Reassessing strategic pay: Testing relationships between organisational contingencies, pay and HR performance outcomes

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Contents

List of Figures

10

11

List of Tables

15

17

Abstract

Using universalistic and contingency perspectives, this study investigates the relationships between pay practices, organisational contingencies (business strategy, workforce employment groups, industry sector and organisation size) and human resource (HR) performance outcomes in the United Kingdom (UK) private sector. It tests the propositions of the strategic pay literature that a) selection of pay practices will have an effect on HR outcomes; b) internal and external organisational contingencies will have an effect on pay practice selection; and c) selection of pay practices aligned to organisational contingencies will have a positive effect on HR outcomes. Data were collected via the Chartered Institute of Personnel and Development (CIPD) Reward Management Survey in 2012. Results support hypothesised associations between a) pay selection and both business strategy and workforce employment groups; and b) specific pay practice approaches and HR outcomes. There is limited support however for the hypothesised effect of strategically aligned pay on HR outcomes although there are suggestions that certain configurations of pay practices and organisational contingencies have the potential for such an effect. These findings have practical implications for reward and HR professionals in designing and implementing pay systems. The study directly contributes to the theoretical development of strategic pay to better understand the complex and context-laden practice of strategic pay and its consequences.

Chapter 1: Introduction

This thesis focuses on analysing both the concept and practice of strategic pay. It investigates the relationships between pay practices, organisational contingencies and consequent human resource (HR) performance outcomes, and it proposes an extension to existing theoretical perspectives in order to understand more fully this important area of organisational practice. Detailed operational definitions will be offered in the following chapters but here, in summary, 'pay practices' denotes the design, level, form and basis for monetary payments within employment relationships; 'organisational contingencies' refers specifically to business strategy, workforce employment groups, industry sector and organisation size; and 'HR performance outcomes' relates to employee relations climate, levels of pay discontent, employee productivity, absenteeism problems and difficulties in recruitment and retention. 'Strategic pay' is the central concept of this study, one with an established background in both academic and practitioner fields of theory and research but, as will be shown, it is a concept that is ready for reassessment and rethinking.

1.1   Theoretical background

The strategic pay concept builds on longstanding research demonstrating that pay has an effect on employee decisions to join and stay with organisations (Salop, 1979; Weiss, 1980; Lazear, 2000; Shaw, Dineen, Fang and Vellella, 2009; Gerhart and Fang, 2014) and that pay can act as a powerful incentive mechanism (Vroom, 1964; Locke, Feren, McCaleb, Shaw and Denney, 1980; Gerhart, Rynes and Fulmer, 2009). Strategic pay theories propose that firms will benefit from operating pay practices aimed at influencing employee behaviour and performance to support the achievement of organisational objectives (Gerhart and Rynes, 2003; Shields, 2015). Early iterations of strategic pay saw 'new pay' writers, during the socio-economic turbulence of the 1980s and 1990s (e.g. Lawler, 1990; Schuster and Zingheim, 1992; Zingheim and Schuster, 2000), rejecting the traditional forms of pay associated with a perceived bureaucratic era of management. Instead, they sought to target the potentially positive effects of pay at improving organisational performance, ostensibly by enhancing organisational flexibility and market competitiveness. Pay became thought of as a *strategic* management tool; a lever that could be pulled to direct employee actions and enhance corporate profitability. This approach has arguably dominated both

academic and practitioner discourse to the present day (Perkins, White and Jones, 2016) despite critical questions (Heery, 1996) and alternative interpretations (Trevor, 2010).

There are a number of perspectives informing this strategic pay paradigm. First, a universalistic approach to pay, as taken by many of the 'new pay' proponents (e.g. Zingheim and Schuster, 2000) encourages organisations to adopt strategic pay practices directed at enhancing organisational performance as opposed to traditional, bureaucratic methods of administering pay. Here, there is a notion of 'one best way'; a superior set of pay practices that, regardless of context, will result in enhanced organisational performance. But the strategic pay model also draws on alignment perspectives contending that optimal pay practices are those which align most closely with an organisation's external and internal characteristics; closer alignment results in improved employee and organisational outcomes (Balkin and Gomez-Mejia, 1990; Lepak and Snell, 2002).

Researchers have sought to model strategic pay alignment (e.g. Heneman and Dixon, 2001) or to test empirically the relationship between contingencies, pay practices and organisational performance (e.g. Allen and Helms, 2002; Chen and Jermias, 2014; Tenhiälä and Laamanen, 2016). However, there remains limited evidence for such relationships (Shields, 2015). Indeed, it has been argued that of all the fields of human resource management (HRM), it is strategic pay that has the widest gap between rhetoric and reality (Bevan, 2005; Trevor and Brown 2014). The proposition that making pay practices contingent on organisational conditions will have positive effects on employee behaviours and organisational performance, was described by Milkovich (1987, p.3) as "probably the greatest leap of faith" given the lack of empirical evidence. And, in the intervening thirty years, questions about the theoretical and empirical underpinning of the strategic pay model have not yet been fully addressed (Conroy, Yoon, Bamberger, Gerhart, Gupta, Nyberg, Park, Park, Shaw and Sturman, 2016). This gap in knowledge provides the starting point for this study.

Strategic pay, like its precursor strategic HRM, is necessarily multi-disciplinary (Godard, 2014; Jackson, Schuler and Jiang, 2014). The underlying assumption of the strategic pay concept, that money is a means to influence human behaviour, spans boundaries between academic disciplines (Trevor, 2010; Nyberg, Pieper and Trevor, 2016) and this research study therefore draws on a multi-disciplinary theoretical framework which includes

strategic management and HRM concepts, as well as theories from the fields of labour economics and both management and motivational psychology.

Research on strategic pay is important. The role of pay within organisations as a means to attract, hire, retain and motivate employees to behave or perform in organisationally desired ways is hotly debated. On one hand, theory and evidence suggests that pay is an incredibly powerful tool in sorting and incentivising employees (Saks, Wiesner and Summers, 1996; Jenkins, Mitra, Gupta and Shaw, 1998; Lazear, 2000; Dineen and Williamson, 2012). On the other, there are strong arguments for dysfunctional and even harmful effects of misconceived pay systems on individuals and organisations (Kohn, 1993; Deci, Koestner and Ryan, 1999; Pink, 2009). For organisations then, the consequences of pay choices have the potential to be incredibly successful or absolutely disastrous. Only by building theory, based firmly on empirical evidence, can the academic community claim to be in a position to offer knowledge with which to shape organisational practice. The contribution of this thesis is to add to that capacity in its unique contribution to knowledge about why organisations select the pay practices they do and how those practices influence organisational outcomes.

1.2   Research context

This research study came about as a result of an initial collaboration between the Chartered Institute of Personnel and Development (CIPD) and a team of academics including the researcher (see Appendix A for list of participants) which involved the collection of pay data from CIPD members and the production of Reward Management Survey Reports (Jones, Marriott, Perkins, and Shields, 2011; Jones, Marriott, Brown, Perkins and Shields 2012). The survey reports in previous years had provided CIPD members with benchmarking data about the frequency of different pay practices and commentary on contemporary developments in pay policy and practice that would be relevant for the practitioner community. The involvement of the researcher and academic team brought a more theoretical perspective to the research with the intention of exploring pay issues in greater depth, particularly emphasising the relationships between strategy, pay and HR performance outcomes. During completion of the 2011 survey report it became clear that there was an opportunity for a notable contribution to theoretical and empirical studies of strategic pay, but that a project of such depth was beyond the scope of the annual CIPD

survey reports. This thesis is the result of those initial ideas and conversations about an in-depth investigation of strategic pay in the UK which could provide both empirical evidence and theoretical rigour for both the academic and practitioner pay communities.

1.3 Aim, objectives and research questions

Given the theoretical background and research context, the aim of this research is to reassess the strategic pay model by evaluating the extent of strategic pay practices in UK private sector organisations and their impact on HR performance outcomes. Having done so, this thesis aims to further develop strategic pay theory by incorporating empirical and theoretical findings into a new framework contributing to both knowledge and application of pay practice.

The research has three main objectives.

1. The first objective of the study is to test the proposition that pay practices will have an effect on HR performance outcomes. This is a key tenet of the strategic pay concept as introduced above; the design, choice and management of pay influences employee behaviour and performance and therefore improves HR performance outcomes such as productivity, absence, recruitment and retention. Testing the strength of evidence for this universalistic claim then is fundamental in reassessing the strategic pay model.

2. The second objective is to test the proposition that organisations will select pay practices that are in alignment with internal and external organisational contingencies. This objective relates to the contingency strands of the strategic pay concept; different organisations will have different employee behaviour and performance requirements due to different business strategies, types of employment, sectoral differences (services or manufacturing) and sizes of organisation (numbers of employees) and different organisations will therefore select different pay practices in order to encourage these different behaviours. If there is strong evidence to suggest that pay practice selection is related to organisational contingencies this would lend support to this aspect of the strategic pay model.

3. Finally, the third objective of the study is to test the proposition that positive HR performance outcomes will result from selecting pay practices that are strategically aligned with organisational contingencies. This builds on the two previous objectives and further tests the contingency precept that aligned pay results in improved outcomes.

To meet these three research objectives, three associated research questions have been framed.

1. What effect do pay practices have on HR performance outcomes?
2. To what extent do organisations align pay practices with external organisational contingencies such as business strategy and industry sector or internal contingencies such as employment group and organisation size?
3. To what extent does alignment of pay practices with organisation contingencies have an effect on HR performance outcomes?

The thesis responds to these research questions through an in-depth, critical review of extant literature on both theoretical and empirical aspects of strategy pay and related, underpinning concepts. This leads to a tightly defined set of hypothetical propositions which are then tested empirically.

1.4   Contribution and impact

This research contributes to strategic pay theory and has important implications for organisational practice. It has been noted that pay remains "neglected" and "under-researched" (Conroy, *et al.*, 2016, p.207-8). In contrast to other HRM topics (such as performance appraisal and selection), research on pay is "sporadic and sparse" being "among the most under-researched areas in HR" (Gupta and Shaw, 2014, p.1-2). Much of the research on strategic pay appears to have been completed in 1980s and 1990s with far fewer contributions in the twenty-first century, and yet the prevailing assumptions about pay, strategy and performance outcomes still inform standard models in current textbooks (e.g. Armstrong and Brown, 2009; Perkins, *et al.*, 2016).

This study responds to Gupta and Shaw's (2014, p.2) call for "better thinking and better evidence" in research on pay. It presents large-scale, cross-sectional empirical evidence of

the extent and effect of strategic pay in UK private sector organisations and, based on this empirical evidence, the study contributes to the debate on and development of strategic pay theory and practice.

This thesis contributes to knowledge in finding that organisations *are* practising strategic pay; they select pay practices that align with workforce human capital requirements and that support their business strategies. The organisation's size and industry sector also influence the type of pay practices selected. Furthermore, this study proposes that pay practices are operated in bundles with distinctive characteristics related to the orientation of the organisation. A significant part of the thesis is the proposition that pay *does* shape HR performance outcomes; not only do specific approaches to pay practice have definite positive or negative effects but configuring practices in bundles with organisational contingencies can enhance or diminish those effects. This strongly suggests that pay choices can have significant consequences for organisational outcomes. Finally, the thesis proposes that the standard theoretical frameworks for analysing strategic pay practice: universalism, contingency or configurational theories (Delery and Doty, 1996; Martín-Alcázar, Romero-Fernández, and Sánchez-Gardey, 2005), should be extended to take account of the contextual complexity and often conflicting imperatives inherent in organisational decision-making

There are important implications here for the development of strategic pay theory. Pay practices are often selected because of organisational contingencies, distinct approaches to pay strategy are evident and there can be significant effects on HR performance, but the linear assumptions that often characterise strategic pay literature need to be rethought. As this study shows, the picture of strategic pay in the UK is a more complex and varied one than these perspectives suggest.

Aside from theoretical contributions, these findings will have high impact in the HR/reward practitioner arena. There is a clear indication from this study that pay practices have strategic importance for organisations and dissemination of these findings will contribute to understanding of the role and impact of pay decisions on organisational performance.

1.5   Thesis outline

This thesis is organised in 9 chapters:

The following two chapters provide a detailed examination of relevant theory and research on strategic pay. Chapter 2 sets out the theoretical background and context of strategic pay, critically discussing the language, meaning and function of pay in organisations. This is followed by an evaluation of different theoretical perspectives of strategic pay in Chapter 3 which examines a) the universalistic perspective incorporating 'new pay' approaches that propose strategic pay practices improve organisational performance and b) contingency and configurational perspectives that advocate greater alignment between pay and internal and external organisational features. This first half of the thesis concludes with a delineation of the strategic pay conceptual framework drawn from the literature and a full statement of the hypotheses. The thesis continues with a detailed explanation of the adopted methodology and overall research approach and design in Chapter 4. The subsequent three chapters report empirical results and analyse findings for relationships between pay and: business strategy, industry sector and organisational size (Chapter 5); employment group (Chapter 6); and HR outcomes (Chapter 7). Chapter 8 discusses the implications of the findings for the extant strategic pay model. Finally, Chapter 9 presents overall conclusions, explores limitations of the study and offers suggestions in directing future research and pay practice.

A brief Glossary is provided for reference, followed by Appendices A-R which provide supporting documents regarding the CIPD Reward Management Survey context, research ethical approval and ancillary data relating to the statistical analyses presented in Chapters 5 to 7.

Chapter 2: Strategic pay - context and background

2.1 Chapter introduction

This chapter provides a contextual and theoretical background to the study. Pay has meaning for people; it is an economic exchange; an entitlement and a reward. Pay has a function in organisations; it attracts employees, retains and incentivises them. And pay plays a central role in concepts of organisational justice; it provides information with which groups and individuals measure their worth as defined by their employers.

The first section of the chapter analyses different perspectives on pay held by various stakeholders in society, the multifaceted meanings of pay's central component, money, and as a starting point, the implications of the language of pay and reward choices.

2.2 The meaning of pay: money, contexts and terminology

2.2.1 Alternative terms: scoping the 'pay' territory

Accepting the premise that socially constructed language choices have meaningful consequences for our understanding of reality (Burger and Luckmann, 1967), it seems appropriate to start by critically examining the terminology used to denote 'pay' in academic literature and organisational practice. In doing so, the intention is twofold: as a practical delineation and clarification of terms but also to begin to unpack some of the main themes in this study around the role of pay in organisations.

