	Employee category	-.093	-.040	-.033	.019	.004	.070	.085	.064	.083	.058	-.179*	-.156
	Tenure	.220*	.088	.281**	.151	.245*	.098	-.231*	-.179	-.011	.050	.119	.062
	Comp_high	-.292**	-.143	-.217*	-.070	.051	.214*	.025	-.036	.229*	.160	.056	.119
	Comp_low	-.203	-.186*	-.078	-.060	.222	.242*	.156	.149	-.042	-.050	-.176	-.168
<b>2</b>	Relational Procedural Justice		.512***		.505***		.572***		-.203*		-.236**		.217**
	<b>R<sup>2</sup></b>	<b>.156</b>	<b>.388</b>	<b>.150</b>	<b>.376</b>	<b>.082</b>	<b>.370</b>	<b>.136</b>	<b>.172</b>	<b>.098</b>	<b>.147</b>	<b>.136</b>	<b>.178</b>
	<b>Adj R<sup>2</sup></b>	<b>.108</b>	<b>.349</b>	<b>.102</b>	<b>.336</b>	<b>.029</b>	<b>.328</b>	<b>.086</b>	<b>.118</b>	<b>.047</b>	<b>.093</b>	<b>.088</b>	<b>.126</b>
	<b>Δ R<sup>2</sup></b>		<b>.232</b>		<b>.226</b>		<b>.288</b>		<b>.036</b>		<b>.049</b>		<b>.042</b>
	<b>F</b>	<b>3.260**</b>	<b>9.867***</b>	<b>3.138**</b>	<b>9.440***</b>	<b>1.535</b>	<b>8.875***</b>	<b>2.735**</b>	<b>3.191**</b>	<b>1.941</b>	<b>2.726**</b>	<b>2.816**</b>	<b>3.410**</b>

\*p<0.05 \*\*p<0.01 \*\*\*p<0.001; Gender (1=male; 0 = female); Education (1 = primary degree 0 = no degree); (1 = permanent; 0 = non permanent).

Having shown how relational and transactional elements of distributive and procedural justice perceptions of HPWS individually impact on employee outcomes, attention now turns to their joint impact. To assess the relationship between both relational and transactional distributive justice and employee outcomes, all control variables were first entered into the model (Step 1), then transactional and relational distributive justice (independent variables) were entered into the model (Step 2). Table 8.7 presents regression analysis testing these hypotheses.

Of the control variables, gender was significantly associated with work pressure ( $\beta = .162, p < .05$ ) and work effort ( $\beta = .243, p < .01$ ) in model 2 indicating that men were more inclined to increase work effort when perceptions of relational distributive justice were high and more likely to experience less pressure at work. Age (dummy 2) was also significant ( $\beta = .232, p < .01$ ) indicating that older employees displayed greater job satisfaction. Hypothesis 5a proposed that employee perceptions of distributive justice of the HPWS system would significantly and positively impact job satisfaction whilst controlling for variables such as gender, age and education. The results shown in Table 8.7 reveal that only relational distributive justice was positively related to job satisfaction ( $\beta = .338, p < .001$ ) with transactional distributive justice having no significant relationship with job satisfaction. A similar result was found for hypotheses 5b and 5f where only relational distributive justice was positively related to affective commitment ( $\beta = .413, p < .001$ ) and work effort ( $\beta = .242, p < .01$ ). Both transactional distributive justice ( $\beta = .283, p < .01$ ) and relational distributive justice ( $\beta = .322, p < .001$ ) were positively related to trust in management. Thus, hypothesis 5c was fully supported indicating that trust in management increased as respondents' perceptions of distributive fairness of HPWS increased. On the other hand, the effects of both transactional and relational distributive justice for intention to leave and work pressure were non-significant. Hypotheses 5d and 5e were thus not supported.

**Table 8.7: Results of regression examining effects of distributive justice on employee outcomes**

Step	Variables	Job Satisfaction		Affective commitment		Trust in Management		Intention to Leave		Work Pressure		Work Effort	
		Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>1</b>	Gender	.044	.058	-.041	-.027	-.004	.023	-.050	-.055	.168*	.162*	.238**	.243**
	Age (Dummy1)	-.044	-.025	-.014	-.008	-.057	-.006	.049	.042	.005	-.014	.038	.006
	Age (Dummy2)	.186*	.232**	.159	.208	.023	.039	-.119	-.137	-.055	-.075	.057	.074
	Education	.002	.000	-.020	-.027	.032	.020	-.044	-.012	-.086	-.089	.078	.067
	Employee category	-.093	-.031	-.033	.016	.004	.110	.085	-.055	.083	.044	-.179*	-.205*
	Tenure	.220*	.095	.281**	.151	.245*	.108	-.231*	.042	-.011	.045	.119	.092
	Comp_high	-.292**	-.191	-.217*	-.116	.051	.186	.025	-.137	.229*	.179	.056	.066
	Comp_low	-.203	-.192	-.078	-.085	.222	.259*	.156	-.043	-.042	-.060	-.176	-.221*
<b>2</b>	Transactional Distributive Justice		.130		.049		.283**		.061		-.121		-.194*
	Relational Distributive Justice		.338***		.413***		.322***		-.182		-.105		.242**
	<b>R<sup>2</sup></b>	<b>.156</b>	<b>.304</b>	<b>.150</b>	<b>.319</b>	<b>.082</b>	<b>.305</b>	<b>.136</b>	<b>.159</b>	<b>.098</b>	<b>.129</b>	<b>.136</b>	<b>.189</b>
	<b>Adj R<sup>2</sup></b>	<b>.108</b>	<b>.253</b>	<b>.102</b>	<b>.271</b>	<b>.029</b>	<b>.253</b>	<b>.086</b>	<b>.098</b>	<b>.047</b>	<b>.067</b>	<b>.088</b>	<b>.132</b>
	<b>Δ R<sup>2</sup></b>		<b>.147</b>		<b>.169</b>		<b>.222</b>		<b>.023</b>		<b>.031</b>		<b>.053</b>
<b>F</b>	<b>3.260**</b>	<b>6.059***</b>	<b>3.138**</b>	<b>6.570***</b>	<b>1.535</b>	<b>5.913***</b>	<b>2.735**</b>	<b>2.599**</b>	<b>1.941</b>	<b>2.086*</b>	<b>2.816**</b>	<b>3.289*</b>	

\*p<0.05 \*\*p<0.01 \*\*\*p<0.001; Gender (1=male; 0 = female); Education (1 = primary degree 0 = no degree); (1 = permanent; 0 = non permanent).

Interview findings also highlight these findings showing that employees are concerned with the fairness of the outcomes that they receive in the organisation. Similar to the quantitative findings, it was the relational aspects of HPWS that emerged as more important for the employees interviewed. Employees across all three organisations acknowledged they were paid a rate higher than their industry average. The following quotes below are indicative of this opinion:

I'd say we're being paid more actually more than, for the catering we do, we are being paid probably over the rate. (Employee 2, FoodCo)

The wages are pretty good....I've actually seen what other places are paying for my job and it's nowhere near as high so that's pretty good. (Employee 1, InsureCo).

I'm not unhappy with my remuneration (Senior Manager 4, ProfCo).

The fairness of outcomes was acknowledged however, with some employees questioning the fairness of how pay decisions are actually made. In one interview, senior manager 4 (ProfCo) stated that equity rules regarding distributive justice:

could be applied a bit more rigorously, the contribution or the effort that people make in terms of what they actually get.

Senior manager 4 admitted that it can be demotivating as '*you can actually be crap and still get a 15% bonus*'. The equity rule of making allocation decisions proposed by Adams (1965) was deemed the most appropriate by employees in both InsureCo and ProfCo. All interviewees were in agreement that allocation of rewards (e.g. pay, performance appraisal rating, and promotion) should be in proportion to people's inputs or contributions. In contrast, many employees interviewed in FoodCo disagreed with the equity rule for reward for a number of reasons. The primary reason cited was due to social relations within the workgroup where large differentials in pay would impact the group dynamic. Another reason proposed adhered to Deutsch's (1985) equality rule where a similar outcome for all was deemed to be fair. Finally, one unit manager in FoodCo suggested that equity based outcomes would bring with it its own problems due to problems with recognising performance:

You know...problems in assessing.... if an employee performs well or if he just performs well in front of the managers you'd say 'oh he's a good employee', but he may not necessarily be a good employee, you may want to reward him more than you want to reward the others. This way (basic pay rates), it's fairer across the board (Unit manager, Site 3, FoodCo).

Similar to the quantitative findings, relational distributive justice perceptions emerged as a stronger predictor of employee outcomes, particularly perceptions of the performance appraisal, development and advancement. The downturn in the economic climate was having a significant

impact on career advancement opportunities in InsureCo in particular which was impacting employees' attitudes. One manager acknowledged:

I think definitely I would have had experiences where I was dealt with unfairly; you know it would have been one of the main reasons for me leaving my previous employment .... The process of rewarding people and then, you know, in certain teams or departments there are limiting factors. So for example if you're working in a team of 10 people and 2 of those people are supervisors, the structure kind of remains static regardless of how your performance compares with the other people in the team. So that's another reason why I would have left my previous job (Manager, InsureCo).

Within ProfCo, distributive justice emerged through discussions of differences between employees who are professional staff liaising with external clients and internal firm services who deal with internal clients services. One senior manager acknowledged that there is a '*General perception of 'them and us' between professional staff and internal firm services.....*' (Senior Manager 3, ProfCo) with professional staff being seen as more important as they bring in the money. This in turn impacts how employees are rewarded. As one manager illustrated:

That's the one major difference between working within internal firm services and working with external facing clients as professional staff.....the career development opportunities are not the same (Senior Manager 2, ProfCo).

Attention now turns to the impact of both elements of procedural justice on employee outcomes. In order to test hypotheses 6a – 6f, a two step hierarchical multiple regression analysis was undertaken. In step one; the control variables were again entered. In the second step, transactional and relational procedural justice of the HPWS system was entered. The results from models 1 and models 2 are presented in Table 8.8. In the analysis, a number of control variable were significantly associated with the dependent variables. Age (dummy 2) significantly impacted job satisfaction in model two suggesting that older employees displayed greater job satisfaction when perceptions of procedural justice are high. Gender was also significant for work effort ( $\beta = .252, p < .01$ ) suggesting that men were more inclined to increase work effort when perceptions of relational procedural justice were high. Relational procedural justice was found to have a positive association with job satisfaction ( $\beta = .458, p < .001$ ) affective commitment ( $\beta = .442, p < .001$ ), trust in management ( $\beta = .471, p < .001$ ) and work effort ( $\beta = .389, p < .001$ ) and a negative association with intention to leave ( $\beta = -.215, p < .05$ ). In contrast, transactional procedural justice was not found to have a relationship with any of the dependent variables except work effort ( $\beta = -.264, p < .01$ ). Thus, we can conclude that hypotheses 6a, 6b, 6c and 6d are partially supported as it shows that procedural justice explains some significant variance in these dependent variables but for relational procedural justice only. Hypothesis 6f is fully supported for both transactional and relational procedural justice showing that procedural justice negatively effects employee work effort. No significant relationship was found between

transactional and relational procedural justice and work pressure. Thus hypothesis 6e was not supported.

**Table 8.8: Results of regression examining effects of procedural justice on employee outcomes**

Step	Variables	Job Satisfaction		Affective commitment		Trust in Management		Intention to Leave		Work Pressure		Work Effort	
		Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>1</b>	Gender	.044	.066	-.041	-.021	-.004	.032	-.050	-.058	.168*	.161*	.238**	.252**
	Age (Dummy1)	-.044	-.021	-.014	.010	-.057	-.029	.049	.041	.005	-.007	.038	.044
	Age (Dummy2)	.186*	.211**	.159	.184*	.023	.041	-.119	-.127	-.055	-.067	.057	.065
	Education	.002	-.038	-.020	-.058	.032	-.014	-.044	-.022	-.086	-.082	.078	.030
	Employee category	-.093	-.032	-.033	.028	.004	.083	.085	.065	.083	.043	-.179*	-.179
	Tenure	.220*	.092	.281**	.156	.245*	.107	-.231*	-.178	-.011	.043	.119	.052
	Comp_high	-.292**	-.137	-.217*	-.064	.051	.225*	.025	-.034	.229*	.148	.056	.100
	Comp_low	-.203	-.171	-.078	-.042	.222	.268**	.156	.153	-.042	-.080	-.176	-.215*
<b>2</b>	Transactional Procedural Justice		.083		.096		.152		.019		-.172		-.264**
	Relational Procedural Justice		.458***		.442***		.471***		-.215*		-.124		.389***
	<b>R<sup>2</sup></b>	<b>.156</b>	<b>.392</b>	<b>.150</b>	<b>.381</b>	<b>.082</b>	<b>.383</b>	<b>.136</b>	<b>.172</b>	<b>.098</b>	<b>.164</b>	<b>.136</b>	<b>.216</b>
	<b>Adj R<sup>2</sup></b>	<b>.108</b>	<b>.348</b>	<b>.102</b>	<b>.337</b>	<b>.029</b>	<b>.337</b>	<b>.086</b>	<b>.112</b>	<b>.047</b>	<b>.104</b>	<b>.088</b>	<b>.161</b>
	<b>Δ R<sup>2</sup></b>		<b>.236</b>		<b>.231</b>		<b>.300</b>		<b>.036</b>		<b>.066</b>		<b>.080</b>
	<b>F</b>	<b>3.260**</b>	<b>8.956***</b>	<b>3.138**</b>	<b>8.618***</b>	<b>1.535</b>	<b>8.367***</b>	<b>2.735**</b>	<b>2.855**</b>	<b>1.941</b>	<b>2.757**</b>	<b>2.816**</b>	<b>7.212**</b>

\*p<0.05 \*\*p<0.01 \*\*\*p<0.001; Gender (1=male; 0 = female); Education (1 = primary degree 0 = no degree); (1 = permanent; 0 = non permanent).

The reasons behind the procedural justice perceptions were uncovered in the interviews. The perception of voice during the enactment of procedures emerged as a key theme. One employee in InsureCo highlighted that:

I'm able to speak up and tell my manager if I feel I haven't scored fairly in my performance appraisal (Employee, InsureCo).

Other procedural justice rules emerged from the qualitative data also. Job relatedness reflects the extent to which procedures in HPWS contexts seem job relevant. This issue emerged in InsureCo in particular, with issues emerging due to the introduction of a competency based appraisal process. Some employees felt that the competencies were not applicable to their job and, as a result, it was not fair that they had to try to meet a competency that was not relevant to how they perform their job. This issue was acknowledged by one manager who agreed that:

....not everybody has the opportunity to demonstrate all of the competencies (Team leader 1, InsureCo).

Issues of personal bias and consistency were identified as important for all HPWS practices but particularly, in selection and promotion decisions and performance appraisals. ProfCo in particular appear to pay a lot of attention to ensuring these procedural justice rules are always to the forefront of decisions. Their performance appraisal system involves interim meetings during the year with their mentor, with the final appraisal involving the partner, director and all senior managers in a particular area of the organisation coming together and speaking about each team member. This format is used to deal with issues of project work as employees will have worked with various senior managers across a number of projects during the year. The aim of this process is to:

ensure it is objective and for others to say 'well I don't agree with that'. I've had an instance of...you know somebody didn't perform or I thought they were fantastic but they didn't perform on other projects. (Senior Manager 3, ProfCo).

It was acknowledged, however, that this process was not always effective, with interviewees suggesting that a senior manager or partner can overrule decisions if they are powerful or if no one else wishes to speak against them. As a result, decisions can be made which employees might question as the quote from Senior Manager 2 highlights '*One person got promoted, and I would have thought 'My God, I don't know why they got promoted'. I would question if (the process was objective enough*'. This issue of bias and consistency was also mentioned within FoodCo. One employee suggested that the manager treated employees differently and gave preferential treatment to some employees in terms of decisions regarding days off and allocation of work:



Yeah. He's good but for his own....I'd say if they wanted a day off or anything, they get first preference. They have first preference for holidays .. going anywhere (Employee 4, FoodCo).

InsureCo employees highlighted the importance of correctability following a decision:

There is a process in place, if you're not happy with this. You can appeal it through my manager, my manager sees it, and goes through my forms as well, just to make sure everything is fair' (Team leader 2, InsureCo).

Inconsistencies in the enactment of procedures was acknowledged by most employees as illustrated by the following quote:

Every manager will have a different understanding of how things should be interpreted. For example, if you give out 10 process manuals, they're all going to be implemented in different manners (Team leader 1, InsureCo).

Similarly in ProfCo, fairness was often determined by your manager:

I think it can be very fair depending on who you work for. I think there are a lot of policies and procedures. But I think the degree or the extent or how they might be applied is reasonably open to the discretion of the manager (Senior Manager 1, ProfCo).

This was also the situation in FoodCo with some unit managers conducting appraisals with all employees on a regular basis and conducting weekly team briefings. In contrast, other unit managers never held team briefings and only chefs were involved in the appraisal process.

The recent changes in InsureCo highlighted issues around employee involvement initiatives. A new Employee Interest Forum (EIF) had recently been established with employee representatives from both the UK and Irish establishment involved. It was acknowledged that it was not a negotiation or decision making forum but rather a forum where topics that broadly affect all InsureCo employees and management could be discussed. One of the interviewees was an Irish InsureCo representative on this new forum who expressed the view that the forum was important to ensure employees had some input into how decisions are made that can impact on their jobs. Before there was the perception that you '*feel decisions are kind of forced on you...hat you have a little bit of input*' (Team leader 2, InsureCo). These feelings of lack of voice may have emerged due to the recent changes made regarding job families and pay structures which one employee explained:

Yes, there were negotiations with the union on it, but choice was limited shall we say. (Employee, InsureCo).

#### **8.4.2 Interactional justice and employee outcomes**

In table 8.9, whilst controlling for variables such as gender, age, education, company and tenure, the results of this regression suggest a direct and positive relationship between interactional

justice of the HPWS system and job satisfaction, affective commitment, trust in management and work effort as hypothesised by Hypotheses 7a,b,c and f. For example, we can see that almost 30 percent of the variance in job satisfaction is explained by interactional justice ( $\beta = .568$ ,  $p < .001$ ), thus supporting hypothesis 7a. Over 26 percent of variance in affective commitment was explained by interactional justice ( $\beta = .546$ ,  $p < .001$ ). The findings also show that interactional justice is negatively and significantly associated with: (1) intention to leave ( $\beta = -.212$ ,  $p < 0.05$ ); and (2) work pressure ( $\beta = -.202$ ,  $p < 0.05$ ). This provides support for Hypotheses 7d and 7e.

Interpersonal treatment emerged as an important theme, in FoodCo in particular, with some employees raising issues with how their supervisors interacted with them during their working day. Bies and Moag (1986) suggest that insulting interpersonal treatment might colour someone's overall reaction to a HPWS episode irrespective of how distributive or procedurally fair it was. Supervisors in each unit of FoodCo were usually cashiers or catering assistants who had moved up through the unit (supervisors do not include the unit managers or junior managers). Two employees in particular (from the same unit) highlighted the interpersonal treatment they received during HR procedures:

One of them (supervisor) is okay but the other one is kind of 'iffy'... kind of rude... You know, like, it's nearly like we are only skivvies (Employee 4, FoodCo).

This opinion was supported by another employee from the same unit who was training to be a supervisor herself during the weekend shifts. She acknowledged this rudeness was an issue which she had noticed in terms of: *'the way they (supervisors) talk to them'* (Employee 5, FoodCo). Interpersonal treatment overall was important for employees in the three workplaces with one manager acknowledging that:

basically it falls back to dignity at work. I mean everybody, ok we're here to do a job, but we're all human beings, (Team leader 2, InsureCo).

Informational justice emerged as a second theme, stressing the importance of openness and clear explanations for decisions made, particularly with regard to performance management and promotion situations. The quotes below illustrate the importance of interactional justice

I think every manager that we've had, thank God, has known that they just have to be open with the employees. (Employee 4, FoodCo)

The big thing is listening to their needs. Sometimes you don't want to listen but you have to as a manager. I make sure they are happy enough, you know. It is all about listening and explaining (Manager, unit 1, FoodCo).

In the context of a performance appraisal, the mid year and end of year meetings were identified as the forum to clearly explain rating outcomes. One senior manager explained that:

The biggest misconception I think with everybody, and I possibly do it myself is, you've a not achieved, achieved, exceeded, and outstanding - that's a one to four rating. People think they're exceeding when they're just achieved, so you kind of have to explain to people. So the mid-year meeting gives you a good opportunity if somebody thinks they're in 'exceed' rating, and I think, well look you haven't achieved, or I think if you are on an exceed, this is what you should be doing, or this is where you would be going and this is why I think so (Senior Manager 3, ProfCo).

**Table 8.9: Results of regression examining effects of interactional justice on employee outcomes**

Step	Variables	Job Satisfaction		Affective commitment		Trust in Management		Intention to Leave		Work Pressure		Work Effort	
		Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>1</b>	Gender	-.017	-.007	-.072	-.065	-.024	.002	-.064	-.067	.101	.096	.219**	.226**
	Age (Dummy1)	-.056	-.024	-.019	.013	-.060	-.023	.047	.035	-.009	-.021	.032	.048
	Age (Dummy2)	.179*	.206*	.156	.182*	.021	.051	-.121	-.129	-.063	-.077	.053	.071
	Education	.003	-.044	-.021	-.064	.033	-.010	-.045	-.027	-.085	-.070	.080	.061
	Employee category	-.088	-.027	-.031	.026	.005	.070	.086	.062	.090	.069	-.174*	-.146
	Tenure	.217*	.060	.279**	.131	.243*	.102	-.233*	-.175	-.015	.037	.118	.050
	Comp_high	-.300**	-.125	-.221*	-.057	.049	.218*	.023	-.045	.222*	.162	.057	.136
	Comp_low	-.203	-.177*	-.080	-.055	.221	.255**	.154	.144	-.035	-.047	-.166	-.151
<b>2</b>	Interactional justice		.568***		.546***		.567***		-.212*		-.202*		.263**
	R <sup>2</sup>	.155	.437	.154	.415	.083	.367	.138	.177	.081	.117	.128	.189
	Adj R <sup>2</sup>	.107	.401	.106	.378	.029	.326	.088	.123	.029	.061	.079	.138
	Δ R <sup>2</sup>		.282		.262		.285		.039		.036		.061
	F	3.222**	12.070***	3.221**	11.136***	1.546	8.776***	2.772**	3.296**	1.569	2.087*	2.627*	3.686***

\*p<0.05 \*\*p<0.01 \*\*\*p<0.001; Gender (1=male; 0 = female); Education (1 = primary degree 0 = no degree); (1 = permanent; 0 = non permanent)..

### **8.4.3 Organisational justice dimensions and employee outcomes**

Having examined the organisational justice concepts individually, analysis now turns to determining which dimensions of organisational justice are stronger predictors of both positive and negative employee outcomes. As in previous analysis, the eight control variables were entered in step 1. In the second step, the independent variables (transactional distributive justice, relational distributive justice, transactional procedural justice, relational procedural justice and interactional justice perceptions of the HPWS system) were entered. The results from models 1 and models 2 are presented in Table 8.10. The findings reveal that interactional justice explained most of the variance in job satisfaction ( $\beta = .646$ ,  $p < 0.001$ ), affective commitment ( $\beta = .439$ ,  $p < .05$ ) and work effort ( $\beta = .540$ ,  $p < 0.01$ ) while interactional justice did not explain any significant incremental variance for a) trust in management, b) intention to leave and c) work pressure. Neither distributive (transactional and relational) nor procedural justice (transactional and relational) dimensions were found to have a significant impact on any of the dependent variables when all independent variables are entered simultaneously in step two of the hierarchical regression. This suggests that the interactional fairness of the HPWS system is a key predictor of employee attitudes and behaviours as it explained most of the variance in the employee-related outcomes when factoring in both procedural and distributive justice dimensions sequentially.

**Table 8.10: Results of regression examining effects of distributive, procedural and interactional justice on employee outcomes**

Step	Variables	Job Satisfaction		Affective commitment		Trust in Management		Intention to Leave		Work Pressure		Work Effort	
		Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>1</b>	Gender	-.017	-.005	-.072	-.067	-.024	.014	-.064	-.067*	.101	.098	.219	.223
	Age (Dummy1)	-.056	-.017	-.019	-.007	-.060	.003	.047	.027	-.009	-.009	.032	.033
	Age (Dummy2)	.179*	.196**	.156	.179*	.021	.050	-.121	-.128	-.063	-.061	.053	.064
	Education	.003	-.050	-.021	-.062	.033	-.016	-.045	-.019	-.085	-.075	.080	.030
	Employee category	-.088	-.028	-.031	.011	.005	.113	.086	.059	.090	.062	-.174	-.193*
	Tenure	.217*	.070	.279**	.148	.243*	.083	-.233*	-.167	-.015	.020	.118	.062
	Comp_high	-.300**	-.121	-.221*	-.061	.049	.240**	.023	-.045	.222*	.147	.057	.111
	Comp_low	-.203	-.168	-.080	-.058	.221	.290**	.154	.148	-.035	-.075	-.166	-.203
<b>2</b>	Transactional DJ		-.004		-.133		.177		-.053		.088		-.137
	Relational DJ		-.129		.023		-.138		.032		.080		-.065
	Transactional PJ		.003		.121		-.007		.082		-.255		-.222
	Relational PJ		.025		.072		.323		-.063		-.331		-.018
	Interactional Justice		.646***		.439*		.312		-.212		.166		.540**
	<b>R<sup>2</sup></b>	<b>.155</b>	<b>.443</b>	<b>.154</b>	<b>.423</b>	<b>.083</b>	<b>.407</b>	<b>.138</b>	<b>.180</b>	<b>.081</b>	<b>.157</b>	<b>.128</b>	<b>.256</b>
	<b>Adj R<sup>2</sup></b>	<b>.107</b>	<b>.389</b>	<b>.106</b>	<b>.368</b>	<b>.029</b>	<b>.349</b>	<b>.088</b>	<b>.100</b>	<b>.029</b>	<b>.078</b>	<b>.079</b>	<b>.186</b>
	<b>Δ R<sup>2</sup></b>		<b>.288</b>				<b>.324</b>		<b>.042</b>		<b>.076</b>		<b>.128</b>
	<b>F</b>	<b>3.222**</b>	<b>8.304***</b>	<b>3.221**</b>	<b>7.728***</b>	<b>1.546</b>	<b>6.976***</b>	<b>2.772**</b>	<b>2.259*</b>	<b>1.569</b>	<b>1.979*</b>	<b>2.627**</b>	<b>3.658***</b>

\*p<0.05 \*\*p<0.01 \*\*\*p<0.001 ; Gender (1=male; 0 = female); Education (1 = primary degree 0 = no degree); (1 = permanent; 0 = non permanent); DJ = distributive justice; PJ = procedural justice.

In summary, only Hypothesis 7a-f were fully supported, suggesting that interactional justice is an important factor in influencing employee responses to HPWS. Hypotheses 5 and 6 were somewhat supported with the relational elements of HPWS being the stronger predictors of subsequent employee attitudes and behaviours. Table 8.11 summarises the key findings.

**Table 8.11: Summary of hypotheses from employee level data and findings**

	<b>Hypotheses</b>	<b>Findings</b>
H5a	Transactional and relational distributive justice will be positively associated with job satisfaction	Supported (relational distributive justice only)
H5b	Transactional and relational distributive justice will be positively associated with affective commitment	Supported (relational distributive justice only)
H5c	Transactional and relational distributive justice will be positively associated with trust in management	Supported
H5d	Transactional and relational distributive justice will be negatively associated with intention to leave	Not supported
H5e	Transactional and relational distributive justice will be negatively associated with work pressure	Not supported
H5f	Transactional and relational distributive justice will be positively associated with work efforts.	Supported
H6a	Transactional and relational procedural justice will be positively associated with job satisfaction	Supported (relational procedural justice only)
H6b	Transactional and relational procedural justice will be positively associated with affective commitment	Supported (relational procedural justice only)
H6c	Transactional and relational procedural justice will be positively associated with trust in management	Supported (relational procedural justice only)
H6d	Transactional and relational procedural justice will be negatively associated with intention to leave	Supported (relational procedural justice only)
H6e	Transactional and relational procedural justice will be negatively associated with work pressure	Not supported
H6f	Transactional and relational procedural justice will be positively associated with work efforts.	Supported (relational procedural justice only). Distributive procedural justice negatively associated with work efforts
H7a	Interactional justice will be positively associated with job	Supported

	<b>Hypotheses</b>	<b>Findings</b>
	satisfaction	
H7b	Interactional justice will be positively associated with affective commitment	Supported
H7c	Interactional justice will be positively associated with trust in management	Supported
H7d	Interactional justice will be negatively associated with intention to leave	Supported
H7e	Interactional justice will be negatively associated with work pressure	Supported
H7f	Interactional justice will be positively associated with work efforts.	Supported

### **8.5.1 Mediation analysis**

Having established the relationship between the three justice concepts and the six dependent variables, the mediation hypotheses were then tested drawing on the principles set forth by Baron and Kenny (1986) for testing mediation. To test for mediation, three separate regression equations were estimated; 1) the mediator was regressed on the dependent variable, 2) the dependent variable was regressed on the independent variable, and 3) the dependent variable was regressed on both the mediator and the independent variable. Chapter 5 discussed mediation analysis in more detail. The mediating hypotheses which were presented in chapter four are outlined below:

H8a-c, f: LMX will positively mediate the relationship between interactional (interpersonal and informational) justice perceptions of HPWS and a) job satisfaction, b) affective commitment and c) trust in management and f) work effort

H8d-f: LMX will negatively mediate the relationship between interactional (interpersonal and informational) justice perceptions of HPWS and d) intention to leave, e) work pressure

H9a-c: POS will positively mediate the relationship between procedural justice perceptions of HPWS and a) job satisfaction, b) affective commitment and c) trust in management

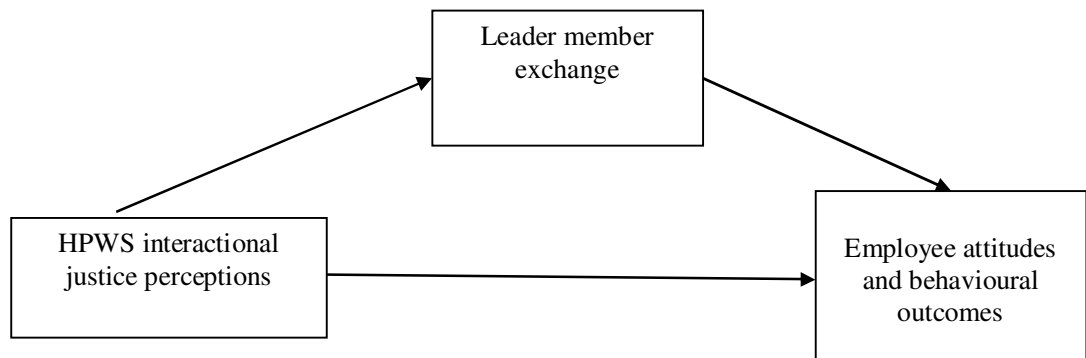
H9d-f: POS will negatively mediate the relationship between procedural justice perceptions of HPWS and d) intention to leave, e) work pressure and d) work intensification.



### 8.5.1 Mediating role of leader-member exchange

The hypotheses that LMX acts as a mediator between interactional justice and a) job satisfaction, b) affective commitment, c) trust in management, d) intentions to leave, e) work pressure, and f) work effort was tested via a series of regression analyses. Figure 8.2 illustrates the proposed role of leader-member exchange as a mediator.

**Figure 8.2: Mediation Model: Leader-member exchange as a mediator between interactional justice and dependent variables**



The results for the mediation analyses are reported in the same order as the four steps suggested by Baron and Kenny (1986) above. The first condition for mediation proposes that interactional justice (as the independent variable) should be significantly related to LMX (the mediator). As the results depicted in Model 2 of Table 8.12 demonstrate, interactional justice was significantly related to LMX ( $\beta = .649, p < .001$ ). Therefore, the more respondents rated themselves as having experienced higher levels of HPWS interactional fairness; the better they perceived the quality of their relationship with their manager.

**Table 8.12: Results of regression examining effects of interactional justice on LMX**

		<b>Leader member exchange (LMX)</b>	
		<b>Model 1</b>	<b>Model 2</b>
<b>1</b>	Gender	-.099	-.093
	Age (Dummy1)	-.064	-.027
	Age (Dummy2)	.135	.154*
	Education	.011	-.046
	Employee category	-.040	.026
	Tenure	.144	-.026
	Comp_high	-.240*	-.040
	Comp_low	-.111	-.083
<b>2</b>	Interactional justice		.649***
	<b>R<sup>2</sup></b>	<b>.096</b>	<b>.466</b>
	<b>Adj R<sup>2</sup></b>	<b>.042</b>	<b>.430</b>
	<b>Δ R<sup>2</sup></b>		<b>.370</b>
	<b>F</b>	<b>1.798</b>	<b>13.064***</b>

\*p<0.05 \*\*p<0.01 \*\*\*p<0.001 ; Gender (1=male; 0 = female); Education (1 = primary degree 0 = no degree); (1 = permanent; 0 = non permanent).

The second condition for mediation (that interactional justice, the independent variable, has a direct effect on the dependent variable) was then tested. Results for this regression analysis have already been presented in Table 8.9. Results for the third step (that the mediator, LMX, would predict the dependent variables) are presented in Table 8.13. The findings revealed that LMX was significantly associated with: (a) job satisfaction ( $\beta = .550$ ,  $p < .001$ ), (b) affective commitment ( $\beta = .559$ ,  $p < .001$ ), (c) trust in management ( $\beta = .509$ ,  $p < .001$ ), (d) intention to leave ( $\beta = -.272$ ,  $p < .01$ ), and (e) work effort ( $\beta = .196$ ,  $p < .05$ ). Thus, the third condition was met for these dependent variables suggesting that supportive work relationships are important antecedents to positive and negative employee attitudes and behavioural outcomes. Work pressure did not meet this condition and therefore Hypothesis 8e can be rejected. Consequently, we can conclude that LMX does not mediate the relationship between interactional justice and work pressure. The role of the manager in terms of the employment relationship emerged as an important theme in the interviews, with one manager commenting:

I think it can be very fair depending on who you work for (ProfCo, Senior manager).