In simple terms, 'pay' is defined as the "money, or a sum of money, paid for labour or service" (OED, 2018a) 'Pay' is the term chosen in this study to refer to the monetary component of the employment transaction as a deliberate choice based on both the relative neutrality of the term in comparison to alternatives (as explored below) and its specific reference to the financial element of the employment deal.

An alternative term to 'pay', 'reward', is used in both literature and practice although it clearly has a wider meaning than its use in an employment context. The *OED* online entry describes reward as "a recompense or return given to (or received by) a person for some

service, merit, or favour" (OED, 2018b) implying that those three elements are not only distinct but equally worthy. In the study of psychology, 'reward' refers to, "any pleasurable or satisfying event or thing that is obtained when some requisite task has been carried out" (Reber, Allen and Reber, 2009 pp.687-8). This definition has close links to the concept of 'reinforcement'; the strengthening of a connection between response (e.g. behaviour) and stimulus (e.g. a reward) (Ibid.). So, in both general English language and psychological literature there is a clear indication of reward as a potentially motivating factor in influencing employee actions. As noted by Druker and White (2000a), particularly in UK practitioner contexts, 'reward' and 'reward management' are favoured terms. These are used by the Chartered Institute of Personnel and Development to refer to all matters related to pay and benefits (CIPD, 2017) and many text-book titles adopt the nomenclanture (e.g. Armstrong and Murlis, 2007; Armstrong and Brown, 2009; Armstrong, 2015; Perkins *et al.*, 2016). Heery and Noon (2009, p.311) in *A Dictionary of Human Resource Management*, define 'reward' as referring to "the benefits which employees receive in return for working on behalf of an employing organization", but they also comment on its use as a more HRM-oriented, "fashionable" and "positive" way of referring to tangible pay and benefits than alternatives. The inclusion of the term 'management' indicates a deliberate approach and suggests reward practices have the potential to be directed towards achieving organisational objectives. There is some indication here then that the very terms 'reward' and 'reward management' are loaded expressions presupposing a positive employee experience but also a purposeful managerial approach.

'Compensation' is a term widely used interchangeably with 'reward' and 'pay' in practice as well as literature, predominantly in the United States (Perkins and White, 2009). The *OED* online cites this particular meaning and again situates it in a chiefly North American context: "Salary or wages, esp. of a public servant; payment for services rendered. US" (OED, 2018c). The emphasis being on monetary elements of pay. 'Compensation *and benefits'* are often coupled as an expression that encompasses other elements besides pay. There are, of course other connotations associated with 'compensation': "that which is given in recompense, an equivalent rendered, remuneration, amends" or "amends or recompense for loss or damage" (Ibid.) are suggestive of reimbursement and have far more negative connotations than the more upbeat 'reward'. There is an implication that the employee needs to be compensated by the employer for enduring employment and expending effort; what

economists term the 'disutility of labour' (Heery and Noon, 2009; Knabe and Ratzel, 2012). However, the origin of 'compensation', from the Latin verb *compensare:* 'to weigh against', also suggests a notion of balance, signifying the need for equilibrium between what is given and taken by employer and employee. 'Remuneration' is yet another term used interchangeably with those above and is much more clearly defined as, "money paid for work or a service" (OED, 2018d). As with 'compensation', definitions of 'remuneration' tend to refer to "money" only.

In addition to these semantic choices, the inclusivity of such terms is a consideration. As noted above, 'compensation', 'remuneration' and 'pay' tend to refer to pay and monetary benefits only, whereas 'reward' can also encompass other aspects of work that are in themselves rewarding. The concept of 'total reward', which has been developed largely in the practitioner arena, has taken this to its logical conclusion with definitions that include compensation, benefits, work-life arrangements, performance management and recognition as well as career development and opportunities (WorldatWork, 2018). This extension of the traditional pay and benefits remit explicitly sets out to incorporate aspects of the employment relationship that are: 'relational' in addition to 'transactional', and 'intangible' as well as 'tangible', drawing on the concept of psychological contract proposed by Argyris (1960) and Rousseau (1989, 1995). This approach to rewarding employees, in its broadest definition, can be understood as expanding to encompass everything that is 'rewarding' about working for an employer or everything employees receives as a result of their employment (Davis, 2007, Corby and Lindop, 2009).

Various models of total reward have been developed in recent years (Armstrong and Brown, 2009; Nienaber, 2010; World at Work, 2018). Figure 2.1 delineates a representative total reward framework originally developed by Helen Murlis and Clive Wright (in personal correspondence) and adapted by Perkins *et al.* (2016) for publication. The range of 'reward elements' starts with basic cash payments, moves through variable elements of pay and benefits all the way up to aspects of employment that seek to generate engagement and emotional connections between employer and employee. Employers can design total reward offers that fulfil 'core' employee needs and that flex to allow 'optional' benefits meeting differing or changing employee needs dependent upon age or gender for example (Corby and Lindop, 2009; Hoole and Hotz, 2016).

The combination of rewards that offer employees both 'extrinsic' (externally derived) *and* 'intrinsic' (derived from the job itself) fulfilment appears to provide employers with a system to maximise the organisational benefit of employee rewards (Hoole and Hotz, 2016). So, 'total reward' conceptualises pay and reward as being about far more than a transactional exchange; there is a clear indication that the value of the whole 'total reward proposition' is far greater than the sum of each individual part.
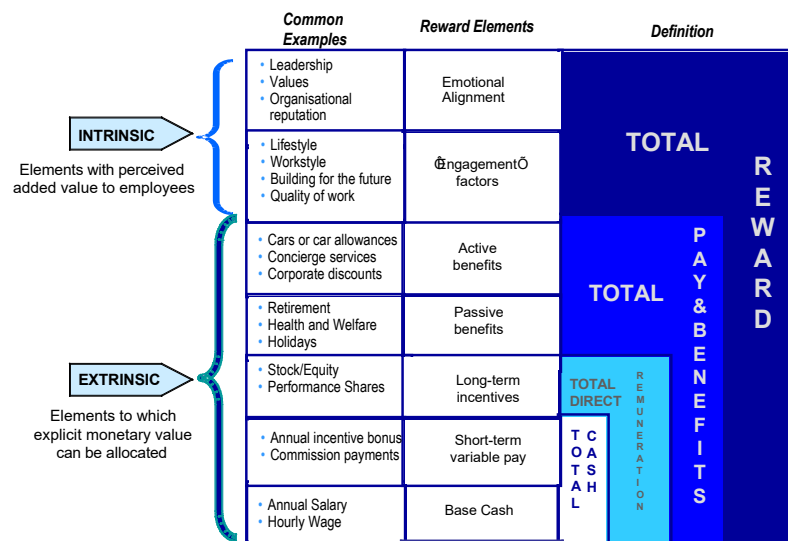
Figure 2-1. Total reward model (Source: Perkins et al, 2016)

While there appears to be some evidence for positive organisational benefits of a total reward approach (e.g. Schlechter, Thompson and Bussin, 2015; Hoole and Hotz, 2016), total reward has also attracted much criticism as a consultancy staple with little academic underpinning or empirical evidence-base (Perkins *et al*, 2016). One of the difficulties of justifying a total reward approach is the very breadth of its scope; if everything and anything can be subjectively rewarding in employment it becomes meaningless (Ibid.). Moreover, Brown (2014) argues that both the terminology and concept of 'total reward' have become increasingly meaningless in the economic uncertainty of the last 10 years. Paton (2014) goes as far as asserting that total reward may well be 'dead' as a concept. The argument is based on the primacy of take-home pay for employees in economies that are putting downward pressure on pay alongside erosion of traditional 'benefits' such as pensions and job security (Brown, 2014; Paton 2014). In this context, higher-order intrinsic elements cease to have meaning when lower-order fundamentals of the model are not being met. The

authors argue that providing 'chocolate box' style flexible benefits packages under a 'total reward' rubric cannot make up for stagnant pay increases, work intensification and continued insecurity (Ibid.).

Taking the above arguments into consideration, the focus (and terminology) chosen for this study is *pay* (the area labelled 'total direct remuneration' in Figure 2.1 above). First, in terms of language, this is in recognition that, of all the options examined above, it is a relatively neutral term. But it also delimits what is included and excluded in the scope of the study. Pay denotes more tangible aspects of the employer-employee exchange and includes all monetary aspects of pay and those with a direct financial equivalence (e.g. stock options). Pay is always a central component of the employment deal (regardless of economic conditions) and while the intangible and relational aspects of the employment relationship, no doubt offer the potential to be rewarding in an employment context, sit outside the bounds of this particular study. While there is some evidence to suggest that the total reward model has become a staple of pay and reward rhetoric (Brown, 2014) it is arguably conceptually distinct from tangible and monetary remuneration because it relies on psychological reactions to intangible aspects of the employment relationship (Perkins, *et al.*, 2016). And these reactions are far more difficult to measure being subjective at an employee level (Ibid.).

2.2.2 Stakeholders

Taking this further, and moving on from language alone, it is important to consider that the actuality of pay (whatever terminology is used to denote it) has meaning too. Milkovich and Newman (2002) offer a useful starting point by outlining the differing perspectives on pay taken by various stakeholders and actors. At the broadest level, all of society has an interest in pay matters. Voters for example, may see the pay and pensions of public sector workers as the reason for increased taxes; consumers too, may regard high labour costs as responsible for higher prices whereas low labour costs in less developed economies are cited as reasons for domestic job losses and off-shoring of production and services (Ibid.). Conversely however those same voters, consumers and citizens may see pay as a social justice issue. In the UK, austerity cuts to public sector pay (Wakefield, 2015) and pensions (Cutler and Waine, 2013), the persistence of the gender pay gap (The Lancet, 2018), the widening gap

between the highest and lowest paid in society (Allen and Ball, 2011; Hutton, 2011), the continuing issues of a 'living' wage and in-work poverty at home (Swaffield, Snell, Tunstall and Bradshaw, 2018) and an end to pay exploitation abroad (Badham, 2017) have all become widespread matters of debate and concern for many.

Within organisations too, pay signifies different things and plays different roles. Pay issues for most shareholders are centred on executive pay and how closely it is tied to the financial performance of the company. For managers, pay is an operational cost to be weighed against productivity but may also have the potential to be a means of improving that productivity (Milkovich and Newman, 2002).

For the recipients of pay, employees, pay can be the main source of economic security and the means to provide both essential and desirable goods and services; both material and social wellbeing. As Milkovich and Newman (2002, p.6) point out, pay can be seen variously by employees as, "a *return in an exchange* between their employer and themselves, as an *entitlement* for being an employee of the company, or as a *reward* for a job well done." (emphasis added). Each of these perspectives comes with its own differing meanings and implications. In an exchange relationship both parties will accept a level of contingency; what is given will depend on what is provided in exchange. In contrast, employees with an entitlement perspective are likely to see pay as something owed to them regardless of their contribution; indeed 'entitlement' has become a pejorative term in recent years in the UK referring to workplace cultures, usually in public sector contexts, where workers are framed as unreasonably demanding pay rights regardless of economic circumstances (e.g. McKinstry, 2008). The connotations of 'reward', as a managerial term used to refer to pay and benefits based in psychological notions of satisfaction on task completion, have been discussed above. However, Milkovich and Newman (2002) suggest that employees are unlikely to view pay in this way despite managers' and consultants' preferences for the terminology. Instead, the authors suggest, pay for employees is a *return on investments* of human capital; education, training and contributions of time and energy in work.

2.2.3   The meaning of money

However, it is unlikely that *all* employees will regard pay in such straightforward terms. One aspect of pay and its meaning for employees which has been explored in the literature is its conceptual overlap with the construct of 'money'. Of course, pay is usually monetary, and, for the majority of people, paid employment is the primary means of accessing money. Gomez-Meija and Balkin (1992, p.5) make this interconnection clear in their introduction to a seminal contribution to the strategic pay literature, *Compensation, Organizational Strategy, and Firm Performance:* "Compensation's central variable – money – represents the most generalized medium of exchange known to humankind." It is therefore not only "an integral part of practically all transactions occurring within and across organizational boundaries" but also, "the quintessence of all business language" (Ibid., p.5).

It follows, therefore, that *pay* may have differing meanings for different employees because *money* has been found to have different meanings for different people; according to gender, socio-economic group, work experience and cultural background (Wernimont and Fitzpatrick, 1972; Tang, 1993). Tang (1992, p.201) goes as far as suggesting that the meaning of money is "a frame of reference in which one examines one's everyday life". It is theorised that childhood socialisation is largely responsible for the different meanings attached to money (Kirkcaldy and Furnham, 1993) and that much of this differentiation has to do with the values individuals attach to money and therefore pay (Mahoney, 1991; Mitchell and Mickel, 1999; Tang, Tang and Luna-Arocas, 2005). Money, and by implication pay, it is argued, can be associated with consumption opportunities, security, power, status and achievement as well as stress and anxiety (Mitchell and Mickel, 1999; Barber and Bretz, 2000). An example of these different associations is shown in an early study of pay increases by Krefting and Mahoney (1977) who find that the meaningfulness employees attached to increases in pay was less to do with the amount of the increase itself than the employees' orientation towards either *money* or organisational *recognition*. Indeed, they find that for those for whom recognition was the primary orientation, the pay itself had "little inherent meaning" (p.85) i.e. the pay increase is valued as a symbol of recognition and organisational approval rather than having meaningful value in monetary terms. Tang and various associates (Tang, 1992; Tang 1993; Tang, Kim and Tang, 2002; Tang, Tang and Luna-Arocas, 2005) have conceptualised these differing attitudes towards money as a

'money ethic' and, through empirical work, have developed scales for differentiating attitudes including: positive attitudes (money is good, important, valuable and attractive); negative attitudes (money is evil, shameful and useless); achievement (money is a symbol of success); respect (money makes people in your community respect you and money is honourable); and power (money allows autonomy and freedom and confers power) (Tang, 1993). So, money, and by extension pay, clearly has far more meaning for people than its 'face value' monetary worth and has a range of psychological, social and cultural dimensions.

2.3 The function of pay in organisations: sorting, incentive and equity effects

Moving from the *meaning* of pay, to consider its *function,* the treatment of the role of pay in the literature is largely divided into three main strands.