**Table 8.13: Results of regression examining effects of mediator (LMX) on employee outcomes**

Step	Variables	Job Satisfaction		Affective commitment		Trust in Management		Intention to Leave		Work Pressure		Work Effort	
		Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>1</b>	Gender	-.013	.044	-.058	-.003	-.004	.050	-.060	-.088	.105	.094	.219**	.238**
	Age (Dummy1)	-.051	-.016	-.023	.013	-.050	-.021	.043	.026	-.005	-.012	.033	.046
	Age (Dummy2)	.178*	.103	.149	.074	.046	.005	-.155	-.119	-.063	-.048	.089	.063
	Education	.006	-.001	-.023	-.029	.043	.047	-.065	-.061	-.073	-.072	.085	.083
	Employee category	-.088	-.065	-.039	-.016	.000	.016	.078	.067	.091	.086	-.168*	-.160
	Tenure	.223*	.142	.290**	.210**	.279**	.194	-.225*	-.185*	.002*	.017	.135	.107
	Comp_high	-.301**	-.166	-.227*	-.093	.037	.159*	.045	-.021	.223	.197	.097	.144
	Comp_low	-.199	-.138	-.083	-.021	.239*	.299**	.147	.117	-.031	-.043	-.142	-.120
<b>2</b>	LMX		.550***		.559***		.509***		-.272**		-.109		.196*
	<b>R<sup>2</sup></b>	<b>.157</b>	<b>.430</b>	<b>.159</b>	<b>.441</b>	<b>.104</b>	<b>.341</b>	<b>.139</b>	<b>.206</b>	<b>.083</b>	<b>.094</b>	<b>.145</b>	<b>.179</b>
	<b>Adj R<sup>2</sup></b>	<b>.107</b>	<b>.391</b>	<b>.109*</b>	<b>.404</b>	<b>.051</b>	<b>.296</b>	<b>.088</b>	<b>.152</b>	<b>.029</b>	<b>.033</b>	<b>.094</b>	<b>.125</b>
	<b>Δ R<sup>2</sup></b>		<b>.273</b>		<b>.283</b>		<b>.236</b>		<b>.067</b>		<b>.011</b>		<b>.035</b>
	<b>F</b>	<b>3.139**</b>	<b>11.219***</b>	<b>3.212**</b>	<b>11.855***</b>	<b>1.954</b>	<b>7.643***</b>	<b>2.730**</b>	<b>3.858***</b>	<b>1.533</b>	<b>1.543</b>	<b>2.877**</b>	<b>2.280**</b>

\*p<0.05 \*\*p<0.01 \*\*\*p<0.001; Gender (1=male; 0 = female); Education (1 = primary degree 0 = no degree); (1 = permanent; 0 = non permanent).

Finally, in the fourth step, test for mediation occurs if the significant relationship between interactional justice and the dependent variables (step 3) either reliably reduce or become non-significant when controlling for LMX (step 4). Results presented in Table 8.15 show that the conditional fourth step for mediation was not met for job satisfaction, affective commitment, trust in management and work effort. Therefore, hypotheses H8a, 8b, 8c and 8f were not supported.

The condition for mediation was met for just one dependent variable, intention to leave. Table 8.14 shows that when interactional justice and LMX are entered into the regression, the effect of interactional justice reduces and is no longer significant ( $\beta = -.058$ ,  $p = ns$ ). Thus, hypothesis H8d is supported. To further test this mediated path, a direct test of the full mediational path (Interactional justice  $\rightarrow$  LMX  $\rightarrow$  intention to leave) was conducted using a Sobel test. This Sobel test (Sobel, 1982) is a conservative test examining the significance of the product terms of the paths from the independent variable to the mediator as well as the path from the mediator to the dependent variable (MacKinnon and Fairchild, 2008). Results of the Sobel test showed the indirect effect of LMX as a mediator between interactional justice and intention to leave was significant ( $z = 3.14$ ,  $s.e. = .07$ ,  $p < .001$ ) providing additional support for hypothesis 8d that the negative relationship between interactional justice and intention to leave is mediated by LMX.

**Table 8.14: Results of regression examining effects of step 4 (LMX and interactional justice) on employee outcomes**

Step	Variables	Job Satisfaction		Affective commitment		Trust in Management		Intention to Leave		Work Effort	
		Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>1</b>	Gender	-.013	.026	-.058	-.020	-.004	.032	-.060	-.085	.219**	.226**
	Age (Dummy1)	-.051	-.010	-.023	.018	-.050	-.012	.043	.025	.033	.049
	Age (Dummy2)	.178*	.146*	.149	.111	.046	.034	-.155	-.125	.089	.088
	Education	.006	-.032	-.023	-.055	.043	.009	-.065	-.056	.085	.065
	Employee category	-.088	-.035	-.039	.009	.000	.056	.078	.062	-.168*	-.142
	Tenure	.223*	.076	.290**	.154*	.279**	.134	-.225*	-.175	.135	.069
	Comp_high	-.301**	-.105	-.227*	-.042	.037	.222*	.045	-.031	.097	.179
	Comp_low	-.199	-.148	-.083	-.029	.239*	.288**	.147	.119	-.142	-.126
<b>2</b>	Interactional justice		.378***		.328***		.398***		-.058		.225*
	LMX		.313***		.353***		.257**		-.235*		.054
	<b>R<sup>2</sup></b>	<b>.157</b>	<b>.504</b>	<b>.159</b>	<b>.497</b>	<b>.104</b>	<b>.421</b>	<b>.139</b>	<b>.208</b>	<b>.145</b>	<b>.206</b>
	<b>Adj R<sup>2</sup></b>	<b>.107</b>	<b>.466</b>	<b>.109</b>	<b>.497</b>	<b>.051</b>	<b>.377</b>	<b>.088</b>	<b>.148</b>	<b>.094</b>	<b>.146</b>
	<b>Δ R<sup>2</sup></b>		<b>.347</b>		<b>.338</b>		<b>.316</b>		<b>.068</b>		<b>.061</b>
	<b>F</b>	<b>3.139**</b>	<b>13.496***</b>	<b>3.212**</b>	<b>13.247***</b>	<b>1.954</b>	<b>9.596***</b>	<b>2.730**</b>	<b>3.483***</b>	<b>2.877**</b>	<b>3.470***</b>

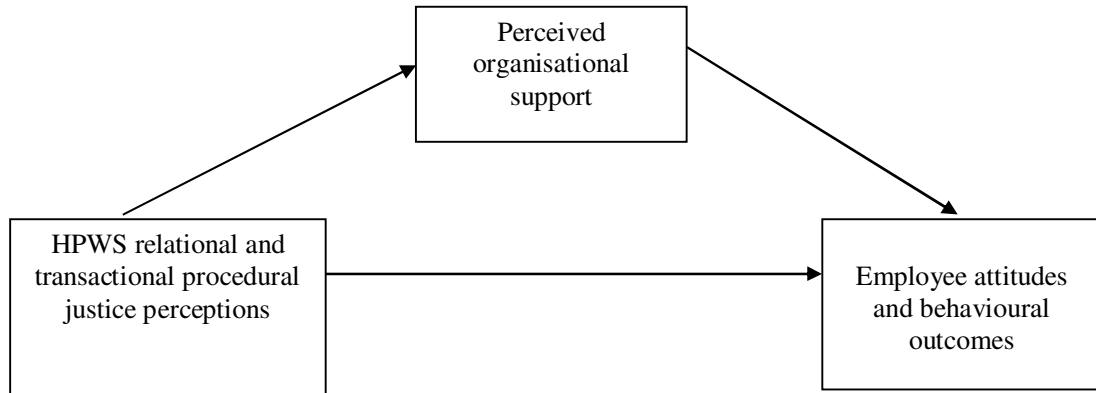
\*p<0.05 \*\*p<0.01 \*\*\*p<0.001; Gender (1=male; 0 = female); Education (1 = primary degree 0 = no degree); (1 = permanent; 0 = non permanent).

As work pressure did not meet the conditions set for step 3, this variable is not included in analysis at step 4.

### 8.5.2 Mediating role of perceived organisational support

The hypothesis that perceived organisational support acts as a mediator between procedural justice and employee outcome variables was tested via a series of regression analyses. Figure 8.3 illustrates the hypotheses diagrammatically. Again, the results for the mediation analyses are reported in the same order as the four steps suggested by Baron and Kenny (1986) above.

**Figure 8.3: Mediation Model: Perceived organisational support as mediator between procedural justice and dependent variables**



The first mediation analysis examined the mediating role of perceived organisational support (POS) on *transactional* procedural justice and employee outcomes. Firstly, the independent variable (transactional procedural justice) was regressed on the mediator (POS). The findings of this regression analysis are presented in Table 8.15. Transactional procedural justice was found to have a significant positive effect ( $\beta = .449$ ,  $p < 0.001$ ) on perceived organisational support; thus the first condition mediation recommended by Baron and Kenny (1986) was supported.

**Table 8.15: Results of regression examining effects of transactional procedural justice on POS**

		<b>Perceived Organisational Support (POS)</b>	
		<b>Model 1</b>	<b>Model 2</b>
<b>1</b>	Gender	-.114	-.102
	Age (Dummy1)	-.085	-.059
	Age (Dummy2)	-.018	-.014
	Education	.060	.070
	Employee category	-.112	-.039
	Tenure	.248*	.211
	Comp_high	-.215*	-.110*
	Comp_low	-.033	.061
<b>2</b>	Transactional procedural justice		.449***
	<b>R<sup>2</sup></b>	<b>.105</b>	<b>.294</b>
	<b>Adj R<sup>2</sup></b>	<b>.052</b>	<b>.246</b>
	<b>Δ R<sup>2</sup></b>		<b>.189</b>
	<b>F</b>	<b>1.974</b>	<b>6.187***</b>

\*p<0.05 \*\*p<0.01 \*\*\*p<0.001; Gender (1=male; 0 = female); Education (1 = primary degree 0 = no degree); (1 = permanent; 0 = non permanent).

The second condition necessitates that the independent variable should be significantly related to the dependent variable. The findings of these regression results were presented in Table 8.5. Transactional procedural justice (the independent variable) was related to the following dependent variables: (a) job satisfaction ( $\beta = .369, p < .001$ ), (b) affective commitment ( $\beta = .372, p < .001$ ), (c) trust in management ( $\beta = .447, p < .001$ ), (d) intention to leave ( $\beta = -.115, p = ns$ ), (e) work pressure ( $\beta = -.249, p < .01$ ), and (f) work effort ( $\beta = -.022, p = ns$ ). Transactional procedural justice did not significantly explain intention to leave or work effort, therefore the second causal step for the mediation test was violated. Thus, the hypotheses suggesting that POS plays a mediating role between transactional procedural justice and both intention to leave and work effort is rejected. The second condition of mediation was met for the remaining dependent variables, however. To test the third condition, the mediator (POS) was entered into the model to determine its relationship with the dependent variables. Findings presented in Table 8.16 show that POS was found to be significantly associated with all dependent variables except work effort ( $\beta = .149, ns$ ). Thus, we can conclude that POS does not mediate the relationship between transactional procedural justice and work effort.

**Table 8.16: Results of regression examining effects of mediator (POS) on employee outcomes**

Step	Variables	Job Satisfaction		Affective Commitment		Trust in Management		Intention to Leave		Work Pressure		Work Effort	
		Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>1</b>	Gender	-.011	.056	-.055	.016	-.013	.061	-.053	-.088	.126	.101	.227**	.244**
	Age (Dummy1)	-.055	-.006	-.026	.027	-.055	.000	.043	.017	.006	-.013	.046	.058
	Age (Dummy2)	.164	.174*	.142	.153*	.049	.061	-.126	-.132	-.064	-.068	.051	.054
	Education	.004	-.032	-.023	-.061	.046	.007	-.057	-.037	-.077	-.064	.073	.064
	Employee category	-.097	-.032	-.040	.030	.003	.076	.082	.044	.120	.095	-.163	-.146
	Tenure	.218*	.073	.282**	.127	.264**	.103	-.231*	-.145	.022	.077	.165	.128
	Comp_high	-.295**	-.170	-.216*	-.081	.040	.179*	.038	-.035	.209	.161	.063	.095
Comp_low	-.209	-.190*	-.088	-.067	.237*	.258**	.152	.143	-.024	-.031	-.146	-.141	
<b>2</b>	POS		.577***		.624***		.648***		-.322***		-.223*		.149
	<b>R<sup>2</sup></b>	<b>.150</b>	<b>.448</b>	<b>.149</b>	<b>.498</b>	<b>.099</b>	<b>.475</b>	<b>.136</b>	<b>.229</b>	<b>.084</b>	<b>.128</b>	<b>.136</b>	<b>.156</b>
	<b>Adj R<sup>2</sup></b>	<b>.099</b>	<b>.410</b>	<b>.099</b>	<b>.464</b>	<b>.045</b>	<b>.440</b>	<b>.084</b>	<b>1.76</b>	<b>.030</b>	<b>.070</b>	<b>.085</b>	<b>.100</b>
	<b>Δ R<sup>2</sup></b>		<b>.298</b>		<b>.348</b>		<b>.376</b>		<b>.092</b>		<b>.044</b>		<b>.020</b>
	<b>F</b>	<b>2.954**</b>	<b>11.984***</b>	<b>2.963**</b>	<b>14.750***</b>	<b>1.851</b>	<b>13.480***</b>	<b>2.606*</b>	<b>4.317***</b>	<b>1.546</b>	<b>2.192*</b>	<b>2.666**</b>	<b>2.759**</b>

\*p<0.05 \*\*p<0.01 \*\*\*p<0.001; Gender (1=male; 0 = female); Education (1 = primary degree 0 = no degree); (1 = permanent; 0 = non permanent).



The final condition to be met to claim partial or full mediation was tested by entering transactional procedural justice into the regression whilst controlling for perceived organisational support for each dependent variable. As condition 2 was not fulfilled for intention to leave and work effort, these variables were not examined in step 4. Table 8.18 presents the mediation regression results for transactional procedural justice, POS and a) job satisfaction, b) affective commitment, c) trust in management and d) work pressure. The first three conditions have been met as discussed above. In step 4, when transactional procedural justice is entered into the regression (whilst controlling for POS), the effect of transactional procedural justice on the predictor (job satisfaction) is no longer significant ( $\beta = .128$ ,  $p = ns$ ) suggesting full mediation effects of POS. Table 8.17 also shows that POS fully mediated the relationship of transactional procedural justice on affective commitment as the effect of relational procedural justice reduced to zero ( $\beta = .111$ ,  $p = ns$ ) in step 4 when POS is controlled for. For trust in management, when both POS and transactional procedural justice were entered into the regression, the effect of transactional procedural justice reduced (from  $.447$ ,  $p < .001$  to  $.228$ ,  $p < .01$ ). No mediation effect was found for work pressure thus hypotheses 8e is rejected. The Sobel test confirmed that POS mediated the effects of transactional procedural justice on job satisfaction ( $z = 4.91$ ,  $s.e. = .04$ ,  $p < .001$ ), affective commitment ( $z = 5.09$ ,  $s.e. = .05$ ,  $p < .001$ ) and trust in management ( $z = 5.12$ ,  $s.e. = .05$ ,  $p < .001$ ).

**Table 8.17: Results of regression examining effects of step 4 (POS and transactional procedural justice) on employee outcomes**

Step	Variables	Job Satisfaction		Affective commitment		Trust in Management		Work Pressure	
		Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>1</b>	Gender	-.011	.053	-.055	.013	-.013	.055	.126	.105
	Age (Dummy1)	-.055	-.004	-.026	.029	-.055	.004	.006	-.015
	Age (Dummy2)	.164	.174*	.142	.153*	.049	.061	-.064	-.068
	Education	.004	-.025	-.023	-.055	.046	.018	-.077	-.072
	Employee category	-.097	-.018	-.040	.042	.003	.101	.120	.079
	Tenure	.218*	.077	.282**	.131	.264**	.111	.022	.072
	Comp_high	-.295**	-.152	-.216*	-.066	.040	.210*	.209	.141
	Comp_low	-.209	-.166	-.088	-.046	.237*	.302**	-.024	-.060
<b>2</b>	Transactional procedural justice		.128		.111		.228**		-.149
	POS		.517***		.572***		.541***		-.153
	<b>R<sup>2</sup></b>	<b>.150</b>	<b>.460</b>	<b>.149</b>	<b>.507</b>	<b>.099</b>	<b>.514</b>	<b>.084</b>	<b>.145</b>
	<b>Adj R<sup>2</sup></b>	<b>.099</b>	<b>.419</b>	<b>.099</b>	<b>.470</b>	<b>.045</b>	<b>.477</b>	<b>.030</b>	<b>.081</b>
	<b>Δ R<sup>2</sup></b>		<b>.310</b>		<b>.357</b>		<b>.415</b>		<b>.061</b>
	<b>F</b>	<b>2.954**</b>	<b>11.236***</b>	<b>2.963**</b>	<b>13.664***</b>	<b>1.851</b>	<b>14.040***</b>	<b>1.564</b>	<b>2.252*</b>

\*p<0.05 \*\*p<0.01 \*\*\*p<0.001; Gender (1=male; 0 = female); Education (1 = primary degree 0 = no degree); (1 = permanent; 0 = non permanent).

As intention to leave and work effort did not meet the conditions set for step 2 and work effort did not meet conditions for step 3, these variables were not included in analysis at step 4.

The final mediation analysis in this chapter examines the mediating role of perceived organisational support on *relational* procedural justice and employee outcomes. Firstly, the independent variable (relational procedural justice) was regressed on to the mediator (POS). Table 8.18 shows that relational procedural justice was found to have a significant positive effect on POS ( $\beta = .610, p < 0.001$ ); thus the first condition outlined by Baron and Kenny (1986) holds.

**Table 8.18: Results of regression examining effects of relational procedural justice on POS**

		Perceived Organisational Support (POS)	
		Model 1	Model 2
<b>1</b>	Gender	-.114	-.090
	Age (Dummy1)	-.085	-.060
	Age (Dummy2)	-.018	.007
	Education	.060	-.003
	Employee category	-.112	-.041
	Tenure	.248*	.097
	Comp_high	-.215	-.055
	Comp_low	-.033	-.008
<b>2</b>	Relational procedural justice		.610***
	<b>R<sup>2</sup></b>	<b>.105</b>	<b>.438</b>
	<b>Adj R<sup>2</sup></b>	<b>.052</b>	<b>.400</b>
	<b><math>\Delta R^2</math></b>		<b>.334</b>
	<b>F</b>	<b>1.971*</b>	<b>11.611***</b>

\* $p < 0.05$  \*\* $p < 0.01$  \*\*\* $p < 0.001$  ; Gender (1=male; 0 = female); Education (1 = primary degree 0 = no degree); (1 = permanent; 0 = non permanent).

Relational procedural justice (the independent variable) was then regressed on to the dependent variables a) job satisfaction ( $\beta = .512, p < .001$ ), b) affective commitment ( $\beta = .505, p < .001$ ), c) trust in management ( $\beta = .572, p < .001$ ), d) intention to leave ( $\beta = -.203, p < .05$ ), e) work pressure ( $\beta = -.236, p < .01$ ), and f) work effort ( $\beta = .217, p < .05$ ). Full details of these regression results were reported in Table 8.6. Thus, the second condition of mediation was met for all dependent variables. In step three, the mediator (POS) was entered into the model to determine its relationship with the dependent variables (see Table 8.17 above). To recap, POS was found to be significantly associated with (a) job satisfaction ( $\beta = .577, p < .001$ ), (b) affective commitment ( $\beta = .624, p < .001$ ), (c) trust in management ( $\beta = .648, p < .001$ ), (d) intention to leave ( $\beta = -.322, p < .001$ ), (e) work pressure ( $\beta = -.223, p < .05$ ). No significant association was found between POS and work effort ( $\beta = .149, p = ns$ ). Therefore, hypothesis 9f was rejected and work effort was not included in step 4.

The final step required that the direct effect of the independent variable (relational procedural justice) on the dependent variable should reduce significantly in magnitude (partial mediation) or become non significant (full mediation), when the mediator (POS) is included in the regression model. Table 8.19 presents the results of the regression analyses. The results show that when POS was added in the final step, the direct effect of POS on job satisfaction and affective commitment remained significant but declined from  $\beta = .512$  ( $p < .001$ ) to  $\beta = .243$  ( $p < .01$ ) for job satisfaction and decreased from  $\beta = .505$  ( $p < .001$ ) to  $\beta = .217$  ( $p < .01$ ) for affective commitment. The results show that POS fully mediated the relationship between relational procedural justice and intention to leave and work pressure as the effect of relational procedural justice reduced to zero for intention to leave ( $\beta = .016$ ,  $p = ns$ ) and work pressure ( $\beta = -.089$ ;  $p = ns$ ) in step 4 when POS is controlled for. The Sobel test confirmed that POS mediated the effects of relational procedural justice on job satisfaction ( $z = 6.14$ ,  $s.e. = .06$ ,  $p < .001$ ), affective commitment ( $z = 6.51$ ,  $s.e. = .07$ ,  $p < .001$ ), intention to leave ( $z = 3.6$ ,  $s.e. = .07$ ,  $p < .001$ ) and work pressure ( $z = 2.88$ ,  $s.e. = .06$ ,  $p < .01$ ).

**Table 8.19: Results of regression examining effects of step 4 (POS and relational procedural justice) on employee outcomes**

		Job Satisfaction		Affective Commitment		Trust in Management		Intention to Leave		Work Pressure	
		Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>1</b>	Gender	-.011	.049	-.055	.010	-.013	.052	-.053	-.089	.126	.103
	Age (Dummy1)	-.055	-.009	-.026	.024	-.055	-.003	.043	.017	.006	-.012
	Age (Dummy2)	.164	.181*	.142	.160*	.049	.070	-.126	-.132	-.064	-.071
	Education	.004	-.048	-.023	-.075	.046	-.012	-.057	-.039	-.077	-.058
	Employee category	-.097	-.020	-.040	.040	.003	.090	.082	.044	.120	.091
	Tenure	.218*	.050	.282**	.106	.264	.076	-.231*	-.146	.022	.086
	Comp_high	-.295**	-.138	-.216*	-.053	.040	.217	.038	-.033	.209	.149
	Comp_low	-.209	-.185*	-.088	-.063	.237	.264	.152	.143	-.024	-.033
<b>2</b>	Relational procedural justice		.243**		.217**		.288		.016		-.089
	POS		.428***		.491***		.472		-.332**		-.168*
	<b>R<sup>2</sup></b>	<b>.150</b>	<b>.481</b>	<b>.149</b>	<b>.524</b>	<b>.099</b>	<b>.522</b>	<b>.136</b>	<b>.229</b>	<b>.041</b>	<b>.110</b>
	<b>Adj R<sup>2</sup></b>	<b>.099</b>	<b>.442</b>	<b>.099</b>	<b>.488</b>	<b>.045</b>	<b>.486</b>	<b>.084</b>	<b>.170</b>	<b>.001</b>	<b>.057</b>
	<b>Δ R<sup>2</sup></b>		<b>.331</b>		<b>.375</b>		<b>.423</b>		<b>.092</b>		<b>.068</b>
	<b>F</b>	<b>2.954**</b>	<b>12.233***</b>	<b>2.963**</b>	<b>14.647***</b>	<b>1.851</b>	<b>14.520***</b>	<b>2.606*</b>	<b>3.859***</b>	<b>1.546</b>	<b>2.076*</b>

\*p<0.05 \*\*p<0.01 \*\*\*p<0.001; Gender (1=male; 0 = female); Education (1 = primary degree 0 = no degree); (1 = permanent; 0 = non permanent).

As work effort did not meet the conditions set for step 2 and step 3, this variable was not included in analysis at step 4.

The test for mediation effects in this study showed that both LMX and POS have mediating effects on perceptions of justice and employee outcomes. However, LMX did not have a full or partial mediation effect on the relationship between interactional justice and the majority of the employee outcomes as originally hypothesised. Regression results showed that LMX fully mediated the interactional justice – intention to leave relationship only. In contrast, POS proved to be a much stronger mediator for both elements of procedural justice and employee outcomes. POS fully mediated the relationship between transactional procedural justice and job satisfaction and affective commitment. It also partially mediated the relationship transactional procedural justice and trust in management. POS also fully mediated the relationship between relational procedural justice and both intention to leave and work pressure. Support for partial mediation was found for relational procedural justice and both job satisfaction and affective commitment. No mediating relationships were found for trust in management or work effort. Sobel tests were used as an additional statistical method to establish the indirect effect in each mediation model.

**Table 8.20: Summary of hypotheses for mediation analysis and findings**

	<b>Hypotheses</b>	<b>Findings</b>
H8a	Leader-member exchange will mediate the relationship between interactional justice and job satisfaction	Not supported
H8b	Leader-member exchange will mediate the relationship between interactional justice and affective commitment	Not supported
H8c	Leader-member exchange will mediate the relationship between interactional justice and trust in management	Not supported
H8d	Leader-member exchange will mediate the relationship between interactional justice and intention to leave	Supported
H8e	Leader-member exchange will mediate the relationship between interactional justice and work pressure	Not supported
H8f	Leader-member exchange will mediate the relationship between interactional justice and work effort	Not supported
H9a	Perceived organisational support will mediate the relationship between procedural justice and job satisfaction	Fully supported (Trans PJ). Partially supported (Rel PJ)
H9b	Perceived organisational support will mediate the relationship between procedural justice and affective commitment	Fully supported (Trans PJ). Partially supported (Rel PJ)
H9c	Perceived organisational support will mediate the relationship between procedural justice and trust in management	Partially Supported (Trans PJ only)

	<b>Hypotheses</b>	<b>Findings</b>
H9d	Perceived organisational support will mediate the relationship between procedural justice and intention to leave	Fully supported (Rel and Trans)
H9e	Perceived organisational support will mediate the relationship between procedural justice and work pressure	Fully supported (Rel PJ only)
H9f	Perceived organisational support will mediate the relationship between procedural justice and work effort	Not supported

## 8.6 Conclusion

The primary aim of this study was to understand employee responses to HPWS through the theoretical lens of organisational justice. Both the employee survey findings and qualitative data presented in this chapter highlight the importance of justice for organisations. This provides support for previous research conducted in a variety of HRM contexts which demonstrated the importance of fairness to employees (Konovsky, 2000). This study revealed that distributive, procedural and interactional justice perceptions of the HPWS system exercised significant effects on outcome variables in different ways. Interactional justice in particular was a significant impact being a predictor of six outcome variables. The role of the line manager in ensuring the fair enactment of HPWS in practice was revealed with one manager acknowledging:

the people management side of the job can take time if it's going wrong in particular and it will go wrong unless you give enough time to ensure it is right (Senior Manager 3, ProfCo).

Findings also revealed that procedural justice was the next strongest predictor on employee outcomes with perceptions of procedural fairness of relational aspects of HPWS being more important in predicting employee attitudes and behavioural responses. Interview findings supported the importance placed on relational aspects of HPWS with employees highlighting the importance of fair treatment during performance appraisals and succession planning decision in particular.

The mediation models proposed received mixed support. Leader-member exchange failed to mediate the relationship between interactional justice and employee attitudes and behaviours with the exception of intention to leave. Thus the argument that employees who experienced high LMX and interactional justice during HPWS in turn reciprocate with higher commitment, and work effort was not established. POS was a stronger mediator between procedural justice and outcomes such as intention to leave, job satisfaction, affective commitment and work

pressure suggesting that fairness of procedures communicates to employees that the organisation values them (Moorman, Blakely and Niehoff, 1998).

This chapter presented the findings related to answering research questions 3, 4 and 5 by examining the processes that influence employee attitudes and behaviours towards HPWS and why such attitudes and behaviours occur. This was achieved through the lens of organisational justice theory. The role of the line manager and the organisation in this HPWS-employee outcomes relationship was also investigated through LMX and POS. Findings established the importance of justice perceptions of the HPWS in explaining employee outcomes. Attention now turns to examining the multi-level pathways by which HPWS can impact employees. To this end, the following chapter will conduct cross level analysis to link the company level measure of HPWS presented in chapter seven with the employee level data examined in this chapter.



**CROSS LEVEL HPWS EFFECTS ON EMPLOYEE OUTCOMES:  
THE MEDIATING ROLE OF ORGANISATIONAL JUSTICE**

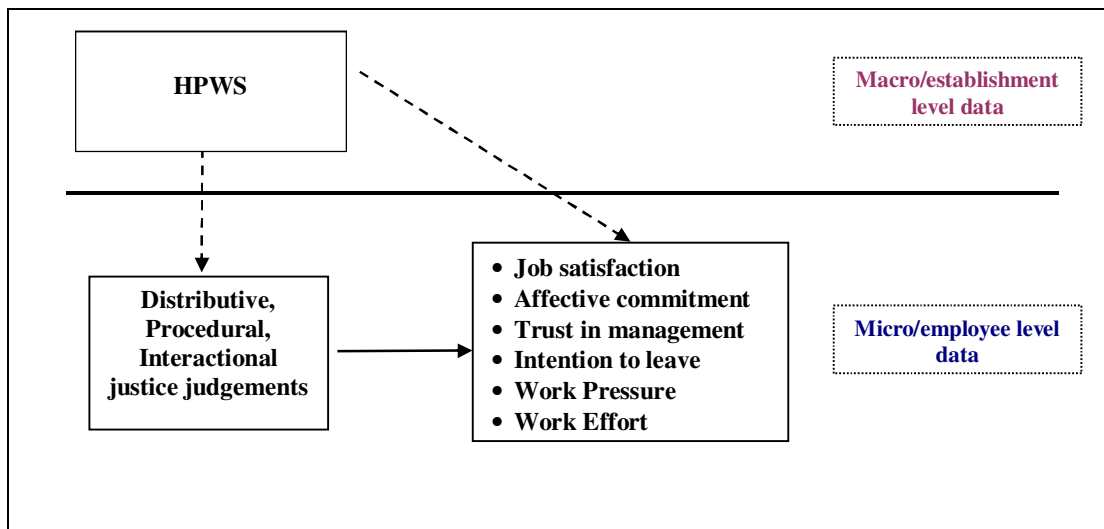
**9.1 Introduction**

This chapter integrates the macro data (establishment level) presented in chapter 6 and the micro data (individual level) considered in chapter 8. It does this by examining the cross level effects of organisation-level utilisation of HPWS policies on individual-level employee attitudes and behavioural outcomes. The mediating role of employee perceptions of HPWS justice on the HPWS-employee outcomes relationship will also be reported. Taken together data in this chapter provides information to help answer research questions 3 and 4. It does this in two ways: firstly, by establishing the impact of HPWS policy (at firm level) on employee outcomes and secondly, by exploring the mediating role of organisational justice in this HPWS-employee outcome relationship in explaining these employee reactions.

**9.2 Cross level linkages between HPWS and employee level attitudes and behavioural outcomes**

Mossholder and Bedeian (1983) and Rousseau (1985) define cross-level effects as those where variables at one level of analysis are hypothesized to influence variables at another level of analysis. The conceptual model in this research is illustrated in Figure 9.1.

**Figure 9.1: A multilevel model of HPWS, organisational justice and individual-level attitudes and behavioural outcomes**



The strategy chosen in this research to investigate cross-level effects is that outlined by Mossholder and Bedeian (1983) and James and Williams (2000). Chapter 5 discussed the examination of cross level effects using fixed effect dummy codes in multiple regression analysis in more detail.

Table 9.1 presents the results of the cross level regression results between establishment level utilisation of HPWS and employee outcomes. In the regression analyses, the results show that high HPWS was a strong predictor of work pressure ( $\beta = .229$ ,  $t = 2.133$ ,  $p < .05$ ). High investment in HPWS at policy level was also found to have a significant negative impact on job satisfaction ( $\beta = -.292$ ,  $t = -2.809$ ,  $p < .01$ ) and affective commitment ( $\beta = -.217$ ,  $t = -2.075$ ,  $p < .05$ ). Low HPWS was not found to predict any employee outcomes.

This suggests that employees working for an organisation that has a high HPWS tend to have lower job satisfaction and affective commitment while experiencing greater work pressure compared to employees working in organisations with low to medium investment in HPWS. In short, a more embedded HPWS model can negatively affect employees.

**Table 9.1: Results of Hierarchical Regression Analysis for establishment level HPWS and dependent variables**

Step	Variables	Job Satisfaction		Affective commitment		Trust in Management		Intention to Leave		Work Pressure		Work Effort	
		Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>1</b>	Gender	.064	.044	-.022	-.041	.008	-.004	-.042	-.050	.138	.168*	.217**	.238
	Age (Dummy1)	.023	.051	-.023	.016	.028	.065	-.084	-.056	.065	-.006	.013	-.044
	Age (Dummy2)	.196	.222*	.148	.170	.064	.067	-.160	-.159	-.035	-.059	.034	.026
	Education	.001	-.002	-.039	-.020	-.014	.032	-.078	-.044	-.038	-.086	.129	.078
	Employee category	-.093	-.093	-.040	-.033	-.014	.004	.074	.085	.102	.083	-.159	-.179**
	Tenure	.225*	.220*	.267**	.281**	.201*	.245*	-.268**	-.231*	.033	-.011	.170	.119
<b>2</b>	Dummy HPWS High		-.292**		-.217*		.051		.025		.229*		.056
	Dummy HPWS Low		-.203		-.078		.222		.156		-.042		-.176
	<b>R<sup>2</sup></b>	<b>.108</b>	<b>.156</b>	<b>.122</b>	<b>.150</b>	<b>.053</b>	<b>.082</b>	<b>.120</b>	<b>.136</b>	<b>.043</b>	<b>.098</b>	<b>.100</b>	<b>.136</b>
	<b>Δ R<sup>2</sup> (Adj R<sup>2</sup>)</b>	<b>(.071)</b>	<b>.048 (.108)</b>	<b>(.085)</b>	<b>.028 (.102)</b>	<b>(.012)</b>	<b>.030 (.029)</b>	<b>(.083)</b>	<b>.016 (.086)</b>	<b>.004</b>	<b>.055 (.047)</b>	<b>(.063)</b>	<b>.036 (.068)</b>
	<b>F</b>	<b>2.899*</b>	<b>3.260**</b>	<b>3.334**</b>	<b>3.138**</b>	<b>1.287</b>	<b>1.535</b>	<b>3.217**</b>	<b>2.735**</b>	<b>1.090</b>	<b>1.941*</b>	<b>2.693**</b>	<b>2.816**</b>

\* = p < .05 \*\* = p < .01 \*\*\* = p < .001 (standardised coefficients reported)

### **9.3 Mediating role of organisational justice in HPWS – employee outcome relationship**

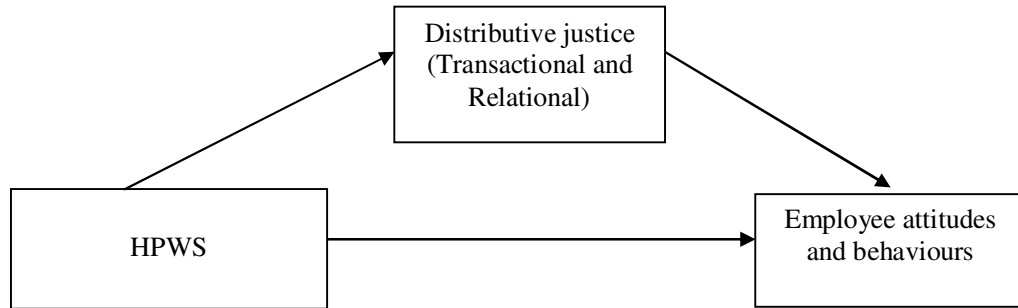
In addition to reporting the magnitude of the HPWS-employee behavioural linkage, this chapter tests for the causal mechanisms that might underlie this relationship. Distributive, procedural, and interactional justice were cast as mediators to explore these relationships. The four step mediation approach advocated by Baron and Kenny (1986) will again be used to infer mediation between organisational justice and the HPWS-employee outcome relationship. Where this analysis suggested mediation, the Sobel test (Sobel, 1982) was then used. The mediation results are presented in a different format to the previous chapter as some of the analysis has already been reported in full table format in chapter 8 and Table 9.1 of this chapter.