First, pay has been theorised to have a *sorting* effect: impacting the composition of the workforce via attraction, selection (both organisational and self-selection) and attrition processes. Key theoretical frameworks include efficiency wage theory (Weiss, 1980) and human capital theory (Becker, 1993).

Second, pay has been theorised to have an *incentive* effect; influencing employee behaviour, motivation and performance (Lazear 1986; Gerhart and Rynes, 2003; Gerhart, Rynes and Fulmer, 2009; Gerhart and Fang, 2014). Key theories applicable here include agency theory (Fama, 1980), expectancy theory (Vroom, 1964) and cognitive evaluation theory (Deci, 1972).

Third, pay decisions have been theorised to have an effect on perceived *equity;* influencing employee action: joining, staying with, and applying task effort in, organisations. Distributive justice and equity theory predictions (Homans, 1961; Adams, 1963, 1965), procedural justice (Leventhal, 1980; McFarlin and Sweeney, 1992) and forms of interactional justice (Greenberg, 1993) as well as underpinning ideas from social comparison theory (Festinger, 1954) and cognitive dissonance theory (Festinger, 1957) are relevant conceptual frameworks in this final strand.

This section will examine both theory and evidence for each of these proposed effects.

2.3.1 Sorting effects

The argument for a sorting effect proposes that pay influences workforce composition because different pay practices attract and retain different types of employee (Gerhart and Rynes, 2003). Much of the work on the sorting effect is based on established theories of labour and institutional economics including efficiency wages (Salop, 1979; Stiglitz, 1987; Weiss, 1980) and human capital (Becker, 1993). The premise of these models is that organisations pay at a higher level in order to attract and retain workers who have invested in their own human capital through education and training and therefore have valuable skills or knowledge.

A key proposition is that higher pay levels aid the attraction and selection of better quality employees. Weiss's (1980) efficiency wage model predicts that better employees will be attracted by wages higher than their 'reservation' wage (the lowest wage a worker would be willing to accept); in effect, better quality employees self-select into higher paid jobs. Weiss's (1980) model however assumes information asymmetry; that organisations cannot know either what employees' reservation wages are or their true productive ability. Despite this, variants of the model propose that an efficiency wage effect will still occur when information asymmetry is reduced because employers can accurately assess and select job applicants and only better candidates are selected (Stiglitz 1987; Schlicht, 2005). Hosios and Peters (1993) too propose that forms of communication (e.g. contract negotiation) between employer and employee, as well as monitoring of performance in short-term contracts, will influence overall contractual and pay outcomes.

Efficiency wage theorists also propose a turnover model where higher pay levels positively influence employee retention. Salop (1979) proposes that employee turnover is costly to the organisation through direct costs of replacement and indirectly through lost productivity and therefore organisations will increase pay rates to a level which secures the on-going employment of employees. Toulemonde (2003), extending the theory, indicates that the prohibitive cost of turnover to the organisation protects 'insider' employees who are able to bargain for their wage and are less likely to leave (voluntarily or involuntarily).

Both the selection and turnover models of efficiency wage theory have been subject to criticism for both unwarranted assumptions and lack of empirical support (Beaudry, 1994).

Testing these predictions empirically has proved difficult because the type of organisation-level data required is rare (Campbell, 1993) and many potential variables, such as 'effort' or 'asymmetric information', are unobservable (Agell and Lundborg, 2001). In addition, the focus of empirical research on efficiency wage theory has been the proposed relationship between higher wages and productivity (e.g. Konings and Walsh, 1994; Hibbs and Locking, 2000) rather than the lesser examined selection and turnover models. The evidence for the existence and effectiveness of efficiency wages for aiding, selection and minimising turnover is largely inconclusive. Leonard (1987) tests the turnover model in a study involving more than 200 locations and 70,000 employees in the United States high-tech sector and finds evidence that while higher wages are associated with lower turnover rates, the actual reduction in turnover rates is not sufficient to offset the higher wage costs. Campbell (1993) finds evidence that firms with higher turnover costs also pay higher wages. Agell and Lundborg's (2001) study surveys Swedish HR Managers and finds a belief that productivity differentials between potential employees are signalled by employees' willingness to accept pay offers, suggesting limited support for the selection model. This finding is in direct contrast however with Blinder and Choi (1990 p.1006) who find "damaging evidence against the adverse-selection model" in that United States managers unanimously disagree with the suggestion that employee rejection of pay offers was related to unobserved high productivity. More recently though, Macpherson, Prasad and Salmon's (2014) research on students suggests a marked preference for a wage profile fitting the traditional 'efficiency wages' model in comparison to a 'deferred compensation' alternative, despite it not necessarily being in their best economic interests over time. Although here the question of generalising results from a population of students to workers has to be raised.

So, while there is no doubt that the empirical support is far from complete, efficiency wage theories proposing that higher pay levels can lead to better employees either self-selecting or being selected and that higher pay levels can prevent better quality employees leaving organisations are clearly well established.

Aside from pay *level*, there has also been considerable attention to the *basis* for pay, in the literature proposing that pay has a sorting effect in organisations. Many of these studies examine the proposition that pay-for-performance (PFP) systems have a sorting effect on workforce composition because individuals are attracted to different types of pay systems

according to their productivity-related attributes and will self-select into jobs in which they can earn more through performance incentives (Gerhart, Rynes and Fulmer, 2009; Gerhart and Fang, 2014). However, distinguishing a sorting effect independently from the better researched incentive effect (discussed at greater length below) has not proved a straightforward task for researchers. This is because, again, the organisational data is difficult to come by (Eriksson and Villeval, 2008), but also because organisations do not tend to use pay practices in isolation; they are more likely to operate a number of pay practices in conjunction with one another (Prince, Prince, Skousen and Kabst, 2016). One approach has been to perform laboratory experiments with students as proxy employees (Cadsby, Song and Tapon, 2007; Eriksson and Villeval, 2008). Cadsby *et al.* (2007) find that more productive 'employees' select PFP over fixed wages while more risk-averse individuals are less likely to select PFP. Eriksson and Villeval (2008) too find that high skill 'employees' favour variable pay schemes suggesting that individuals with higher level skills are more likely to self-select into jobs with such schemes. There are however considerable limitations of these studies, acknowledged by the authors. One limitation is the question-mark over generalisability of results from a student to an employee population. In addition, the low-value monetary stakes risked by participants cannot replicate real PFP schemes and laboratory conditions cannot truly emulate the complexity of real world organisational settings, so these results must be treated with some caution.

An alternative research strategy, employed by Lazear (1986, 2000), is to study organisations changing their pay system and moving from fixed pay to variable piece rates as it allows the researcher an opportunity to analyse any differences in outcome. An initial study found that more able workers select firms where performance has a payoff (i.e. they are paid according to output) while less able workers go to firms where ability has no effect on salary (Lazear, 1986). A further large-scale field study in a glassworks factory identifies a strong sorting influence on the productivity of the organisation; of the 44% improvement in productivity overall, Lazear (2000) finds roughly half is attributable to the outcome that, over time, less productive employees left and were replaced by more productive employees.

However, all the above studies are confined to examining the sorting effect of piece rates which is just one form of PFP and one that is increasingly rare in organisations (Perkins *et al.,* 2016). In addition, the sorting effect observed is limited to self-selection only. This issue

is addressed somewhat by Trevor, Gerhart and Boudreau (1997) in a study of voluntary turnover and job performance that finds high performers are less likely to leave if their pay growth is commensurate with their performance. Work by Nyberg (2010) supports these findings in a study of insurance workers as does that by Shaw *et al.* (2009) showing 'expectation-enhancements', including PFP, are negatively related to high performers' quit rates and positively related to poor performers' quit rates suggesting a sorting effect in the organisations studied. So, the proposition that the basis for pay can lead to more productive employees being attracted to and retained by organisations has a reasonable body of supporting evidence.

However, while the sorting effect has been proposed as an important function of pay systems, it is overshadowed in the literature by the huge body of work focussing on the *incentive* effect.

2.3.2 Incentive effects

The central proposition of the incentive effect is that pay influences the level or intensity of individual and aggregate motivation and therefore output (Gerhart *et al.,* 2009). There are a number of theoretical frameworks proposed to underpin the incentive effect of pay coming from both the disciplines of labour economics and management psychology (Gerhart and Rynes, 2003). But there are also theories that counter claims of an incentive effect, particularly from the field of motivational psychology. This section will examine both theories and empirical evidence of the incentive effect of pay on employee performance.

For economists the incentive power of pay is rarely in question; principles of classical economic theory predict that *homo economicus* wishes to obtain the greatest amount of wealth possible and will therefore act in order to get it (Mill, 2009a). Rottenberg (1956) explains that, in comparison to other job qualities (such as job security), money is not only continuously quantifiable as a highly visible scale, but also that preference patterns are consistent; all else being equal, people will nearly always prefer more money, rather than less.

More recently, agency theory has sought to make sense of the dynamics of pay as an incentive, framing organisational shareholders as the 'principal' and managers their 'agent'. The theory assumes that agents will act in their own best interest unless the economic

interests of the agent are aligned with those of the principal (Stroh, Brett, Bauman and Reilly, 1996). Agency theorists have sought to explain the pay choices available to principals and how these relate to agent outcomes (Bloom and Milkovich, 1998). Ross (1973, p.138) defines the problem for the principal: a "fee-to-act" can be agreed with the agent but monitoring of performance, particularly for multiple agents, will prove costly. Fama (1980) presents one solution in the form of competition from the market which will force evolution of performance management devices; the market will effectively impose a wage revision process which constrains managers' self-interest. However, as Perkins and Hendry (2005) explain, agency theory's premise is that it is not easy to align managers' pay with their performance outcomes, otherwise organisations could just rely on fixed salaries, the fact that they more often adopt variable PFP systems is a function of the assumed principal-agent problem i.e. shareholders believe that managers are likely to shirk and act primarily in their own self-interest unless appropriately incentivised.

On one level there is empirical support for pay incentives working as a solution to the principal-agent problem. In his large-scale field study of a glassworks company's move from hourly rates to piece work, Lazear (2000) finds a significant incentive effect increasing employee output alongside the sorting effect cited above. Cadsby *et al.* (2007) observed incentive effects in their laboratory study where, regardless of pay preferences, participants produced more working under a PFP scheme than on fixed wages. However, in the field of executive pay it is harder to find such unambiguous results. Bloom and Milkovich (1998) in a study of large-scale United States databases on managerial pay, stock market risk and accounting data find that, counter to what would be expected if a principal-agent effect was at work, firms at higher risk did not use short-term incentives and indeed those that did so suffered poorer firm-level performance outcomes. The authors suggest this implies a more complex employment contract than agency theory predicts. Perkins and Hendry (2005, p.1464) also suggest agency theory is inadequate to explain the complexity of executive pay which does not operate in a "hermetically sealed" world but rather one where governance of executive pay and performance is subject to multifaceted social processes.

In the psychological literature there is also a mixed view of the incentive effect of pay. There are some that have argued strongly in favour of pay acting as an incentive, for example, Locke *et al.* (1980) propose that no other incentive or motivational technique can compare

to money with respect to its instrumental value. The 'instrumentality' of incentives is an idea largely deriving from expectancy theory developed initially by Vroom (1964). The premise of the theory is that incentive effects are dependent on:

1. The individual believing that s/he has the capability to perform the given task if s/he exerts performance-related effort (expectancy - E)
2. That performance, at a certain level, will lead to outcomes or consequences (instrumentality - I) and;
3. The outcomes or consequences are valued (valence - V)

(Schwab, 1973)

The implications for the incentive effect of pay in general, and PFP in particular, have been widely studied and the core components of expectancy theory have become a standard part of the language of motivational psychology (Gerhart and Rynes, 2003). Expectancy theory also seems to offer practical principles for designing performance-pay systems that have clear, achievable performance objectives which are rewarded with sufficiently valued pay outcomes (Armstrong and Brown, 2009).

In terms of empirical evidence for an expectancy effect, a meta-analysis by Van Eerde and Thierry (1996) find some support for the individual components of the model (E-I-V) although it is proposed that the validity of the construct as a whole is uncertain. The authors attribute this in part to the different interpretations of the theory by researchers and inaccurate analysis techniques in decades-old research. However, a subsequent meta-analysis finds monetary incentives have a large mean effect on employee productivity although only in terms of quantity not quality (Jenkins *et al.*, 1998) and the incentive effect of pay, based on its instrumental properties, remains a strong component of some strands of management psychology.

This view, however, is in direct contrast to pervasive psychological theories of motivation developed in the middle and second half of the twentieth century by Maslow (1943), Herzberg (1974, 1987; Herzberg, Mausner and Synderman, 1959) and Deci (1972, 1976; Deci and Ryan, 1985). Collectively, these authors reject the dominance of monetary reward as the primary incentive to explain human behaviour in organisational contexts. Maslow's (1943) hierarchy of needs theory categorises money as a *basic* need (it enabled the fulfilment

of physiological and instinctive requirements such as food, shelter and warmth) as opposed to the *higher* needs of love (belongingness), esteem and self-actualisation which could be better fulfilled by meaningful, satisfying work. For Herzberg *et al.* (1959), who developed a two-factor theory of motivators and 'hygiene factors', money is a hygiene factor; it can be a source of *dis*satisfaction for employees but not a source of satisfaction and therefore motivation.

The work of Deci and colleagues (Deci, 1972, 1976; Deci and Ryan, 1985; Deci, Koestner and Ryan, 1999; Ryan and Deci, 2000; Baard, Deci and Ryan, 2004) on the effects of external reward on motivation has also questioned the incentive effect of pay suggesting that contingent rewards such as PFP could have a negative effect on motivation. Deci's (1972) starting position is that there are two broad classes of human motivation: intrinsic motivation and extrinsic motivation. Intrinsic motivation occurs when the individual undertakes an activity for no other reason than the activity itself (e.g. reasons of satisfaction, enjoyment) whereas extrinsic motivation occurs when the individual undertakes an activity because it leads to an external reward (e.g. pay, approval and status). His findings over time have led to the development of cognitive evaluation theory (CET) which suggests that pay is likely to 'crowd out' an individual's interest and satisfaction in the work itself, thereby lessening the strength of intrinsic motivation. This happens because external reward has a 'controlling' aspect. When money is the external reward, intrinsic motivation decreases because the individual perceives their behaviour to be governed by acting to gain the reward; they are controlled by it (Deci, 1972). This on-going research has concluded that external rewards, particularly tangible rewards that are contingent upon individual actions, undermine intrinsic motivation (Deci, Koestner and Ryan, 1999).

The work of Maslow, Herzberg and Deci has been taken up by those authors arguing that monetary rewards (particularly variable, performance-based payments) are ineffective as incentives for performance. Pfeffer (1998) proposes that financial incentives undermine job satisfaction, employees perceive them as controlling and they therefore provoke resistance and also, over time, they come to be taken for granted as an expected part of the package so cease to have an incentive effect. Deming (1986) exhorts organisations to abandon financial incentives as they lead to lack of co-operation and low productivity. Kohn (1993, p.54) takes a more robust view labelling all external rewards "bribes" that not only fail to motivate,

they also: punish, rupture relationships, ignore reasons for poor performance and discourage risk-taking as well as undermine interest in work. Pink (2009) has drawn directly on Deci's work to underpin his popularist take on the power of intrinsic motivation and the limited contribution of PFP as a performance incentive.

However, the argument is a complex one and criticisms of the motivational psychologists' claims have been robust. Fang and Gerhart (2012) make the point that much of the research that went into forming cognitive evaluation theory was conducted in non-work settings (often among children in educational contexts) and there is limited workplace-based evidence. Indeed, in their own study of white-collar workers in Taiwan, the authors find evidence that, contrary to the expected CET view, PFP has a *positive* impact on intrinsic motivation. The possibility of pay incentives increasing intrinsic as well as extrinsic motivation has been noted before by Ryan, Mims and Koestner (1983) who propose that monetary reward can also provide feedback on performance and therefore increase intrinsic motivation by providing meaningful information about self-competence. An issue here may well be that a core component of motivational theory, the validity and reliability of the 'intrinsic' vs. 'extrinsic' construct is weak. Certainly, definitional inconsistencies have been cited as problematic, largely due to the operationalization of different definitional frameworks (Guzzo, 1979; Kanungo and Hartwick, 1987).

Another key factor in the debate is that too little attention has been paid to the 'meaning of money' discussed in Section 2.2.3 above; pay takes on symbolic meanings for individuals aside from, or in addition to, its tangible characteristics. Even Herzberg (1974, p.20), one of the originators of two-factor theory which proposes that pay is *not* a motivator, later concedes that pay can act as motivator *and* hygiene factor because "although primarily a hygiene factor, it also often takes on some of the properties of a motivator with dynamics similar to recognition or achievement".

An alternative view which responds to some of the criticisms of PFP comes from Baker, Jensen and Murphy (1988, p.597) who are unequivocal in their belief that pay has an incentive effect. They go as far as claiming that the only problem with incentives are that they are "too effective" and, whilst they acknowledge unintended or counterproductive results, imply this is a problem of management rather than a fault with the theory.

It is clear from the evidence outlined above that pay can have an incentive effect, despite questions over the alignment with shareholder interests, durability and impact on other organisationally desired behaviours such as teamworking. The effect of other motivational elements, particularly those identified as 'intrinsic', may be stronger for some depending on the type and context of work tasks, but nonetheless there is a body of evidence to suggest that pay can have a powerful effect on employee behaviour and, where managed well, this can have positive organisational outcomes.

2.3.3 Equity and justice effects

Wallace and Fay (1983, p.69) state that "the critical theme that exists at the center of *all* compensation theory and practice [is] equity". Alongside the sorting and incentive effects of pay, the influence on employee behaviour of perceptions of equity, fairness and justice in pay decisions, distributions and procedures is a conceptual strand of the literature that is crucial in understanding how pay works in organisations.

While notions of equity and distributive justice can be traced as far back as Aristotle's *Nichomachean Ethics,* written circa 350 B.C.E. (Aristotle, translated by Ross, 2009), these theories gained traction in the social psychology and compensation literature in the 1960s with a number of publications on the subject by Jacques (1961), Homans (1961), Adams (1963, 1965), and Lawler (1971). These theories centre on perceived fairness of an individual's pay provided within the context of the wage-effort exchange. Equity theories generally propose that the perception of fairness is related to the comparative nature of equity i.e. an individual will compare the experienced effort-reward ratio with that of another individual or one that had been experienced in the past or was anticipated to experience in the future.

In an early model, Jacques' (1961, p.219) proposes a 'psycho-economic equilibrium' where work and individual capacity must be matched, and payment for the work done must be equitable in order for the individual to experience "the maximum psychological equilibrium which we are capable of experiencing with regard to our work and payment". Where there is 'over equity payment' Jacques (1961) proposes there will be some initial feelings of satisfaction followed by unease, guilt, and fear of envy or retaliation by others. If, in addition, the work level is above individual capacity then stress disorders and breakdown may result.

On the other hand, where there is 'under equity payment', even for the correct work level, there will be feelings of unfairness, falling morale and criticism of the organisation. Where under equity payments are provided for work that is above or below our capacity, Jacques (1961) claims, feelings of contempt for the employer, dissatisfaction and economic insecurity will arise leading surely to labour turnover. Jacques' (1961) conceptualisation of equity effects centres on perceptions of payment in relation to individual capacity (the amount or quality of work performed) rather than equity in relation to payments received by other workers. His key contribution is the identification of the worker's psychological reactions to perceptions of inequity and the suggestion that workers would act to reach or maintain the desirable psychological state of equity equilibrium.

Meanwhile, drawing directly on Aristotelian ideas, Homans (1974, p.249) proposes that "the condition of distributive justice is satisfied when the ratio of the measures of the persons is equal to the ratio of the measures of their respective rewards". This means that rewards should be in proportion to the investments and contribution made and, as long as this is the case for all participants, equity or distributive justice is maintained. So here the 'respective' element is just as important for the achievement of equity. Homans (Ibid.) notes however that reaching consensus on what constitutes 'investment', 'contribution' and 'reward' is not easy as these factors are contextual in both time and place as well as driven by highly personal perspectives.

Homans' work was followed by John Stacy Adams who is perhaps the best known and oft-cited equity theorist despite the initial concept being presented as a 'theory of social *in*equity' (1963). Adams (1963, p.424) defines inequity as follows:

> Inequity exists for Person whenever his perceived job inputs and/or outcomes stand psychologically in an obverse relation to what he perceives are the inputs and/or outcomes of Other.

Therefore, equity for an individual is achieved when inputs and outcomes are relative or proportional to those of another. Building on Homans' (1961) 'investments' and 'contributions', Adams (1963) defines 'inputs' as all those things an individual brings to an employment exchange relationship. This might include: education, intelligence, experience, training, skill, seniority, age, sex, ethnic background, social status, and effort. Crucially

these are inputs as *perceived* by the individual themselves rather than the employer for whom only some 'inputs' will be recognised as relevant to the exchange taking place. In terms of the 'outcomes' of the exchange, these are the rewards received and may include: "pay, rewards intrinsic to the job, seniority benefits, fringe benefits, job status and status symbols, and a variety of formally and informally sanctioned perquisites" (Ibid., p.423). Adams (1963) also draws on Festinger's (1954) social comparison theory making the comparative 'Other' a central component of the theory. It is the individual who determines who the comparator is and while it might well be "a co-worker or colleague" (as an employer might expect) it might equally be "a relative or neighbour" or even "a group of co-workers, a craft group, an industry-wide pattern" (Adams, 1963, p.424). In addition, as Patchen (1961) indicates, the referent Other might be the individual themselves six months ago i.e. comparing past inputs / outcomes with present inputs / outcomes, or Other might even be a future version of themselves in an aspirant position, envisaging the inputs / outcomes they are capable of achieving. Goodman (1974) finds that most people use more than one referent as 'Other' which therefore could be any of the above comparators simultaneously.

Adams (1963) also uses Festinger's (1957) work on cognitive dissonance theory as well as Jacques (1961) psycho-economic equilibrium concept discussed above, to propose that 'inequity' results for Person if they feel themselves to be underpaid *or* overpaid and that this inequity results in a 'tension' (although he notes that the threshold for feelings associated with inequity is likely to be higher for overpayment than underpayment). The presence of tension created by inequity, Adams (1963, p.427) argues, "will motivate Person to achieve equity or reduce inequity, and the strength of motivation to do so will vary directly with the amount of inequity". This direct link between equity and employee motivation in Adams' (1963, 1965) model proposes that an individual could seek to achieve equity and reduce inequity in a number of ways. They could either increase inputs (greater job effort, productivity, more training or education); decrease inputs (less job effort and productivity); increase outcomes (pay rise, additional benefits or higher status); decrease outcomes (lower pay) or 'leave the field' (quit the job, transfer, reassignment or increase absenteeism). So, even in these early conceptualisations a direct link is envisaged between equity and employee behaviour.

The field of equity and organisational justice has evolved to incorporate four distinct categories of justice which are theorised to influence employee responses to pay (Colquitt and Rodell, 2011). *Equity* and *distributive* justice refer to the fairness of reward distribution (Adams, 1963, 1965); *procedural* justice refers to the fairness of reward decision-making (Leventhal, 1980); *interactional* justice refers to the fairness of treatment received in the implementation of distributions and procedures. This last category has been further divided into two distinct components by Greenberg (1993): *interpersonal* justice refers to the fairness received in interpersonal treatment by others and *informational* justice refers to the fairness and truthfulness of explanations and information provided (Greenberg, 1993).

Each of these constructs is theorised to influence employee attitudes and behaviour outcomes; for example: job satisfaction, organisational commitment, evaluation of authority, organisational citizenship behaviour, withdrawal behaviours, and job performance (Colquitt and Rodell, 2011). In particular though, both procedural and distributive justice have been theorised to have a direct effect on pay satisfaction and dissatisfaction with resultant positive or negative organisational outcomes (Heneman and Judge, 2000). Lawler (1971) was among the first to set out a case for pay systems to be based on equity and merit on the basis that this would determine pay satisfaction, motivation and organisational effectiveness. Lawler's (1971) proposition is that any discrepancy between the amount an individual perceived they should be paid and the actual amount paid will contribute to determining pay satisfaction with resultant organisational benefit or disadvantage.

One of the challenges in assessing the evidence in support of these theories is in the differing conceptual constructs of equity adopted by different researchers. Comparison of two similar studies that superficially reach the same conclusion, that equity predicts employee satisfaction, illustrate this point. Klein (1973) in a study on US manufacturing workers, operationalises 'equity' as a salary comparison with the same, higher, and lower level jobs drawing predominantly on the social comparison aspects of the equity concept. Findings indicate that equity predicts employment satisfaction with a predictive power far greater in terms of the variance accounted for than either of the other two tested predictor variables (reinforcement and expectancy). Another study of equity and employee satisfaction by Berkowitz, Fraser, Treasure, and Cochran (1987) on 248 full-time employed US men also

finds that equity plays a significant part in predicting pay satisfaction. However, the operationalisation of equity (the extent to which individuals feel their rewards are fair or deserved) is very different to Klein's (1973). Indeed, the authors separately test 'comparisons with other people's pay' and find it *does not* influence satisfaction to any significant degree. They therefore go on to make a clear distinction between equity and social comparison, proposing that the two concepts may operate entirely independently of one another.

Taking these sorts of discrepancies into account however, in general there are a number of studies that generally support the theories proposed by Jacques (1961), Homans (1961), Adams (1963, 1965) and Lawler (1971). The most comprehensive of these is a meta-analysis of the antecedents and consequences of pay satisfaction undertaken by Williams, McDaniel and Nguyen (2006) evaluating 203 studies published in the preceding 35 years. Their findings generally support the predictions of equity and justice theories. First, they find that "pay comparisons were among the strongest predictors of pay satisfaction" (Ibid., p.403) and both internal and external comparisons are strongly related to pay level satisfaction. They also find that distributive justice is strongly related to pay satisfaction and where procedural justice measures are focused on pay (rather than on general organisational procedures), procedural justice is also strongly related to pay level satisfaction. Second, the meta-analysis findings for the outcomes of pay satisfaction indicate that pay satisfaction is moderately related to attitudinal outcomes (such as turnover intentions) although only weakly related to behavioural outcomes (such as absenteeism and performance). This second finding appears to contradict Heneman and Judge (2000, p.85) who claim that prior research had "unequivocally shown that pay dissatisfaction can have important and undesirable outcomes", although both sets of authors acknowledge the need for further research and in particular the need to construct more "behaviourally specific" (Heneman and Judge, 2000, p.85) and more precise rather than "global" (Williams *et al.,* 2006, p.406) models.

Another, related, problematic element of these studies is the multi-dimensional nature of the pay satisfaction construct and its measurement (Heneman and Schwab, 1985). For example in the pay satisfaction questionnaire used by 19 of the studies in Williams *et al.*'s (2006) meta-analysis, three of the 18 measurement items relate to equity or distributive justice (pay

of other jobs in the company; consistency of the company's pay policies; and differences in pay among jobs in the company); two items relate to procedural justice (influence my supervisor has on my pay; how my raises are determined) and one item relates to informational justice (information the company gives about pay issues of concern to me) whereas the remainder of items concern the size, level or amount of benefits, salary or other elements of pay (Heneman and Schwab, 1985). Teasing out not only the equity-specific effects on pay satisfaction, but also the effects of different types of equity and justice is a challenge for researchers.

Responding to this deficiency, Till and Karren (2011) have conducted a focused study on pay comparisons and the perceptions of different types of fairness and organisational justice as antecedents of pay level satisfaction. They use three different constructs of distributive justice: individual equity (comparisons of people doing the same job in the same company); external equity (comparisons of people doing the same job in other companies); internal equity (upward and downward comparisons within the organisation) as well as procedural justice and informational justice. Findings indicate that the three types of distributive justice are most important for pay satisfaction with individual equity having the largest effect. They also find that while both procedural and informational justice have an effect on pay satisfaction it is not to the same extent as the three types of distributive justice. A secondary finding is that none of the participants in their policy-capturing survey relied on a single referent against which to compare themselves. These findings support theories that emphasise the importance of social comparisons with those in similar positions (Homans, 1961; Adams, 1963), the propensity towards multiple referents (Goodman, 1974) as well as the dominance of distributive justice over both procedural and informational justice (McFarlin and Sweeney, 1992; Colquitt and Rodell, 2011). However, the study was small, just 52 respondents, all from management and executive grades which could limit the generalisability to general workers.