Table 9.1 shows that establishment level HPWS (dummy high) had a significant impact on three dependent variables: (a) job satisfaction, (b) affective commitment and (c) work pressure. No relationship was found between HPWS and the following dependent variables: trust in management, intention to leave and work effort. As a result, the second condition of mediation as set out by Baron and Kenny (1986) was not met for these variables. Therefore, distributive, procedural and interactional justice does not mediate the HPWS-trust in management, HPWS-intention to leave and HPWS-work effort relationships. The mediation effects of organisational justice on the remaining dependent variables will now be examined.

#### **9.3.1 *Distributive justice as a mediator***

Following the causal steps approach advocated by Baron and Kenny (1986), four conditions were tested to examine if distributive justice mediated the relationship between HPWS and a) job satisfaction, b) affective commitment and c) work pressure. Figure 9.2 illustrates the hypotheses diagrammatically. As distributive justice was found to comprise of transactional distributive justice and relational distributive justice, these will be treated as two separate mediators in the analysis.

**Figure 9.2: Mediation Model: Distributive justice as a mediator between establishment level HPWS and dependent variables**



Hypothesis 11a postulates that distributive justice will mediate the effect of establishment level HPWS on job satisfaction. Tables 9.2, 9.3 and 9.4 present the causal steps mediation results for transactional distributive justice and a) job satisfaction, b) affective commitment and c) work pressure. At the first step, HPWS was regressed on to the mediating variable, transactional distributive justice. As the independent variable was not significantly related to the mediator ( $\beta = .101$ , ns), the first condition of mediation set down by Baron and Kenny (1986) was not met. Thus, transactional distributive justice was not found to mediate the HPWS-employee attitudes and behaviour relationship.

**Table 9.2: Mediation analysis for HPWS, transactional distributive justice and job satisfaction**

	Variable <sup>10</sup>	<i>b</i>	<i>t</i>	$\Delta R^2$ (Adj $R^2$ )	<i>F</i>
Equation 1	Dependent variable= DJ (Trans) Independent variable = HPWS	-.101 <i>ns</i>	-1.20	.009 (.083)	2.989**
Equation 2	Dependent variable= Job satisfaction Independent variable = HPWS	-.179*	-2.01	.027 (.093)	3.177**
Equation 3	Dependent variable= Job satisfaction Independent variable = DJ (Trans)	.296***	3.68	.078 (.146)	4.644***

<sup>10</sup> Note: Gender, age, education, employee category and tenure were included as control variables in all analyses in this chapter

**Table 9.3: Mediation analysis for HPWS, transactional distributive justice and affective commitment**

	Variable	<i>b</i>	<i>t</i>	$\Delta R^2$ (Adj $R^2$ )	<b>F</b>
Equation 1	Dependent variable= DJ (Trans) Independent variable = HPWS	-.101 <i>ns</i>	-1.20	.009 (.083)	2.989**
Equation 2	Dependent variable= AC Independent variable = HPWS	-.173*	-2.05	.025 (.105)	3.527**
Equation 3	Dependent variable= AC Independent variable = DJ (Trans)	.233***	2.87	.048 (.129)	4.182***

**Table 9.4: Mediation analysis for HPWS, transactional distributive justice and work pressure**

	Variable	<i>b</i>	<i>t</i>	$\Delta R^2$ (Adj $R^2$ )	<b>F</b>
Equation 1	Dependent variable= DJ (Trans) Independent variable = HPWS	-.101 <i>ns</i>	-1.20	.009 (.083)	2.989**
Equation 2	Dependent variable= Work pressure Independent variable = HPWS	.252**	2.93	.054 (.053)	2.212*
Equation 3	Dependent variable= Work pressure Independent variable = DJ (Trans)	-.181*	-2.11	.029 (.027)	1.595

Attention now turns to the mediating effect of relational distributive justice. The results presented in Table 9.5 show that HPWS was a significant predictor of relational distributive justice ( $\beta = -.236$ ,  $p < .05$ ). At the second step, HPWS was regressed on to job satisfaction ( $\beta = -.179$ ,  $p < .05$ ). Baron and Kenny's (1986) third condition was also upheld with relational distributive justice being significantly related to job satisfaction. Finally, the relationship between HPWS and job satisfaction was no longer significant after the introduction of relational distributive justice, which fulfilled condition four. To test the significance of the change in the coefficient due to the introduction of the mediator, a Sobel (1982) test was carried out. The Sobel test supported the findings ( $z = 2.46$ ,  $p < .05$ ). This reveals that relational distributive justice positively mediates the negative relationship between HPWS and job satisfaction.

**Table 9.5: Mediation analysis for HPWS, relational distributive justice and job satisfaction**

	Variable	<i>b</i>	T	$\Delta R^2$ Adj R <sup>2</sup>	F
Equation 1	Dependent variable= DJ (Rel) Independent variable = HPWS	-.236**	-2.77	.047 (.057)	2.326*
Equation 2	Dependent variable= Job satisfaction Independent variable = HPWS	-.179*	-2.01	.027 (.093)	3.177**
Equation 3	Dependent variable= Job satisfaction Independent variable = DJ (Rel)	.401***	5.41	.153 (.255)	7.169***
Equation 4	Dependent variable= Job satisfaction Independent variable = HPWS Independent variable = DJ (Rel)	-.088 .383***	-1.09 5.03	.159 (.226)	6.304***

The findings reported in Table 9.6 reveal that the first three conditions of mediation were upheld for the dependent variable affective commitment. HPWS (the independent variable) had a significant effect on the mediator ( $\beta = -.236$ ,  $p < .01$ ). HPWS was significantly related to the dependent variable (affective commitment) and relational distributive justice was significantly related to affective commitment ( $\beta = .445$ ,  $p < .001$ ). Table 9.6 shows that in step 4, when relational distributive justice was added to the model, it was found to be significantly related to affective commitment ( $\beta = .430$ ,  $p < 0.001$ ) but the direct effect of HPWS became insignificant ( $\beta = -.070$ , ns) suggesting full mediation. The findings from the Sobel test confirmed that relational distributive justice exerted a mediating effect on HPWS and affective employee commitment. ( $z = 2.53$ ,  $p < .05$ ).

**Table 9.6: Mediation analysis for HPWS, relational distributive justice and affective commitment**

	Variable	<i>b</i>	<i>t</i>	$\Delta R^2$ Adj R <sup>2</sup>	F
Equation 1	Dependent variable= DJ (Rel) Independent variable = HPWS	-.236**	-2.77	.047 (.057)	2.326*
Equation 2	Dependent variable= AC Independent variable = HPWS	-.173*	-2.05	.025 (.105)	3.527**
Equation 3	Dependent variable= AC Independent variable = DJ (Rel)	.445***	6.22	.187 (.276)	9.149***
Equation 4	Dependent variable= AC Independent variable = HPWS Independent variable = DJ (Rel)	-.070 .430***	-.896 5.85	.191 (.275)	8.095***

After conducting three consecutive regressions between HPWS, relational distributive justice and work pressure, the first three conditions recommended by Baron and Kenny (1986) were met. In step four, when relational distributive justice and the mediator are entered into the regression, the effect of relational distributive justice reduced to zero for the mediator whilst the dependent variable remained significant. Thus, it was found that relational distributive justice did not mediate the HPWS-work pressure relationship.

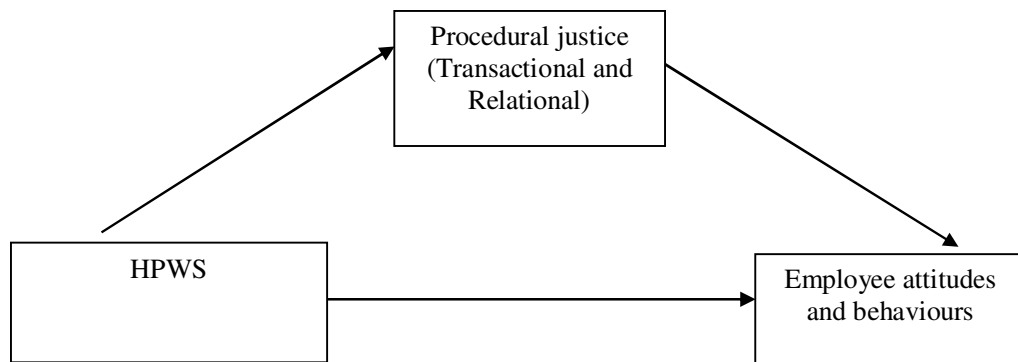
**Table 9.7: Mediation analysis for HPWS, relational distributive justice and work pressure**

	Variable	<i>b</i>	<i>t</i>	$\Delta R^2$ Adj $R^2$	F
Equation 1	Dependent variable= DJ (Rel) Independent variable = HPWS	-.236**	-2.77	.047 (.057)	2.326*
Equation 2	Dependent variable= Work pressure Independent variable = HPWS	.252**	2.93	.054 (.053)	2.212*
Equation 3	Dependent variable= Work pressure Independent variable = DJ (Rel)	-.197*	-2.39	.037 (.035)	1.787*
Equation 4	Dependent variable= Work pressure Independent variable = HPWS Independent variable = DJ (Rel)	.216* -.151	-1.87	.074 (.068)	2.381*

### 9.3.2 Procedural justice as a mediator

This section presents the results for the hypotheses examining the mediating effect of procedural justice on HPWS and employee outcomes. Figure 9.3 illustrates the hypotheses diagrammatically. Similar to distributive justice, procedural justice was found to comprise of transactional procedural justice and relational procedural justice and are treated as two separate mediators.

**Figure 9.3: Mediation Model: Procedural justice as a mediator between establishment level HPWS and dependent variables**





Three consecutive regression analyses were conducted between the independent variable (HPWS), the mediator variable (transactional procedural justice) and the dependent variables: a) job satisfaction b) affective commitment and c) work pressure. Tables 9.8, 9.9 and 9.10 present the results. The first causal step in this mediation test was not significant ( $\beta = -.137$ , ns). HPWS did not significantly explain transactional procedural justice. Having failed to meet the first condition set down by Baron and Kenny (1986), no claim of complete or partial mediation was tenable for HPWS, transactional procedural justice and the dependent variables.

**Table 9.8: Mediation analysis for HPWS, transactional procedural justice and job satisfaction**

	Variable	<i>b</i>	<i>t</i>	$\Delta R^2$ Adj $R^2$	F
Equation 1	Dependent variable= PJ (Trans) Independent variable = HPWS	-.137 <i>ns</i>	-1.56	.016 (.007)	1.148
Equation 2	Dependent variable= Job satisfaction Independent variable = HPWS	-.179*	-2.01	.027 (.093)	3.177**
Equation 3	Dependent variable= Job satisfaction Independent variable = PJ (Trans)	.399***	5.43	.154 (.226)	7.206***

**Table 9.9: Mediation analysis for HPWS, transactional procedural justice and commitment**

	Variable	<i>b</i>	<i>t</i>	$\Delta R^2$ Adj $R^2$	F
Equation 1	Dependent variable = PJ (Trans) Independent variable = HPWS	-.137 <i>ns</i>	-1.56	.016 (.007)	1.148
Equation 2	Dependent variable = AC Independent variable = HPWS	-.173*	-2.05	.025 (.105)	3.527**
Equation 3	Dependent variable = AC Independent variable = PJ (Trans)	.387***	5.31	.145 (.231)	7.426***

**Table 9.10: Mediation analysis for HPWS, transactional procedural justice and work pressure**

	Variable	<i>b</i>	<i>t</i>	$\Delta R^2$ Adj $R^2$	F
Equation 1	Dependent variable= PJ (Trans) Independent variable = HPWS	-.137 <i>ns</i>	-1.56	.016 (.007)	1.148
Equation 2	Dependent variable= Work pressure Independent variable = HPWS	.252**	2.93	.054 (.053)	2.212*
Equation 3	Dependent variable= Work pressure Independent variable = PJ (Trans)	-.268	-3.34	.069 (.069)	2.600*

Analysis of the relational aspect of procedural justice then took place. After conducting three consecutive regression analyses between the independent variable (HPWS), the mediator variable (relational procedural justice) and the dependent variable (job satisfaction), the following results were found: the first causal step in this mediation test was significant. HPWS did significantly explain relational procedural justice ( $\beta = -.268, p < .01$ ). The second and third causal steps were also significant (see Table 9.11 below). Finally, relational procedural justice was found to be a complete mediator between HPWS and job satisfaction, as the effect of HPWS when controlling for relational procedural justice reduced to zero. Relational procedural justice fully mediates the relationship between HPWS and job satisfaction thus supporting hypothesis H11a. The Sobel test was significant ( $z = 2.932, p < .01$ ).

**Table 9.11: Mediation analysis for HPWS, relational procedural justice and job satisfaction**

	Variable	<i>b</i>	<i>t</i>	$\Delta R^2$ Adj $R^2$	F
Equation 1	Dependent variable= PJ (Rel) Independent variable = HPWS	-.268**	-3.16	.061 (.073)	2.715**
Equation 2	Dependent variable= Job satisfaction Independent variable = HPWS	-.179*	-2.01	.027 (.093)	3.177**
Equation 3	Dependent variable= Job satisfaction Independent variable = PJ (Rel)	.525***	7.67	.261 (.339)	11.896***
Equation 4	Dependent variable= Job satisfaction Independent variable = HPWS Independent variable = PJ (Rel)	-.039 <i>ns</i> .515***	-.516 7.26	.262 (.335)	10.389***

To test the mediating effect of relational procedural justice on the HPWS-affective commitment relationship, three consecutive regression analyses were conducted. The following results were found: the first causal step in this mediation test was significant. HPWS did significantly explain relational procedural justice ( $\beta = -.268, p < .01$ ). The second and third causal steps were also significant (see Table 9.12 below). Finally, relational procedural justice was found to be a complete mediator between HPWS and affective commitment, as the effect of HPWS, when controlling for relational procedural justice reduced to zero. Thus, relational procedural justice fully mediates the relationship between HPWS and affective commitment. The Sobel test was significant ( $z = 2.931, p < .01$ ).

**Table 9.12: Mediation analysis for HPWS, relational procedural justice and affective commitment**

	Variable	<i>B</i>	<i>t</i>	$\Delta R^2$ Adj <i>R</i> <sup>2</sup>	<i>F</i>
Equation 1	Dependent variable= PJ (Rel) Independent variable = HPWS	-.268**	-3.16	.061 (.073)	2.715**
Equation 2	Dependent variable = AC Independent variable = HPWS	-.173*	-2.05	.025 (.105)	3.527**
Equation 3	Dependent variable = AC Independent variable = PJ (Rel)	.515***	7.57	.251 (.342)	12.16***
Equation 4	Dependent variable = AC Independent variable = HPWS Independent variable = PJ (Rel)	-.036 .506***	-.484 7.17	.252 (.339)	10.614***

Hypothesis 11e predicted that the association between HPWS and work pressure would be mediated by procedural justice. As shown in Table 9.13 all association at the three steps of mediation analysis were significant. The results also yielded information regarding the fourth step of Baron and Kenny's (1986) recommended procedures. After controlling for relational distributive justice, the association between HPWS and work pressure declined, although remained significant. This process revealed that relational procedural justice partially mediated the HPWS-work pressure relationship. The Sobel test supported the findings and were significant ( $z = 2.344, p < .05$ ).

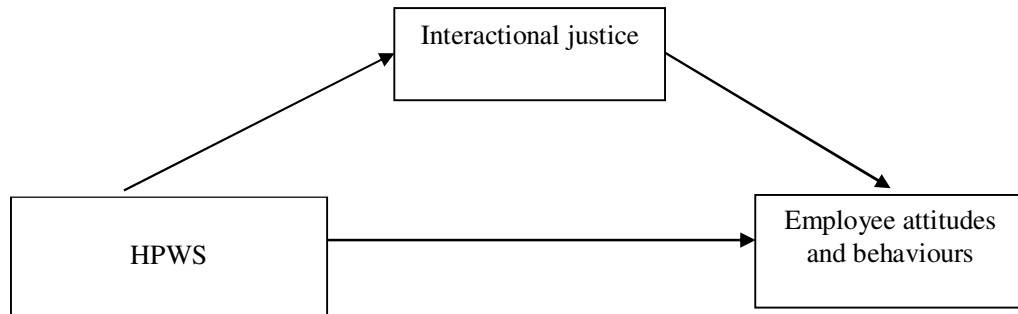
**Table 9.13: Mediation analysis for HPWS, relational procedural justice and work pressure**

	Variable	<i>b</i>	<i>t</i>	$\Delta R^2$ Adj <i>R</i> <sup>2</sup>	<i>F</i>
Equation 1	Dependent variable= PJ (Rel) Independent variable = HPWS	-.268**	-3.16	.061 (.073)	2.715**
Equation 2	Dependent variable= Work pressure Independent variable = HPWS	.252**	2.93	.054 (.053)	2.212*
Equation 3	Dependent variable= Work pressure Independent variable = PJ (Rel)	-.281***	-.349	.075 (.075)	2.749**
Equation 4	Dependent variable= Work pressure Independent variable = HPWS Independent variable = PJ (Rel)	.189* -.235**	2.17 -2.86	.103 (.098)	3.058**

### 9.3.3 *Interactional justice as a mediator*

The hypotheses that interactional justice acts as a mediator between establishment level HPWS and H12a) job satisfaction, H12b) affective commitment and H12e) work pressure was tested via a series of regression analyses. Figure 9.4 illustrates the proposed role of interactional justice as a mediator.

**Figure 9.4: Mediation Model: Interactional justice as a mediator between establishment level HPWS and dependent variables**



The results supported the mediated effect of interactional justice on job satisfaction. The first condition for mediation (that HPWS as the independent variable is significantly related to interactional justice, the mediator) was supported ( $\beta = -.264, p < .01$ ). In step two, HPWS was found to have a direct effect on job satisfaction ( $\beta = -.179, p < .01$ ). The third step (that interactional justice would predict job satisfaction) was supported ( $\beta = .579, p < .001$ ). Finally, in the fourth step, when HPWS and interactional justice are included in the analysis, the previously significant relationship between HPWS and job satisfaction was no longer significant. Thus, interactional justice was found to completely mediate the HPWS–job satisfaction relationship such that there was no significant direct relationship when perceptions of interactional justice were controlled for. A Sobel (1982) test was then carried out. This provided further support for the mediation effect ( $z = 2.93, p < .01$ ).

**Table 9.14: Mediation analysis for HPWS, interactional justice and job satisfaction**

	Variable	<i>b</i>	<i>t</i>	$\Delta R^2$ Adj $R^2$	<i>F</i>
Equation 1	Dependent variable= Interactional justice Independent variable = HPWS	-.264**	-3.12	.059 (.070)	2.651**
Equation 2	Dependent variable= Job satisfaction Independent variable = HPWS	-.179*	-2.01	.027 (.093)	3.177**
Equation 3	Dependent variable= Job satisfaction Independent variable = Interactional justice	.579***	8.84	.317 (.397)	14.995***
Equation 4	Dependent variable= Job satisfaction Independent variable = HPWS Independent variable = Interactional justice	-.015 .579***	-.204 .575	.317 (.398)	13.037***

The findings reported in Table 9.15 reveal that the first three conditions of mediation were upheld for hypothesis 12b. HPWS (the independent variable) had a significant effect on the mediator ( $\beta = -.264$ ,  $p < .01$ ). HPWS was significantly related to the dependent variable (affective commitment) and interactional justice was significantly related to affective commitment ( $\beta = .553$ ,  $p < .001$ ). When interactional justice was added to the model, it was found to be significantly related to affective commitment ( $\beta = .430$ ,  $p < 0.001$ ) while the direct effect of HPWS became insignificant ( $\beta = -.070$ , ns) suggesting full mediation. Sobel test results confirmed that interactional justice had a mediating effect on HPWS and affective commitment ( $z = 2.93$ ,  $p < .01$ ).

**Table 9.15: Mediation analysis for HPWS, interactional justice and affective commitment**

	Variable	<i>B</i>	<i>t</i>	$\Delta R^2$ Adj $R^2$	<i>F</i>
Equation 1	Dependent variable= Interactional justice Independent variable = HPWS	-.264**	-3.12	.059 (.070)	2.651**
Equation 2	Dependent variable = AC Independent variable = HPWS	-.173*	-2.05	.025 (.105)	3.527**
Equation 3	Dependent variable = AC Independent variable = Interactional justice	.553***	8.36	.288 (.381)	14.212***
Equation 4	Dependent variable = AC Independent variable = HPWS Independent variable = Interactional justice	-.021 .547***	-.285 7.96	.289 (.377)	12.364***

The results for hypothesis 12e are shown in Table 9.16. In accordance with the first condition for mediation, the effect of the independent variable (HPWS) on the mediator was significant

and negative ( $\beta = -.264, p < .01$ ). The second and third conditions were also satisfied which requires that the independent variable is significantly associated with the dependent variable, and the mediator is associated with the dependent variable. Finally, the fourth condition of mediation was tested which requires that the direct effect of the independent variable on the dependent variable should reduce significantly in size (partial mediation) or it should become non-significant (full mediation), when the mediator is included in the regression model. Table 9.16 shows that the direct effect of HPWS on work pressure has reduced but is still significant when interactional justice is entered into the equation suggesting partial mediation. The findings from the Sobel test confirmed this mediation ( $z = 2.16, p < .05$ ).

**Table 9.16: Mediation analysis for HPWS, interactional justice and work pressure**

	Variable	b	t	$\Delta R^2$ Adj $R^2$	F
Equation 1	Dependent variable= Interactional justice Independent variable = HPWS	-.264**	-3.12	.059 (.070)	2.651**
Equation 2	Dependent variable= Work pressure Independent variable = HPWS	.252**	2.93	.054 (.053)	2.212*
Equation 3	Dependent variable= Work pressure Independent variable = Interactional justice	-.243**	2.99	.056 (.056)	2.269*
Equation 4	Dependent variable= Work pressure Independent variable = HPWS Independent variable = Interactional justice	.200* -.195*	2.27 -2.35	.088 (.082)	2.691**

Table 9.17 provides a summary of the hypotheses related to cross-level regressions as proposed in this study.

**Table 9.17: Summary of hypotheses for cross level mediation analysis and findings**

	Hypotheses	Findings
H10a	Distributive justice will mediate the relationship between establishment level HPWS and job satisfaction	Supported (relational DJ only)
H10b	Distributive justice will mediate the relationship between establishment level HPWS and affective commitment	Supported (relational DJ only)
H10c	Distributive justice will mediate the relationship between establishment level HPWS and trust in management	Not supported
H10d	Distributive justice will mediate the relationship between establishment level HPWS and intention to leave	Not supported
H10e	Distributive justice will mediate the relationship between establishment level HPWS and work pressure	Not supported

	<b>Hypotheses</b>	<b>Findings</b>
H10f	Distributive justice will mediate the relationship between establishment level HPWS and work effort	Not supported
H11a	Procedural justice will mediate the relationship between establishment level HPWS and job satisfaction	Supported (relational PJ only)
H11b	Procedural justice will mediate the relationship between establishment level HPWS and affective commitment	Supported (relational PJ only)
H11c	Procedural justice will mediate the relationship between establishment level HPWS and trust in management	Not supported
H11d	Procedural justice will mediate the relationship between establishment level HPWS and intention to leave	Not supported
H11e	Procedural justice will mediate the relationship between establishment level HPWS and work pressure	Partially supported (relational PJ only)
H11f	Procedural justice will mediate the relationship between establishment level HPWS and work effort	Not supported
H12a	Interactional justice will mediate the relationship between establishment level HPWS and job satisfaction	Supported
H12b	Interactional justice will mediate the relationship between establishment level HPWS and affective commitment	Supported
H12c	Interactional justice will mediate the relationship between establishment level HPWS and trust in management	Not supported
H12d	Interactional justice will mediate the relationship between establishment level HPWS and intention to leave	Not supported
H12e	Interactional justice will mediate the relationship between establishment level HPWS and work pressure	Partially supported
H12f	Interactional justice will mediate the relationship between establishment level HPWS and work effort	Not supported

#### **9.4 Conclusion**

This chapter presented the results of cross level analysis examining the impact of establishment level HPWS on employee attitudes and behavioural outcomes which provided data to answer research questions 3 and 4. Employees in the organisation with high HPWS at policy level reported lower job satisfaction, lower commitment and higher perceptions of pressure at work. Results from cross-level analyses however, indicate that the relationships between establishment-level HPWS and both job satisfaction and affective commitment were fully mediated by employee perceptions of relational distributive justice, relational procedural justice and interactional justice. Relational procedural justice and interactional justice were partial

mediators for the HPWS-work pressure relationship. Transactional distributive justice was not found to mediate any of the HPWS-employee outcome relationships. This research supports the claim by a number of authors that cross level links exist between HPWS at policy level and employee attitudes and behavioural outcomes at the micro level (e.g. Nishii et al., 2008; Takeuchi, Chen and Lepak, 2009). However, the findings reported in this chapter are inconsistent with much of the previous HPWS research which argues that HPWS are mutually beneficial for both employer and employee. The findings show that high investment in HPWS was found to have negative consequences for many employees which are only alleviated by perceptions of how fairly the HPWS procedures are enacted and how interactionally fair their supervisors are during the HPWS practices being implemented. The implications of these findings, together with those presented in previous chapters will now be discussed.



### DISCUSSION

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#### 10.1 Introduction

In this thesis, a conceptual framework was developed and presented in chapter 4 with five primary research questions. The findings were reported first at the macro level, examining the impact of HPWS on organisational performance, as well as the moderating role of business strategy and management philosophy on the HPWS-performance relationship. Then the micro level quantitative and qualitative findings were presented, which examined not only the impact of HPWS on employee attitudes and behavioural outcomes, but also *why* such reactions occur (using organisational justice theory as a theoretical lens). The way in which the relationship between employees, supervisors/managers and the organisation affects employee perceptions of HPWS through LMX and POS perspectives was also examined. Finally, the macro and micro level data were integrated by examining the impact of HPWS policy (at the macro level) on individual (micro level) outcomes. This discussion chapter presents a unifying discussion of the key findings in light of previous research. Before addressing the key research questions, the prevalence of HPWS in Ireland will be discussed, together with contextual factors leading to the adoption and diffusion of HPWS across employee groups. Next, the impact of HPWS on organisational performance will be explored together with the moderating effect of business strategy. The employee level findings will then be examined. The chapter will conclude with a discussion of the findings from the cross level analysis.

#### 10.2 Extent of HPWS adoption in Ireland

Before discussing the performance effects of HPWS, the extent of HPWS adoption in Irish organisations will be examined together with factors that have been found to influence the prevalence of HPWS in organisations. On average, the utilisation of HPWS in this study was 46.33 percent which indicates there is only moderate adoption of HPWS in Irish organisations. This is consistent with other studies which have used similar measures of HPWS (based on Huselid and Rau, 1997; Guthrie, 2001) in Ireland, US and New Zealand. For example, Datta et al. (2005) reported a mean HPWS score of 49.58 in their US sample. Guthrie et al. (2009) also reported a mean score of 46.96 for Ireland which is very similar to this study. Roche (1999) examined HPWS adoption in Ireland using data from the Price Waterhouse Cranfield International Survey of Human Resource Management and found that there was only modest diffusion of HPWS policies in his multi industry sample of Irish organisations. A number of factors help explain this moderate level of adoption of HPWS in the Irish sample including unionisation, firm size, industry concentration, capital intensity and industry.

In terms of ownership, HPWS were more prevalent in foreign owned organisations operating in Ireland than in indigenous firms. Previous research has shown that country of origin does impact HPWS diffusion with foreign-owned firms reporting higher HPWS utilisation (Guthrie, et al., 2009; Roche and Geary 1996; Turner et al., 1997). Roche (1999), for example, found that the majority of organisations with a highly developed set of high commitment HR practices were Irish subsidiaries of major international companies. US multinationals, in particular, have a tendency to operate in a centralised manner managing subsidiaries through standardised formal systems, processes and policies rather than conforming to the prevailing behaviors of indigenous country firms (Fenton-O’Creevy and Wood, 2007; Gooderham et al., 1998).

No association was found between firm age and HPWS adoption. It was expected that older organisations would have more sophisticated HPWS as younger firms would lack the formal structures needed to implement HPWS (Cardon and Stevens, 2004). This lack of association might be due to the number of multinational organisations in the sample. The survey asked how long the organisation had been in operation in Ireland. However, a multinational locating to Ireland would already have resources and management structures in place to invest in HPWS in their new business unit in Ireland. In contrast, firm size was positively associated with HPWS adoption, with smaller organisations displaying low adoption of HPWS. Bacon et al., (1996) suggest that smaller organisations have scarce resources and would not be able to bear the considerable costs associated with designing and implementing HPWS practices.

The formal presence of a HR function has been shown to influence adoption of HPWS (Galang, 1999; Murphy and Southey, 2003). More importantly, as suggested by Schuler (1990), HR’s involvement in strategic level decisions is also an important factor influencing HPWS adoption. In this study, HR strategic integration was found to be positively associated with HPWS adoption in this study. Strategic integration was assessed by capturing HR’s representation on the top management team, the HR function’s role in formal business planning and corporate strategy formulation and the degree to which the HR function is strategically focused (Roche, 1999). Where HR is strategically integrated into the organisation, this suggests that the HR function has strong HR legitimacy and credibility. Representation at top level highlights the importance of hierarchical position and access to those needing to be influenced. If HR has a legitimate strategic role within an organisation, it should, in turn, have the authority, opportunity and resources to adopt HPWS practices (Gooderham et al. 1999). More recently, Guthrie et al. (2011) found that managers’ assessments of the strategic value of their organisations’ HR department was significantly influenced by relative investment in HPWS.

In this study, HPWS adoption had a negative association with unionisation. This suggests that organisations in Ireland which have not conceded union recognition are more likely to have

adopted HPWS than organisations operating in unionised settings. HPWS could be seen in these organisations as an alternative model of managing the workforce through individualised means of exercising voice (Taylor, 1994), or even a substitution strategy used by organisations (Kochan et al, 1986).

### **10.3 HR architecture and employment sub-systems**

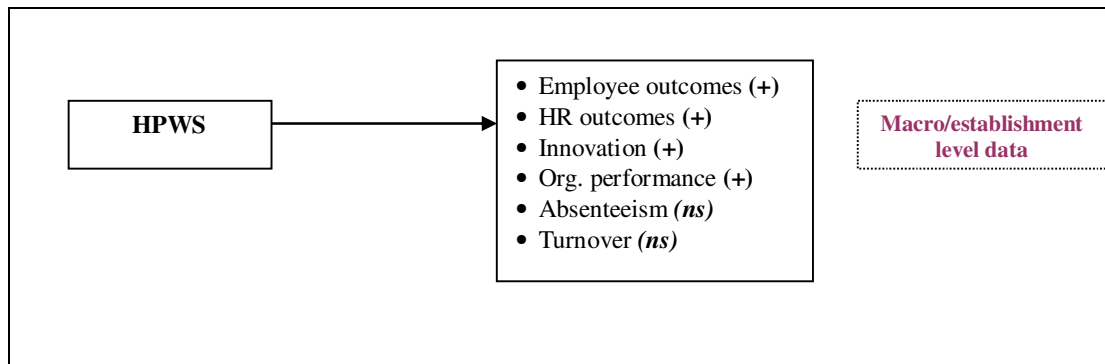
The results in chapter 6 show that the organisations investigated appear to be implementing different HR configurations for different employee groups in the organisation. Whilst this was not a primary research question, it was an important finding to emerge from the macro level data. T-tests showed significant differences in overall HPWS investment across clerical/production employees and professional/managerial employees. When the HPWS system was unbundled, there were significant differences in investment in employee resourcing, performance management and remuneration as well as communication and involvement with higher investment for professional/managerial employees across all these practices.

Boxall and Purcell (2003:50) point out that we ‘should not assume that the HR strategies are uniform within firms. It is wrong to conjure up the image of a single set of critical practices for managing people in the firm’. Findings support this view by suggesting that organisations do not adopt a single configuration or bundle of HR policies for each of their employee groups; thus rejecting the best practice approach to HPWS. Organisations in this study invested more heavily in HPWS for professional and managerial staff than for other occupational groups. This may indicate that organisations make conscious decisions and choices about how they treat and motivate the right type of *professional* people by placing more emphasis on sophisticated performance management systems, variable pay options, and by ensuring that these types of employees have a voice at work. The importance of particular employee skills was particularly valued in ProfCo, where there was a perception that professional staff who liaise with external clients benefited from greater HPWS investments due to their critical role in the organisation and the uniqueness of their skills. In explaining these findings, Lepak and Snell (1999, 2002) suggest that the success of an organisation may be dependent on its ability to manage and coordinate the contributions of different groups of employees through different HR practices based on their firm specific knowledge and their value to the organisation (what they term the HR architecture model). The research findings reported in this thesis suggest that employers do plan and prioritise the investments in HPWS according to the employees’ value to the organisation. This, however, also raises concerns about fairness of the treatment of groups of employees where a two tier HPWS system may exist, with some employees experiencing the minimum set of HPWS practices, whilst those employee groups who are valuable to the organisation experience additional HPWS.

#### 10.4 HPWS and firm performance

A primary aim of the study was to explore the performance effects of HPWS. Previous empirical research appears to provide fairly strong evidence in support of high performance work systems and organisational performance (Guthrie, 2001; Hoque, 1999; Huselid, 1995). The findings of this study provide further evidence of the positive impact of HPWS on business performance. Figure 10.1 illustrates the key findings for hypotheses 1a to 1f. The results of the regression analysis are in line with the previous research (Becker and Huselid, 1998; Guthrie, 2001; Hoque, 1999; Wood and de Menezes, 1998). HPWS is positively associated with employee performance, HR outcomes, innovation and organisational performance. No support was found for hypotheses 1e and 1f relating to the relationship between HPWS and turnover and absenteeism.

**Figure 10.1: Results of hypothesised model of HPWS and organisational outcomes**<sup>11</sup>



Support for hypothesis 1a (that HPWS positively affects employee outcomes such as greater flexibility, motivation and productivity) suggests that HPWS elicits employee behaviours and capabilities that contribute to firm competitive advantage (Collins and Smith, 2006). Investment in HPWS is used to enhance skills and ability, and improve quality performance which in turn impacts profit. Hypothesis 1b posited that the relationship between the utilisation of HPWS and HR outcomes would be positive. This was supported and suggests that HPWS can create a positive employment relationship between the employer and employee and helps the organisation become an employer of choice. Bowen and Ostroff (2004) suggest that when HPWS are properly implemented, it creates a social atmosphere in which employees feel positive about the organisation. For example, effective HPWS should result in more open communication, greater information sharing and participation (Collins and Smith, 2006) and a positive brand image among both prospective and existing staff (Scullion and Collings, 2011). A significant association was also established between HPWS and innovation (hypothesis 1c), which is consistent with previous research (Laursen and Foss, 2003; Shipton et al., 2005). For

<sup>11</sup> A + symbol indicates a positive significant relationship. *ns* indicates the relationship was not significant.

example, a study of 173 Spanish firms found that a positive relationship existed between HRM practices and innovation which, in turn, contributed to business performance (Jimenez-Jimenez and Sanz-Valle, 2008). Shipton et al. (2005) argue that HPWS have the potential to predict organisational innovation. This is because they engender aligned interests, information sharing and participatory mechanisms which in turn impact innovation (Wright and Snell, 1998). Heffernan et al. (2009) found that high investment in HPWS generated a strong creativity climate which mediated the relationship between HPWS and innovation. This suggests that open and transparent communication in particular, can have a positive influence in promoting creativity and innovation. HPWS systems further strengthen a positive HPWS-innovation link through greater decentralisation, increased utilisation of local knowledge and greater job rotation which provides a greater coordination advantage with teams combining their knowledge and skills resulting in incremental process and product improvements.

Finally, Hypothesis 1d posited that HPWS would be positively associated with organisational performance outcomes. Organisational performance has been considered using various indicators in HPWS research (Boselie et al., 2005). These include, but are not limited to, productivity, profitability, economic value added, innovation rate, service quality and customer service (Nikandrou, Campos, Cunha, and Papalexandris 2006). At the macro level, organisational performance in this study was measured by subjective judgments of profitability, growth in sales, market share, quality of products/services, development of new products/services, % sales/turnover from R&D, operating costs and satisfaction from clients (relative to competitors). Similar to previous studies, a significant positive association was found between high investment in HPWS and organisational performance. Guthrie (2001) examined HPWS in 164 business organisations in New Zealand and found that firms which utilise a high number of HPWS practices were associated with an increase in productivity. The assumption underlying this performance effect is that HPWS affects organisational performance, as workers change their attitudes and behaviours in response to their experience of HR practices. So far, however, there has been a dearth of research evidence based on employee responses to HR practice (Macky and Boxall, 2007). As a consequence, the employee's experiences of HPWS are seen as a 'neglected' area of HPWS research (see Grant and Shields, 2002 for example). This neglected issue will be addressed further in sections 10.5 and 10.6.

#### **10.4.1 Individual HPWS practices**

Although this study is focusing on HPWS (which is conceptualised as a system of HR practices), it has been suggested that each category of HR practices may have a differential relationship with the outcomes investigated (Evans and Davis, 2005). Boselie et al.'s (2005: 73) review of 104 studies of HRM and performance found that the 'top four' HR practices which emerged were: 'training and development, contingent pay and reward schemes, performance management

(including appraisal) and careful recruitment and selection'. Many studies have examined HPWS practices individually. For example, Walsworth and Verma (2007) identified that training was positively related to innovation while variable pay schemes were negatively related to innovation. Incentive-based compensation has also been linked to firm innovativeness via intrapreneurial behaviour (Carlson, Upton and Seaman, 2006). Findings in chapter 6 (macro data) provided strong support for the role of communication and involvement practices in predicting organisational outcomes. When all subcomponents of HPWS were entered into the regression model, only communication and involvement was found to positively predict (a) employee performance, (b) HR performance and (c) organisational performance.

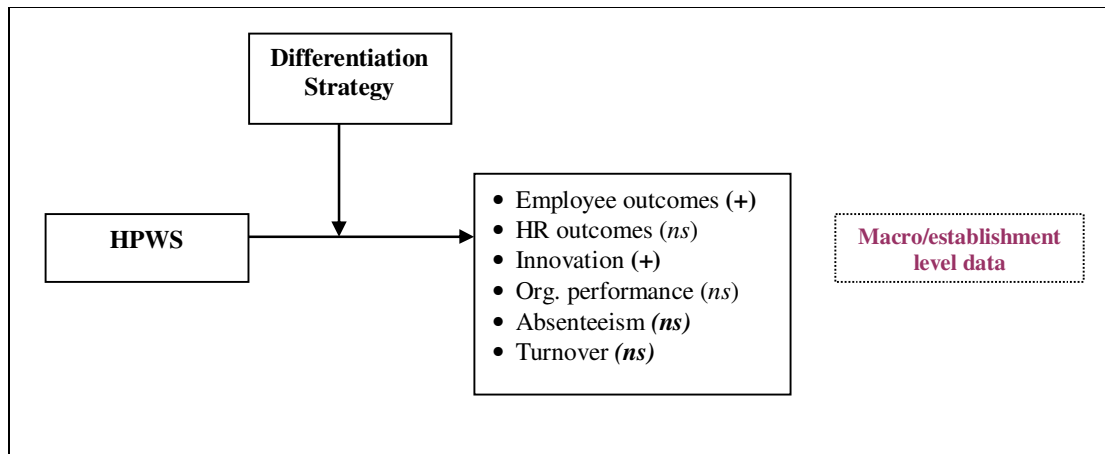
Communication and involvement practices encompass many practices associated with the concept of employee voice which are designed to allow workers have some 'say' in how their organisations are run (Marchington, 2007; Dundon, et al., 2004). These include policies which elicit employee participation and inputs, including semi autonomous teams, which are said to provide employees with strategic and financial information on the organisation. Much of the literature on HPWS suggests that voice, particularly direct employee involvement schemes, are an integral part of the high commitment model of HRM which yield beneficial performance outcomes (Boxall, Purcell and Wright, 2007). By involving employees and providing participatory mechanisms, information flow can be improved across employees, which lead to higher levels of motivation. Appelbaum et al. (2000), for example, found that giving workers an opportunity to use their discretion at work was important for discretionary behaviour when compared to traditional close supervision. Similar evidence is reported in numerous other studies also (e.g. Apospori et al., 2008; Mayrhofer et al., 2000; Conway and Monks, 2009; Purcell and Georgiadiss, 2006). The findings from this research suggests that employee involvement and communications schemes can only be meaningful and effective if it they operates in a climate that is seen as supportive of open communication and which utilises principles of legitimacy, consistency and fairness (Bowen and Ostroff, 2004).

#### **10.4.2 HPWS – Best practice or best fit?**

The best practice approach suggests that internal consistency between HR policies will have beneficial effects irrespective of context. The best fit approach, in contrast, suggests that a firm's HR practices will only be effective when aligned with other factors, particularly business strategy (Michie and Sheehan, 2005). Youndt et al. (1996) strengthen the best fit (or contingency) perspective by positing 'that an organization's strategic posture either augments or diminishes the impact of HR practices on performance' (pg.837). Previous studies support the assertion that competitive strategy is a contextual factor with important implications for HPWS (Arthur, 1992; Boxall, 1999). Guthrie et al. (2002), for example, argue that business performance will improve when there is consistency or 'fit' between business strategy and HR practices.

A contribution from this thesis is the finding that differentiation strategy significantly moderated the link between HPWS and both employee outcomes and innovation. However, there were some important caveats; for example, no significant effect was found for absenteeism, turnover, HR outcomes or organisational performance. It was also found that organisations with a differentiation strategy also had higher levels of HPWS practices. For those organisations pursuing a differentiation-oriented strategy, higher levels of HPWS were associated with more positive employee outcomes and innovation levels. Thus hypotheses 2a and 2d were supported.

**Figure 10.2: Results of hypothesised model of moderating effect of differentiation business strategy on HPWS and organisational outcomes**

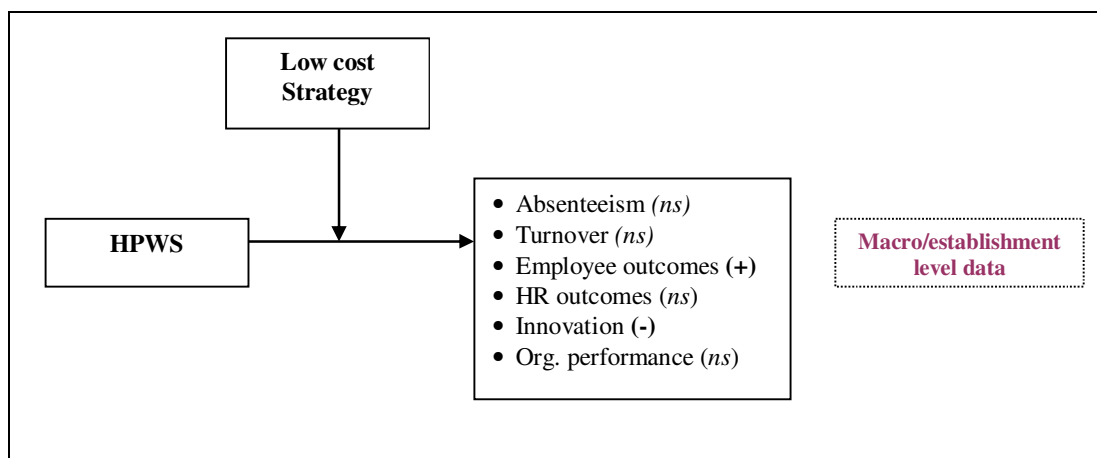


In explaining these findings, it is argued that organisations pursuing a differentiation strategy (focusing on innovation) need depth and breadth of employee skills, as well as a higher level of commitment and discretionary effort in order to perform effectively. Thus, HPWS practices based on the high usage of training, teams and more autonomy in decision making are all consistent with providing employees with the positive outcomes including innovative ideas, quality of employees and flexibility. Together with organisational processes, these practices lead to increased innovation in a way that is congruent with firm strategy.

This research also confirmed that a low cost strategy had a moderating effect on HPWS and both employee outcomes and innovation. Findings showed that a low cost strategy negatively moderated the relationship between HPWS and innovation. In explaining these findings, it can be argued that an organisation pursuing a low cost strategy will implement HPWS practises that focus on narrow tasks, limited training, close supervision and little communication or participation (Guthrie et al., 2002). Research has shown that these practices impact staff empowerment, attitudes to innovation and competencies needed to match the requirements of a

changing environment (Teece et al., 1997). Michie and Sheehan (2005) suggest that organisations pursuing a low cost business strategy will have lower levels of HPWS investment. Such investments are less likely to be correlated with significantly improved outcomes than is the case for firms pursuing differentiation strategies which findings from this study also support. Contrary to expectations however, a low cost strategy was found to positively moderate the HPWS-employee outcome link such that employees were more flexible and achieved greater work output when organisations had high investment in HPWS and a low cost strategy. The employee outcome measure in this research focuses on the flexibility and output of the worker rather than issues such as commitment to the organisation. As such the low cost strategy may lead to increases in these employee outcomes through work intensification and work pressure rather than quality of work life or positive psychological work outcomes. This is consistent with the research findings of Cook (2001).

**Figure 10.3: Results of hypothesised model of moderating effect of low cost business strategy on HPWS and organisational outcomes**



These findings are largely supportive of previous research with the exception of employee outcomes and low cost strategy. This, therefore, supports the contingency argument for HPWS effectiveness when it is moderated by a differentiation-oriented competitive strategy. Surprisingly however, a low cost strategy positively moderated the relationship between high investment in HPWS and employee outcomes. This anomaly suggests that the relationship between a firm's strategy and its HR practices may be more complex than originally posited (Chan, Shaffer and Snape, 2004).

### 10.5 HPWS and organisational justice

This section discusses the findings from the micro level data. Whilst past empirical research has provided ample evidence that high levels of HPWS can result in several positive outcomes for organisations and employees, it has remained silent on the underlying processes through which

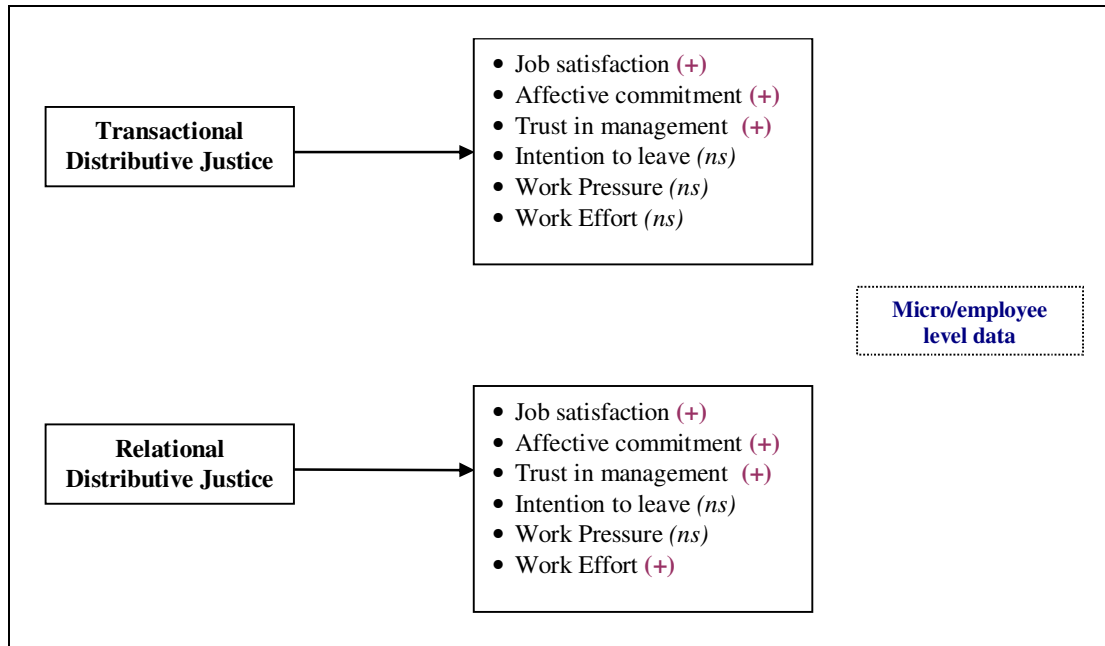


HPWS can affect these outcomes. In this research, organisational justice theory was used to extend our understanding of the process of *how* HPWS may affect employee attitudes and behavioural outcomes. A meta-analysis by Cohen-Charash and Spector (2001), for example, found distributive, procedural, and interactional fairness to be positively related to job satisfaction and commitment to the organisation, and negatively related to turnover intentions and negative emotions at work. The following section of the chapter discusses the individual level results, examining the impact of three justice dimensions on employee outcomes.

### **10.5.1 Distributive justice**

Distributive justice refers to the fairness of the outcomes received in a given transaction. Hypotheses 5 argued that employee perceptions of the fairness of HPWS outcomes would significantly impact employee attitudes and behaviours. The findings show that both distributive justice perceptions of pay (transactional) and relational justice perceptions of HPWS practices relating to advancement, training and performance management were found to positively impact job satisfaction, affective commitment and trust in management (see figure 10.4). However, only relational distributive justice was found to have a positive effect on work effort. This is consistent with the predictions set out in equity theory (Adams, 1963; Cook and Hegtvedt, 1983). It suggests that perceptions of unfair outcomes (given an employee's input) can result in lower future effort and performance but that perceptions of fair outcomes can lead to increased effort. In terms of allocation preferences, the qualitative data suggested that employees across the three organisations used different distributive justice rules to assess the fairness of outcomes. Previous findings have shown that employees in Europe and the US prefer allocation decisions based on proportional contributions, thus the equity rule is the most prevalent (Chen, 1995). In ProfCo and InsureCo, employees were found to base their distributive justice perceptions on the basis of value, where HR decisions such as pay or promotion were contingent on high performance. In contrast, equality appeared to be more important for many employees interviewed in FoodCo where employees received base pay with no reward for performance. This may be explained by Tyler's (1987) relational model of justice where fairness affirms an employee's identity within valued groups. In FoodCo, conversations with employees showed that they were members of a highly cohesive work teams with strong interpersonal attachments. As a result, equality, rather than equity was a more important rule as it is said to build group cohesion. This is consistent with research by Tyler et al. (1998) and Colquitt and Jackson (2006) who studied a team context in the US and found that equality emerged as an important rule.

**Figure 10.4: A hypothesised model of distributive justice and employee attitudes and behavioural outcomes**



### 10.5.2 Procedural justice

Procedural justice concerns the fairness of the procedures used to determine the distribution of resources among employees (Greenberg, 1990). Previous psychological, sociological, and political research suggests that people like to have a voice in the decision-making process, and prefer the process to be neutral and efficient (Thibaut and Walker, 1975). Employees who perceive that they have a voice may feel a sense of employee input which gives them a sense of empowerment and motivation. Proponents of HPWS argue that many of the practices are procedurally fair for employees (Wu and Chaturvedi, 2009). For example, compensation systems tied to objective performance goals may reduce perceptions of subjectivity, as the procedures for determining rewards are clear, measurable and absent of bias, resulting in higher perceptions of procedural justice (Konovsky, 2000). Greater emphasis on employee involvement allows more participation in decision-making processes, offers the opportunity for voice and is positively related to perceptions of procedural justice (Konovsky, 2000).

Figure 10.5 provides some support for hypotheses 6a to 6f (that HPWS procedural fairness impacts employee attitudes and behaviours) thus highlighting the importance of HPWS policies being seen to be procedurally fair when enacted by line managers. Similar to work by McFarlin and Sweeney (1992), the current research shows that procedural justice is a greater predictor of work outcomes than distributive justice. Whilst, both distributive and procedural justice were predictive of organisational outcomes such as trust in management, job satisfaction and commitment, only relational procedural justice was found to negatively impact intention to leave

and work pressure and positively impact work effort. These outcomes may be explained through employees working in an HPWS environment where perceived higher levels of procedural fairness in the decision-making process (voice) emerge through employee involvement and participation mechanisms. A more open process means employees are more comfortable expressing themselves through the communication channels provided by HPWS and are more likely to trust other parties (Konovsky and Pugh, 1994) and reciprocate with higher job satisfaction, discretionary work effort and commitment to the firm (Wu and Chaturvedi, 2009). In contrast, procedural *injustice* produces ‘intellectual and emotional indignation’, resulting in ‘distrust and resentment’ (Kim and Mauborgne, 2005: 183).

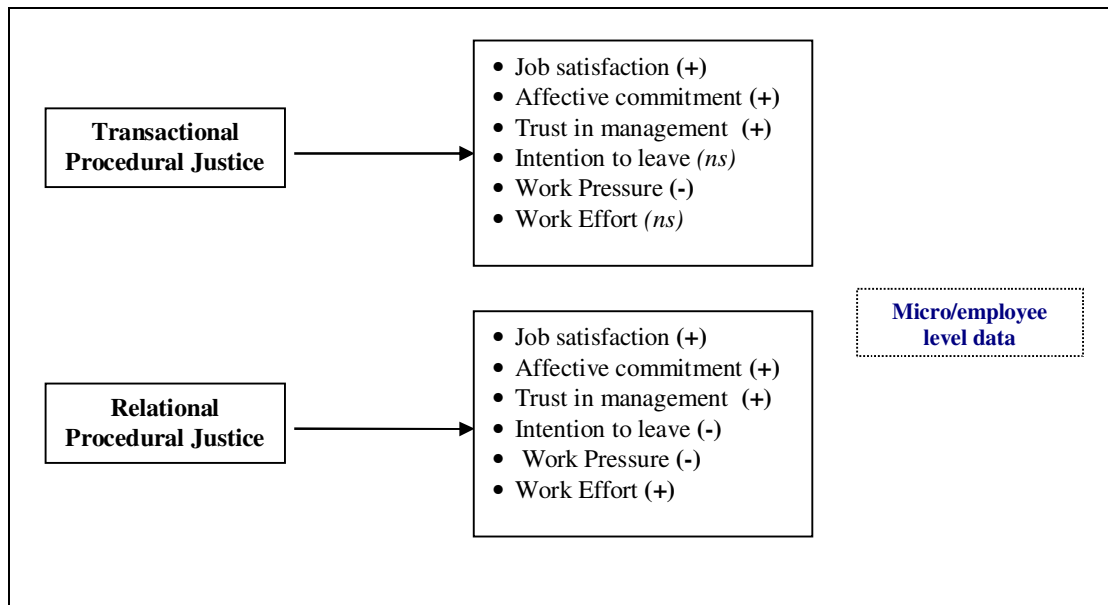
At the core of procedural justice is the perception that employees have a voice when decisions are being made. Employee voice can occur in many ways in an organisation (Farndale et al., 2011). This can be through mechanisms that facilitate employee voice, climates that encourage employees to put forward their ideas and opinions, and/or the extent to which influence is associated with voice, that is, whether employee ideas and opinions really affect the outcome of decisions (decision control). This chapter has already discussed the importance of communication and involvement mechanisms for organisational outcomes at the macro level. These policies were identified by this research and other studies (e.g. Conway and Monks, 2008; Kinnie et al., 2005) as an important determinant of the success of HPWS. Employees’ perceptions of voice in HPWS have been shown to also significantly impact employees’ subsequent attitudes and behaviours (Folger, 1977 Korsgaard and Roberson, 1995). In this study, relational procedural justice was a stronger predictor of outcomes than procedural justice perceptions of pay (transactional). This relates to perceptions of performance management, succession planning and employee involvement amongst others. Research consistently shows that voice in decision making procedures leads to greater satisfaction with the process. Cawley, Keeping, and Levy’s (1998) meta-analysis of 27 field studies examined employee participation in a performance appraisal process. They found that when employees had a voice they were more satisfied, saw the process as more fair, and were motivated to exert more effort. More recently, Farndale et al. (2011) found that a significant relationship existed between employee voice and commitment. A perception of voice in a decision making procedure is seen as fair because employees perceive they have an instrumental effect on decisions being made (Lind and Tyler, 1988).

The significance of procedural justice in predicting employee outcomes such as intention to leave and affective commitment (relative to distributive justice) may also be explained by non-instrumental effect. This model is predicated on the assumption that individuals are predisposed to join groups and that a primary motivation for group membership is the need for self-validation (Tyler et al. 1998). For this reason, employees tend to be sensitive to signs and symbols that

communicate information about their status or position within the group (Aryee and Chay, 2001). These signs and symbols are often assessed via procedures enacted in the organisation. Whilst the instrumental effects of voice have been shown to impact perceptions of procedural justice, research has shown that voice can also have non instrumental effects by demonstrating that the organisation considers the employee's input as valuable. Consequently, when procedures enacted in HPWS policies are seen to satisfy the relational concerns of neutrality, trust, and standing, they affirm the employee's status within the group and a sense of personal worth and worth in the organisation. This is said to bolster the relational bond between employees and the organisation and influence employee retention.

Findings from the qualitative data lend support to Blader and Tyler's (2003) assertion that Thibaut and Walker's (1975) control model of procedural justice is the most dominant influence on procedural justice. While some of Leventhal's (1980) procedural justice rules did emerge during the interviews, it was employees' concerns regarding procedures that allow some influence or participation in determining outcomes (voice) that appeared to define procedural justice. Thus, this research showed that procedural justice perceptions significantly impacted employee attitudes and behavioural outcomes, with procedural justice perceptions of HPWS practices relating to development, status and having a long term future in the organisation having a stronger impact on all employee outcomes. Transactional procedural justice was not found to affect an employee's intention to leave or their discretionary work effort.

**Figure 10.5: A hypothesised model of procedural justice and employee attitudes and behavioural outcomes**

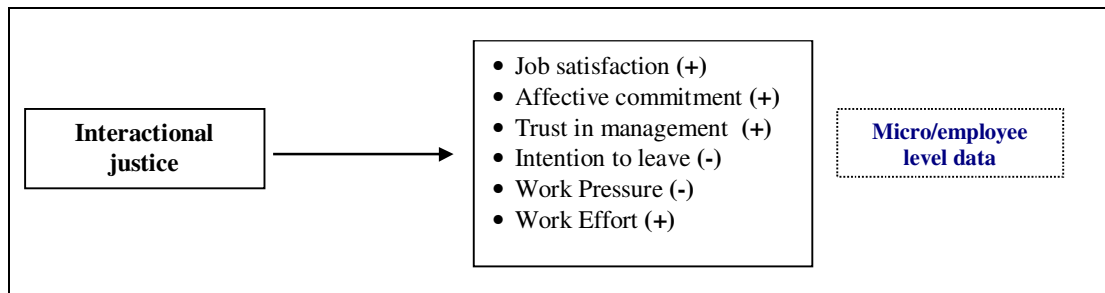


### 10.5.3 Interactional justice

Purcell and Hutchinson (2007) note that the role of interpersonal relationships between managers and their subordinates in the context of people-management systems has not been well researched, even though the line manager is the lynchpin through which HPWS is enacted. Leadership behaviour, including fair treatment and communications about decision making, has been shown to not only influence employees' performance (Gerstner and Day, 1997), but also employee well-being (van Dierendonck, Haynes, Borrill, and Stride, 2004).

Hypotheses 7a to 7f suggested that interactional justice would significantly impact employee attitudes and behavioural outcomes. Whilst procedural justice is said to measure the fairness of the organisation (through its procedures), interactional justice measures the fairness of the supervisor. All hypotheses were supported for interactional justice (see figure 10.6). Interestingly, when all justice dimensions were regressed onto the employee outcomes, interactional justice emerged as *the* most significant justice dimension in explaining employee experiences of, and responses to HPWS. It can be argued that fair treatment by the line manager during the enactment of HPWS practices creates a closer, open ended social exchange relationship. Employees will feel obligated to repay their supervisor or organisation through increased performance, commitment and organisational citizenship behaviours. Consistent with this argument, a positive relationship was found between interactional justice and both affective commitment (efforts towards the organisation) and trust in management (relating to the supervisor). Research conducted by Greenberg (1993) examined the role of interactional justice in managing pay cuts in two manufacturing plants. He found that differences in how pay cuts were managed produced dramatically different outcomes. The key was interpersonal treatment and clear explanations. This issue is particularly important during times when resources are scarce. The qualitative interviews showed that there was dissatisfaction with a number of HPWS practices (e.g. payment of bonuses, access to training and development and recognition of effort through promotions). The economic climate meant that organisations were not promoting people to positions and people were not moving from jobs as much as they did before. Thus, employees appeared dissatisfied with outcomes given their performance as the organisation no longer had opportunities to reward high performance as well as they had previously (e.g. through bonuses, training or promotions). Research suggests that organisational justice, and interactional justice in particular allows managers to manage these tough decisions more effectively.

**Figure 10.6: A hypothesised model of interactional justice and employee attitudes and behavioural outcomes**



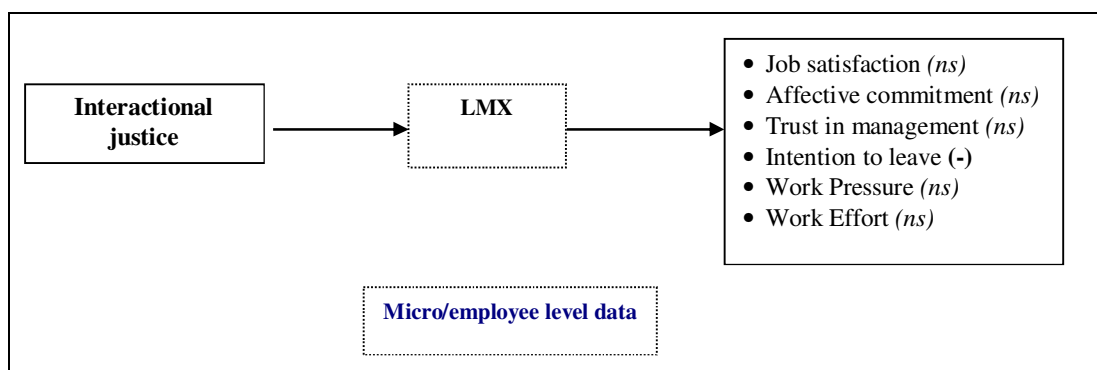
#### 10.5.4 Mediating role of leader-member exchange

The mediation analysis examined LMX and POS and investigated whether the reason fairness perceptions influence work-related attitudes and behaviours lies in the quality of employees' social exchange relationships with their supervisor (LMX) and the organisation (POS). Research shows that social exchange theory is particularly relevant when examining organisational justice because it explains exchange relationships with both the organisation (through POS) and individual (through LMX) (Andrews, Kacmar, Blakely and Bucklew, 2008). In chapter 4, it was suggested that LMX would mediate the relationship between interactional justice and employee outcomes. Research has shown that line management involvement in implementing HPWS is not without its difficulties (Reddington et al, 2005) and there remain mixed results about the process of devolution and the competence of line managers in undertaking HR activities more generally (Hutchinson and Purcell, 2003; Renwick, 2003; McGovern et al., 1997). One means of examining the role of line management is through interactional justice and LMX (hypothesis 8).

LMX is defined as the quality of the relationship between the supervisor and his or her employee (Graen and Scandura, 1987). Since these line managers directly interpret and transmit HR policies, it is suggested that the degree to which they are perceived to be supportive will influence the impact that HPWS policies will have on workers outcomes. LMX theory argues that leaders do not form uniform relationships with their subordinates. They form higher quality exchanges with some subordinates in relationships that are characterised by trust, affect, and mutual respect, and with others they form lower quality exchanges that do not go beyond interactions required by an individual's role definition (Liden et al., 1997). The perceived interactional justice of managers has been shown to be an important prerequisite of LMX (Cropanzano and Byrne, 2000). However, no mediating role was found for LMX in the relationship between perceived interactional justice and affective commitment, job satisfaction, trust in management, work pressure and work effort (see Figure 10.7). Whether an employee has high or low LMX did not seem to affect the extent to which interactional justice perceptions influenced the majority of their attitudes and behaviours. There was a mediating relationship between LMX and the relationship between interactional justice and intention to leave however.

Findings suggest that the link between interactional justice and intention to leave is explained by the quality of the LMX relationship. Poor quality LMX is viewed as a negative attribute in an employment relationship and has been observed to explain employees' quit decisions. Previous research has shown that strong supervisory support and satisfaction with supervision is a means of reducing turnover directly or indirectly through heightened job satisfaction (Griffeth and Hom, 2001) and organisational commitment (Gaertner, 1999; Griffeth and Hom, 2001).

**Figure 10.7: A hypothesised model of mediator LMX and interactional justice and individual-level attitudes and behavioural outcomes**



### 10.5.5 Mediating role of perceived organisational support

This study posited POS as a mediator for procedural justice and employee outcomes (hypothesis 9). Previous studies have shown that exchange relationships regarding procedural justice were stronger predictors of the quality of the relationships that individuals form with their organisation (POS), than with their manager (Masterson et al., 2000; Rhoades et al., 2001, 2002). When procedures are seen to be designed in a fair manner giving employees opportunities for voice, this helps form positive perceptions of perceived organisational support. Employees may form a desire to reciprocate this fair treatment, leading to the formation of a high-quality relationship with the organisation (Murphy et al., 2003). In return the employees will be more likely to engage psychologically with the organisation. In this research, the exchanges individuals form with their organisation appear to be a stronger predictor of attitudes and behaviours than LMX and exchanges between employees and their manager.

Figure 10.8 shows that POS mediated the relationship between procedural justice (transactional and relational) and both job satisfaction and affective commitment, providing support for hypotheses 9a and 9b. POS also mediated the relationship between employee perceptions of procedural justice regarding pay (transactional procedural justice) decisions and trust in management. This suggests that when employees perceive pay determination procedures as fair, this shows them that the organisation values their contribution and cares about their well-being. This, in turn, leads to greater effort to achieving the organisation's goals through greater job

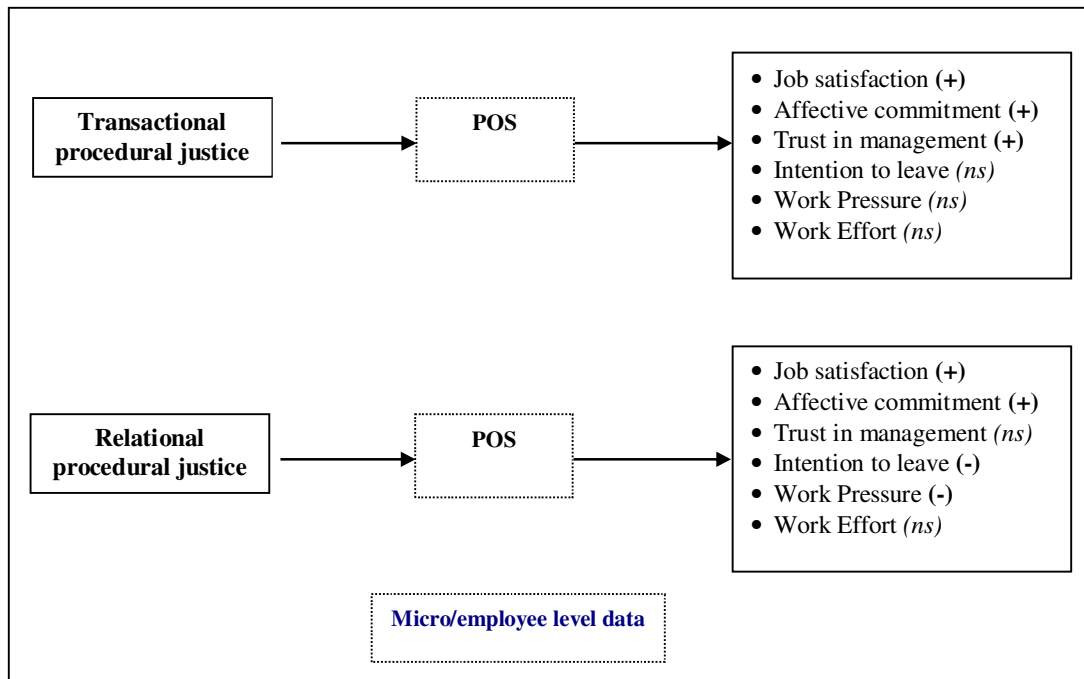
satisfaction, commitment and trust in management. No support was found for the argument that POS mediated the relationship between procedural justice and work effort. This study's findings show that perceptions regarding procedural justice of relational HPWS practices were stronger predictors of subsequent employee attitudes and behaviours than procedural justice perceptions of transactional HPWS practices. Relational HPWS practices include training and development, performance management, employee involvement and participation and succession planning. Consistent with previous HPWS research, these HPWS practices are seen to be important for motivation, empowerment and development of those core employees who are important to the organisation in the long term. Transactional, in contrast, is more short-term, focused with a results-oriented focus and as such it would not be expected that POS would be as strongly associated to POS when compared to relational procedural justice.