While there is broad consensus in the literature that equity theories have a level of empirical support, the *relevance* of equity theories in the twenty-first-century workplace has been questioned. In a theoretical paper, Skiba and Rosenberg (2011) claim that despite widespread operationalisation in late twentieth-century developed economies, equity theory no longer has a place in contemporary management practice. The authors argue that sectoral

changes have resulted in imbalances between the institutions of business, government and society and have led to extreme and increasing inequity which has manifested as the widening gap between the pay of the highest paid CEOs and average workers' salaries, wage stagnation, and the prevalence of redundancies and long-term 'temporary' employment among other issues. The authors call for measures to be taken to tackle the imbalance and restore the equity equilibrium.

However, it seems the demise of equity, at least at a conceptual level, may well have been exaggerated. Recent work by Pepper, Gosling and Gore (2015) has contributed to a new phase in the development of equity theories. The authors adopt an economic model of equity based on Fehr and Schmidt's (1999) fairness model. The construct is compatible with that of the social and management psychologists as it is based on an assessment of individual assets in relation to a comparator (as in Homans, 1961; Adams, 1963) and incorporates outcomes evoked by individuals experiencing inequity – either under-equity payment (termed envy) or over-equity payment (termed guilt). This framing of envy and guilt is comparable with Adam's (1963) 'tensions' based on Festinger's (1957) 'cognitive dissonance'; indeed Jacques (1961) also uses the term 'guilt' to describe feelings associated with over-equity payments. Finally, the authors also concur with the social psychologists that "envy weighs heavier than guilt" (Pepper *et al.*, 2015, p.1296) a direct echo of Adams (1963). Pepper *et al.*'s (2015) study tests the fairness model against standard rational economic models on senior executive choices in relation to problem scenarios involving questions of distributive justice. The authors find that the fairness model is much better at explaining senior executive behaviour than the standard economic model. They conclude that "fairness considerations are salient to senior executives", and that while prevalent views of executive pay emphasise incentives, they "underestimate the role and significance of fairness" because they are dominated by agency theory and related concepts (Pepper *et al.,* 2015 p.1308). The authors make the case for building equity and 'behavioural' concepts into standard agency models; possibly a unifying concept in the psychological and economic academic fields.

So, concepts of equity and justice remain central to understanding how pay functions in organisations. Equitable pay influences employee satisfaction with both pay and more generally with the employment exchange being entered into. This satisfaction can translate

into motivation and positive organisational outcomes. Conversely, pay inequity has been found to cause dissatisfaction which leads to negative employee attitudes and behaviours.

2.4   Chapter summary

This chapter has set out the contextual and theoretical background against which the current study is set. First, differing perspectives and meanings attributed to pay in organisations have been presented. The central theme emerging from this analysis is that pay is multidimensional and multifaceted; individual and cultural values are likely to influence responses towards pay and resultant behaviours. The function of pay in organisations has also been examined through a theoretical lens that provides three central contentions:

> Pay has a sorting effect on the workforce; pay levels and the basis for pay operate, through attraction, selection and attrition processes, to influence the makeup of employees joining and remaining in the organisation.

> Pay has an incentive effect on employees; pay is a powerful, instrumental lever in changing employee behaviour and influencing HR and organisational outcomes.

> Perceptions of pay equity affect employee satisfaction and motivation, also influencing individual and organisational outcomes.

These propositions provide a baseline for understanding and examining the strategic pay construct that is central to this study. It is clear that each of these propositions has implications for organisational practice. Pay has meaning for people; it evokes a response. Pay responses can be influenced by organisations with the potential to utilise the powerful effects of pay to shape the character of their workforces, incentivise and motivate employees, change employee behaviour and achieve desired organisational objectives. This is a seductive and compelling prospect, and one that has not escaped strategic pay thinkers and practitioners over the past thirty years.

The next chapter will provide an analytic critique of the strategic pay concept, its underlying assumptions and competing perspectives. It will critically examine the development of universalistic strategic pay concepts against the context of changing employment and structural environments giving rise to a 'new pay' paradigm and evaluates contingency and

configurational treatments of strategic pay which suggest optimum performance can be achieved by aligning pay with organisational characteristics. Finally, a conceptual framework integrating these perspectives is proposed.

Chapter 3: Strategic pay perspectives

3.1   Chapter introduction

This chapter evaluates alternative perspectives of strategic pay; those associated with a universalistic view of strategic pay which propose a set of new pay principles an alternative to the traditional pay model and those associated with alignment perspectives which proposes strategic pay practices should be configured to fit with organisational contingencies. However, this thesis does not view these, admittedly differing, perspectives as incompatible. Indeed, after Youndt, Snell, Dean and Lepak (1996), Martín-Alcázar *et al*. (2005) and Kaifeng, Lepak, Jia and Baer (2012), this chapter seeks to integrate these perspectives to build a holistic conceptual framework to guide the empirical phase of the study.

3.2   Universalistic perspectives and new pay

Heavily influenced by notions of 'best practice' HRM, and characterised as a 'new pay' approach, strategic pay challenges established thinking about pay and argues for the introduction of pay practices aimed at achieving organisational objectives in changed and changing socio-economic environments.   The analysis in this chapter will explore how traditional compensation models came to be rejected in favour of a 'new pay' orthodoxy which favours 'strategic' flexibility, market competitiveness, performance-orientation and individualism.

3.2.1   Strategic pay as a component of HRM best practice

Universalistic approaches to strategic pay have been heavily shaped by principles of 'best practice' HRM which hold that a defined set of strategic HRM activities; a prescribed 'bundle of practices', leads to high employee commitment and enhanced organisational performance (Walton, 1985; Huselid, 1995; Purcell, Kinnie, Hutchinson, Rayton and Swart, 2003; Pfeffer, 1998, 2005; Appelbaum, Bailey, Berg and Kalleberg, 2000). These authors propose that business success can be achieved through practices that empower and engage employees, promoting elevated levels of discretionary behaviour and contributing to organisational performance. As a concept, 'best practice' HRM has prompted a significant

amount of criticism for both resting on weak theoretical foundations (Martín-Alcázar *et al.*, 2005) and prizing rhetoric over reality (Godard, 2004; Legge, 2005; Wright, Gardner, Moynihan and Allen, 2005).

In theoretical terms, universalistic arguments are the simplest approach to examining the link between practice and performance in the strategic HRM literature because they suggest that there is a linear relationship between an independent variable (such as performance-related pay) and a dependent variable (such as increased productivity) and that this is applicable across the population of organisations regardless of sector, size, location, strategy or culture (Delery and Doty, 1996). It is this linear simplicity that has prompted questions about both the universalistic approach's lack of solid theoretical foundations and its failure to acknowledge "either the synergic interdependence or the integration of practices" and their effects (Martín-Alcázar *et al.* 2005, p.634). Nevertheless, empirical testing of the HRM practice-performance relationship has found high levels of statistical significance (Ibid.) and given rise to strong arguments for accepting the universal application of the approach (Delery and Doty, 1996).

The role of pay practices within these 'bundles' of best practice HRM activity is primarily to motivate and reward high performance but these studies rarely examine the effect of strategic pay practices in isolation. They are usually designed to test the additive effect of a wider bundle of strategic HRM practices (Martín-Alcázar *et al.* 2005). And, while there may be compelling evidence for a positive relationship between such practices and organisational performance (Huselid, 1995; MacDuffie, 1995; Delery and Doty, 1996; Guest, Michie, Conway and Sheehan, 2003; Katou, 2017), there are critical questions over the strength of this association (Wood and De Menezes, 1998) and both the consistency of inclusion/exclusion of HR practices in bundles (Boselie, Dietz and Boon, 2005) as well as the variations in proxies used to measure performance (Guest *et al.*, 2003; Purcell and Kinnie, 2007). Moreover, the operationalisation of strategic pay practices in these studies is generally limited to those that are contingent on organisational performance (usually PFP or profit-sharing) and does not incorporate a range of other pay practices that could be equally considered worthy of inclusion as having potential to influence organisational performance such as individual and team-based schemes, pay structures or long-term incentives such as share options. However, the inclusion of strategic pay in universalistic treatments of the

HRM practice-performance link provides a clear imperative for examining universalistic approaches to the pay-performance link in more granular detail.

3.2.2 Drivers for a new approach to pay

'New pay' thinking (e.g. Zingheim and Schuster, 2000) has dominated the universalistic approach to strategic pay in its rejection of traditional ways of designing and managing pay systems and its emphasis on a 'better' way of rewarding employees for enhanced business performance. From the late 1980s onwards there has been a shift in the conceptual development of pay to focus on its potential for driving organisational performance; a role that the traditional pay model is seen as wholly inadequate to perform. New pay writers perceive a dichotomy between the old and new worlds of work and pay (Heery, 1996). The old world is represented by Taylorist notions of command and control, predictable job environments, bureaucratic organisation designs and structured pay based on service, seniority and job evaluation (Risher, 1999; Trevor, 2010). Although they may have been an appropriate response for organisations operating in mid twentieth-century environments, new pay writers argue that in the face of forces of global competition, traditional pay systems in the developed economies are expensive, unproductive and inflexible (Schuster and Zingheim, 1992; Risher, 1999). North American and European organisations are unable to respond to the high quality, low cost products offered by global competitors and traditional pay systems are often seen as directly responsible for contributing to their lack of competitiveness (Lawler, 1990). The view clearly articulated is that the traditional pay model is both out of date and lacking in credibility (Risher, 1999; Willems, Janvier and Henderickx, 2006).

3.2.3 The traditional pay model

Pay systems characterised as 'traditional pay' or 'old pay' in the literature are those that operated from the early twentieth century onwards and focused on "job-evaluated grade structures, payment by time, salary progression as the basis of seniority, internal labour markets and service-related benefits" (Trevor, 2010, p.8). They were largely developed in industrial economies where mass production and large, low- or semi-skilled workforces were managed according to principles of scientific management endorsed by Taylor (1911).

Gomez-Mejia and Balkin's (1992) depiction of the traditional compensation model emphasises job roles, hierarchy and structure. There is a clear focus on determining the pay for the job rather than characteristics of the individual post-holder. Pay ranges are established through an assessment of the job content and its worth within the context of the organisation. Only in the latter stages of the process do personal inputs such as performance or experience feature in positioning individual pay within the established pay range. The model also emphasises traditional, hierarchical structures; sorting jobs according to their worth into grade structures upon which pay ranges are super-imposed. The key mechanism in this model is job evaluation which centres on establishing and maintaining internal consistency and equity in pay relationships within the organisation. Beal (1963) stresses the "objectivity" of job evaluation plans, because human judgement is "pooled judgement, systematically applied" (Ibid. p.11). Beal (1963, p.9) goes as far as claiming that JE was universally accepted by employees, managers, unions and governments alike: "no one opposes it or objects to it". Beal's (1963) view may have been extreme but there is little disagreement that the traditional pay model was generally accepted before the 1980s (Lawler, 1990). In essence, the traditional pay model is largely related to principles of distributive and procedural justice (Jacques, 1961; Adams 1963; Leventhal, 1980) which can be easily justified to stakeholders and legally defended where necessary.

By the 1990s however, this traditional pay model was coming to be seen as reflecting an era that was largely over in developed economies (Risher 1999; Willems *et al.*, 2006). The model was developed in a time when jobs and working environments were rigid and structured, people were not mobile between employers and personnel specialists (prompted by extensive trade unionism) constrained supervisors' discretion by the development of systems and rules (Gomez-Mejia and Balkin, 1992). In this context, internal equity concerns were paramount and therefore the traditional pay model, emphasising structure, hierarchy and consistency of application, was an appropriate response. In a changing socio-economic environment however, where global competitive markets for products and services were becoming common, the traditional pay model appeared restrictive, unproductive and expensive for many businesses (Risher, 1999).

3.2.4 The new pay paradigm

Criticism of the traditional pay model laid the groundwork for the development of a new framework for managing pay in organisations. It was Lawler (1984) who first coined the term 'new pay' in a working paper of the same title. In it he introduces a new approach to pay, "that fits the [new] approaches to management that are being developed" (Ibid. p.10). This was not just an isolated area of practice, new pay sat comfortably alongside other new management and HR approaches. Later 'strategic pay' became the more dominant term (Lawler himself used *Strategic Pay* as the title of his 1990 book on the subject) but the two terms are often used interchangeably. In defining what new pay is, its chief architect describes it, rather loosely, as "a way of thinking" (Lawler, 1995, p.14) about the role of pay systems in complex organisations that allow them to operate successfully in competitive global markets. Although Lawler (1995) argues that new pay is not alternative pay, and not a set of pay practices or any specific practices, other new pay proponents do set out an 'alternative' to traditional pay models. Schuster and Zingheim (1992) specify components of "new base pay" (p.83); "new variable pay" (p.153) and "new indirect pay" (p.223), particularly emphasising practices such as skill-based pay, market-based pay, profit-sharing, gainsharing, group-based rewards, bonus plans and long-term incentives. Risher (1999) also focuses on specific practices such as broadbanding, market pricing and pay-for-performance. Lawler (1990) himself, regardless of his stated view, emphasises performance-driven incentives including group or team performance evaluations and rewards based on organisational performance such as gainsharing or employee ownership. Lawler (1990) also advocates "paying the person" (p.153) rather than "paying the job" (p.135) through skill-based pay rather than traditional job evaluation processes.

Intentionally or not then, new pay is often presented as an alternative to traditional pay models. Moreover, there are a number of pay practices associated with the new pay approach which emphasise performance incentives, group working and flexibility. And finally, there is a universalistic implication evident in much of the new pay literature that suggests adoption of strategic pay principles and practices will deliver competitive advantage to the organisation.

It is clear that the new pay approach is representative of a shift in thinking about pay and a number of clear themes emerge from the literature. These are often direct responses to the

criticisms of the traditional pay model; if traditional pay methods suited 'old world' organisations, strategic pay methods were needed for 'new world' companies competing in a global environment. These responses are often framed as competing alternatives, with organisations exhorted to follow a prescribed path: 'be strategic, not bureaucratic', 'be flexible, not inflexible' and so on.