This study found that POS negatively mediated the relationship between relational procedural justice and both intention to leave and work pressure. This suggests that when decisions regarding these HPWS practices are seen as transparent and procedurally fair, employees will perceive high organisational support which, in turn, will affect turnover intentions and perceptions of work pressure. High organisational support at work has been shown to decrease employee's intentions to quit (Brough and Frame, 2004; Houkes et al., 2003). POS has also been found to be negatively associated with stress experienced in the workplace (Cropanzano et al., 1997), as it indicates the availability of material aid and emotional support that is needed to face high demands at work (Rhoades and Eisenberger, 2002). The findings provide some support for the relational or group value model of procedural justice as proposed. Thus, it can be said that the link between procedural justice and affective commitment, job satisfaction, trust in management, intention to leave and work effort is an indirect one, mediated or partially mediated by POS.

Taken together these findings discussed above show that procedural and interactional justice perceptions are important inputs to employees' judgments of the quality of their exchange relationships with their organisations and, to a lesser extent, with their supervisor.



**Figure 10.8: A hypothesised model of mediator (POS) and procedural justice and individual-level attitudes and behavioural outcomes**



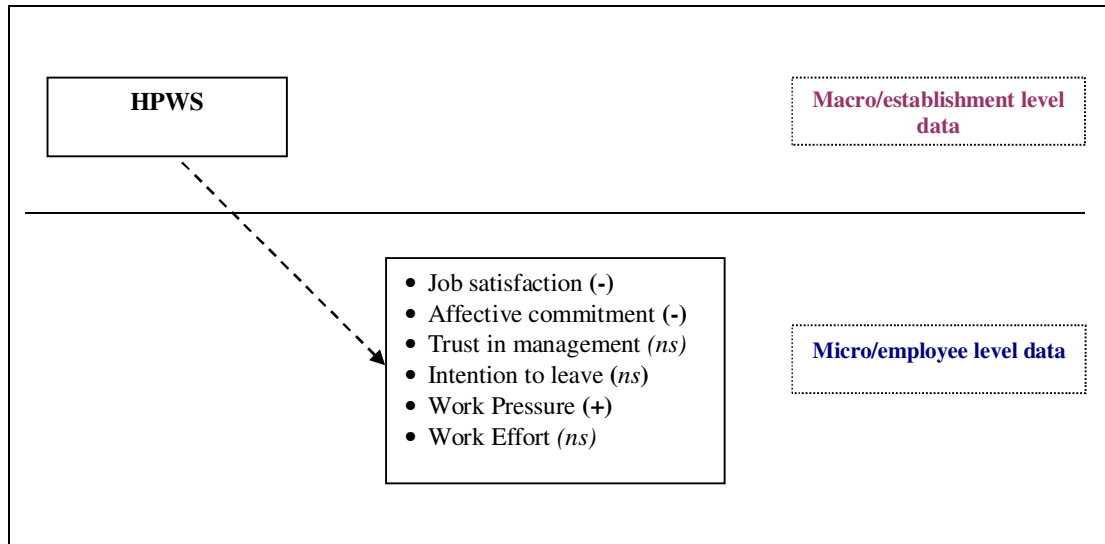
### 10.6 Cross level effects of HPWS and employee attitudes and behavioural outcomes

A core objective of this research was to examine the impact of HPWS practices on employee attitudes and behavioural outcomes. Previous research has shown significant evidence of the positive impact of HPWS on employees when management adopts a mutual gains approach to their adoption (Witt et al., 2001; Guest, 1999). A number of studies have found that HPWS has positive implications for employees through improved quality of work (Kalmi and Kauhanen, 2008), positive social and psychological implications (Guest, 1999; Harley, Allen & Sargent, 2007), higher pay (Forth and Millward, 2004; Handel and Levine, 2006), greater job security (Kalmi and Kauhanen, 2008), and increased autonomy (Appelbaum et al., 2000; Harley et al., 2007). However, there is also some evidence that a win-lose outcome can occur where greater diffusion of HPWS can lead to negative employee outcomes (Godard 2001b, 2004), including longer working hours and poorer work-life balance (White et al. 2003), higher levels of work intensity and stress (Landsbergis et al., 1999) and lower perceptions of job-security and increased job strain (Ramsay et al. 2000).

The results for the cross level analysis in this thesis between establishment level HPWS and employee outcomes address Peccei's (2004) questioning of the potential trade-off between organisational performance outcomes and employee well-being in contemporary organisations and the role that HPWS may play in that trade-off. Figure 10.9 shows that relative to employees working in organisations with either low or medium investment in HPWS, employees who

experience high diffusion of HPWS report lower job satisfaction and affective commitment and higher perceptions of pressure at work, raising implications for HPWS and work intensification which will now be discussed.

**Figure 10.9: A hypothesised model of establishment level HPWS and individual-level attitudes and behavioural outcomes**



The implication here is that HPWS practices - such as contingent pay and performance management systems - actually have more negative implications for workers, because they create an added pressure to perform or work longer hours (Godard, 2010). Arguably, those employees characterised as ‘gold collar workers’ (Kelley, 1985) who are highly paid, enjoy high status and are recipients of an investment in HPWS, can and do work long hours because they are dealing with complex and challenging problems. This can be said of employees working in ProfCo, for example, where many employees were engaged in a ‘pressure cooker’ type of work environment owing to the nature of their job and the pressures of dealing with clients (Purcell et al., 2009). It can be argued that the benefits of any increase in these HPWS are outweighed by work intensification, insecurity and stress (Green, 2004). A second argument might be that benefits of HPWS become less obvious as complexity increases. A further implication can be that too many management initiatives can lead to overload for employees: for example, a system where a performance appraisal is added to teamwork in a flattened hierarchy, along with increased participation in decision making, enhanced information flows, and so on.

Two other issues emerge from the cross level findings. The first issue relates to the type of employees who responded to the survey. FoodCo (low HPWS at establishment level) were predominantly production employees. In InsureCo and ProfCo, employees were predominantly in the professional/managerial employment category. These employees would fit with Lepak and Snell’s (2002) knowledge based employment quadrant because they have high human capital

uniqueness and high strategic value for their organisations. Employees in FoodCo, by contrast, could be categorised as job based employment with high strategic value but limited uniqueness. Thus, knowledge based employees would be expected to have high HPWS investment relative to job based employees. Research by Kinnie et al. (2005) found support for this HR architecture model when they found that HPWS is effective when applied differently to different employee groups. More importantly however, they stress that there should be a fit between HR investment and employee's perceived organisational needs. This might suggest why employees in FoodCo are more satisfied and committed relative to ProfCo even though there is low HPWS investment. The HPWS practices that are being implemented are appropriate for their organisational needs.

The second issue centres on Godard's (2004) argument of diminishing returns of HPWS when HPWS adoption exceeds its optimal level. Godard (2004) argues that owing to the cost-benefit trade-offs, execution of HPWS at a moderate level should outperform that at a high level. Chi and Lin (2011) examined HPWS adoption in Taiwanese firms and found that the relationship between HPWS and organisational performance was an inverted U pattern for high technology firms. Whilst this argument has been examined from the organisational performance level, the employee level findings in this study suggest a similar situation may be happening at the employee level, where additional costs (personal and socio-emotional effects for the employee) as a result of over implementation may offset any improvements in employee attitudes and behaviours. Recently however, Godard (2010) revisited his investigation of what was best for workers. Examining 1998 data and 2003-2004 data, the negative implications of HPWS (stress and fatigue) were 'more muted and less likely to become negative at high levels of adopting, either because workers have become adjusted to these practices or because the practices themselves have been adjusted over time' (pg. 483).

#### **10.7 Cross level effects. Mediating role of organisational justice on HPWS-employee outcomes relationship**

Having shown that establishment level HPWS can impact employee outcomes; attention now turns to examining the mediating role of organisational justice in the link between HPWS and employee outcome relations. Relative to relational aspects of justice, justice perceptions of the justice of the pay element of HPWS did not emerge as an important contributor to employee outcomes when HPWS was high. When both relational and transactional elements of distributive and procedural justice were regressed onto the dependent variables, transactional elements of justice were no longer significant. This contradicts previous research which has found that pay is the first or second most important aspect of the job for knowledge workers, because it is a mechanism through which their status is determined in the organisation (May et al., 2002). Perceptions of procedural justice and interactional justice emerged as the two strongest mediators. This suggests that when employees perceive that HPWS practices are procedurally

fair and when their line manager treats them with dignity and respect and explains all decisions clearly, then job satisfaction and affective commitment will increase and perceptions of work pressure will decrease. Recently, employee well-being research has investigated the importance of justice in a number of areas including the prevention of burnout (Noblet and Rodwell, 2008). The perception of the rightfulness of procedures in the organisation has, in particular, been found to have structural effects on decreased levels of stress (Schminke et al., 2000).

## **10.8 Conclusion**

Organisational justice perceptions are important predictors of employee responses to HPWS. This research showed that whilst distributive, procedural and interactional justice were all important predictors of employee outcomes, ultimately it is employee perceptions of interactional justice which determines their job satisfaction, affective commitment and work effort. The mediated relationships regarding LMX and POS suggest that employees get their sense of justice from two main sources of justice: one's immediate supervisor or manager and the organisation as a whole, with the organisation being a stronger predictor of employee attitudes and behaviours. The findings challenge the idea of much of the win-win rhetoric of previous HPWS authors by suggesting that this argument does not hold. High investment in HPWS was shown in this research to lead to more intensified work places with lower affective commitment and job satisfaction. This raises questions about the value of significant investment in HPWS if it has such a negative impact. However, employee perceptions of the fairness of outcomes, procedures and the line manager help mitigate the negative aspects of HPWS for employees. This suggests that it is not the number of practices that contribute to organisational and employee outcomes. Rather, *how* practices are implemented is a much stronger factor for ensuring effective people management in organisations. Implementing a small number of core HPWS practices well appears to be more beneficial than having a large number of sophisticated practices that are poorly enacted by line managers. In the final chapter, a brief overview of the study is outlined together with its contribution to HPWS theory and practice, limitations and recommendations for further research.

### CONCLUSION

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#### 11.1 Introduction

This study set out to provide a better understanding of the impact of HPWS from an employee perspective. The analysis of previous research suggested that the employees' viewpoint of HPWS had been neglected in previous research (Van Buren, Greenwood and Sheehan, 2011). This final chapter provides an overview of the main conclusions of the empirical and discussion chapters of this thesis. The theoretical and methodological contributions of this research are outlined. Some limitations of the current study as well as practical implications are given. Finally, a number of potentially interesting future research avenues are presented.

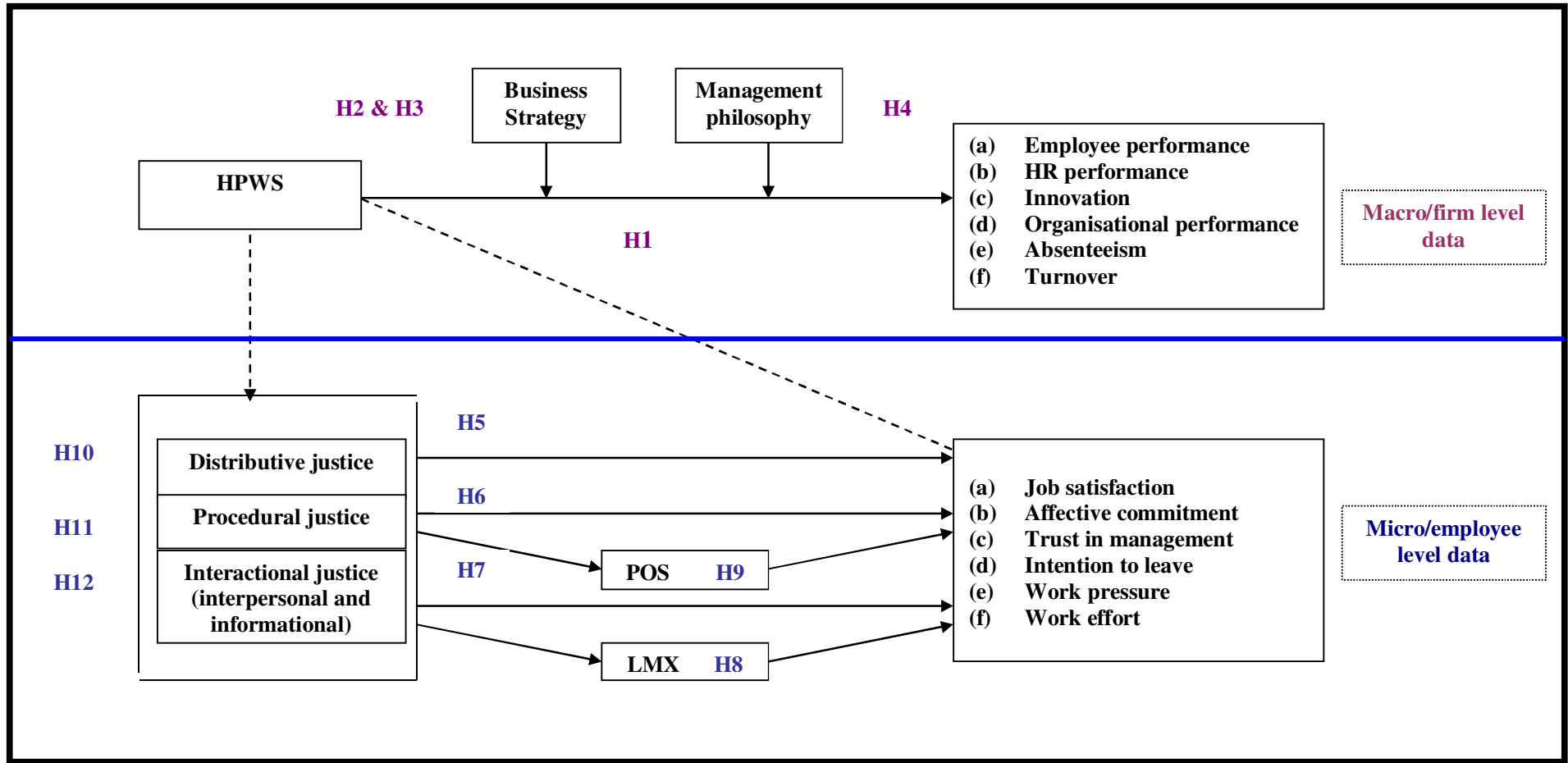
#### 11.2 Key conclusions

As discussed in chapter 1, the main purpose of this study was to explore the impact of HPWS on employees and to contribute to the 'black box' debate in HPWS by proposing organisational justice as a means of better understanding HPWS's role in enhancing organisational effectiveness. A number of research questions guided the current study.

6. How do HPWS policies affect performance outcomes? (Hypothesis 1)
7. Is the relationship between HPWS and organisational performance dependent on other factors? (Hypotheses 2, 3, 4)
8. What are the processes that influence employee attitudes and behaviours towards HPWS? Why do such attitudes and behaviours occur? (Hypotheses 5, 6, 7, 10, 11, 12)
9. How does the relationship between employees, supervisors/managers and the organisation affect employee perceptions of HPWS? (Hypotheses 8 and 9)

In addressing these research questions, a conceptual model (see Figure 11.1) was developed which analysed the link between HPWS and employee outcomes using organisational justice as a theoretical lens through which employee perceptions of, and responses to, HPWS could be examined. A secondary aim was to examine the impact of HPWS on organisational performance outcomes and explore the moderating role of business strategy and management philosophy. The findings discussed in this thesis yielded a number of important insights, thereby helping advance theory and inform practice on the process and management of HPWS in contemporary work organisations. These key conclusions will now be outlined.

Figure 11.1: Hypothesized multi level model of HPWS, organisational justice and employee outcomes revisited



—————> Denotes a correlation and regression relationship  
 - - - - -> Denotes a cross-level inference of the relationship between firm level HPWS investment and employee level outcome variables

### **11.2.1 How do HPWS policies affect performance outcomes?**

Research question 1 sought to examine how HPWS policies affected performance outcomes. Hypotheses 1a to 1d posited that high HPWS would positively impact employee performance, HR performance, innovation and organisational performance. Hypotheses 1e and 1f argued that high investment in HPWS would negatively impact absenteeism and turnover. Findings at the macro level of analysis provided strong support for the thesis that the HPWS system has a strong, positive influence on performance through employee, HR and organisational performance variables. Thus, this research contributed to the continuing debate about the efficacy of HPWS for organisational performance and provided further support for the effectiveness of HPWS for a multi industry sample of organisations operating in Ireland.

### **11.2.2 Is the relationship between HPWS and organisational performance dependent on other factors?**

Research question 2 examined whether the HPWS-performance relationship was contingent on business strategy and management philosophy. Hypotheses 2 and 3 were developed to test this research question. It was argued that when an organisation achieves 'fit' between their business strategy and their HR practices it will generate maximum organisational performance (Wright and McMahan, 1992). Results for this proposition were not fully confirmed. Differentiation strategy was found to positively moderate the relationship between high HPWS diffusion and both employee outcomes and innovation as hypothesised. This suggests some support for the contingency perspective of HPWS. However, whilst a negative relationship was found for the moderating role of low cost strategy on HPWS and innovation, a positive relationship was found for employee outcomes. This suggests that the relationship between HPWS and business strategy is quite complex (Purcell, 1999) with a whole range of other factors in existence that may impact the relationship between HRM and performance (Paauwe and Boselie, 2005), including the way in which people are treated. No support was found for the moderating role of management philosophy which suggests that philosophies of management which are employee centred do not strengthen the effectiveness of the HPWS-performance relationship.

### **11.2.3 What are the processes that influence employee attitudes and behaviours towards HPWS? Why do such attitudes and behaviours occur?**

Whilst findings for research questions 1 and 2 found support for the HPWS-performance argument, chapter 2 showed that much is still unknown about the exact processes by which these HPWS practices lead to improved employee and firm performance. In other words, the 'how' and 'why' explanations were found wanting to a large degree in much of the extant research. This thesis, therefore, explored the 'black box' issue evidenced in previous HPWS by (1) directly assessing employees' attitudes and experiences under HPWS and (2) using organisational justice theory to explore the process by which employees experience and respond

to HPWS. As discussed in chapter 2, previous HPWS-performance research has predominantly focused on organisational outcomes with little attention paid to employee perceptions. In examining research questions 3 and 4, the results show that fair processes and treatment are particularly important in the effective enactment of HPWS at employee level. Findings in the current study also showed that the effects of fairness vary with the type of justice (distributive, procedural, interactional) under consideration. Interactional justice judgments of HPWS were a stronger predictor of employee attitudes and behaviours than any of the other justice judgments. Overall, the results provided theoretical and empirical support for the hypotheses that favourable organisational justice evaluations act as a mechanism through which high investment in HPWS impacts employee attitudes and behavioural outcomes. On the whole, results emphasised the importance of the perceived fairness of the HR system in attempting to understand the true effect of the actual HPWS system on employees' attitudes and behavioural outcomes.

This research also illustrated that we should treat the 'mutually beneficial' claims of HPWS with some degree of scepticism as the findings provided support for Godard's (2004) critical assessment of HPWS. In testing the HPWS-employee outcome relationship, some support was found for the critical perspective of HPWS which argues that greater HPWS contributes to negative employee experiences such as coercion, work intensification, job stress and insecurity (Edwards et al., 1998; Green 2004). In contrast to research by Macky and Boxall (2007), the current research findings showed that high investment in HPWS had *negative* consequences for job satisfaction and affective commitment and significantly increased employee perceptions of work pressure. This raises questions about the mutually beneficial win-win argument proposed by proponents of HPWS. Macky and Boxall (2007) caution that we should not rush to the conclusion that more HPWS practices will always be better for employees. This research provides further support for this advice where it can be concluded that it is not the number of practices that matter in terms of managing positive employee attitudes and behavioural outcomes but rather the manner in which they are implemented.

Overall, it was found that organisational justice theory provided a useful framework to guide research on the experience of HPWS for employees. This supports the multidimensional perspective of performance (Paauwe, 2004) which views human resources as more than just resources to be managed to add economic value; instead we should also see moral values such as fairness as an integral part of the performance construct in HPWS research.

#### **11.2.4 How does the relationship between employees, supervisors/managers and the organisation affect employee perceptions of HPWS?**

In answering question 5, this research posited that in exchange for fair procedures (procedural justice) employees will offer positive attitudes and behaviours towards the organisation (through



POS) and in exchange for fair treatment (interactional justice) employees will offer positive attitudes and behaviour (by developing a strong LMX relationship with their supervisor). These positive relationships will then mediate the justice-employee outcomes relationship. Findings for this proposition were mixed. The role of LMX was only supported for turnover intentions. In contrast, POS was found to be an important predictor for most of the dependent variables (with the exception of work effort). This finding highlights, in particular, the importance of organisations in valuing employees and providing a supportive work environment for employees in implementing HPWS to ensure positive employee perceptions. Overall, these findings suggest that intangibles such as organisational justice and managerial/organisational relations can be argued as central to the success of HPWS.

### **11.3 Contribution to theory**

Chapter two identified a number of debates in HPWS literature which this current research has attempted to address. The biggest contribution of this research was providing a theoretical foundation for explaining how and why the HPWS-performance relationship occurs. Previous HPWS research has been criticised for its weak theoretical underpinning and not providing a precise framework for defining the specific mechanisms through which HR practices influence firm performance – often termed the ‘black box’ issue (Wright and Gardner, 2003). By confirming the important explanatory role of organisational justice theory in how HPWS can impact employee attitudes and behaviours, the author has specified an important intervening variable between the linear relationship that exists between HPWS and firm performance. This research took a process approach to HPWS research by attempting to explain why and how HPWS is related to individual employee outcomes thus ensuring a more precise framework linking intended HR practices (HR manager view), actual HR practices (line managers’ view as implementers) and perceived HR practices (employees’ experiences of, and reactions to, HR practices when enacted). This is an important contribution in HPWS research. Just recently, Sanders, Shipton and Gomez (2011) made a call for a special edition of *Human Resource Management* asking the question, ‘Are HRM Processes Important?’ According to these authors, the ‘black box’ issue still exists and by taking a process approach to HRM they highlight the importance of the psychological processes through which employees attach meanings to HRM practices (pg. 1). However, they stress that more research is still needed to examine both the content of HR practices and the process of employees’ attribution. This research succeeds in doing so by examining HPWS at the macro level and subsequent employee attributions at the micro level of analysis successfully using organisational justice theory.

The findings from this research also provide additional support for the work of Bowen and Ostroff (2004), Takeuchi et al.(2009), and Nishii, Lepak, and Schneider (2008) by examining HPWS across multiple levels in order to show how HPWS is implemented and employee

experiences of HPWS. Cross level analysis proved valuable when looking at the sequence of boxes that reflect the HRM and employee outcomes linkage between HPWS at firm level, experience HPWS at employee level and employee attitudes and behaviours. A great deal of previous research has been from single respondents (usually the HR manager). Legge (2001) called previous accounts of HRM as being the 'voices of management'. However, it is HPWS as perceived by employees that impact on employee reactions and subsequent performance. By focusing on the employee, this research also counterbalanced the management agenda of previous research by reintroducing the employee back into HPWS-performance research agenda (Boselie, Brewster and Paauwe, 2009). Findings showed that examining employee experiences of HPWS in addition to firm level HPWS proved critical to understanding the psychological processes through which formal practices of HPWS influence employee attitudes and behaviours.

The use of employees as a source of data in this research also provided support for Bowen and Ostroff's (2004) argument that individual employees can experience and interpret the same set of HPWS practices differently. By particularly focusing on the HPWS practices actually experienced by individual employees, this research has shown that uniform HPWS policies can be implemented differently or may be perceived or experienced differently by employees. This highlights a disconnection between what management says about HPWS practices implemented (espoused HPWS) and the HPWS practices actually experienced by individual employees (Boxall and Macky, 2007). This disconnect can only be captured by using multiple sources of data across multiple sources. The organisational justice framework provided an explanation for this potential disconnect across levels by showing how employees may form different evaluations of outcome decisions (such as pay, performance appraisal and promotion), the procedures used to arrive at these decision and the interpersonal treatment and information given to employees as these HPWS procedures are carried out (Colquitt et al., 2001). These differences, in turn, significantly impact subsequent employee attitudes and behaviours. Furthermore, leader-member exchange and perceived organisational support suggested important exchange relationships between the employee and his/her manager and the organisation itself which mediated the justice-employee attitudes and behaviours relationship. Overall, this research shows that a useful approach to unlocking the HRM 'black box' is through the lens of organisational justice theory. Whilst various studies have shown that employees evaluate individual HR practices in terms of justice (e.g. Gilliland, 1993), no attempt has previously been made to evaluate the overall fairness of the HPWS system.

This research took a multi dimensional approach to defining performance by looking at multiple perspectives of performance (through economic performance indicators and societal aspect of

performance emphasising fairness). By doing so, this research ensured that justice was done 'to the multiple goals of HRM and to the different parties involved' (Paauwe and Boselie, 2005: 73). Finally, the extant HPWS research presented in chapter 2 showed that it has predominantly been conducted in manufacturing environments neglecting the presence of the service sector (Harley, Allen and Sargent, 2007). However, the service sector has become the most important sector in most OECD countries economies accounting for over 70 percent of total employment and value added (Wölfl, 2005). Service sector employment in Ireland has increased significantly since the 1970s moving from being predominantly agrarian and traditional manufacturing based to one which is service based, particularly technology and internationally traded services (Wallace, Gunnigle, McMahon, 2004; ESRI, 2010). The contribution of the service sector to Irish employment and productivity growth was substantial over the past decade. In 2005, over 40 percent of the Irish working age population were employed by the services sector (Pilat, 2005). This increased to almost 60 percent in 2007. Whilst this figure has decreased since the onset of the economic recession, the service sector is still an important part of the Irish economy in terms of its potential for job creation and value add. Little research has explored the applicability and implications of HPWS in services (Harley, Allen and Sargent, 2007). This research contributes to HPWS research by examining the implications of HPWS specifically within the service sector. Previous research has produced mixed results. An important contribution from this research was the positive benefits for both low skilled and high skilled employees. However, those high skilled workers experiencing high investment in HPWS reported negative consequences. Some of the reasons behind this have been discussed previously including arguments drawing on labour process theory. Another conjecture suggested by Berg and Frost (2005) was that unionisation had a positive impact on the outcomes of HPWS for employees in the service sector. Whilst this research shows no statistical evidence supporting this, the low and medium HPWS organisations did have union representation with approximately 40 percent of staff being union members. More research is required to examine the potential role of unionisation in influencing the impact of HPWS on service employees.

Finally, Mark Huselid, in his recent editorial celebrating 50 years of Human Resource Management journal, looked back on the journals past and identified issues that need to be included in the next phase of the research agenda. One important issue identified was clarification of the line managers HR role as they are 'accountable for the most important (and expensive) organisational asset – the workforce' (Huselid, 2011: 311). Purcell and Hutchinson (2007) also argue that the role of the line manager has been neglected in previous HPWS research. This is a major omission given that 'it is these managers who are increasingly charged with the implementation of many HR practices' (Purcell and Hutchinson, 2007: 3). This research has brought the role of the line manager back into HPWS research by examining whether they enact HPWS policies fairly. Findings indicate that interactional justice is the strongest predictor

of employee attitudes and behavioural outcomes, suggesting that the line manager is an important factor in the HPWS-performance causal chain. This shows that the front line manager (FLM) as the agent of the organisation and the deliverer of HR practices provides a useful explanation for discrepancies in HPWS policy and practice.

#### **11.4 Contribution to methods**

This study has made a number of contributions to methodological issues in HPWS research. Chapter 2 outlined a number of shortcomings in previous HPWS research (see Hesketh and Fleetwood; 2006, Paauwe, 2009; Wall and Wood, 2005 and Wright and Gardner, 2002 for overviews). These include, but are not limited to, single respondent surveys, levels of analysis at which the HR-firm performance relationship has been studied and an over focus on management outcomes. This research attempted to overcome some of these limitations by using (1) multiple methods, (2) multiple sources and (3) multiple levels of data.

Previous research on HPWS has been criticised for its positivistic research design as it was deemed incapable of ‘unlocking the black box’ of the processes that link HRM with organisational performance (Legge, 2001) with some hard to measure items being ignored. Whilst quantitative data using surveys was the dominant research method used in this study, qualitative data was also collected to overcome the problems of an exclusive positivist research design. It ensured a more contextual approach to the analysis of HPWS. The use of in-depth interviews in particular allowed the researcher ‘to unravel the underlying causal and interrelated mechanisms in the social practices underlying the HR practices’ (Paauwe, 2009: 137). The use of multiple methods allowed issues that were less amenable to quantitative research to be examined and provided unique insights into the HPWS debate. For example, the use of qualitative methods enabled the research to find subtle differences in both how HPWS was implemented and employees’ fairness perceptions that would not have been possible using other research methods. The interviews were illuminating in understanding why fairness perceptions existed in certain contexts across the three organisations. A decade ago, Susan Taylor (2001) suggested that organisational justice literature would benefit significantly from qualitative studies. However, qualitative studies are still uncommon (an exception is the narrative study by Woodilla and Forray in 2008). Thus, the use of interviews in the current research allowed the researcher to examine in-depth how employees thought about fairness, how they responded to (un)fairness and why they reacted in that way.

A second contribution is the use of multiple sources taking account of the multiple stakeholders involved in HPWS-performance relationship. There appears to be consensus in HPWS literature that we can no longer rely on only management accounts of HPWS and their consequences. This research sought information from HR managers, line managers and employees thus

overcoming many of the serious methodological problems of past HPWS research with regard to single respondents (Gerhart et al., 2000b). Wright and Boswell (2002) claim that an ideal way of acquiring information on a company's HR practice was to collect data from multiple sources in each organisation. Multiple sources of evidence in this research include the HR manager who provided information on the intended HPWS policies, actual HPWS practices were explored through the line managers and perceived HPWS practices and reactions were acquired from employees.

Finally, some HPWS researchers have proposed that it is possible to conceptualise HPWS as a multi-level construct in order to account properly for variables at both the organisational and individual level of analysis (Bowen and Ostroff, 2004; Klein et al, 1994) which consists of multiple hierarchically arranged components (Arthur and Boyles, 2007). In HPWS research, Wright and Boswell (2002) stress the importance of blending research on the individual employee level with research at the organisational level (typical of HPWS studies) in order to open up the 'black box' of the HRM performance linkage (Snape and Redman, 2010). Paauwe and Boselie (2005) argue that multilevel analysis is simply unavoidable when looking at the sequence of boxes that reflect the HRM and performance linkage (e.g. those proposed by Guest, 1997; Appelbaum et al., 2000; Wright and Nishii, 2007) due to the need to consider aspects of the organisations social system (Takeuchi et al., 2009). This research successfully utilised cross level analysis in order to assess the impact of intended HPWS policy (at firm level) on perceived HPWS practices and reactions (at individual employee level). Importantly, cross level analysis revealed significant negative effects between HPWS policy and job satisfaction, affective commitment and work pressure. In sum, the use of multiple methods, multiple levels and multiple stakeholders enabled the researcher to delve deeper into the processes by which HPWS are enacted in organisations and explain how HPWS impacts employee attitudes and behaviours.

### **11.5 Contribution to practice**

The findings from this study can assist HR practitioners within organisations by acknowledging that the implementation of HPWS is critical for organisations and can positively impact firm performance. However, it is clear from this study that having policies in place can also have a negative impact on employee attitudes and behaviours if these procedures are not implemented fairly. Organisations can utilise the findings and insights of this research to design human resource systems or procedures that will be regarded as fair and thus guide line managers in the administration of more effective HR systems.

One important contribution concerns the role that line managers play in HPWS effectiveness. Purcell et al. (2003) claimed that the line managers' role is to implement and bring to life the HPWS practices. This research has shown, however, that discrepancies in how managers enact

these policies exist and that these can have negative implications for the organisation through negative employee attitudes and behaviours. For example, perceptions of interactional *injustice* was found to impact job satisfaction, affective commitment, trust in management and work effort negatively; whilst intention to leave and perceptions of work pressure were found to increase. A key challenge therefore, is motivating line managers to implement these systems in a way that are perceived to be fair. One suggestion to close this gap is training schemes for line managers to improve their knowledge of HPWS practices and acknowledge the principles of organisational justice in implementing HPWS. Cole and Latham (1997) highlighted the importance of training of supervisors in addressing this issue which is supported by findings in this thesis.

A second recommendation to emerge from this study was the issue of pay and compensation. Chapter 7 briefly discussed the Irish economic climate and the problems Irish organisations are currently encountering. Organisations are no longer in a position to pay above market rates to attract and retain core staff. This research shows that, whilst fairness of pay was an important determinant of employee attitudes and behaviours, it was not the strongest predictor. Instead, the fairness of the supervisor and the fairness of relational aspects of HPWS (relating to being seen to invest in the long term future of the employee in the organisation) were seen as much more important for employees than the fairness of pay. Thus, whilst organisations are being forced to reduce or freeze wages and remove bonus payments, they should not reduce investments in key HPWS policies such as training and employee involvement mechanisms.

A third recommendation centres on the validity of the universalist assumptions of HPWS that all HR policies be applied equally to all groups of employees. Findings show that organisations are complex and made up of many different types of employees. As a result, it is wrong to assume that implementing similar HPWS policies organisation wide will have the same effect on all employees who work for the organisation. HR managers should consider distinct employee groups and focus on the needs of each group and the human capital requirements of the organisation. Research shows that employee categories can be managed successfully through diverse sets of HR policies rather than focusing on a list of best practice HPWS (Kinnie et al., 2005). Rather than high investment in best practice HPWS, heterogeneity of HPWS practices is needed to manage the needs of different groups within the organisation.

Finally, given the findings of this thesis, HR practitioners should consider how they view their role within the organisation. Much of the extant HPWS literature has focused on value creation and delivery and HPWS - that is the role of HR in delivering bottom-line financial results. Given the findings of this thesis, it appears that this focus on cost has led to what Wright and Snell (2005) identify as a third value challenge – that of ‘living values’. This research shows that

ethical values are integral to effective organisations, without them negative employee attitudes emerge.

### **11.6 Limitations of research**

Whilst a number of key conclusions have been successfully drawn from this research it is important to also acknowledge a number of limitations including cross sectional design, issues regarding measurement of organisational justice, and the sample size. These will now be discussed.

Firstly, due to the cross sectional nature of the research design at both organisational and employee level, conclusions regarding causal relationships cannot be drawn. No causal relationships could be tested; therefore, only statistical associations are tested for, and the directionality of results remains untested. Thus, longitudinal research data would be needed in order to address this issue. A second limitation concerns the organisational justice, intention to leave and business strategy measures used in this study. Chapter 5 examined the key decisions taken when choosing these scales, particular the organisational justice scales. By using abridged scales with direct measures of justice, some justice rules were overlooked. However, it should also be noted that the qualitative data did allow the researcher to access employee's opinions of which justice rules were most important in particular HPWS contexts (e.g. voice, respect, explanations). The use of simple classifications of strategy used in this study may be too coarse-grained to account for the strategic differences across firms, even within the same industry (Bjorkman and Xiucheng, 2002). Finally, intention to leave consisted of just two items and had low reliability relative to all other variables.