3.2.4.1 Strategic vs. bureaucratic

Above all, new pay writers propose shedding the traditional image of pay as an administrative, often bureaucratic and procedure-driven function and replacing it with a business-oriented, flexible and strategic role. The argument against the traditional model of pay centres on its inextricable link with bureaucratic management (Lawler, 1986; Risher, 1999). By placing importance on the worth of the activities an individual can be held accountable for, the traditional pay model facilitates a top-down management style emphasising control and encouraging employees to do what they are told to do (but little more).

The function of pay in this bureaucratic context was seen as chiefly administrative, characterised, rather pejoratively, as "record keeping and paper shuffling" by Gomez-Mejia and Balkin (1992, p.17). But it is its emphasis on hierarchical structures that is seen as its most undesirable feature. Bureaucracies rely on a control and command style of management which is only effective with clear lines of command and explicit graduation of roles (Lawler, 1986). Job evaluation is seen as inextricably linked with this management style as it facilitates the creation of organisational hierarchies through grade structures. The unnecessary pecking orders and unhealthy power relationships created by hierarchies (Lawler, 1986) were, it was argued, the antithesis of the co-operative, teamwork-oriented working environments which many organisations were seeking to promote in a changing economic and competitive environment (Risher, 1999).

3.2.4.2 Flexible vs. inflexible

A lack of flexibility is often cited by new pay writers as a negative aspect of the traditional pay model. Partly, this is because traditional pay systems were designed for industries operating in stable markets and were effectively the operationalisation of notions of stability and continuity. These traditional pay systems became "a high investment in the status quo"

(Lawler, 1986, p.24) which were "difficult to change" (Gomez-Mejia and Balkin, 1992, p.14).

According to critics of traditional pay, this lack of flexibility has negative consequences for organisations wishing, or needing, to change in response to rapidly shifting business environments. For Gomez-Mejia and Balkin (1992) the lack of flexibility in traditional pay systems means organisational change more often results in redundancies and undermines trust and loyalty in the firm. In the medium-long term this has negative socio-economic consequences such as higher unemployment rates and results in a "shell-shocked, apathetic and risk adverse labor force" (Ibid., p.14) damaging innovation, creativity and competitiveness. The authors put this down to a lack of variability in the pay mix in traditional pay models and organisations' "limited manoeuvrability to control the cost structure other than through employee dismissals" (Ibid.).

New pay promises an end to the imposed managerial inflexibility of traditional pay systems and its proponents make a strong business case for doing so. Martocchio (2015) for example, argues for pay variability in order to lower payroll costs during lean periods and then enhance the level of reward when business activity improves.

While variable, incentive-based pay had existed in traditional organisations before the new pay era, usually in the form of piece rates for manufacturing workers or commission for salespeople (Lawler, 1990), the *new* variable pay was a far more systematic approach to controlling fixed pay costs for organisations. Schuster and Zingheim (1992) set out a number of components of new variable pay; first, including a variable, non-consolidated element of pay into the pay mix of employees who might have been traditionally been paid base pay only; second, introducing performance measures on a group basis as well as individual; and third, emphasising a 'partnership' in which employee and organisation share the financial success of the organisation. The alternative forms of these variable pay practices are numerous and can include recognition awards, individual variable pay; group variable pay; profit-sharing, gainsharing; long-term variable pay; discretionary bonuses and stock options (Lawler, 1990; Schuster and Zingheim, 1992).

The unitarist rhetoric of 'partnership', 'collaboration' and 'shared success' in this literature downplays the increased *risk* that employees now would share with their employers and

glosses over the consequence that the level of risk was being transferred from employer to employee. Organisations sharing success by implication would share financial failure and despite claims by Gomez-Mejia and Balkin (1992) that variable pay could 'cushion' organisations against possible redundancies by allowing an organisation to flex its pay costs, the unspoken but logical conclusion is that employees would face decreased take-home pay when the organisation was performing badly. Under many new pay practices, it would be the employee to suffer directly the consequences of poor organisational performance while organisational exposure to loss was minimised. Heery (1996) critically examines the consequences for employees of such a system, arguing that new pay poses a direct threat to employee wellbeing because it contradicts both economic and psychological needs for stable and secure income (Ibid.).

3.2.4.3 External vs. internal focus

Strategic pay writers criticise the traditional pay model for its internal focus at the expense of appreciation for external market conditions. They argue that emphasising internally benchmarked pay leads to external uncompetitiveness and constrained managerial discretion (Lawler, 1986). This internal focus, according to Lawler (1986) undermines external competitiveness because it encourages employees to benchmark their job 'points' against each other with a view to improving their relative pay position. Over time this ratchets up pay rates out of kilter with the market, leaving the organisation paying more in wages than it needs to.

Rejecting pay systems that were based primarily on internal comparisons to establish compensation levels, strategic pay writers advocate using external market comparisons. Lawler (1990, p.151) stated a preference "to take all or virtually all jobs to the market individually" and similarly, Schuster and Zingheim (1992, p.xvi) propose that "under new pay, base pay levels are matched as closely as possible to the competitive labor market". In this market-based pay model, internal comparison is treated as secondary to external considerations and pay is largely (if not exclusively) determined through market surveys and benchmarking (Mitra, Gupta and Shaw, 2011).

From a theoretical perspective, market-based pay comparisons have the effect of providing external equity (comparisons of people doing the same job in other companies) but minimise both individual equity (comparisons of people doing the same job in the same

58

company) and internal equity (upward and downward comparisons within the organisation), both of which were found by Till and Karren (2011) to have far greater effects on employees' pay satisfaction than external equity. And yet the recurring message in new pay writing is that in order to implement new, strategic pay ideas, organisations should largely abandon the concept of internal equity (Gomez-Mejia and Balkin, 1992) and replace it with a market-based approach. In arguing against consistent application of pay practices across the workforce and in favour of greater discretion and flexibility for managers, the critics of traditional pay systems are rejecting the idea that equity is central to pay considerations and decision-making. Once again, within this unitarist paradigm, the distinct needs of employees barely feature as a consideration, despite the likelihood that undermining procedural and distributive justice in organisations will have negative consequences for ethical employee treatment (Heery, 1996; Skiba and Rosenberg, 2011).

3.2.4.4 Performance vs. service

One of the central themes of the new pay literature is its focus on the importance of linking pay to performance. Performance can be associated with results and outputs at the individual, group or organisational level, but, proponents of strategic pay argue, it is only by connecting performance with financial reward that organisations will improve their results and gain competitive advantage in the market (Lawler, 1990; Schuster and Zingheim, 1992).

By contrast, a negative consequence of the traditional pay model, according to its critics, is that factors besides performance are reinforced as the primary means of increasing pay. Schuster and Zingheim (1992) criticise traditional pay systems founded on length of service for creating a sense of entitlement (to regular pay increases and to retention by the organisation) as well as being unrelated to performance. According to the authors, if organisational success is dependent on employee performance, the primary focus of pay must be on results achieved, regardless of service. Furthermore, they claim, a pay system based on tenure undermines the organisation's ability "to create an alliance between the organization and the employee based on shared results" (Ibid., p.162). So, from the unitarist perspective, time served, and experience gained are of less 'value' than the ultimate (shared) goal of organisational performance and therefore should not be rewarded through pay.

Instead, variable PFP systems such as individual or group based variable pay, gainsharing, profit-sharing and long-term incentives are promoted as a far better alternative.

There is sound empirical evidence over many years for the relationship between pay-for-performance and organisational performance, underpinned by theories of incentive and agency discussed in the previous chapter. Leonard (1990) finds that organisations using long-term incentives for executives have substantially larger increases in return on investment than other organisations. Similarly, Abowd (1990) finds management pay based on organisational financial performance is significantly related to the future financial performance of the organisation. Gerhart and Milkovich (1990) find that organisations with pay plans that include a greater amount of performance contingent pay achieve superior financial performance. Imberman (1992) cites the positive impact of gainsharing programmes on American manufacturing companies as improvements in productivity, cost reduction, quality, employee relations and absenteeism. Arthur and Huntley (2005) find positive performance effects of a gainsharing scheme in a longitudinal case study of a manufacturing plant. And Nyberg *et al.* (2016) also find PFP schemes positively associated with employee performance.

New pay proponents are careful to distinguish 'new' performance-based pay from traditional forms of incentives such as piece-work and commission payments (Lawler, 1990). These new incentives forms are heralded as significantly different in approach from traditional methods that could encourage dysfunctional behaviour in organisations especially when managed badly (Baker, *et al.*, 1988; Lawler, 1990). Despite this, the type of performance-related pay schemes advocated by new pay writers continues to come under scrutiny from critics such as Kohn (1993), Pfeffer (1998) and Pink (2009) for failing to incentivise over time, decreasing intrinsic motivation and being detrimental to the employment relationship. This is supported by empirical studies such as Bloom and Milkovich (1998) who find that short-term incentives in particular lead to poorer firm-level performance outcomes in some organisations. PFP has similarly been negatively associated with innovation (Ederer and Manso, 2013) and, in some conditions, employee creativity (Zhang, Long and Zhang, 2015). Criticism has also come from an equality perspective: PFP can be negotiable and discretionary and therefore provides an opportunity for unfair

discrimination (Bevan and Thompson, 1993; Heery 1996; Kulich, Trojanowski, Ryan, Haslam and Renneboog, 2011; Koskinen Sandberg, 2017).

Despite these concerns, performance-based pay schemes have become a central pillar of the new pay approach largely aimed at replacing traditional pay systems that emphasise seniority and service as the basis for pay enhancement.

3.2.4.5 Person vs. job focus

Another common theme of traditional pay criticism is that it focuses on tasks and duties associated with the 'job' rather than the attributes of the individual post-holder, the 'person'. In the traditional model, employees are paid depending on the job they do and where the job is positioned in the pay structure according to job evaluation, therefore their pay rate only changes if they change job (Gomez-Mejia and Balkin, 1992). This, Lawler (1986) argues, depersonalises employees and equates them with a list of duties, underemphasising their unique skills and performance. In addition, the job-focus places importance on the enactment of specified duties establishing implicit limits on what employees are willing to do (Risher, 1999), leading to a 'it's not in my job description' culture (Lawler, 1986).

The most commonly cited person-based pay approach in new pay writing is skill-based pay (also known as knowledge-based pay) and competency pay (Lawler 1990, 1994; Schuster and Zingheim, 1992). In a skill-based pay system, "pay is determined by the skills of the employee rather than the job to which the employee is assigned" as well as "the depth, breadth, and types of skills they obtain and apply in their work" (Schuster and Zingheim, 1992, p.95). Skills-based pay rewards employees according to "abilities that can be successfully applied to a variety of tasks and situations" (Gomez-Mejia and Balkin, 1992, p.39). Competencies are defined by Boyatzis, (2008) as abilities or capabilities that have behavioural characteristics. In competency pay, these underlying characteristics, such as leadership or flexibility, which may lead to organisationally desired behaviours, are assessed and rewarded (Cira and Benjamin, 1998). In short, competency and skills-based pay disassociates an employee's pay from the tasks they perform and emphasises achievement of defined knowledge, skill and competency levels as well as multi-skilled functional flexibility.

Another new pay initiative, broadbanding, helps facilitate payments based on employee value in the market, skills and competencies. Broadbanding was given new impetus in the 1990s by flatter, leaner US organisations seeking to pay the person not the job (Neubauer, 1995). It was offered as an alternative to traditional pay structures such as narrow-grading that was often closely associated with job evaluation (Hofrichter, 1993). The benefits for companies are cited as increasing flexibility by downplaying salary 'controls' such as mid-points and compa-ratios; facilitating employees' personal growth by paying for skills and competencies; supporting team-based systems with multi-skilled jobs that de-emphasise hierarchy and generally allowing organisations to rethink what they pay for (Hofrichter 1993). Broadbanding is heralded as a pay management approach which offers employers freedom from rigidity and pay 'drift' and is not only far more suitable to de-layered and flexible organisations but also facilitates both market pay and lateral career progression (Armstrong and Brown, 2009).

In line with many of the other new pay initiatives, broadbanding's apparent flexibility has given rise to concerns about internal equity, managerial latitude, pay inconsistencies and potential for discrimination. Arnold and Scott (2002) discuss the effectiveness of broadbanding and find that the potential for inconsistent allocation of compensation between employees can escalate pay costs as well as cause potential legal problems. In addition, they argue that employee commitment and motivation can be undermined by fewer promotional opportunities.

The other structured approach to facilitating pay based on skills and competencies is a job family or career-graded pay structure. While early new pay writers often criticise traditional job family approaches as being too focused on job content (Schuster and Zingheim, 1992), throughout the 1990s they became increasingly associated with skill- and competency-based pay systems as they were able to emphasise "groupings of broadly similar jobs, with the same skill and competency sets and common career and development paths" (Brown, 2001, p.22).

So, alongside performance as a basis for pay rather than length of service, new pay systems also emphasise individual skills and competency. To facilitate the requirements of these more flexible, discretionary pay plans, broadbanding and job family pay structures are used to manage base pay in new pay systems.

3.2.4.6 Group vs. individual pay

According to Schuster and Zingheim (1992), most traditional variable pay plans focus on individual performance, while new variable pay schemes focus primarily on groups of employees. This emphasis on group or team pay is reflective of a corresponding shift away from individual performance in workplace redesign, "placing greater importance on the role of teams and work groups" (Heneman and von Hippel, 1995, p.63).

Group-based incentive schemes such as gainsharing, goal-sharing and profit-sharing measure performance at group level and reward individuals accordingly. Heneman and von Hippel (1995) suggest these schemes could be effective in directing group members towards contributing to the achievement of organisational goals and critical success factors. Furthermore, they are promoted as encouraging organisational cultural values such as co-operation, collaboration and teamworking whereas individual variable pay schemes are criticised for leading to dysfunctional behaviours such as gaming the system, competition and conflict between employees as well as an unhelpful focus on a limited, formula-driven, scope of behaviours (e.g. sales at the expense of customer satisfaction; quantity rather than quality of output) (Lawler, 1990). This is supported by Tremblay and Chênevert's (2008) study of Canadian high technology firms where greater emphasis on group performance pay is positively associated with productivity and negatively related to turnover whereas extensive use of individual performance pay is positively associated with turnover. Conroy and Gupta (2015) find evidence for positive sorting and incentive effects of team-based performance pay and a more recent meta-analysis by Nyberg, Maltarich, Abdulsalam, Essman and Cragun (2018) also finds positive outcomes relating to collective performance-related schemes such as profit-sharing, gainsharing and broad-based stock option schemes.

So, while some individual pay schemes remain part of the new pay approach, the preference is for group-based incentives such as gainsharing, and profit-sharing as opposed to traditional individual incentives such as sales commission and piece-rates.

3.2.4.7 Individualism vs. collectivism

Despite the emphasis on *group* pay plans, for new pay writers, *collective* employee representation hardly features in the portrayal of organisations moving from traditional to new pay practices. Where trade unions are mentioned it is as enforcers of the traditional pay

model, hindering progress (Schuster and Zingheim, 1992) or, alongside legal interventions in employee protection such as minimum wage legislation, unions are cast as responsible for ratcheting up wages and making American businesses uncompetitive in global markets (Lawler, 1990).

For Heery (1996, p.60), the new pay is essentially a unitarist concept that, by emphasising mutual economic gains for employer and employee based on business needs, "effectively squeezes out any alternative pluralist conception of pay as the meeting place for competing but equally legitimate interests".   In the unitarist paradigm, employee commitment and motivation come from incentives that not only align interests but also foster co-operation and minimise conflict.

Heery (1996, 2000) also notes that the new pay writers have an attachment to the principle of direct individual employee involvement in the management of pay, minimising trade union and collective participation in pay decisions. Schuster and Zingheim (1992) devote a whole chapter to it and for Lawler (1995, p.20) employee involvement promotes "understanding and acceptance of the system". Similarly, Ledford (1995, pp.53-54), acknowledging that, "the [new pay] systems are almost certain to generate concern among employees about the potential for arbitrary management action, risk, and pay equity", suggests managers, "actively involve employees in designing systems they understand and accept". The emphasis here appears to be in smoothing the way for employee acceptance of management wishes rather than as a recognition of potentially conflicting interests or the enactment of democratic principles.   New pay systems then, favour individual, but participative, base pay setting while rejecting traditional collective pay bargaining.

It is evident from the analysis in this section that universalistic approaches to strategic pay heralded 'new pay' as the perfect strategic solution to facilitate new management initiatives in the changing landscape of late twentieth-century employment by emphasising flexibility, skills and competencies, market-sensitivity, performance, group outputs and simultaneously downplaying hierarchy position, length of service, job tasks, internal equity considerations and collective mechanisms.

While these approaches have prompted criticism for failing to acknowledge pluralistic dynamics in organisations and as having the potential for employee disadvantage and

exploitation, the rhetoric of strategic pay and its role in helping organisations achieve their objectives has apparently become a common feature of HRM practice in the twenty-first century. Furthermore, these strategic pay practices are theorised to have a positive effect on organisational performance measured by financial performance, efficiency and quality because they give rise to positive HR outcomes such as improved productivity, improved employment relations climate, ease of employee recruitment and retention and declining absenteeism. Empirical studies have provided evidence for these relationships although research is sparse and often specific to certain groups of employees, locations or industry sectors. And there remains a critical question as to the extent of strategic pay's effect on employee and organisational performance.

Drawing these ideas together in Table 3.1, it is apparent that there is a clear set of strategic pay practices associated with the new pay paradigm as distinct from traditional pay practices.

Table 3.1 Strategic and traditional pay practices

Strategic pay practices	Traditional pay practices
Market-based pay and reviews	Job evaluation to determine pay
Individualised but participative base pay setting	Collective pay bargaining
Performance-based pay, skills-based pay and/or competency pay	Seniority/service-based pay
Group incentives: gainsharing / goal-sharing / profit-sharing	Individual output-based incentives: piece-rates and commission
High levels of variable pay	High levels of consolidated pay
Broadbanding and/or job family pay structures	Narrow-graded pay structures

By examining universalistic perspectives in the strategic pay literature, this section has identified individual strategic pay practices as well as pay practices that might be considered a 'bundle' constituting a coherent strategic pay approach. In addition, the evidence for a significant association between those practices and HR / organisational performance outcomes has been evaluated.

Based on universalistic, new pay predictions therefore, two hypothetical propositions can be articulated:

H1.   HR performance outcomes will be positively related to strategic pay practices and negatively related to traditional pay practices.

H2.   Organisations will bundle strategic pay practices and bundling will have an additive effect on HR performance outcomes.

For many strategic HRM researchers universalistic and alignment perspectives are treated as wholly irreconcilable paradigms (Delery and Doty, 1996). There is, however, recognition in the literature that the two are not mutually exclusive. Youndt *et al* (1996) argue for complementarity rather than competition between the rival perspectives. Whereas universalistic approaches examine the benefit of a set of HR practices across all contexts, contingency perspectives offer a deeper insight into organisational phenomena on which to base more situationally specific theories and ultimately to guide management practice. Martín-Alcázar *et al.* (2005) propose an integrated conceptual framework for use in SHRM research that starts with the universalistic proposition that HR practices have an effect on organisational outcomes and builds in moderating layers of contingency factors and configurations interacting to determine the central practice-performance relationship. Kaifeng *et al* (2012) argue for yet more integrated approaches to SHRM research noting that while researchers from different perspectives may adopt different angles to examine the relationships between HR practices and more distal outcomes, the theorised critical path from HR practices to HR outcomes to operational and financial outcomes remains consistent.

On this basis, the universalistic propositions articulated in this section provide the starting point from which to begin to construct a conceptual framework; the first, and foundational, propositions that pay practices have an effect on employee outcomes and that differing bundles of practices will have differing effects. Drawing on Martín-Alcázar *et al.* (2005) contingency and configurational perspectives will also be used to provide a deeper examination of the strategic pay model. These perspectives propose that improved HR outcomes are dependent upon an alignment between pay practices and contingency factors such as business strategy; industry sector; employment groups and organisation size.

3.3 Alignment perspectives: contingencies and configurations

Whereas the universalistic new pay paradigm examined in the previous section promotes a change in pay practices as a generalisable, 'better' alternative to the traditional pay model, there is another, arguably more pervasive, perspective evident in the strategic pay literature. This approach adopts the 'best fit' premise that in order to maximise HR and organisational performance, pay practices should be aligned with aspects of organisational contingencies, either aligned with specific internal or external characteristics or as an integrated component of an ideal type, a configuration of internal and external organisational characteristics.

This section evaluates these propositions. First, it examines the conceptual architecture of both contingency and configurational perspectives. And second it assesses theoretical arguments and empirical evidence for a relationship between HR performance outcomes and alignment of pay practices with organisational contingencies; business strategy, employment group, industry sector and organisation size.

3.3.1 Contingency perspective

Contingency approaches to strategic pay have been widely questioned in the academic literature. Milkovich (1987, p.3) queries the central proposition of strategic pay that making pay practices contingent on organisational conditions has positive effects on employee behaviours and organisational performance as, "probably the greatest leap of faith" with no "solid footings". Both Gerhart and Rynes (2003), and Shields (2015) conclude that there is limited evidence that pay alignment does improve HR outcomes or organisational performance. And Bevan (2005) argues that of all the fields of HRM, it is strategic pay that has the widest gap between rhetoric and reality.

Despite this apparent dearth of evidence however, the central premise of contingency theories, that internal organisational capabilities or functionality should be matched to other internal and/or external conditions for enhanced organisational performance has an established pedigree in academic literature (Nadler and Tushman, 1980; Wright and Snell, 1998). In the strategic HRM literature, many different conceptual variations have been deployed, termed variously as: *contingency* (Ginsberg and Venkatraman, 1985), *congruence* (Balkin and Gomez-Mejia, 1990; Montemayor, 1996), *fit* (Baird and Meshoulam, 1988; Wright and Snell, 1998) and *alignment* (Semler, 1997; Christiansen and

Higgs, 2008). There seems to be recognition that some of these terms can be used interchangeably (Snow, Miles and Miles, 2005). And, although there are conceptual variations within these approaches, in general there are two proposed dimensions of alignment, both predicated on a behavioural perspective. Schuler (1987) argues either for alignment with externalities, chiefly the competitive market environment and the organisation's response to it; or for alignment with and between internal characteristics. These two aspects of alignment can be summarised as follows:

> *Vertical alignment*: practices and policies are selected to best meet the requirements for external competitive success in the organisation's chosen industry, product or service markets (Miles and Snow, 1984; Schuler and Jackson, 1987a, 1987b; Jackson, Schuler and Rivero, 1989; Christiansen and Higgs, 2008).

> *Horizontal alignment*: practices and policies are selected to best support internal components of the organisation such as: other HRM practices and organisational life-cycle stage (Baird and Meshoulam, 1988; Delery, 1998), organisational culture (Cabrera and Bonache 1999), the organisation's structure, size and technology (Jackson, Schuler and Rivero, 1989), and the employment modes of its workforce (Wright, McMahan and Williams, 1994; Wright and Snell, 1998; Wright, Dunford and Snell, 2001; Lepak and Snell, 2002).

Early conceptualisations of HRM alignment are oriented to the contingency perspective. The Michigan or 'matching' model of HRM advocates a tight fit between organisational strategies and HRM processes (Devanna, Fombrun and Tichy, 1981; Tichy, Fombrun and Devanna, 1982; Fombrun, Tichy and Devanna, 1984). The fundamental assumption being that different HRM practices are required by organisations adopting different business strategies; organisations with "greater congruence between their HR practices and their strategies should enjoy superior performance" (Delery and Doty, 1996, pp.802-3). Subsequent models also argue for the achievement of fit between HRM strategies and overall business strategy; moving HRM practices into alignment with the competitive market position of the organisation (e.g. Schuler, 1987; Schuler and Jackson, 1987a, 1987b; Jackson, Schuler and Rivero, 1989).

The contingency approach holds that in order to support organisational performance, HRM practices should be designed to create and support desired employee 'role behaviours' according to the needs of the chosen competitive strategy (Schuler, 1987). The rationale for this approach to HRM is based on the premise that a) organisations pursuing different competitive business strategies will require employees with different behaviours and b) desired behaviours are those that are imperative in contributing to organisational performance. Schuler and Jackson (1987a) describe role behaviours as distinct from task-specific knowledge, skills, and abilities and as instead related to employees working with other employees in social environments. Role behaviours could include a high degree of creative behaviour and risk taking for firms pursuing a competitive strategy of innovation; a high concern for quality and process for firms pursuing a strategy of quality enhancement; and relatively repetitive and predictable behaviours alongside concern for results for firms seeking to gain competitive advantage by pursuing a strategy of cost reduction (Ibid.).

As opposed to the universalistic perspective, the contingency model takes a different starting assumption in terms of the relationship between variables. Whereas universalistic approaches assume a linearity between variables and see HRM practices directly influencing employee and organisational outcomes, contingency approaches propose a model based on interactivity of variables (Martín-Alcázar *et al*., 2005). The relationship between the dependent and the independent variable will vary depending on other contingency variables that moderate the relationship. So, for example, the relationship between an organisation's pay practices and its performance will vary depending on the business strategy pursued. The implication therefore, is to suggest a more complex view than the universalistic argument that a set of best practices can lead automatically to superior organisational performance under any and all circumstances (Delery and Doty, 1996).

So, contingency perspectives seek to offer co-variables such as business strategy or organisation size to the study of relationships between pay practices and HR outcomes / organisation performance. However, this approach tends towards bivariate, either/or, choices (Doty and Glick, 1994) and an alternative perspective, configurational theory, may offer a more holistic view of the pay-performance link.

3.3.2 Configurational perspective

Configurations are "any multidimensional constellation of conceptually distinct characteristics that commonly occur together" (Meyer, Tsui and Hinings, 1993, p.1175). They can be composed of numerous dimensions including "environments, industries, technologies, strategies, structures, cultures, ideologies, groups, members, processes, practices, beliefs, and outcomes" (Ibid). Configurational perspectives differ from both universalistic and contingency theories in several important respects. First, configurational theory takes a more holistic approach to identify "unique patterns of factors that are posited to be maximally effective" (Delery and Doty, 1996, p.808). It explores, "nonlinear synergistic effects and higher-order interactions" (Ibid.) implying a gestalt approach which takes account of organisational complexities. Moreover, configurational theories, unlike either universalistic or contingency approaches, adopt the systems theory tenet of equifinality that the same end result can be achieved by multiple means (Meyer *et al.,* 1993) implying that different configurations of pay practices could be equally effective in improving organisational performance (Martín-Alcázar *et al.*, 2005). Lastly, configurational perspectives acknowledge that configurations can be represented in typologies which have been developed only conceptually (Meyer *et al.*, 1993). This indicates that configurations are 'ideal types'; theoretical constructs that may not always be empirically observable and while actual organisations may be more or less similar to an ideal type, they can rarely, if ever, be assigned to one of the ideal types in the typology (Doty and Glick, 1994).

According to Delery and Doty (1996), in order to build theory from a configurational perspective, internally consistent configurations of practice should be constructed for maximal horizontal alignment, and these should be linked to alternative strategic configurations to maximize vertical alignment. Snow, Miles and Miles (2005, p.433) also predict that high-performing configurations are those with "internal and external congruence, alignment or fit". This implies that in order to fully understand the pay-performance relationship, both internalities and externalities as well as their interactions need to be examined in a nonlinear and holistic approach.

As set out above, universalistic, contingency and configurational perspectives are not mutually exclusive (Youndt *et al.*, 1996). Indeed, by layering these approaches (after

Martín-Alcázar *et al*., 2005) a richer perspective on strategic pay can be achieved and a more robust conceptual framework built. In applying this approach to strategic pay, two key organisational contingencies, one vertical (business strategy) and one horizontal (employment group), will be assessed in relation to their alignment with pay practices. Both of these contingency factors have been theorised as 'typologies' with ideal types constructed against which organisations can be positioned (Doty and Glick, 1994). In addition, two further organisational contingencies, one external (industry sector) and one internal (organisation size), will be considered as supplementary conditions that may contribute to the configurational pattern of organisational contingencies.

3.3.2.1 Business strategy

The imperative to align pay systems with business strategy has also long been a feature of strategic pay literature (Scott, McMullen, Shields and Bowbin, 2009). In operationalising these two variables: 'business strategy' and 'pay system' researchers have employed a variety of models and frameworks.