Innocenti et al (2011) suggest that operating sector is important in HPWS research as it can have a significant influence on working processes. In phase 1, the sample was chosen to represent diverse industries including companies engaged in production, distribution, marketing and consultancy. Phase two examined three organisations operating within the same sector (service industry) but encompassing diverse industries. Whilst all three organisations operated within the same sector, there were huge differences in the nature of business between FoodCo (which was in the food service business) and the other two organisations (InsureCo and ProfCo) which were in financial services. Future research should focus on locating organisations with similar businesses within the same sector. A fourth limitation is related to the fact that the sample from both phase 1 and 2 is restricted to one country and three companies and, consequently it does limit the generalisability of the findings. Future research conducted with larger samples and in other national environments can provide complementary findings.

A fifth limitation relates to the data being collected from just one source at the macro level (the HR manager) which means common method bias may impact the results. Harman's single-factor test is the most widely known approach for assessing common method bias in a single-method research design (Podsakoff et al. 2003, Podsakoff and Organ 1986). All of the items in the macro study were subjected to exploratory factor analysis. A similar test was conducted on the micro level data. If common method bias was a problem, one factor would emerge that accounts for the majority of the covariance in the measures. Results in both datasets indicated that individual constructs factored separately with no one factor accounting for a large amount of variance. This suggests that respondents viewed each construct distinctly and that common method bias may not significantly impact results. Also, by collecting data from two distinct sources (HR manager and employee), one could suggest that this also prevented the problem of common method variance.

### **11.7 Recommendations for future research**

The key conclusions of this research emphasises (1) the importance of the implementation phase in HPWS; (2) the role of organisational justice as a mechanism in understanding employee responses to HPWS and (3) the key role of the line manager in successfully implementing HPWS. These have a number of implications for future research which will now be outlined.

Wright and Nishii's (2007) HR causal model shows that the HPWS-performance relationship can best be understood by examining intended, enacted and experienced HPWS which proposes that (1) intended HR practices impact (2) actual HR practices which impacts (3) perceived HR practices. These then influence (4) employee reactions and behaviour, and (5) firm performance. This study contributed to this causal model by exploring the first four stages of this causal model. However, it did not close the research loop by linking employee reactions and behaviour back to the firm level performance measures as the primary focus was on employee reactions to HPWS. It is, therefore, suggested that future researchers could fruitfully extend this research by testing the full HR causal model using organisational justice as a mediator.

Owing to the limitations associated with the cross sectional nature of this study, it is recommended that any future studies should test the conceptual model developed here, in this study, through a longitudinal research design using multiple sources. Longitudinal studies 'allows for more confident conclusions about causal relations, which are difficult with cross sectional designs, regardless of measurement method' (Spector, 1994, p. 387). A stronger case that HPWS impact organisational outcomes could be made with the use of stronger longitudinal research designs where it can be shown that use of HR practices precedes the performance outcome (Wright and Gardner, 2003).



This research used cross level analysis to link HPWS at the firm level to individual level outcomes. Due to the small higher level sample size, multi level modelling was not possible. Future research should extend this research by designing a multi level theoretical model of organisational justice that tests organisations as multi level systems (Kozlowski and Klein, 2000). Multi level research necessitates sampling several organisations, units within those organisations and individuals within those units. Research has shown that a large number of higher level groups (i.e. the organisation) is more important for multi level modelling than the number of responses within each group (research suggests over 30) (Maas and Hox, 2005).

The findings in this thesis show that organisational justice is an important mediating factor in the HPWS-performance causal chain. Therefore, future research would benefit from a greater methodological sophistication to take account of employees' perceptions of organisational justice and place more emphasis on measurement of the key justice dimensions at the HPWS system level. Finally, future research examining how HPWS perceptions relate to employee outcomes through organisational justice might also incorporate other factors that impact individual perceptions including previous experience and personality.

### **11.8 Conclusion**

This research set out to reintroduce the employee (the missing subject of HPWS) back into HPWS research. It was argued that employees needed to be placed at the centre of the analysis of HPWS as they are the people who 'experience' HPWS on the line. This was achieved by examining employees' experiences of HPWS through organisational justice. Findings showed that the 'win win' argument proposed by proponents of HPWS was not always true with employees working in an organisation with high investment in HPWS reporting more negative employee outcomes relative to those organisations with low and medium investment. These negative outcomes were found to reduce however when employees perceived HPWS to be more organisationally fair. Differences between intended and experienced HPWS and the role of the line manager emerged as key issues in the research findings. It is suggested that these themes represent key challenges for both future research and HR practitioners in the area of HPWS-performance research. Overall, these findings shed new light on the mechanisms through which HPWS impact employee outcomes and serve to bridge the gap between macro and micro perspectives of human resource management.

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## **APPENDIX A**

# **Summary Results of HPWS Studies and Firm Performance**

Chapter two examined the growing empirical evidence that HPWS can guarantee superior organisational performance. Table A.1 identifies some of these empirical studies ranging from seminal early HPWS writers such as Arthur (1994) and Huselid (1995) to more recent authors. The table shows that HPWS has been examined across a number of countries with a number of difference performance indicators. The results show that the HPWS-performance argument is largely supported by the majority of these studies.

**Table A.1: Summary of key research findings for HPWS studies on organisational performance outcomes**

Country	Study	Performance indicators	Results
USA	Arthur (1994) In a sample of steel minimills Compare between “control” and “commitment” systems	<ul style="list-style-type: none"> <li>▪ Labour efficiency</li> <li>▪ Employee retention</li> </ul>	<ul style="list-style-type: none"> <li>▪ Significant increase</li> <li>▪ Significant increase</li> </ul>
USA	MacDuffie (1995) 62 automotive assembly plants	<ul style="list-style-type: none"> <li>▪ Labour productivity</li> <li>▪ Quality</li> </ul>	<ul style="list-style-type: none"> <li>▪ Significant increase</li> <li>▪ Significant increase</li> </ul>
	Ichniowski, Shaw and Prensushi (1997) 36 steel production lines	<ul style="list-style-type: none"> <li>▪ Productivity</li> <li>▪ Product quality</li> </ul>	<ul style="list-style-type: none"> <li>▪ Significant increase</li> <li>▪ Significant increase</li> </ul>
USA	Delaney & Huselid (1996) 590 for-profit and non-profit firms from the National Organisations Survey	<ul style="list-style-type: none"> <li>▪ Perceived organisational performance</li> <li>▪ Perceived market performance</li> </ul>	<ul style="list-style-type: none"> <li>▪ Significant increase</li> <li>▪ Significant increase</li> </ul>
USA	Huselid (1995) Combination of HPWS practices vs. individual HR practices	<ul style="list-style-type: none"> <li>▪ Employee retention</li> <li>▪ Productivity</li> <li>▪ Corporate performance</li> </ul>	<ul style="list-style-type: none"> <li>▪ Significant increase</li> <li>▪ Significant increase</li> <li>▪ Significant increase</li> </ul>

Country	Study	Performance indicators	Results
USA	Delery & Doty (1996) Study on bank loan officers	<ul style="list-style-type: none"> <li>▪ Financial performance</li> </ul>	<ul style="list-style-type: none"> <li>▪ Significant increase</li> </ul>
New Zealand	Guthrie (2001) A multi-industry sample of 164 New Zealand firms	<ul style="list-style-type: none"> <li>▪ Firm productivity</li> <li>▪ Employee retention</li> </ul>	<ul style="list-style-type: none"> <li>▪ Significant increase</li> <li>▪ Significant increase</li> </ul>
USA	Batt (2002) A nationally representative sample of the US telecommunications services industry	<ul style="list-style-type: none"> <li>▪ Sales growth</li> <li>▪ Quit rates (the mediated effects of quit rate between HR practices and sales growth)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Significant increase</li> <li>▪ Significant decrease</li> </ul>
UK	Thompson (2002) The UK Aerospace industry	<ul style="list-style-type: none"> <li>▪ Innovation</li> <li>▪ Productivity</li> <li>▪ Psychological contract</li> </ul>	<ul style="list-style-type: none"> <li>▪ Significant increase</li> <li>▪ Significant increase</li> <li>▪ Significant increase</li> </ul>
UK	Guest, Michie, Conway & Sheehan (2003) A multi industry sample of 366 UK companies	<ul style="list-style-type: none"> <li>▪ Labour turnover</li> <li>▪ Labour productivity</li> <li>▪ Profitability (profit per employee)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Significant decrease</li> <li>▪ Not significant</li> <li>▪ Significant increase</li> </ul>
USA	Richard & Johnson (2004) 80 banking companies	<ul style="list-style-type: none"> <li>▪ Marketing performance</li> <li>▪ Growth in sales</li> <li>▪ Profitability</li> <li>▪ Market share</li> <li>▪ Organisational innovation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Significant increase</li> <li>▪ Significant increase</li> <li>▪ Significant increase</li> <li>▪ Significant increase</li> <li>▪ Significant increase</li> </ul>
Ireland	Flood, Guthrie, Liu & MacCurtain (2005) Survey of 165 Irish business organisations.	<ul style="list-style-type: none"> <li>▪ Labour productivity</li> <li>▪ Employee retention</li> <li>▪ Sales growth</li> <li>▪ New product innovation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Significant increase</li> <li>▪ Significant increase</li> <li>▪ Significant increase</li> <li>▪ Significant increase</li> </ul>

Country	Study	Performance indicators	Results
Ireland	Heffernan, Harney, Cafferkey & Dundon (2009) Survey of 169 top 2,000 performing firms in Ireland – multi-industry	<ul style="list-style-type: none"> <li>▪ Organisational performance</li> <li>▪ HR performance</li> <li>▪ Employee performance</li> <li>▪ Innovation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Significant increase</li> <li>▪ Significant increase</li> <li>▪ Significant increase</li> <li>▪ Significant increase</li> <li>▪</li> </ul>
UK	Michie & Sheehan (2005) Study of stratified survey sample of publicly quoted UK manufacturing and service sector firms with 50 employees or more.	<ul style="list-style-type: none"> <li>▪ Business strategy and HPWS</li> <li>▪ Sales growth</li> <li>▪ Labour productivity</li> <li>▪ Profitability</li> </ul>	<ul style="list-style-type: none"> <li>▪ Significant increase</li> <li>▪ Significant increase</li> <li>▪ Significant increase</li> <li>▪ Significant increase</li> </ul>
China	Ngo, Lau & Foley (2008) Study of 600 enterprises across 4 Chinese regions. Majority of respondents were in the manufacturing sector	<ul style="list-style-type: none"> <li>▪ Financial performance</li> <li>▪ Operational performance</li> <li>▪ Employee relations climate</li> </ul> <p>Moderating variable: ownership type</p> <ul style="list-style-type: none"> <li>▪ Financial performance</li> <li>▪ Operational performance</li> <li>▪ Employee relations climate</li> </ul>	<ul style="list-style-type: none"> <li>▪ Significant increase</li> <li>▪ Significant increase</li> <li>▪ Significant increase</li> <li>▪ Significant increase</li> <li>▪ Not significant</li> <li>▪ Not significant</li> </ul>
Netherlands	Den Hartog & Verburg (2004) 175 organisations from different sectors in the Netherlands	<ul style="list-style-type: none"> <li>▪ Firm performance</li> <li>▪ Beyond contract</li> <li>▪ Economic outcome</li> <li>▪ Employee turnover</li> <li>▪ Manager/specialist turnover</li> <li>▪ Employee absenteeism</li> <li>▪ Manager/specialist absenteeism</li> </ul>	<ul style="list-style-type: none"> <li>▪ Not significant</li> <li>▪ Significant increase</li> <li>▪ Significant increase</li> <li>▪ Not significant</li> <li>▪ Not significant</li> <li>▪ Not significant</li> <li>▪ Significant decrease</li> </ul>



Country	Study	Performance indicators	Results
US and Canada	Wright, Gardner & Moynihan (2003) Survey of US food services company (50 business units)	HRM impacts performance via commitment <ul style="list-style-type: none"> <li>▪ Worker compensation</li> <li>▪ Quality</li> <li>▪ Shrinkage</li> <li>▪ Productivity</li> <li>▪ Operating expenses</li> <li>▪ Profitability</li> </ul>	<ul style="list-style-type: none"> <li>▪ Not significant</li> <li>▪ Not significant</li> <li>▪ Not significant</li> <li>▪ Not significant</li> <li>▪ Significant increase</li> <li>▪ Significant increase</li> </ul>
Belgium	Sels, De Winne, Maes, Delmotte, Faems & Forrier (2006) Survey of 416 small businesses	<ul style="list-style-type: none"> <li>▪ Voluntary turnover</li> <li>▪ Labour productivity</li> <li>▪ Share of personnel costs in value added</li> <li>▪ Profitability</li> <li>▪ Liquidity (indirect effect)</li> <li>▪ Solvency (indirect effect)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Not significant</li> <li>▪ Significant increase</li> <li>▪ Significant increase</li> <li>▪ Significant increase (through productivity)</li> <li>▪ Not significant</li> <li>▪ Not significant</li> </ul>
US	Subramony, Krause, Norton & Burns (2008) 126 large publicly traded U.S. organisations over 3 years	<ul style="list-style-type: none"> <li>▪ Financial performance</li> <li>▪ Labour productivity</li> <li>▪ Customer satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>▪ Significant increase (via morale)</li> <li>▪ Significant increase (via morale)</li> <li>▪ Significant increase (via morale)</li> </ul>
Hong Kong	Chan, Shaffer & Snape (2004) 49 matched responses from multi industry sample	<ul style="list-style-type: none"> <li>▪ Perceived organisational performance</li> <li>▪ Perceived market performance</li> </ul>	<ul style="list-style-type: none"> <li>▪ Not significant</li> <li>▪ Not significant</li> </ul>
US	Collins & Smith (2006) 136 technology companies	Indirect relationship via social capital and exchange and combination of knowledge <ul style="list-style-type: none"> <li>▪ Sales growth</li> <li>▪ Revenue from new products/services</li> </ul>	<ul style="list-style-type: none"> <li>▪ Significant increase</li> <li>▪ Significant increase</li> </ul>

Country	Study	Performance indicators	Results
China	Bjorkman & Xiucheng (2002)  62 manufacturing Chinese-Western joint ventures and wholly owned subsidiaries	<ul style="list-style-type: none"> <li>▪ Subjective firm performance measure</li> </ul>	<ul style="list-style-type: none"> <li>▪ Significant increase</li> </ul>
US	Way (2002)  Survey of 446 small firms	<ul style="list-style-type: none"> <li>▪ Workforce turnover</li> <li>▪ Labour productivity</li> </ul>	<ul style="list-style-type: none"> <li>▪ Significant decreased</li> <li>▪ Not significant</li> </ul>
Greece	Katou & Budwar (2007)  Survey of 178 firms from 23 industries in the manufacturing sector	<ul style="list-style-type: none"> <li>▪ Effectiveness</li> <li>▪ Efficiency</li> <li>▪ Development</li> <li>▪ Satisfaction</li> <li>▪ Innovation</li> <li>▪ Quality</li> <li>▪ Overall organisational performance</li> </ul>	<ul style="list-style-type: none"> <li>▪ Significant increase (recruitment, training, promotion, H&amp;S)</li> <li>▪ Significant increase (recruitment, selection, training, incentives, H&amp;S)</li> <li>▪ Significant increase (recruitment, incentives, participation, H&amp;S)</li> <li>▪ Significant increase (recruitment, training, perf appraisal, compensation, promotion, incentives, H&amp;S)</li> <li>▪ Significant increase (recruitment, training, promotion, H&amp;S)</li> <li>▪ Significant increase (recruitment, compensation, incentives, involvement, H&amp;S)</li> <li>▪ Significant increase (recruitment, training, promotion, incentives, benefits, involvement, H&amp;S)</li> </ul>

Updated from Boselie (2002) and Heffernan , Flood & Liu, (2010)

## **APPENDIX B**

# **Summary Results of HPWS Studies and Employee Outcomes**



As discussed in chapter two, much of the HPWS research has been focused on the effects of firm level HPWS on organisational outcomes with few researchers testing effects of HPWS on employee outcomes. It is only recently that the importance of workers' perceptions and behaviour in understanding the relationship between HPWS and performance has emerged, what Guest (2011) calls the fifth phase in the development of HPWS theory and research. Table B.1 outlines some of the important findings which have considered employee perceptions of HPWS and examined whether it is feasible for HPWS to result in both higher performance for the organisation and enhanced workers' well-being (Peccei, 2004). The findings show some mixed results. Whilst, results are predominantly positive (e.g. Guest, 1999) there are some findings that suggest that HPWS may have negative consequences for employees through job strain (e.g. Ramsey et al. 2000), stress (Danford et al, 2004) and negative job to home spillover (White et al, 2003).

**Table B.1: Summary of key research findings for HPWS studies on employee outcomes**

Country	Study	Employee outcomes	Results
UK	Guest (1999) UK study cross-sectional telephone interview examining HPWS n = 1000	<ul style="list-style-type: none"> <li>• Psychological contract</li> <li>• Job satisfaction</li> <li>• Job satisfaction (mediated model)</li> <li>• Pressure at work</li> <li>• Employment security</li> <li>• Motivation</li> <li>• Motivation (mediated model)</li> </ul>	<ul style="list-style-type: none"> <li>• Significant increase</li> <li>• No change</li> <li>• Significant increase</li> <li>• Slight increase</li> <li>• Significant increase</li> <li>• No change</li> <li>• Significant increase</li> </ul>
USA	Appelbaum, Bailey, Berg & Kalleberg (2000) Study of companies in steel, apparel and medical electronics manufacturing N = 4374	<ul style="list-style-type: none"> <li>• Job satisfaction</li> <li>• Commitment</li> <li>• Stress</li> <li>• Wages</li> </ul>	<ul style="list-style-type: none"> <li>• Significant increase</li> <li>• Significant increase</li> <li>• Significant decrease</li> <li>• Significant increase</li> </ul>
UK	Ramsay, Scholarios & Harley (2000)	<i>HCM and HIM models</i> <ul style="list-style-type: none"> <li>• Extrinsic satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>• Significant increase</li> </ul>

Country	Study	Employee outcomes	Results
	<p>WERS98 data from both management and employees (N = 15920)</p> <p>HPWS scores broken down into SWP1, SWP2 and HPWP. Findings are reported for HPWP only</p>	<ul style="list-style-type: none"> <li>• Management relations</li> <li>• Job Discretion</li> <li>• Commitment</li> </ul> <p><i>Labour process model</i></p> <ul style="list-style-type: none"> <li>• Work intensification</li> <li>• Job Insecurity</li> <li>• Discretion</li> <li>• Job strain</li> </ul>	<ul style="list-style-type: none"> <li>• Significant increase</li> <li>• Significant increase</li> <li>• Significant increase</li> </ul> <ul style="list-style-type: none"> <li>• Significant increase</li> <li>• Significant decrease</li> <li>• Significant increase</li> <li>• Significant increase</li> </ul>
Canada	<p>Godard (2001b)</p> <p>Telephone survey of 508 employed Canadians investigating alternative work practices</p>	<ul style="list-style-type: none"> <li>• Belongingness</li> <li>• Stressfulness</li> </ul> <ul style="list-style-type: none"> <li>• Commitment</li> <li>• Job satisfaction</li> <li>• Empowerment</li> <li>• Workload</li> <li>• Fatigue</li> <li>• Citizenship</li> <li>• Task involvement</li> </ul>	<ul style="list-style-type: none"> <li>• Significant increase</li> <li>• Significant increase (for linear model only)</li> </ul> <ul style="list-style-type: none"> <li>• Significant increase</li> <li>• Significant increase</li> <li>• Significant increase</li> <li>• No change</li> <li>• No change</li> <li>• Significant increase</li> <li>• Significant increase</li> </ul>
Australia	<p>Harley (2002)</p> <p>1995 Australian Workplace Industrial Relations Survey (AWIRS95)</p>	<ul style="list-style-type: none"> <li>• Discretion</li> <li>• Job satisfaction</li> <li>• Attitude to management</li> <li>• Insecurity</li> <li>• Effort</li> <li>• Stress</li> <li>• Composite discretion</li> </ul>	<ul style="list-style-type: none"> <li>• No change</li> <li>• No change</li> <li>• No change</li> <li>• No change</li> <li>• No change</li> <li>• No change</li> <li>• No change</li> </ul>

Country	Study	Employee outcomes	Results
UK	White, Hill, McGovern, Mills & Smeaton (2003)  National Survey 'Working in Britain 1992' and 'Working in Britain 2000'	<ul style="list-style-type: none"> <li>• Negative job to home spillover</li> </ul>	<ul style="list-style-type: none"> <li>• Increased</li> </ul>
UK	Danford, Richardson, Stewart, Tailby & Upchurch (2004)  1 in-depth case study in multinational 'blue chip' aerospace manufacturing plant (high skill, high technology)  Qualitative interviews with 72 staff 604 questionnaires and company responses to WERS98 data	<ul style="list-style-type: none"> <li>• Stress</li> <li>• Work place decision making</li> <li>• Quality of working life</li> </ul>	<ul style="list-style-type: none"> <li>• Increased</li> <li>• Decreased</li> <li>• Decreased</li> </ul>
Australia	Harley, Allen & Sargent (2007)  Survey of two occupational groups - registered nurses and aged-care/personal care workers in Victoria  Survey administered to 3136 members of Australia Nursing Federation (Victoria), 1318 usable responses	<ul style="list-style-type: none"> <li>• Autonomy</li> <li>• Affective commitment</li> <li>• Job satisfaction</li> <li>• Psychological strain</li> <li>• Turnover intention</li> <li>• Work effort</li> </ul>	<ul style="list-style-type: none"> <li>• Significant increase</li> <li>• Significant increase</li> <li>• Significant increase</li> <li>• Significant decrease</li> <li>• Significant decrease</li> <li>• Significant decrease</li> </ul>
Finland	Kalmi & Kauhanen (2008)  Quality of Work national survey 4104 surveyed; focus of study on 493 full-time employees	<ul style="list-style-type: none"> <li>• Job intensity</li> <li>• Job influence</li> <li>• Job security</li> <li>• Wage</li> </ul>	<ul style="list-style-type: none"> <li>• No change</li> <li>• Significant increase</li> <li>• Significant increase</li> <li>• Significant increase</li> </ul>

Country	Study	Employee outcomes	Results
		<ul style="list-style-type: none"> <li>• Stress</li> <li>• Job satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>• Significant decrease</li> <li>• Significant increase</li> </ul>
USA	<p>Nishii, Lepak &amp; Schneider (2008)</p> <p>362 departments across 95 stores of a US supermarket chain Data on HPWS collected from 4,500 employees and 1100 department managers</p>	<ul style="list-style-type: none"> <li>• HR attributions impact on employee attitudes (affective commitment &amp; satisfaction combined) <ul style="list-style-type: none"> <li>i. Quality and employee enhancement</li> <li>ii. Cost and employee exploitation</li> <li>iii. Union compliance</li> </ul> </li> <li>• Impact of employee attitudes on organisational citizenship behaviours</li> </ul>	<ul style="list-style-type: none"> <li>• Significant increase</li> <li>• Significant decrease</li> <li>• No change</li> <li>• Significant increase</li> </ul>
New Zealand	<p>Macky &amp; Boxall (2008)</p> <p>Representative national survey Computer assisted telephone interview with 775 randomly selected NZ employees</p>	<ul style="list-style-type: none"> <li>• Job satisfaction</li> <li>• Stress</li> <li>• Fatigue</li> <li>• Work life imbalance</li> </ul>	<ul style="list-style-type: none"> <li>• Significant increase</li> <li>• Slight decrease</li> <li>• No change</li> <li>• No change</li> </ul>
Japan	<p>Liao, Toya, Lepak &amp; Hong (2009)</p> <p>Survey of branch management and employees across 92 branches of a Japanese national bank</p>	<ul style="list-style-type: none"> <li>• Employee knowledge skills and abilities</li> <li>• Employee motivation/psychological empowerment</li> <li>• Employee perceived organisational support (POS)</li> </ul>	<ul style="list-style-type: none"> <li>• Significant increase</li> <li>• Significant increase</li> <li>• Significant increase</li> </ul>
USA	<p>Butts, Vandenberg, DeJoy, Schaffer &amp; Wilson (2009)</p> <p>Annual survey of national retailer in US. Survey administered to 21 retail centres. 1723</p>	<p>Psychological empowerment mediates relationship between HPWS and:</p> <ul style="list-style-type: none"> <li>• Job Satisfaction</li> <li>• Organisational commitment</li> </ul>	<ul style="list-style-type: none"> <li>• Significant increase</li> <li>• Significant increase</li> </ul>

Country	Study	Employee outcomes	Results
	usable responses	<ul style="list-style-type: none"> <li>• Job performance</li> <li>• Job stress</li> </ul>	<ul style="list-style-type: none"> <li>• Significant increase</li> <li>• Significant decrease</li> </ul>
England and Malaysia	Gould-Williams & Mohamed (2010) Survey of local government workers in England and Malaysia	<p>Analysed impact of HPWS practices (selection, training, teamworking, appraisals, communication, involvement) on:</p> <ul style="list-style-type: none"> <li>• Motivation</li> <li>• Job satisfaction</li> <li>• Organisational citizenship behaviours</li> <li>• Stress</li> <li>• Quit intentions</li> </ul>	<ul style="list-style-type: none"> <li>• Significant increase (teamwork, communication)</li> <li>• Significant increase (selection, training and communication)</li> <li>• Significant increase (communication) but negative impact for appraisals)</li> <li>• Significant decrease (team working)</li> <li>• Significant decrease (training and team working). Significant increase (selection)</li> </ul>
UK	Snape & Redman (2010) Multi-level study of North East England. Total of 28 workplaces and 519 employees	<p>Organisational citizenship behaviour (mediated by perceived job influence):</p> <ul style="list-style-type: none"> <li>• Compliance.</li> <li>• Altruism.</li> <li>• In-role behaviour.</li> </ul> <p>Organisational citizenship behaviour (mediated by perceived organisational support)</p> <ul style="list-style-type: none"> <li>• Compliance.</li> <li>• Altruism.</li> <li>• In-role behaviour.</li> </ul>	<ul style="list-style-type: none"> <li>• Significant increase</li> <li>• Significant increase</li> <li>• No significant</li> <li>• No significant</li> <li>• Significant increase</li> <li>• No significant</li> </ul>

Country	Study	Employee outcomes	Results
China	Wang, Yi, Lawler & Zhang (2011)  633 employees surveyed across four organisations in two in China	<ul style="list-style-type: none"> <li>• Organisational commitment</li> <li>• Reduced work withdrawal behaviours</li> <li>• Turnover intentions.</li> </ul>	<ul style="list-style-type: none"> <li>• Significant increase</li> <li>• Significant decrease (via commitment)</li> <li>• Significant decrease (via commitment)</li> </ul>
UK	Wood & de Menezes (2011)  Workplace Employment Relations Survey of 2004 (WERS2004) with a total of 22,451 employees	<ul style="list-style-type: none"> <li>• Job satisfaction</li> <li>• Anxiety–Contentment scale</li> </ul>	<ul style="list-style-type: none"> <li>• Not significant</li> <li>• Significant decrease (contentment)</li> </ul>
Europe	Searle, Den Hartog, Weibel, Gillespie, Six, Hatzakis and Skinner (2011)  Survey of managers and professional employees working at different organisations in Europe	<ul style="list-style-type: none"> <li>• Trust in the employer</li> </ul>	<ul style="list-style-type: none"> <li>• Significant increase</li> </ul>
Canada	Mendelson, Turner & Barling (2011)  317 employees from five public and private organisations	<ul style="list-style-type: none"> <li>• Job satisfaction</li> <li>• Affective commitment</li> <li>• Continuance commitment</li> </ul>	<ul style="list-style-type: none"> <li>• Significant increase</li> <li>• Significant increase</li> <li>• Significant decrease</li> </ul>

Country	Study	Employee outcomes	Results
Canada	Zacharatos, Barling & Iverson (2005)  Survey of 189 front-line employees in 2 organisations.	<ul style="list-style-type: none"> <li>• Personal-safety orientation ( measured through safety knowledge, safety motivation, safety compliance, and safety initiative)</li> <li>• Safety incidents (i.e., injuries requiring first aid and near misses).</li> </ul>	<ul style="list-style-type: none"> <li>• Significant increase (mediated safety climate)</li> <li>▪ Significant decrease (mediated by trust in management and safety climate)</li> </ul>

Updated from Heffernan et al. (2010)

## **APPENDIX C**

### **Examples of organisational justice research in the high performance work system domain**



Table C.1 outlines previous research examining organisational justice and individual HR practices such as recruitment and selection, performance appraisals, performance related pay and teamwork.

**Table C.1: Examples of organisational justice research in the HPWS domain**

<b>HPWS practice</b>	<b>Author</b>	<b>Method</b>	<b>Key Findings</b>
<b>Recruitment &amp; Selection</b>	Gilliland (1994)	Applicants distributive and procedural justice perceptions of selection process 260 undergraduates participated in experiment	Job relatedness influenced perceived distributive fairness for rejected but not hired applicants Job relatedness influenced performance and interacted with selection decision on perceptions of distributive fairness and self-efficacy Explanations influenced recommendations of rejected applicants
	Lazar, Zinger & Lachterman, (2007)	Perceived procedural justice (structural, social and content job-relatedness) of selection procedures in pre-conscription military selection procedures 506 survey respondents across two waves of data collection in Israel	Three justice measures (structural, social and content job-relatedness) were statistically significant in predicting overall procedural justice, and job attractiveness and recommendation intention. Job relatedness found to be most significant predictor of all outcomes Social selection justice had a significant contribution to all outcome measures – strongest for job attractiveness and overall selection procedural justice
	Ployart, Ryan & Bennett (1999)	Effects of explanation features on participants reactions toward a selection decision. Looked at interactive effects of explanation features (information and sensitivity) and selection or rejection decisions on the reactions (i.e. process fairness, reports of	Study 1: Procedural information was significant in enhancing fairness and organisational perceptions while minimising the negative perceptions reported by participants who were role-playing rejected applicants Study 2: Different types of procedural information produced different effects for different dependent measures (process fairness, self perceptions and

HPWS practice	Author	Method	Key Findings
		self-perceptions and organisational perceptions) Study 1: 156 undergraduate US students participated in experiment Study 2: survey 35 respondents who applied for graduate school in US university	organisational perceptions) but also the nature of the decision (i.e. selected or rejected) influenced the direction of the effects
	Steiner & Gilliland (1996)	Examines fairness reactions to different selection practices in France and US 259 college students from France and US rated favourability of 10 selection procedures and indicated the bases for these reactions on a number of procedural dimensions	Interviews, work sample tests and resumes highest rated selection techniques Procedural dimensions less predictive of fairness reactions among French respondents than US respondents
<b>Performance appraisal</b>	Greenberg (1986)	217 middle managers from 3 industrial groupings (cable TV firm, wholesale pharmaceutical distribution firm and credit unions) completed an open ended questionnaire describing determinants of fair or unfair performance appraisals	Procedural factors identified included soliciting input prior to evaluation (most important), two way communication, ability to challenge, rater familiarity with ratees work and consistent applications of standards Distributive factors included receipt of training based on performance achieved and recommendation for salary/promotion based on rating
	Cawley, Keeping & Levy (1998)	Meta analysis of 27 studies containing 32 individual samples of studies examining participation in performance appraisal process and various employee reactions	Employee participation positively related to employee satisfaction with the appraisal session, the appraisal system, perceived utility of the appraisal, motivation of employees to improve performance and perceived fairness of the system Instrumental participation and value expressive

HPWS practice	Author	Method	Key Findings
			participation Value expressive participation strongly related to reactions than instrumental participation
	Kavanagh, Benson & Brown (2007)	Perceived fairness of PA experience across a number of process factors including the role of employee participation, attitudes towards supervisor and knowledge of PA system Survey of 2377 public sector employees in Australia	<u>Employee participation</u> High levels of two way communication and involvement in the setting of objectives in the PA process positively related to higher levels of PA fairness  <u>Supervisor</u> High levels of supervisor neutrality related to higher levels of PA fairness  <u>Knowledge of PA system</u> Higher levels of clarify of and understanding of PA system related to higher levels of PA fairness Higher levels of acceptance of objectives under the PA system related to higher levels of PA fairness
	Erdogan, Kraimer & Liden (2001)	Examination of system and rater procedural justice in performance appraisal context Survey of employees from a private commercial bank in Turkey. 93 usable surveys returned	Organisational level positively related to system procedural justice Rater-ratee demographic similarity not related to rater procedural justice Knowledge of appraisal criteria, validity of appraisal criteria and fair hearing were positively related to perceptions of system procedural justice Fair hearing and performance feedback were positively related to perceptions of rater procedural justice
	Korsgaard & Roberson (1995)	Examined instrumental and non instrument voice in performance appraisal context	Distributive justice and voice components related to satisfaction with appraisal review and trust in manager Effect of voice on trust and satisfaction with appraisal

HPWS practice	Author	Method	Key Findings
		168 management level employees in three divisions of a nationwide retail organisation	does not depend upon perceptions of distributive justice Both instrumental and non instrumental voice uniquely related to satisfaction with appraisal Perceptions of instrumental voice not significantly related to trust independently of the simple opportunity to voice ones opinion (non instrumental voice)
	Taylor, Masterson, Renard & Tracy (1998)	Examined managers reactions to the implementation of due process or procedurally just performance management system (DPPM) Study of large public US university 106 managers (study 1) and experiment with staff pulled from a state government organisations personnel file	Across study 1 and 2, managers using a procedurally just performance mgt system (fair hearing, adequate notice and judgement based on evidence) reported greater satisfaction with the system, improved working relationships with employers and less distortion of appraisals. DPPM managers who perceived their most recent performance evaluations to be unfair reported more favourable working relationships with their employees and less tendency to distort appraisal results
<b>Succession planning/promotions</b>	Bagdadli, Roberson & Paoletti (2006)	Examine relationships between promotion decisions and employee reactions to such decisions Survey of 156 managers in Italian MNC	Perceptions of procedural justice in promotion processes completely mediate the promotion-commitment relationship Procedural justice did not mediate the relationship between promotion and intention to leave the organisation Indirect effect of procedural justice on intention to leave when mediated by organisational commitment.
	Lemons & Jones (2001)	290 volunteer students who were full time working adults whilst also attending school	After controlling for age, tenure, gender and employee position it was found that employees who perceive promotion decisions as procedurally fair experience higher levels of organisational commitment than those who perceive them as procedurally unfair As tenure increased procedural justice in promotions decisions decreased

<b>HPWS practice</b>	<b>Author</b>	<b>Method</b>	<b>Key Findings</b>
<b>Career management</b>	Crawshaw (2006)	Employee perceptions of fairness and organisational career management (OCM) practices in a large UK financial retailer 392 questionnaires completed followed by 20 semi structured interviews	Interpersonal justice regarding line manager strongly influenced fairness judgements regarding career management Procedural justice (particularly bias suppression, voice, consistency and ethicality) emerged as key fairness criteria for OCM practices Informational justice focused on issues such as openness and guidance/information emerged Equity and need emerges as key distributive justice criteria in that career development opportunities should be equitably distributed and meet their needs
<b>High potential identification/talent management</b>	Slan-Jerusalim & Hausdorf (2007)	Determine the impact of high potential identification practise on justice outcomes Survey administered to 655 attendees at a leadership conference in Canada. 373 responses	Higher levels of procedural justice when high potential identification programs include employee input (voice), open communication (adequate information), and formal program evaluation (bias suppression, consistently applied and correctable) No support for hypothesis that higher levels of distributive justice found when the definition of high potential in the employees company is perceptive to be based primarily on organisationally-defined leadership criteria and when employee has been identified as high potential
<b>Reward and compensation</b>	Greenberg (2003)  Pay for performance	Justice perceptions of pay for performance plan. 276 sales representatives of a large household good company across US. Previously worked under a salary only pay system	Pay for performance systems heightened beliefs about fairness of the organisation but lowered beliefs about fairness of individual managers Perceptions of distributive justice based on equity were significantly linked to pay performance Distributive justice perceptions of PRP had a significant impact on performance

HPWS practice	Author	Method	Key Findings
Pay setting process	Andersson-Stråberg, Sverke & Hellgre (2007)	Investigate if distributive, procedural, interpersonal and informational justice contributes to the prediction of employee work attitudes and behaviour in pay setting process. Study of 1190 registered nurses in Sweden	Pay related justice determined by work climate and pay related factors most particularly by feedback, knowledge of pay criteria/explicit pay criteria and participation (positive relationship) and workload (negative relationship) Interpersonal justice perceptions of pay setting process associated with higher job satisfaction and less intention to leave Distributive justice perceptions of the pay setting process strongly associated with pay satisfaction
	McFarlin & Sweeney (1992)	Examined justice in pay context Midwestern US bank. 675 surveys completed	Both procedural and distributive justice were significant predictors of organisational commitment, subordinates evaluation of supervisor, pay level satisfaction and job satisfaction Procedural justice explained more variance in organisational outcomes (organisational commitment and evaluation of supervisor) Distributive justice explained more variance in personal outcomes (pay satisfaction and job satisfaction, turnover intentions)
Pay freeze	Schaubroeck, May & Brown (1994)	Employees perceptions and consequences of pay freeze Field experience involving 173 salaried employees	Presence of an explanation for a pay freeze mitigated negative responses (e.g. Turnover job dissatisfaction) by those affected by freeze
Pay for performance	Chang & Hahn (2006)	Effect of pay for performance on distributive justice and the moderating effect of commitment performance appraisal. 656	No significant relationship between pay for performance and distributive justice Commitment performance appraisal mediates the relationship between pay for performance and distributive

HPWS practice	Author	Method	Key Findings
		employees responses collected from 28 companies in Korea	justice positively
Skills based pay	Lee, Law & Bobko (1999)	Relationship between skills based pay, fairness perceptions and employee reactions to the pay system Longitudinal study of SBP in a consumer products company. Time 1: 660 employee responses. Time 2: 598 employee responses	Fairness perceptions partially mediated relationship between two skills based pay (SBP) characteristics (training and understanding) and pay satisfaction and SBP benefits. The third SBP characteristic, advancement, was unrelated to the outcomes studies
Pay level	Tekleab, Bartol & Liu (2005)	Relationship between actual pay and distributive and procedural justice. Study 1: Survey of 288 managers from a professional and support services firm in US Study 2: 148 part time MBA students in mid Atlantic region of US	Distributive justice perceptions of pay positively related to (a) pay level satisfaction and (b) pay raise satisfaction with the relationship between distributive justice and pay level satisfaction being stronger for both studies Procedural justice perceptions of pay positively related to (a) pay level satisfaction and (b) pay raise satisfaction with the relationship being stronger for pay raise satisfaction in study 1. No link between procedural justice and pay level satisfaction in study 2 Procedural justice has a moderating effect on the relationship between distributive justice and pay raise satisfaction but not pay level satisfaction in study 2. No effect found in study 1.
	Welbourne (1998)	The role of distributive and procedural justice in predicting gainsharing satisfaction  Study of two firms (one high tech and one consumer products company) in US who implemented gainsharing at the same time. One	Distributive and procedural justice of gainsharing impacted gainsharing satisfaction and incentive satisfaction in both firms Procedural justice of gainsharing was more important than distributive justice in predicating gainsharing satisfaction particularly when outcomes were low

HPWS practice	Author	Method	Key Findings
		organisation has high pay out the other experienced low payouts. 221 employee questionnaires completed	
	Dulebohn & Martocchio (1998)	Fairness of team bonuses in non-union chemical plant	Perceptions of distributive and procedural justice related to employees understanding of the pay system, belief in the pay systems effectiveness and organisational commitment Organisational commitment more strongly associated by distributive rather than procedural justice
	Cox (2003) Variable pay	Fairness of variable pay systems in small and medium sized enterprises Study of four organisations in UK using qualitative and quantitative research	Distributive justice significant re. levels of basic pay when variable pay premia are small Procedural justice, particularly perceptions of prior consultation and voice, were significant. Procedural and interactional justice associated with positive employee satisfaction outcomes such as job enjoyment, willingness to recommend the employer and attachment to job. Distributive justice did not however impact employee satisfaction outcomes
<b>Grievance procedures</b>	Shapiro & Brett (1993)	Study of judgement of procedural justice in mediation and arbitration Examination of filed grievances of 158 coal miners. 69 miners had their grievances mediated. 89 had their grievances arbitrated	Instrumental, non instrumental and enactment processes underlie judgements of procedural justice No instrumental and enactment processes significantly influenced disputant judgements of procedural justice irrespective of the outcome (win, lose or compromise) Disputants perceived greater procedural justice in mediation than in arbitration reporting greater outcome ad process control. Therefore voice or participation occurred not just in presentation of their side of grievance but also in development of an agreement



HPWS practice	Author	Method	Key Findings
<b>Dispute resolution/grievance handling/ Workplace mediation</b>	Nabatchi, Blomgren-Bingham & Good (2007)	Examined structure and dimensionality of organisational justice in a workplace mediation programme REDRESS® in United States Postal Service (UPS) Survey given to all participants at close of every REDRESS® mediation session 23390 employee surveys and 24635 supervisor surveys returned	Found support for a six factor model of justice Procedural aspects of the mediation process were significant for participants to be satisfied with the outcome. The fairness of the procedure itself had a stronger impact on perceptions of outcome than the fairness of the neutral decision maker who enacts the procedure The interactions between disputants (interpersonal justice), not just with the mediator, can contribute to enhanced perceptions of overall organisational justice
<b>Job loss/job security</b>	Brockner, Konovsky, Cooper-Schneider, Folger, Martin & Bies (1994)	Layoff ‘victims’ and ‘survivors’ perceptions of procedural elements of layoff event Study 1 consisted of a survey of 218 first time registrants for unemployment benefit Study 2 surveys 150 full time employees of a financial services firm that had recently laid staff off Study 3 considered 147 employees scheduled to be laid off from a large unionised manufacturing firm	Low procedural justice perceptions for both victims and survivors (as assessed by advance notice and interactional justice) increased adverse reaction to layoffs in terms of outcome negativity and individual reactions
	Kausto, Elo, Lipponen & Elovainio (2005)	Tested the moderating effect of job insecurity in the relationship between procedural and interactional justice and employee wellbeing. Survey of all employees in technical sector of a Finnish	Employees who perceived the organisation as procedurally and interactionally unfair and who experienced job insecurity were at a higher risk of emotional exhaustion and stress symptoms. The moderating effect of job insecurity in the relationship between interactional justice and employee well being was gender specific

<b>HPWS practice</b>	<b>Author</b>	<b>Method</b>	<b>Key Findings</b>
		municipality	
	Grunberg, Anderson-Connolly & Greenberg (2000)	Examined effects of layoffs on surviving employees Survey of 1900 employees of large US company	Negative association between perceptions of layoff unfairness and organisational commitment No relationship found between perceptions of fairness layoff and performance measures except when mediated by commitment
	Kernan & Hanges (2002)	Examined survivor reactions to reorganisation incorporating a number of antecedents and outcomes of procedural, interpersonal, and informational justice Study of R&D facility of a large pharmaceutical MNC in US undergoing reorganisation. 183 surveys returned in time 1 194 returned in time 2	Employee input, victim support, implementation, and communication quality predicted interpersonal fairness Implementation and communication quality were associated with informational fairness Only employee input found to predict procedural justice. Procedural justice was strongly related to all 4 outcome variables (organisational commitment, job satisfaction, management trust and turnover intentions) Interpersonal and informational justice added unique variance to the prediction of trust in management
<b>Organisational change</b>	Saunders & Thornhill (2003)	Study of employee trust as a reaction to management of change using organisational justice constructs Case study of UK public sector organisation. Data obtained from interviews with 28 employees	Employees perceptions of procedural justice important in determining trust Highlights importance of fairness of interpersonal treatment in enabling trust Two way communication and caring attitudes and roles by socially sensitive and skilled line managers particularly important.
<b>Employee dismissals</b>	Darcy (2005)	Explored (a) fairness perceptions of employees in the context of employee dismissals in Ireland (b) Examined what factors caused dismissed employees to decide to	Examined the following variables: formal quality of decision making (FQDM), informal quality of decision making (IQDM) informal quality of treatment (IQT) and demographic and human capital characteristics examined (e.g. legal awareness, gender, age, union membership,

HPWS practice	Author	Method	Key Findings
		initiate claiming behaviour/file a case for unfair dismissal	education). (a) FQDM and IQT significantly predicted fairness perceptions among dismissed employees Micro variable of FQDM (opportunity to amend undesirable behaviour) was particularly significant in perceiving a dismissal as fair/unfair. Micro variables of IQT (absence of adequate explanation and perceived treatment at time of dismissal) were significant in explaining perceptions of fair dismissal (b) FQDM, IQT, IQDM and legal awareness had strong predictive power in relation to claiming behaviour
<b>Self managing work teams</b>	Kirkman, Shapiro, Novelli Jr and Brett (1996)	Examined employee concerns in implementation of self-managing work teams at two large Fortune 500 organisations. One organisation was a service division of a large computer manufacturing and serving organisation. The second was in textile manufacturing. 222 questionnaires returned from IT company and 254 from textile company	Employee primarily concerned with the fairness of their outcomes (distributive justice) as a result of the move to SMWT particularly regarding group based pay (71% of total fairness concerns) Procedural justice less of a concern (at just 9%). Voice in decision making on SMWT , shifting criteria and new leadership with no knowledge of department operations referred to Interactional justice made up one fifth of all justice related concerns regarding implementation of SMWT (at 20%) Issues identified including losing relationship with previous manager, dominant team members, sincerity of top management in granting real autonomy and power sharing
	Shapiro and Kirkman (1999)	Reactions of 492 line level employees from two large Fortune 500 organisations to implementation of self	Employees' anticipation of distributive injustice regarding SMWT changes significantly influenced employee resistance, organisational commitment and turnover intentions. Had no significant effect on OCB

<b>HPWS practice</b>	<b>Author</b>	<b>Method</b>	<b>Key Findings</b>
		management work teams – focus on anticipatory injustice	Employees are more likely to anticipate distributive injustice when they are concerned about losing their jobs Procedural justice moderates the negative reactions associated with anticipated distributive injustice for employee resistance and organisational commitment (not for OCB or turnover intentions)
<b>Work teams</b>	Byrne (2001)	177-supervisor-subordinate dyads from three organisations Examined organisational justice in relation to perceived support from supervisor and co-workers, workgroup identification, commitment, satisfaction and turnover	Individuals perceived fairness emanating from their co-workers as well as their supervisor Interactional justice from co-workers positively predicted satisfaction with co-worker indirectly through perceived co-worker support Co-worker support fully mediated the relationship between the interaction of co-worker commitment with co-worker interactional justice and satisfaction in co-worker OCB predicted by supervisory distributive and interactional justice when moderated by workgroup identification with supervisor Co-worker and supervisory distributive and procedural justice inversely predicted turnover intentions
<b>Virtual teams</b>	Hakonen & Lipponen (2008)	Questionnaire sent to 39 virtual teams in 13 organisations in Finland 293 usable questionnaires returned	Based on uncertainty management model of procedural justice found that people are more sensitive to fairness perceptions (such as fairness of decision making) when the frequency of face-to-face meetings is low and when geographical dispersion is high.
<b>Joint consultative committees</b>	Dietz & Fortin (2007)	Conceptual paper only Trust and justice are used to analyse the processes involved in initiating, designing, setting up	Pre-voice history will impact both parties expectations – a positive pre voice history of trust and fairness judgements will have a positive effect on parties willingness to collaborate

HPWS practice	Author	Method	Key Findings
		and maintaining a new joint consultative committee (JCC) such as a works council or staff forum	Informational justice will part determine the perceived fairness of JCC outcomes JCCs effectiveness dependent upon the quality of interpersonal engagement among its member participants. Representativeness, no bias, conformity to morality, existence of recourse mechanisms, consistency and reliance on good information will impact procedural justice in context of JCC e.g. elections free from bias, consistency of procedures across people and time Distributive justice in a JCC context could come from equity perceptions relative to consultation outcomes in other organisations or pre-JCC outcomes
<b>Electronic surveillance</b>	Kidwell & Bennett (1994)	Employees perceptions of procedures of electronic control Questionnaires	Procedural fairness linked to attitudes about ECS monitoring and job satisfaction among public employees
	Stanton (2000)	Examination of employee attitudes to electronic performance monitoring from an organisational justice perspective Survey of 301 employees across various organisational settings	Higher monitoring consistency and beliefs about supervisor knowledge of performance predicted greater perceptions of procedural and interactional fairness Greater control over time and setting of monitoring predicted higher perceptions of fairness Provision of adequate justification predicted higher perceptions of interactional justice
<b>Labour relations</b>	Skarlicki & Latham (1996)	Canada based quasi experiment with 11 union leaders undergoing 3 months of training in skills required to implement principles of organisational justice and 9 who were in the control group. 152 union member respondents to	Training that increases the skills of leaders in applying principles of organisational justice increased citizenship behaviour on the part of an organisations members Perceptions of fairness partially mediated OCBO (citizenship behaviour supporting the union as an organisation) but not OCBI (behaviour supporting union brothers and sisters) although both OCB dimensions were

<b>HPWS practice</b>	<b>Author</b>	<b>Method</b>	<b>Key Findings</b>
		survey	significantly higher for training group than control group
<b>Strategy implementation</b>	Kim & Mauborgne (1993)	Longitudinal study of subsidiary top managers' justice perceptions regarding head office strategic decisions across 19 organisations. 119 subsidiary top manager responses from stage one and two of study	Procedural justice and attitudes of commitment, trust in head office management and outcome satisfaction positively effects subsidiary top management compliance with multinational corporate decisions All of these effects (except outcome satisfaction effect) were stronger in subsidiaries with global industries than in subsidiaries with multi domestic industries
<b>Diversity management</b>	Leck, Saunders & Charbonneau (1996)	Study of 1412 employees in a large printing and publishing Canadian company  Examined fairness perceptions of affirmative action programs	Employees were more likely to express positive behavioural intentions when they: (1) perceived that notions of equity, equality and need were respected (distributive justice); (2) perceived that employment related decisions were consistently applied (procedural justice); and, (3) did not resist integration (attitude).
<b>Compensation claims process</b>	Gleason & Roberts (1993)	Study examining differences between union and non-union workers' perceptions of the fairness of the workers' compensation claims process  Study of Michigan workers injured on the job taking compensation claims	Union 'voice' has little impact on the perceived fairness of the claims process The main contribution of unions is the provision of a complaint mechanism.

## **APPENDIX D**

### **Summary results of organisational justice studies on employee outcomes**

**Table D.1: Summary results of organisational justice studies on employee outcomes**

<b>Outcomes</b>	<b>Author</b>	<b>Study</b>	<b>Key Findings</b>
<b>Performance Commitment OCB</b>	Masterson, Lewis, Goldman & Taylor (2000)	Influence of distributive, procedural and interactional justice on university clerical and staff employees as mediated by POS and LMX	<ul style="list-style-type: none"> <li>• No significant relationship between procedural justice and performance</li> <li>• Positive correlation between interactional justice and performance</li> <li>• Structural elements of procedural justice found to predict commitment</li> <li>• LMX mediates relationship between interactional justice and supervisor OCB</li> <li>• POS mediates relationship between procedural justice and organisation OCB</li> </ul>
<b>Commitment Job satisfaction Evaluation of supervisor</b>	McFarlin & Sweeney (1992)	Examined impact of distributive and procedural fairness in pay setting on employee outcomes. Survey of 675 banking employees	<ul style="list-style-type: none"> <li>• Distributive justice was found to be a more important predictor pay satisfaction and job satisfaction</li> <li>• Procedural justice more predictive of organisational commitment and subordinate's evaluation of supervisor.</li> </ul>
<b>Employee performance</b>	Robbins, Summers, Miller & Hendrix (2000)	Textile products company Two measures of employee performance: supervisor rating and employee self reports of group performance)	<ul style="list-style-type: none"> <li>• Only interactional justice found to impact both supervisor ratings and employee perceptions of work group performance.</li> </ul>
<b>Stress and absenteeism</b>	Elovainio, Kivimäki & Vahtera (2002)	Assess procedural and interactional justice of over 4000 hospital employees	<ul style="list-style-type: none"> <li>• Interactional injustice predicted self reported health, psychiatric morbidity and absenteeism</li> <li>• Procedural justice predicted absenteeism</li> </ul>
<b>Burnout</b>	Moliner, Martínez-Tur, Peiró, Ramos & Cropanzano (2005)	Survey of 317 contract employees of 59 Spanish hotels.	<ul style="list-style-type: none"> <li>• Procedural and interactional injustice associated with burnout (operationalised as emotional exhaustion and cynicism)</li> <li>• Procedural and interactional justice associated with</li> </ul>



<b>Outcomes</b>	<b>Author</b>	<b>Study</b>	<b>Key Findings</b>
			<p>engagement which predicted extra role service behaviours.</p> <ul style="list-style-type: none"> <li>• No relationship between burnout and extra role service behaviours</li> </ul>
<b>Organisational citizenship behaviour</b>	Piccolo, Bardes, Mayer & Judge (2008)	Assess interaction between perceptions of procedural and interactional justice with leader member exchange. Survey of 283 individuals from a broad cross section of job types	<ul style="list-style-type: none"> <li>• Procedural and interactional justice positively related to felt obligation and OCB and negatively related to withdrawal intentions</li> <li>• Interactional justice encourages OCB and reduced withdrawal behaviours independent of perceived level of LMX</li> <li>• Procedural justice effects on felt obligation and OCB had no impact when LMX was low</li> </ul>
<b>Turnover intentions</b> <b>Job satisfaction</b>	Dailey & Kirk (1992)	Relationship between justice, job satisfaction and intent to turnover	<ul style="list-style-type: none"> <li>• As perceptions of interpersonal justice and informational justice decreased, employees were more likely to consider leaving the organisation</li> <li>• Justice perceptions stronger predictor of turnover intentions than job satisfaction</li> </ul>
<b>Turnover intentions</b>	Konovsky & Cropanzano (1991)	Examined justice and turnover intentions in drug testing context	<ul style="list-style-type: none"> <li>• Procedural and informational justice strongly related to turnover intentions</li> <li>• Distributive justice strongly related to turnover intentions</li> </ul>
<b>Turnover intentions;</b> <b>General satisfaction;</b> <b>Organisational commitment</b>	Schaubroeck, May & Brown (1994)	Randomized field experiment looking at organisational justice and pay freezes involving 173 salaried employees in manufacturing setting	<ul style="list-style-type: none"> <li>• Informational justice (explanations) weakens the impact of economic hardship on employee reactions (turnover intentions, general satisfaction, commitment)</li> </ul>
<b>Absenteeism</b>	Lam, Schaubroeck & Aryee (2002)	Examined distributive and procedural justice link to absenteeism using	<ul style="list-style-type: none"> <li>• Power distance displayed a moderating effect on distributive</li> </ul>

Outcomes	Author	Study	Key Findings
		Hofstede's cultural dimensions as a moderator	and procedural justice and absenteeism. A person with a low power distance orientation was less likely to accept justice violations and were more likely to respond by being absent from work
<b>Absenteeism</b>	Gellatly (1995)	Examined effect of various individual and group level factors on absenteeism Study of 166 nursing and food service employees in a hospital	<ul style="list-style-type: none"> <li>• Interactional justice has a negative association with absenteeism. Where people perceived supervisors as interactionally unfair, more likely to be absent from work.</li> </ul>
<b>Deviant behaviours</b>	Aquino, Lewis, Bradfield & Jackson (1999)	Stratified random sample of government employees and employees from private manufacturing firm. Distinguished deviance between organisational deviance (e.g. ignoring instructions, arriving late) and interpersonal deviance (acts directed at individual at work e.g. gossip, obscene comments)	<ul style="list-style-type: none"> <li>• Distributive justice associated with interpersonal deviance</li> <li>• Interactional justice associated with both interpersonal and organisational deviance</li> <li>• No significant relationship found between procedural justice and organisational justice</li> </ul>
<b>Organisational retaliatory behaviours (ORB)</b>	Skarlicki & Folger (1997)	Study of first line employees in a manufacturing plant	<ul style="list-style-type: none"> <li>• Three way interaction between procedural, distributive and interactional justice predicted ORB where fair procedure mitigated the effects of distributive and interactional injustice</li> </ul>
<b>Minor counter-productive behaviours</b>	Lim (2002)	Online study in Singapore investigating the relationship between organisational justice and cyber loafing	<ul style="list-style-type: none"> <li>• Negative perceptions of procedural, distributive and interactional justice associated with increased cyber loafing (non work related email and internet usage)</li> </ul>
<b>Theft</b>	Greenberg (1993)	Study of underpayment and theft in a sample of undergraduate students	<ul style="list-style-type: none"> <li>• In reaction to perceptions of distributive injustice, stealing increased</li> <li>• This was moderated by the validity of information given and</li> </ul>

Outcomes	Author	Study	Key Findings
			the degree of interpersonal sensitivity shown
<b>Theft</b>	Greenberg (1990)	Employee theft rates were measured in manufacturing plants during a period in which pay was temporarily reduced by 15%. Control group included who experience not pay reduction	<ul style="list-style-type: none"> <li>• Groups whose pay was reduced had significantly higher theft rates highlighting effects of distributive injustice.</li> <li>• Feelings of inequity and theft rates were reduced when the basis for the pay cuts was thoroughly and sensitively explained to employees (informational justice)</li> </ul>
<b>Sabotage behaviour</b>	Ambrose, Seabright and Schminke (2002)	Organisational injustice and sabotage  132 first person accounts of sabotage activities reported in the book Sabotage in the American Workplace	<ul style="list-style-type: none"> <li>• Perceived injustice most frequent case of sabotage behaviour</li> <li>• For distributive injustice, sabotage was used to restore equity</li> <li>• For interactional injustice, sabotage was used in retaliation</li> <li>• Additive effects of distributive, procedural and interactional injustice on the severity of sabotage.</li> </ul>
<b>Violence</b>	Greenberg and Barling (1999)	Study of predictors of employee aggression against co-workers, subordinates and supervisors. Survey of 136 make full time employees at a Canadian university	<ul style="list-style-type: none"> <li>• Procedural justice interacted with amount of alcohol consumed in predicting both aggression against a co-worker and aggression against a subordinate.</li> <li>• Both job security and procedural justice interacted with history of aggression in predicting aggression against a subordinate</li> </ul>

## **APPENDIX E**

# **High Performance Work Systems in Ireland Survey**



National University of Ireland, Galway  
*Ollscoil na hÉireann, Gaillimh*

# High Performance Work Systems in Ireland Survey

A National University of Ireland, Galway  
Research Project



**CISC** Centre for Innovation &  
Structural Change



## People, Innovation and Management Survey

### **Objectives**

The purpose of the High Performance Work Systems in Ireland Survey is to obtain **objective information** on the extent to which certain people management policies and practices are being utilized in Irish organisations.

### **Confidentiality**

This is a strictly confidential questionnaire and your answers will of course be treated as such. Your organisation will **not be identified** by name or any other recognizable indicator in the summarized results. Information from the survey will be compiled into overall research reports consisting of **aggregated results** from many companies; any publications will be in aggregate form only.

### **Survey Guidance**

Could you please respond to each question by **circling the appropriate response**, ticking the relevant box, or writing your answer in the space provided. Please try to answer the questions as honestly and candidly as possible. This is NOT a test. There are no right or wrong answers. In order to help us classify your responses the survey is divided into the following six sections:

- **Setting the Context** - personal and professional classification items; organisation industry and ownership information
- **People Management & Strategy**- your organisation's strategy and approach to people management
- **Organisational Environment**- Factors characterising the environment that your organisation is operating in
- **People Management Practices**- The nature and extent of people management practices employed by your organisation
- **Creativity Climate**- Organisational mechanisms fostering innovation
- **People, Management and Innovation outcomes**- Your perception of how well the organisation is performing relative to competitors

Please feel free to add any additional comments you may think are necessary at the end. When you have completed the questionnaire we would be most grateful can if you could return it in the self-addressed envelope provided. **It would be helpful if the survey could be returned by INSERT DATE.**

**Thanking you in advance for your co-operation.**

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# Respondent Background

What is your **organisational position or title**? .....

Have you earned a **post secondary diploma/ degree etc.**..... Yes \_\_\_\_ No

If **Yes** please specify the highest degree you have obtained: \_\_\_\_\_

Are you a member of any **professional body** (e.g. CIPD) ?..... Yes \_\_\_\_ No

If **Yes** please specify: \_\_\_\_\_

# Organisational Characteristics

Which of the following categories best describes your **PRIMARY** industry sector?

- |   |   |
|---|---|
| <input type="checkbox"/> Agriculture/forestry/fishing   | <input type="checkbox"/> Other Manufacturing (e.g. food, drink, tobacco; textiles, clothing, paper, publishing, rubber, plastics) |
| <input type="checkbox"/> Banking, finance, insurance, business services (e.g. consultancies, PR, legal)                     | <input type="checkbox"/> Personal, domestic, recreational services  |
| <input type="checkbox"/> Building and civil engineering   | <input type="checkbox"/> Retail and distribution; hotels  |
| <input type="checkbox"/> Chemical products  | <input type="checkbox"/> Transport and communication (e.g. rail, postal, telecoms)  |
| <input type="checkbox"/> Energy and water   | <input type="checkbox"/> Other services (e.g. R&D, television, radio)   |
| <input type="checkbox"/> Health services  | <input type="checkbox"/> Other (Please specify _____)   |
| <input type="checkbox"/> Metal Manufacturing (mechanical, electrical and instrument engineering, data processing machinery) |   |

Approximately what proportion of your total sales (turnover) is from the above industry?..... %

- Is your organisation
- Irish owned
  - US owned
  - European owned
  - Other, Please indicate \_\_\_\_\_

How long has your organisation **been in operation** (in Ireland)..... years

Please estimate the **total number of employees** in your organisation.....

Please estimate the **number of employees** who are on fixed-term, casual, and/or seasonal contracts\_\_\_\_\_

Which category best approximates the **percentage of your total annual operating expenses** accounted for by labour costs in your organisation? (Please **circle one** category).

- (a) < 25%                      (b) 26-50%                      (c) 51-75%                      (d) >75%

# People Management & Strategy

Does your organisation have its own **personnel/human resources department**?  
 ..... Yes \_\_\_\_\_ No \_\_\_\_\_

If **Yes** how many people work in the Personnel/HR Department in your organisation? \_\_\_\_\_

Is there a senior manager/director with responsibility for personnel or Human Resource related matters on the board of directors (or equivalent) of your organisation..... Yes \_\_\_\_\_ No \_\_\_\_\_

Please **Tick** as appropriate:

Does your organisation have a:	Written	Unwritten	No	Don't Know
Mission Statement				
Corporate Strategy				
Personnel/ HR Management Strategy				
A Personnel/HR strategy that is translated into work programmes and deadlines				

In your organisation at what **stage is the personnel/HR function involved** in the **development of corporate strategy**?

- From the outset \_\_\_\_\_
- Through consultation \_\_\_\_\_
- On implementation \_\_\_\_\_
- No involvement \_\_\_\_\_

Please indicate your level of agreement or disagreement with each of the following statements by **circling** the appropriate number beside each statement.

		<b>Strongly Disagree</b>			<b>Strongly Agree</b>
<b>People issues are a top priority</b> for management ahead of either finance or marketing issues.....	1	2	3	4	5
Management views its <b>employees</b> primarily <b>as a cost</b> of doing business.....	1	2	3	4	5
Management <b>look outside the organisation</b> (e.g. what competitors are doing) to identify people management trends and future needs.....	1	2	3	4	5

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## Organisational Strategy

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During the past year what **proportion of your organisation's total sales (turnover)** was achieved through each of **these two strategic approaches**? (Your answer should total 100%)

**LOW COST:** Compete on the basis of **lower costs** (through economies of scale, experience, technology etc) resulting in lower prices to consumers.....%

**DIFFERENTIATION:** Create products or services **perceived industry wide as unique**.....%



Please allocate **100 points** across the following factors reflecting how your firm's **top managers would view** each factor's **relative importance in achieving competitive success**:

- Products or services ..... \_\_\_\_\_
- Advertising/marketing ..... \_\_\_\_\_
- Employees/workforce ..... \_\_\_\_\_
- Financial management ..... \_\_\_\_\_
- Technology ..... \_\_\_\_\_
- Research & development ..... \_\_\_\_\_
- Total: ..... 100 Points**

Please indicate your level of agreement or disagreement with each of the following statements by **circling** the appropriate number beside each statement.

	<b>Strongly Disagree</b>			<b>Strongly Agree</b>	
This organisation offers <b>higher-quality products/services</b> in comparison to the competition.....	1	2	3	4	5
This organisation is <b>innovative</b> in terms of the number of <b>new products/services offered</b> .....	1	2	3	4	5
This organisation <b>attempts to shape its environment</b> , as opposed to merely reacting to trends.....	1	2	3	4	5
This organisation sets <b>product/service prices below</b> those of competitors....	1	2	3	4	5

## Organisational Environment

**These questions will be utilised to gain an understanding of the nature of your organisation's competitive environment. Please provide answers which best describe this environment during 2004-05.**

How would you describe the market(s) for your organisation's products or services? Please estimate the **proportion of your organisation's total sales** (turnover) derived from each of the following geographical markets

- Regional Markets..... proportion of total sales \_\_\_\_\_%
- National Market..... proportion of total sales \_\_\_\_\_%
- European/ International Market..... proportion of total sales \_\_\_\_\_%

Please indicate your level of agreement or disagreement with each of the following statements by **circling** the appropriate number beside each statement.

	<b>Strongly Disagree</b>			<b>Strongly Agree</b>	
The <b>demand</b> for the organisation's product/service <b>is relatively stable and predictable</b> .....	1	2	3	4	5
This organisation faces substantial competition from <b>international companies</b> .....	1	2	3	4	5
The <b>technology</b> employed by our organisation <b>requires a highly skilled workforce</b> .....	1	2	3	4	5
This organisation is operating in a <b>heavily regulated environment</b> .....	1	2	3	4	5
This organisation faces pressures from investors, suppliers or customers to attain <b>short term profits</b> at the expense of long term investments.....	1	2	3	4	5

Changes in the external environment can often impact upon HR and people management activities. Please assess the impact of the following statements in terms of the pressure they would exert for change in HR policies and practices at your organisation

Pressures for Change	No Pressure For HR Change					Intense Pressure For HR Change				
	1	2	3	4	5	1	2	3	4	5
<b>Competition</b> from other companies.....	1	2	3	4	5					
Increasing <b>demands of your customers</b> .....	1	2	3	4	5					
<b>Changes in production technology</b> in your line of business.....	1	2	3	4	5					
<b>Employment Legislation</b> .....	1	2	3	4	5					
Increasing <b>demands for changes</b> in the workplace <b>from your employees</b> ....	1	2	3	4	5					
<b>Difficulty in recruiting</b> appropriate staff.....	1	2	3	4	5					
<b>Changes in the structure</b> of the organisation.....	1	2	3	4	5					
<b>Best practices</b> implemented by other companies.....	1	2	3	4	5					

## People Management Practices

Please answer the following questions *with respect to two broad groups of employees during 2005-06:*

**Group A** = Production, maintenance, service and clerical employees.

**Group B** = Executives, managers, supervisors and professional/technical employees.

Employee Resourcing: What proportion of your employees .....	<u>Group A</u>	<u>Group B</u>
Are interviewed during the hiring process using <b>structured, standardized interviews</b> (e.g., behavioural or situational interviews), as opposed to unstructured interviews? .....	_____%	_____%
Are administered one or more validated <b>employment tests</b> (e.g., skills tests, aptitude tests, mental/cognitive ability tests) prior to hiring?.....	_____%	_____%
Hold jobs which have been subjected to a <b>formal job analysis</b> to identify position requirements (such as required knowledge, skills or abilities)?.....	_____%	_____%
Hold <b>non-entry level jobs</b> as a result of <b>internal promotions</b> (as opposed to hired from outside of the organisation)?.....	_____%	_____%
Hold <b>non-entry level jobs</b> due to promotions based <b>upon merit or performance</b> , as opposed to seniority?.....	_____%	_____%
Can expect to <b>stay in this organisation for as long as they wish</b> (i.e. employment with the firm is almost guaranteed).....	_____%	_____%
On leaving the firm are subjected to a <b>formal exit interview</b> .....	_____%	_____%

Please answer the following questions **with respect to two broad groups of employees during 2005-06:**

**Group A** = Production, maintenance, service and clerical employees.

**Group B** = Executives, managers, supervisors and professional/technical employees.

<b>Training &amp; Development:</b> What proportion of your employees .....	<b>Group A</b>	<b>Group B</b>
Receive <b>formal induction training</b> / socialisation to the organisation.....	_____ a%	_____ b%
Have been <b>trained in a variety of jobs or skills</b> (are "cross trained") and/or routinely perform more than one job (are "cross utilised")? .....	_____ %	_____ %
Have received <b>training in company-specific skills</b> (e.g. task or firm-specific training)?.....	_____ %	_____ %
Have received <b>training in generic skills</b> (e.g., problem-solving, communication skills, etc)?.....	_____ %	_____ %
Receive specific training as a <b>direct result of their performance appraisal</b> ?.....	_____ %	_____ %
Have been involved in a <b>Total Quality Management programme</b> ?.....	_____ a%	_____ b%
What is the <b>average NUMBER of hours of training</b> received by a typical employee over the last 12 months?.....	_____ #	_____ #
<b>Performance Management &amp; Remuneration:</b> What proportion of your employees ....	<b>Group A</b>	<b>Group B</b>
Receive <b>formal performance appraisals</b> on a routine basis?.....	_____ %	_____ %
Receive <b>formal performance feedback</b> from <b>more than one source</b> (i.e., feedback from several individuals such as supervisors, peers etc.)?.....	_____ %	_____ %
Receive <b>compensation</b> partially <b>contingent on individual merit</b> or performance?..	_____ %	_____ %
Receive <b>compensation</b> partially <b>contingent on group performance</b> (e.g., profit-sharing, gainsharing, team-based)?.....	_____ %	_____ %
Have options to obtain <b>shares of your organisation's stock</b> (e.g., an employee stock ownership plan)?.....	_____ %	_____ %
Are paid primarily on the basis of a <b>skill or knowledge-based pay system</b> (versus a job-based system)?.....	_____ a %	_____ b %
Are paid a <b>premium wage</b> in order to attract and retain them (in comparison to similar occupations in the same industry).....	_____ %	_____ %
What proportion of the average employee's <b>total annual remuneration</b> is <b>contingent on performance</b> ?.....	_____ %	_____ %

Please provide responses that best describe HR practices in your operations in Ireland during 2005-06.

**Group A** = Production, maintenance, service, clerical employees.

**Group B** = Executives, managers, supervisors, professional/technical employees.

<b>Communication &amp; Involvement:</b> What proportion of your employees .....	<b>Group A</b>	<b>Group B</b>
Are involved in programmes designed to <b>elicit participation and employee input</b> (e.g., quality circles)?.....	_____ %	_____ %
Are provided relevant <b>financial performance information</b> ?.....	_____ %	_____ %
Are provided relevant <b>strategic information</b> (e.g., strategic mission, goals, tactics, competitor information, etc.)?.....	_____ %	_____ %
Are administered <b>attitude surveys</b> on a regular basis?.....	_____ %	_____ %
Have access to a formal <b>grievance/complaint</b> resolution procedure or system?.....	_____ %	_____ %
Are organised in <b>self-directed work teams</b> in performing a major part of their work roles?.....	_____ %	_____ %

<b>Work Organisation &amp; Other HR Issues:</b> .....	<b>Group A</b>	<b>Group B</b>
What proportion of your workforce is <b>unionised</b> ?.....	_____ %	_____ %
What proportion of your workforce covered by <b>family-friendly policies or work-life balance practices</b> ? .....	_____ %	_____ %
Please estimate your annual employee turnover rate (percent who depart your organisation each year).....	_____ %	_____ %
Please estimate the average <b>NUMBER</b> of days per year <b>employees are absent</b> .....	_____ #	_____ #
Please estimate the approximate <b>NUMBER</b> of full time employees in your organisation .....	_____ #	_____ #

## Creativity Climate

Please indicate your level of agreement or disagreement with each of the following statements by **circling** the appropriate number beside each statement.

	<b>Strongly Disagree</b>			<b>Strongly Agree</b>	
In my opinion an individual's <b>creative ability is respected</b> in this organisation	1	2	3	4	5
People in this organisation are <b>rewarded for creativity and innovation</b> .....	1	2	3	4	5
<b>New ideas</b> are always <b>encouraged and rewarded</b> in this organisation.....	1	2	3	4	5
The <b>best way to get along</b> in this organisation <b>is to think the way the rest of the group thinks</b> .....	1	2	3	4	5
People in this organisation generally <b>feel challenged by their work</b> .....	1	2	3	4	5
There is <b>free and open communication</b> within this organisation.....	1	2	3	4	5

This organisation provides **sufficient resources** to be creative, including:

	Strongly Disagree				Strongly Agree
People	1	2	3	4	5
Funds	1	2	3	4	5
Facilities	1	2	3	4	5
Time	1	2	3	4	5
Information	1	2	3	4	5

## People, Innovation & Management Outcomes

How many **new lines of products**  **new services**  has your firm marketed in the last 3 years.....\_\_\_\_\_

What **proportion of your organisation's total sales** (turnover) comes from **products or services introduced within the previous 12 months**?.....\_\_\_\_\_%

Has your company introduced any **new technology** in the past year? .....\_\_\_\_\_ Yes \_\_\_\_\_ No

Has your company introduced any **new or Innovative People Management policies** or practices in the past 3 years?.....\_\_\_\_\_ Yes \_\_\_\_\_ No

If **Yes** please specify .....\_\_\_\_\_

Please indicate the current **position of your organisation relative** to your **direct competitors** (i.e. similar firms in the same industry) in terms of:

<u>Organisational Performance</u>	Worse		Same		Much Better
<b>Profitability</b> .....	1	2	3	4	5
<b>Growth in sales</b> .....	1	2	3	4	5
<b>Market share</b> .....	1	2	3	4	5
<b>Quality of product(s) or service(s)</b> .....	1	2	3	4	5
<b>Development of new products and services</b> .....	1	2	3	4	5
<b>% of sales (turnover) spent on R&amp;D</b> .....	1	2	3	4	5
<b>Satisfaction of customers or clients</b> .....	1	2	3	4	5
<b>Operating costs</b> .....	1	2	3	4	5

<u>HR Performance</u>	Worse		Same		Much Better
<b>Ability to attract and retain employees</b> .....	1	2	3	4	5
<b>Relations between management and other employees</b> .....	1	2	3	4	5
<b>Relations among employees in general</b> .....	1	2	3	4	5

Does your organisation utilise a **balanced scorecard** for assessing performance.....\_\_\_\_\_ Yes \_\_\_\_\_ No

Is the performance of your personnel/HR function **systematically evaluated**.....\_\_\_\_\_ Yes \_\_\_\_\_ No

Please indicate your level of agreement or disagreement with each of the following statements by **circling** the appropriate number beside each statement.

	Disagree					Agree				
The HR department is <b>performing</b> its job <b>the way you would like it to be performed</b> .....	1	2	3	4	5					
Our <b>HRM policies</b> and practices <b>are effective</b> (in terms of increasing employee motivation, satisfaction and commitment to the organisation).....	1	2	3	4	5					
If you had the chance you would <b>change the manner</b> in which the <b>HR department is doing its job</b> .....	1	2	3	4	5					
In terms of <b>employee outcomes</b> at your organisation, how would you rate the following relative to your <b>direct competitors</b>										
	Low		Average			High				
Levels of <b>employee motivation</b> .....	1	2	3	4	5					
Employee <b>identification</b> with your <b>organisation's core values and goals</b> ....	1	2	3	4	5					
The <b>quality</b> of your <b>employees</b> .....	1	2	3	4	5					
The level of <b>output</b> achieved by your <b>employees</b> .....	1	2	3	4	5					
The extent to which your <b>employees come up with innovative ideas</b> in relation to their day to day work.....	1	2	3	4	5					
The <b>flexibility of your employees</b> to adapt to organisational <b>changes that originate in the external environment</b> .....	1	2	3	4	5					
The <b>flexibility of your employees</b> to <b>move between jobs</b> as the work demands.....	1	2	3	4	5					

Please add any additional information here

**Thank you for taking the time to complete this questionnaire.  
Please return completed questionnaire in the envelope  
provided.**

Alternatively post it to:

High Performance Work Systems in Ireland Survey  
c/o Department of Management,  
J.E. Cairnes Graduate School  
National University of Ireland,  
Galway

**APPENDIX F**

**Employee Survey**

## GENERAL INSTRUCTIONS – EMPLOYEE QUESTIONNAIRE

### Objectives of the Study

The purpose of this study is to examine your perceptions of Human Resource practices and how they are implemented in your company.

### Procedures

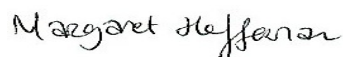
We are asking employees across a range of areas and units in your organisation to complete this questionnaire. Please note that your participation in this study is strictly voluntary. Please try to answer the questions as honestly and as candidly as possible. ***There are no trick questions***: this is NOT a test, so there are no right or wrong answers. The questionnaire should take 10 minutes to complete. Upon completion of the questionnaire, place in the addressed envelope provided. Please seal the envelope and give it to your manager who will pass all completed surveys to me. Alternatively you may send your completed survey back to me using the attached preaddressed envelope by **INSERT DATE**.

### Confidentiality

This is a strictly confidential survey. The questionnaire does not require you to give your name or any other information that might identify you. ***Under no circumstances will your individual responses be made available to anyone in your organisation.*** Information from the survey will be compiled using aggregated results across all respondents across a number of companies.

Please try to answer every question. If you have any questions, you can contact me at 01 7006874 or at the address below.

Many thanks for your help.



Margaret Heffernan  
Dublin City University Business School  
Dublin City University  
Glasnevin, Dublin 9.

Tel: 01 7006874  
[margaret.heffernan@dcu.ie](mailto:margaret.heffernan@dcu.ie)



## PART 1: PERSONAL BACKGROUND

1. Gender            Male              
                               Female
2. Age:                <25 years              
                               26-35 years              
                               35-45 years              
                               46-55 years              
                               56 years or more
3. Nationality        Irish              
                               Non-Irish
4. Which of the following best describes the highest level of education you have completed to date (tick one box only):
- |                                   |                          |  |                          |
|-----------------------------------|--------------------------|--|--------------------------|
| None/primary certificate          | <input type="checkbox"/> | Junior/Inter certificate or equivalent | <input type="checkbox"/> |
| Leaving Certificate or equivalent | <input type="checkbox"/> | Certificate/Diploma                    | <input type="checkbox"/> |
| Bachelors Degree                  | <input type="checkbox"/> | Masters Degree                         | <input type="checkbox"/> |
| Doctorial Degree                  | <input type="checkbox"/> | Other (please specify) _____           |                          |
5. Which of the following occupation groups' best describes your current job?
- |   |                          |
|---|--------------------------|
| Manager (with some staffing responsibilities) | <input type="checkbox"/> |
| Graduate Professional Specialist              | <input type="checkbox"/> |
| Non-Graduate Professional Specialist          | <input type="checkbox"/> |
| Technical and Administrative                  | <input type="checkbox"/> |
| Assistance services                           | <input type="checkbox"/> |
| Clerical and secretarial                      | <input type="checkbox"/> |
| Other (please specify) _____                  | <input type="checkbox"/> |
6. In what functional area do you work?  
 \_\_\_\_\_
7. How many years have you worked at your **present organisation**?  
 \_\_\_\_\_ years \_\_\_\_\_ months
8. How many years have you worked in your **current position**?  
 \_\_\_\_\_ years \_\_\_\_\_ months
9. Please indicated which employee category applies to you (tick one box only):
- |                              |                          |   |                          |
|------------------------------|--------------------------|---|--------------------------|
| Full-time (Permanent)        | <input type="checkbox"/> | Full-time (Fixed term/temporary contract) | <input type="checkbox"/> |
| Part-time                    | <input type="checkbox"/> | Agency worker                             | <input type="checkbox"/> |
| Other (please specify) _____ |                          |   |                          |

## PART TWO: ASSESSMENT OF HUMAN RESOURCE POLICIES AND PRACTICES

Listed below are a number of employment practices sometimes used in workplaces. For each one please tell me whether or not you are involved or covered by the practice:

- |  |                              |                             |
|--|------------------------------|-----------------------------|
| Regular performance reviews or appraisals              | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Formal education or training provided by your employer | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Formal induction training                              | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Working from home                                      | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Flexible hours/Flexitime                               | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Job sharing/week on-week off etc.                      | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Profit sharing/share options/gain sharing              | Yes <input type="checkbox"/> | No <input type="checkbox"/> |

Part-time hours	Yes <input type="checkbox"/>	No <input type="checkbox"/>
A stated policy of deliberately avoiding compulsory redundancies and lay-offs	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Performance related pay		
Is part of pay increases based on performance?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Programmes designed to elicit participation and employee input (e.g. quality circles)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Forums or other arrangements designed for formally involving workers in decision making	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Organised in self-directed work teams in performing a major part of your work	Yes <input type="checkbox"/>	No <input type="checkbox"/>

The following questions refer to the *Human Resource practices and policies in your organisation*. The questions aim to uncover what HRM practices exist in your area and what are your perceptions of how they are implemented within your job.



Please read the following statements. I would like you to tell me whether or not you:

strongly agree (5); agree (4); neither agree/disagree; disagree (2); or strongly disagree (1).

### Recruitment and Selection

In my opinion, recruitment and selection practices in this company are fair	1	2	3	4	5
A rigorous selection process is used to select new recruits	1	2	3	4	5
Given my ability and experience, I believe I was <u>not</u> evaluated correctly by the selection process	1	2	3	4	5
In this organisation, hiring decisions usually reflect applicants that are most qualified for the position	1	2	3	4	5
I was offered an explanation of the types of factors that affected the hiring decision	1	2	3	4	5
I was treated honestly, openly and with respect during the selection process	1	2	3	4	5

### Payment systems and pay determination

In my opinion procedures used to determine pay and salary increases are fair	1	2	3	4	5
I am fairly paid for the amount of work I do	1	2	3	4	5
Relative to others doing the same job in my company I believe I am fairly paid for the work I do	1	2	3	4	5
The pay plan in this company is administered fairly	1	2	3	4	5
My supervisor gives me the opportunity to express my views and feelings on pay setting issues and pay decisions	1	2	3	4	5
My supervisor treated with me respect and dignity during pay determination	1	2	3	4	5
My supervisor explained procedures clearly and provided useful feedback on the decision	1	2	3	4	5

## Training and development

In my opinion procedures used to determine training and development opportunities in this organisation are fair	1	2	3	4	5
I am provided with sufficient opportunities for training and development	1	2	3	4	5
My supervisor provides me with timely feedback about training/development decisions and its implications	1	2	3	4	5
I was treated honestly, openly and with respect during discussions about training opportunities	1	2	3	4	5
Given my performance, opportunities for training offered are fair	1	2	3	4	5

## Performance Management

In my opinion, procedures used to evaluate my performance are fair	1	2	3	4	5
My supervisor gives me the opportunity to express my views and feelings during my performance evaluation	1	2	3	4	5
My supervisor treats me with honesty, respect and dignity during my performance appraisal	1	2	3	4	5
My supervisor lets me know my appraisal outcomes and provides justification	1	2	3	4	5
My most recent performance evaluation was justified given my performance	1	2	3	4	5

## Grievance and disciplinary procedures

In my opinion procedures for dealing with grievance and disciplinary issues at work are fair	1	2	3	4	5
My supervisor provides me with reasonable opportunities to express grievances and raise personal concerns	1	2	3	4	5
My supervisor treats people with honesty, respect and dignity during a grievance or disciplinary hearing	1	2	3	4	5
Grievance and disciplinary outcomes are fair	1	2	3	4	5
My supervisor lets people know the outcome of a grievance or disciplinary hearing and provides justification	1	2	3	4	5

## Employee involvement

In my opinion, outcomes from employee involvement and teamwork (e.g. team based pay, group based recognition) are fair	1	2	3	4	5
In my opinion, procedures used to ensure employee involvement in decision- making are fair	1	2	3	4	5
My supervisor treats people with honesty, respect and dignity during team briefings or any other employee involvement meetings	1	2	3	4	5
Employee involvement schemes (such as teams and quality circles) are systems that provide opportunities to appeal or challenge decisions.	1	2	3	4	5
I am provided with reasonable opportunities to express new ideas, concerns or get involved in decision making	1	2	3	4	5

## Succession Planning

In my opinion procedures used to determine promotions in this organisation are fair	1	2	3	4	5
I believe I would be fairly considered for a vacancy in the organisation for which I am qualified	1	2	3	4	5
Promotions in this organisation usually depends on how well a person performs in his/her job	1	2	3	4	5
My supervisor provides reasonable, timely and respectful information on all promotion opportunities in this organisation	1	2	3	4	5
My supervisor treats me with honesty, respect and dignity during a promotion opportunity	1	2	3	4	5

## Job Security

In my opinion, procedures used to determine layoffs/redundancies in this organisation are fair	1	2	3	4	5
In a layoff situation, I believe my supervisor would treat me with honesty, respect and dignity	1	2	3	4	5
In a layoff situation, I believe my supervisor would explain procedures thoroughly and truthfully	1	2	3	4	5
I am frequently worried about the future of my company	1	2	3	4	5
In my opinion I will keep my job in the near future	1	2	3	4	5
I believe that my job is secure	1	2	3	4	5
I am certain that I will not be laid off from my job some time in the future	1	2	3	4	5
Managers are good at maintaining the job security of employees	1	2	3	4	5

## Part 3: ABOUT YOUR JOB

This part of the survey asks you to describe your job, as *objectively* as you can. Listed below are a number of statements which could be used to describe a job. You are to indicate whether each statement is an accurate or an inaccurate description of your job. Please use the scale below to indicate the extent to which you agree or disagree with the following statements:

**1 = strongly disagree 2 = somewhat disagree 3 = neutral 4 = somewhat agree 5 = strongly agree**

I often put effort into my job <i>beyond what</i> is required?	1	2	3	4	5
My job requires that I work very hard.	1	2	3	4	5
I feel under pressure from my managers and supervisors in my job	1	2	3	4	5
I feel under pressure from my work mates and colleagues in my job	1	2	3	4	5
I feel under pressure from the sheer quantity of work I have	1	2	3	4	5
I worry a lot about my work outside working hours	1	2	3	4	5
I feel very tired at the end of a work day	1	2	3	4	5
I never seem to have enough time to get my job done	1	2	3	4	5

I intend to keep working at this organisation for at least the next 3 years	1	2	3	4	5
It is likely that I will leave my employment with this organisation within a year	1	2	3	4	5
Overall, I would rate my satisfaction with my current job as high.	1	2	3	4	5
In my present job I am satisfied with my co-workers	1	2	3	4	5
All in all, I am satisfied with the job itself	1	2	3	4	5
Compared to most jobs, mine is a pretty good one.	1	2	3	4	5

## PART 4: YOUR SUPERVISOR

In this section we would like you to think about the relationship you have with your immediate supervisor. Indicate the extent to which you agree or disagree with each of the following statements by circling the response that most accurately reflects your position.

**1 = strongly disagree 2 = somewhat disagree 3 = neutral 4 = somewhat agree 5 = strongly agree**

I always know how satisfied my supervisor is with what I do	1	2	3	4	5
My supervisor understands my problems and needs well enough	1	2	3	4	5
My supervisor does not adequately recognise my potential	1	2	3	4	5
My supervisor would personally use his/her power to help me solve my work problems	1	2	3	4	5
I can count on my supervisor to 'bail me out' at his/her expense when I really need it	1	2	3	4	5
I have enough confidence in my supervisor to defend and justify his/her decisions when he/she is not present to do so	1	2	3	4	5
My working relationship with my supervisor is extremely effective	1	2	3	4	5
Management delivers on its promises.	1	2	3	4	5
Management actions match its words.	1	2	3	4	5
Management is ethical and honest.	1	2	3	4	5
I feel a strong sense of belonging to my organisation.	1	2	3	4	5
I feel personally attached to my work organisation.	1	2	3	4	5
Working at this organisation has a great deal of personal meaning to me	1	2	3	4	5
I would be happy to work at this organisation until I retire.	1	2	3	4	5
I really feel that problems faced by my organisation are also my problems.	1	2	3	4	5

## PART 5: YOUR ORGANISATION

In this section we would like you to think about the relationship you have with your organisation. Indicate the extent to which you agree or disagree with each of the following statements by circling the response that most accurately reflects your position.

**1 = strongly disagree 2 = somewhat disagree 3 = neutral 4 = somewhat agree 5 = strongly agree**

The organisation is willing to extend itself in order to help me perform my job to the	1	2	3	4	5
--	---	---	---	---	---

best of my ability

The organisation cares about my general satisfaction at work	1	2	3	4	5
This organisation shows very little concern for me	1	2	3	4	5
The organisation cares about my opinions	1	2	3	4	5
Even if I did the best job possible, the organisation would fail to notice	1	2	3	4	5
Help is available from management when I need it	1	2	3	4	5
Management strongly considers my goals and values	1	2	3	4	5
In this organisation management cares about my well being	1	2	3	4	5
The organisation takes pride in my accomplishments at work	1	2	3	4	5

Additional comments for the researcher:

**Thank you for taking the time to complete this questionnaire.  
Please return completed questionnaire in the envelope provided.**

Alternatively post completed survey to:

Margaret Heffernan  
Dublin City University Business School  
Dublin City University  
Glasnevin  
Dublin 9

## **APPENDIX G**

### **Interview schedule for HR manager and employees/line managers**

These interview schedules provide an overview of the main topics that are covered in the HR, line manager and employee interviews. The interview approach was semi-structured. Open-ended questions guided the structure of the interviews, and follow-up questions were asked to go deeper into the subject. The exact content of the interviews and what questions were asked depended on the organisation, the nature of HR in the organisation and the function of the respondent. Thus, some of the questions below were not asked to every interviewee.

## **EMPLOYEE & LINE MANAGER INTERVIEW SCHEDULE**

**Company name:**

**Name of respondent:**

**Position:**

**Date:**

---

### ***Introduction***

Introduction to the research project

Description of the content of the interview

### ***About yourself***

What is your job title?

How long have you worked for COMPANY NAME?

Are you employed on a (a) permanent basis; (b) temporary/contract basis; (c) casual basis?

Are you a member of a trade union?

### ***About your job***

What is your job title?

Tell me a little about the nature of your job.

Have you changed your job over the last 12 months?

If yes, in what way has it changed?

Do you feel that the COMPANY NAME attempts to make the jobs of people like yourself as interesting and varied as possible?

Generally, how much influence do you have over how you do your job?

How satisfied are you with the amount of influence you have over your job? Why do you say that?

### ***Human resource management practices***

The following section aims to examine people management practices in your organisation.



Over the last 12 months have there been any changes in the way people are managed in your work area? If yes, what kind?

Would you say that COMPANY NAME is a fair place to work? Why do you say that?

#### Recruitment and selection

When you first came to work here, what methods of recruitment were used?

Was a recruitment agency/external agent used in the recruitment process?

How satisfied were you with the methods of selection used? Why/why not?

In your opinion are recruitment and selection practices in COMPANY NAME fair? Why?

Generally, when new positions come up, do you feel COMPANY NAME fill them with people from inside the organisation rather than recruiting them from outside?

How effective do you feel this approach is in getting the right people in?

#### Training and development

When you first joined COMPANY NAME did you have any formal induction training?

How satisfied were you with the induction programme? Why do you say that?

Approximately how much formal training do you think you have received over the last year?

Was this training off the job or on the job?

What was the training for?

How often do you discuss your training and development needs with your team leader/line manager?

To what extent does your line manager provide coaching or guidance to help improve your performance:

How satisfied are you with the level of training (both formal and informal) you receive in your current job (both on the job and off the job)? Why do you say that?

Do you feel there are opportunities for you here for career advancement? Why/Why not?

Overall, how satisfied are you with your current career opportunities?

#### Performance management, pay and reward

How satisfied do you feel with your pay? Why do you say that?

How satisfied are you with your pay compared with the pay of other people that work here? Why is that?

What is your opinion of the pay-setting process at your workplace?

Do you have knowledge of the criteria used for pay raises in your organisation?

Is your pay related to your individual performance in any way? If yes, can you take me through the process?

Do you clearly understand the basis on which your performance is judged?

Do you think the process is fair?

How effective do you think this system is in encouraging you to improve your performance?  
Why do you say that?  
Do you have a formal performance appraisal system? Have you undergone a formal appraisal in the past year?  
Is the performance appraisal system used solely to determine pay or is it also used for training and development purposes?  
Could you briefly describe the performance appraisal process?  
How satisfied are you with this method of appraising your performance? Why?  
How fair do you think the appraisal process is? Why do you say that?

*Employee involvement and teamwork*

In your daily work activities are you usually part of a team of people who work together?  
Please briefly describe these teams  
Are any of these teams (self-directed) teams of people who work together and jointly make decisions about the work/task assignments?  
Do you rotate jobs within and across your work teams?  
How would you describe the sense of team working in each of your work groups?  
How effective do you think teamworking is in encouraging you to improve performance?  
Other than teamworking (if applicable) are there any ways/programmes in place to try and get you more involved in workplace decision making? If yes, please describe these programmes.  
Have you personally been involved in any of these programmes at work? If yes, could you please describe how you were involved?  
What are your opinions of these programmes?  
Does your manager seek your views on work place issues?  
Overall how satisfied are you with the influence you have in company decisions that affect your job or work? Why do you say that?  
How good do you feel the level of co-operation is within a) your work team; b) with line managers and c) the organisation as a whole?  
How satisfied do you feel with the amount of information you receive about how the company is performing? Why do you say that?

*Line manager*

How effective do you feel your manager is?  
In general how would you describe employee relationships here? Why do you say that?  
To what extent do you feel COMPANY NAME provides you with reasonable opportunities to express grievances and raise personal concerns?  
Are there any other comments you'd like to make about working for the COMPANY NAME, particularly with regard to HR, management issues?

## HR MANAGER INTERVIEW SCHEDULE

**Company name:**

**Name of respondent:**

**Date:**

---

### *Introduction*

Introduction to the research project

Description of the content of the interview

### *Introduction of the interviewee*

Can you tell me about your background and your current function in Company X?

Can you tell me a little about the organisation (sector, size, ownership, history, recent changes).

Could you describe an important change that has taken place during the last five?

How would you describe the effects of this change on employees and on HRM?

How would you describe the organisational culture, and to what extent are HR practices aligned with organisational culture?

### *Organisational strategy*

What would you say is the core competence or success factor of your organisation?

What is the organisation's position in the market?

What pressures is your organisation currently dealing with?

Can you describe the influence of these pressures on your HR strategy and practices?

### *Strategy and HRM*

What role does HR play in the organisation?

Who is involved in developing HR strategy and HR practices?

How much freedom do HR managers have to adjust HR strategy to their unit?

Does your organisation recognise a trade union (why/why not).

### *Employees*

Which employees would you label as core employees in your organisation?

Does the organisation use different HR practices for different groups of employees? Why? Can you give me some examples?

How would you rate management/employee relations generally at this workplace? Why?

Has that relationship changed over the past two years? If so, how?

Would you say COMPANY NAME is a fair place to work? Why/why not?

What, in your opinion, is HR's role in ensuring fairness in the workplace?

***HR strategy and HR policy***

How would you describe HR strategy?

How would you describe the strengths, weaknesses, and challenges of HR strategy and practices?

***Implementation of HR practices***

Could you describe how HR practices are implemented?

Who is involved in HR practices implementation?

How are HR strategy and HR practices communicated throughout the organisation?

***HR practices***

Which HR practices used in your organisation would you describe as successful?

Could you describe these HR practices?

Could you describe how the following practices are implemented in your firm?

- Recruitment and selection
- Education and training
- Employee development and internal promotion opportunities
- Performance appraisal and evaluation
- Rewards
- Employee security
- Team working and team autonomy
- Employee autonomy and participation

Could you describe links between these practices?

***Documentation sought from organisations***

- Size/Location of Workforce
- Organisational Charts
- Statements of organisational philosophies/visions
- Company Brochures

**HR Documentation**

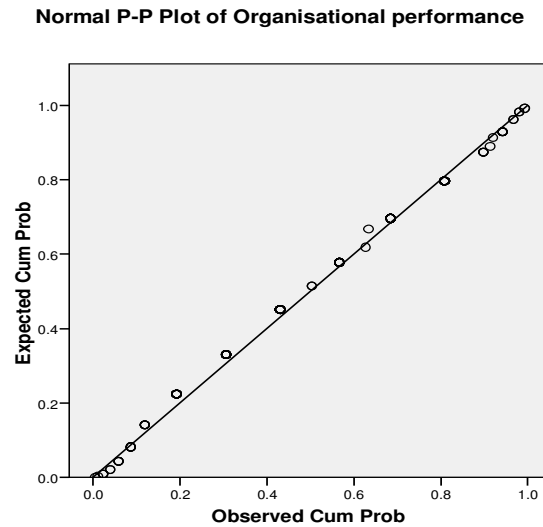
- Policy documents relating to any recent changes (e.g. changing pay structures)
- Trade Union Agreements
- Staff handbooks
- Consultants' Reports

## **APPENDIX H**

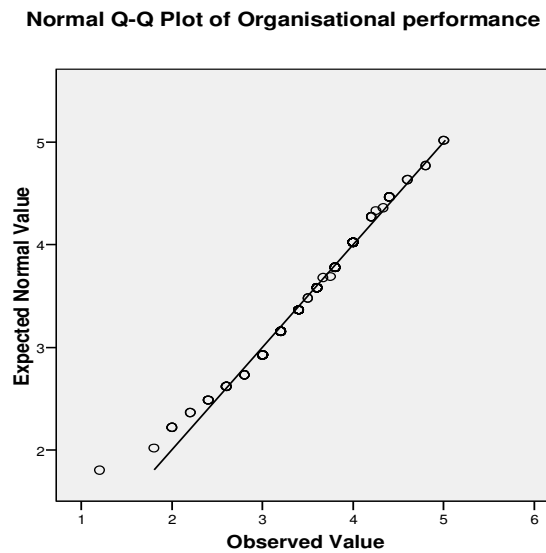
### **Example of P-P plots and Q-Q plots**

Chapter 5 tested a number of assumptions to ensure the data from Phase 1 and Phase 2 surveys. In order to test normality of error terms the normal probability plots were inspected. The P-P plots and Q-Q plots for all variables fell close to the 'ideal' diagonal and so normality of the sample is established. Examples of P-P and Q-Q plots are shown below for two variables.

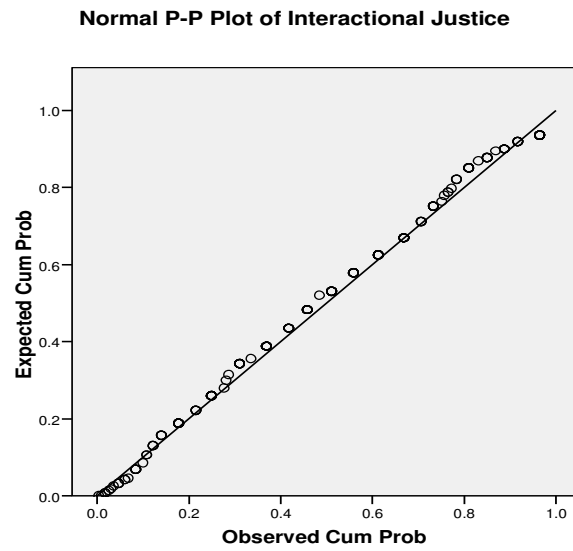
**Figure H.1: P-P plots of organisational outcome scores (Phase 1 survey)**



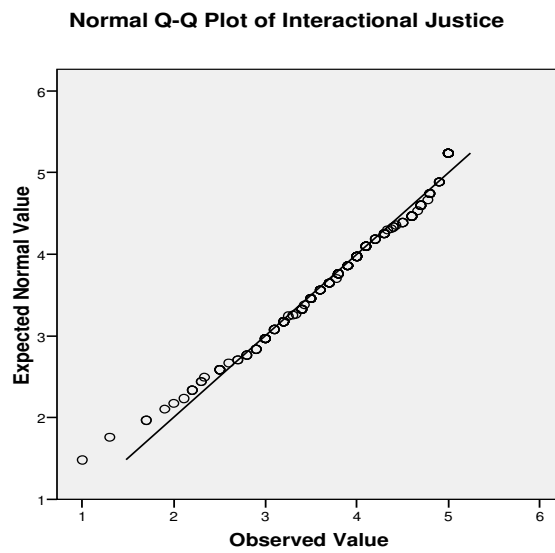
**Figure H.2: Q-Q plots of organisational outcome scores (Phase 1 survey)**



**Figure H.3: P-P plots of interactional justice scores (Phase 2 survey)**



**Figure H.4: Q-Q plots of interactional justice scores (Phase 2 survey)**



# **APPENDIX I**

## **Results of moderation analysis for moderating role of management philosophy on HPWS-performance relationship**



Table I.1 examines the moderating role of management philosophy on the HPWS-performance relationship. The control variables were entered in Step 1, the predictor variable (HPWS) and the moderator variable (management philosophy) were entered in step 2, and finally, the interaction term (centred HPWS\*centred management philosophy) was entered in Step 3. Results show that the addition of the moderator variable was not significant for any of the outcome variables. Therefore management philosophy does not moderate the HPWS-performance relationship.

**Table I.1: Results for Hierarchical Regression Analysis for moderating role of management philosophy on outcomes**

Step	Variables	Employee Performance		HR Performance		Innovation		Organisational Performance	
		Model 2	Model 3	Model 2	Model 3	Model 2	Model 3	Model 2	Model 3
	<b>Control variables</b>								
<b>1</b>	Sector	.020	.024	.026	.029	-.156	-.156	.076	.078
	Firm age	-.091	-.086	-.059	-.055	-.060	-.059	-.176*	-.168*
	Firm size	-.126	-.130	-.140	-.145	.046	.046	.057	.053
	Ownership	-.138	-.142	-.102	-.106	.134	.134	-.084	-.082
	Unionisation	-.007	-.008	.065	.064	-.064	-.064	-.034	-.040
<b>2.</b>	<b>Independent variable</b>								
	HPWS	.198*	.182	.162	.151***	.255*	.254*	.142	.128
	Management philosophy	.480**	.478	.336***	.334	-.039	-.039	.337**	.331***
<b>3.</b>	<b>Interaction</b>								
	HPWS x management philosophy		-.161		-.106		-.006		-.084
	<b>R<sup>2</sup></b>	<b>.362</b>	<b>.388</b>	<b>.188</b>	<b>.199</b>	<b>.133</b>	<b>.133</b>	<b>.217</b>	<b>.223</b>
	<b>Ad R<sup>2</sup>j</b>		<b>.354</b>		<b>.155</b>		<b>.068</b>		<b>.173</b>
	<b>Δ R<sup>2</sup></b>		<b>.026</b>		<b>.011</b>		<b>.000</b>		<b>.007</b>
	<b>F</b>	<b>11.757***</b>	<b>11.393***</b>	<b>4.849***</b>	<b>4.520***</b>	<b>2.3528</b>	<b>2.039*</b>	<b>4.943***</b>	<b>4.461***</b>

\* = p < .05 \*\* = p < .01 \*\*\* = p < .001 (standardised coefficients reported)

Sector (1 = service; 0 = others); Ownership (1 = Irish owned; 0 = others); Unionisation (1 = union; 0 = non union)