2.3.3.1.1 Business strategy typologies

In general terms, researchers have made a distinction between 'low-road' business strategies based on efficiency and cost reduction/control, and 'high-road' strategies based on the pursuit of quality, innovation or variety (Osterman, 1994). These are largely based on Miles and Snow's (Miles, Snow, Meyer and Coleman, 1978; Miles and Snow, 1984) defender / prospector business strategy typology, Porter's (1980, 2004) generic competitive business strategies model and/or Gerstein and Reisman's (1983) dynamic growth / rationalisation typologies. These three typologies have clear overlaps from which business strategy 'types' emerge:

Defender / Cost Leader / Rationalisation-maintenance: The first business strategy type has narrow and relatively stable product domains, seldom making major adjustments in their technology, structure or methods of operation. Instead they devote primary attention to improving the efficiency of their current operations to become *the* low-cost producer in their industry. They are likely to have a limited product line, a functional structure and prioritise production efficiency, process engineering, customer / supplier relationships and cost-control. These low-cost producers find and exploit all sources of cost advantage which could include economies of scale, proprietary technology or access to raw materials, low-cost

labour or extremely low overheads. (Adapted from Gerstein and Reisman, 1983; Miles *et al.*, 1978; Miles and Snow, 1984; Porter 1980, 2004).

Prospector / Differentiator / Dynamic growth: The second business strategy type is continually searching for product and market opportunities and regularly experiments with responses to emerging trends. These organisations are often the creators of change and uncertainty, prompting their competitors to respond. They prioritise product and market innovation sometimes at the expense of efficiency. They seek to be unique in their industry in ways that are highly valued by buyers. They select one or more attributes that many buyers perceive to be important such as product quality and/or innovation and position themselves to meet that need. As a consequence of their uniqueness they can charge a premium price for their product / service and, as long as they maintain a cost position lower than the benefits of the premium price, they can achieve and sustain differentiation. (Adapted from Gerstein and Reisman, 1983; Miles *et al.*, 1978; Miles and Snow, 1984; Porter 1980, 2004).

Analyser / Focus: The third business strategy type is likely to have characteristics of both other types. These organisations may well operate in both product / market domains, one relatively stable, the other changeable. They are likely to have a limited basic product line and search for a small number of related product opportunities. These organisations can compete on either cost focus or differentiation focus and they do so by serving their target segments better than either of the other types. (Adapted from Miles *et al.*, 1978; Miles and Snow, 1984; Porter 1980, 2004).

Reactor / 'Stuck-in-the-middle': The final business strategy type arguable does not have a business strategy. These organisations have poorly aligned strategy, structure and processes or operate in strategy-environment inconsistency and are likely to perform less well than the other three types. (Adapted Miles *et al.*, 1978; Miles and Snow, 1984; Porter 1980, 2004).

There are critical questions as to the validity of these business typologies. They have been described as useful for operationalisation by researchers because they are "appropriately broad but not vague" (Hambrick, 1983a, p.688) and have "strong theoretical underpinnings" (White, 1986, p.220). However, Porter's generic strategies model has been criticised for its emphasis on the implied mutual exclusivity of its strategic positions. Porter (1980) argues

that the two broad strategy types, cost leadership and differentiation are incompatible; if an organisation does not fully commit to one strategy type they are 'stuck in the middle' and will not be successful. Yet other researchers have shown that hybrid business strategies can be as effective as, and even outperform, those operating one generic strategy (Hall, 1980; Prajogo, 2007) and that the two strategic positions may not be incompatible (Hambrick, 1983b; Murray, 1988).

Conversely, a key criticism of both typology models is their generic character (Hambrick, 1983b). Miles and Snow (Miles *et al.*, 1978; 1984) conducted their research in a variety of industries and claim that their typology can be observed, and successfully applied, in all industries. This claim of universality however has been questioned for ignoring the industry and environmental context (Hambrick, 1983b). According to Miles and Snow (1984), the robustness of the typology over time is partly due to the development of certain internal organisational consistencies which help to perpetuate the strategic orientations they pursue. This appears to be contrary to normative contingency perspectives which hold that an organisation's business strategy is an adaptive response to environmental conditions (Hofer, 1975). Miles and Snow's typology suggests the opposite; that entrenched strategic positioning may constrain an organisation's responses to industry and environmental change (Hambrick, 1983b). It is however more consistent with configurational perspectives that acknowledge the potential for multidirectional, interactive effects between organisational characteristics (Martín-Alcázar *et al.*, 2005). Moreover, tests of the typology's reliability and validity have shown robustness across a variety of measures (Shortell and Zajac, 1990).

In synthesising the strategic typology frameworks, two fundamental business strategy types emerge. On one hand there is a strategic position which emphasises stability and efficiency (defender / cost leader / rationalisation-maintenance) and on the other, there is a strategic type that is entrepreneurial and innovative (prospector / differentiator / dynamic growth). To this could be added a third 'focused' strategy however focusers/analysers must still choose to compete either on cost or differentiation – just in a narrower market (Porter, 1980, 2004). The fourth type, stuck-in-the-middle / reactor 'option' is based on the absence of a coherent strategic position and is difficult to justify as a competitive strategy at all. What is left therefore is a distillation of business strategy types which reinforces Osterman's (1994)

observation of two main strategic positions: 'low-road' and 'high-road'. Table 3.2 shows the typologies and their broad alignments.

Table3.2 Business strategy typologies

Miles and Snow (1978, 1984)	Porter (1980, 2004)	Gerstein and Reisman (1983)	Osterman (1994)
Defender	Cost leader	Extract profit / rationalisation	Low-road
Analyser	Focus - Cost	-	
	Focus - Differentiation		High-road
Prospector	Differentiator	Dynamic growth	
Reactor	Stuck in the middle	-	-

2.3.3.1.2 Strategic pay systems

While there appear to be two broadly aligned business strategy types, low-road and high-road, organisations face considerable choice in aligning their pay practices with their business strategies. Based on the impetus to create and support effective employee role behaviours that support strategic orientations, Schuler and Jackson (1987a, 1987b) and Heneman and Dixon (2001) propose a set of dimensions of 'compensating choices' for organisations:

Low base salaries…..……...High base salaries

Internal equity………….External equity

Few perks…………..Many perks

Standard, fixed package……………Flexible package

Low participation………….High participation

No incentives…………...Many incentives

No employment security…………High employment security

Hierarchical………….Egalitarian

Monetary……….Non-monetary

Job-focus…….Person–focus for pay

Behaviour-based…….Results–based rewards

Open…..Closed pay communications

(Schuler and Jackson, 1987a, 1987b; Heneman and Dixon, 2001)

These dimensions reflect many of the strategic pay themes discussed above although whereas universalistic new pay writers frame these dimensions as choices between 'old/traditional' and 'new/strategic' with the emphasis very much on promoting the new pay model, others (including Miles and Snow, 1984; Schuler and Jackson, 1987a, 1987b; Gomez-Mejia and Welbourne (1988); Jackson, Schuler and Rivero, 1989; Balkin and Gomez-Mejia, (1990); Gomez-Mejia and Balkin (1992) and Gomez-Mejia, (1992)) question whether pay choices are more likely to be contingent on business strategy. Synthesising this literature, two clear pay systems emerge, aligned to the two business strategy types:

Algorithmic pay systems are aligned to the low-road strategic type. They are mechanised, pre-determined and standardised; oriented toward position in organisational hierarchy, internal consistency, total compensation heavily oriented toward cash and driven by superior / subordinate differentials. Key distinguishing features are: traditional job evaluation procedures; seniority as criteria for pay allocation; short-term performance orientation; minimal risk sharing between employer and employees; emphasis on internal equity and hierarchical position as basis for pay distribution; above market pay; high job security; narrowly defined grade structures; pay secrecy; and little employee participation.

Experiential pay systems are aligned to the high-road strategic type. They are organic, flexible and adaptable; oriented toward performance, external competitiveness, total compensation heavily oriented toward incentives and driven by recruitment needs. Here, key features include: use of personal skills and attributes as the basis for pay determination rather than job evaluation; performance rather than service as criteria for progressing pay; extensive risk sharing; more sensitivity to the market rather than internal equity concerns in

setting pay level; less emphasis on hierarchy position as a determinant compensation; multiple rewards at the individual and group level; and greater employee input.

A number of studies exploring or testing the relationship between business strategy and pay have drawn on the theorised experiential / algorithmic pay system framework while other empirical work has focused on a limited number of pay practices and their relationship with business strategy types. The evidence presented for an alignment of pay systems with business strategies is varied, and reliable comparison between studies is difficult due to differences in pay practice selection / operationalisation or different national, industry and occupational contexts. Nevertheless, analysis of these studies provides some considerable support for aspects of the theoretical frameworks proposed by Miles and Snow (1984), Schuler and Jackson (1987a, 1987b), and Gomez-Mejia and Balkin (1992). There is good evidence for low-road strategy organisations emphasising labour cost / quality performance objectives, less variable pay, narrow-graded pay structures, hierarchy-based pay systems, and job evaluation (Montemayor, 1996; Heneman and Dixon, 2001; Allen and Helms, 2002). High-road strategy organisations on the other hand offer more variable pay, are more 'aggressive' in their pay level policy, use merit-pay, individual performance-based pay, employee stock ownership, competency pay, broadbanded pay ranges and are more open with respect to pay information (Ibid.). The pattern of these differences conforms to the experiential / algorithmic pay system model.

Other studies however, find little or no support for the model. Long and Fang (2015) focus on profit-sharing finding no evidence for an association between high-road strategy and profit-sharing. Romero and Cabrera (2001) find no support for the overall hypothesis that compensation decisions will be dependent on business strategy. However, using cluster analysis, they do find mixed evidence that high-road strategists follow some experiential practices and low-road strategists follow some algorithmic practices. Chen and Jermias (2014) find high-road strategy firms do pay higher salaries and give more in bonuses based on performance than low-road firms but there is no significant difference in proportions of LTIs awarded to executives between the strategy types.

Further studies have given rise to similar questions over both the inclusion or exclusion of pay practices from the pay model as well as the theoretical basis for assigning particular practices to either the experiential or algorithmic pay pattern. Boyd and Salamin (2001) find

that strategic orientation accounts for significant variance in base pay levels, bonus levels and the pay mix indicating strong support for the alignment of pay practices with business strategy. Results show that the more high-road-like the business unit, the higher the levels of bonus pay, and the greater the ratio between base and bonus pay, consistent with the experiential pay pattern. However, they also find that higher base pay levels were associated with the high-road strategic orientation which in Miles and Snow (1984) and Gomez-Mejia and Balkin's (1992) models were associated with low-road / algorithmic pay patterns.

Yanadori and Marler (2006) find something similar in their examination of the relationship between innovation strategy and pay systems in the high-technology industry. Using pay data for management and professional employees, they find that an organisation's strategic intention to pursue innovation has positive effects on pay level and long- versus short-term pay ratios. Again, both these features; high pay level and long-term pay orientation are more consistent with the hypothesised low-road / algorithmic pattern than the high-road / experiential pay pattern.

In making sense of these apparent anomalies, Hambrick and Snow's (1989) argument can be drawn on: because low-road strategy organisations compete on a basis of efficiency and cost control, there are fewer financial resources available and therefore likely to be *lower* not higher base salaries in these organisations. Conversely, because high-road strategies increase outcome uncertainty, *higher* base salaries, and longer-term incentives are needed to both offset risk and maintain attraction and retention especially for the groups of employees in both the Boyd and Salamin (2001) and Yanadori and Marler (2006) studies: managers and professionals (Rajagopalan and Finkelstein, 1992).

In summary then, the proposed alignment between experiential pay and high-road business strategies, and between algorithmic pay and low-road business strategies has some support in the literature. While some studies find little or no support for the alignment proposition, or indeed find results that are contrary to predicted patterns, the applicability of these results requires caution because of study design context that focus on specific groups of employees, specific sectors, organisation sizes and/or national contexts. And of course, the analysis so far has been limited to studies or results that only deal with the first part of the alignment proposition; that pay practice selection will depend on business strategy. The following

section will go on to examine the evidence for the effect of alignment on organisational performance.

2.3.3.1.3   *Strategy-pay-performance relationship*

While a number of studies focus on the extent of alignment between pay practices and strategy, there are far fewer that explore the effect of successful or unsuccessful alignment. Of those papers that specifically focus on the strategy-pay-performance relationship, there is a range of different approaches in terms of operationalisation of variables, sectors and employee groups, but nevertheless there are consistent indications of a strategy-pay-performance link.

One of the earliest studies, by Balkin and Gomez-Mejia (1990), surveys 212 HR executives from the manufacturing sector. This research is significant for the current study as it examines a full set of pay practices in detail unlike others that focus on just one or two individual practices. Moreover, synchronous with a configurational approach, the authors construct a pay system for each strategic type based on empirical findings. This is broadly in line with the algorithmic / experiential typologies the authors developed further in a later publication (Gomez-Mejia and Balkin, 1992) and discussed above. However, the key finding of this research is that business strategy and pay practices have an interactive effect on the effectiveness of pay systems in supporting organisational and HR performance. There is a clear distinction between pay practices judged to be 'effective' depending on the organisation's business strategy orientation. High-road firms are much more likely to find a low salary and benefits / high incentive pay mix, with flexible and less formalised procedures and an emphasis on performance more effective, whereas low-road firms find a fixed salary / benefit package along with job-based, bureaucratic pay systems more effective. These findings indicate substantial support for the hypothesised strategy-pay-performance relationship.

Since then a number of other studies have drawn similar conclusions. Montemayor (1996) finds alignment of business strategy and pay is positively associated with high-performing firms whereas poor alignment is associated with poorer performance. Similarly, Allen and Helms (2002) measuring organisational performance using a subjective scale, suggest that alignment of pay and strategy leads to higher performance.

Tsai, Chou and Chen (2008) use a 'value added' purely financial measure of firm performance (the difference between the revenues of a firm and the cost of its material inputs) and find that matching pay policy to high-road strategy is positively associated with performance in one high-tech sector but not all three, lending only partial support to the hypothesis and leading the authors to question the universal application of the strategy-pay alignment model.

In Chen and Jermias's (2014) paper on executive compensation, strategy and performance, the relationship is approached from a 'misfit' perspective and the authors predict and find that a misfit between business strategy and performance-linked pay has a negative effect on firm financial performance. The authors conclude with support for the contingency theory perspective which suggests alignment of pay structures to strategy will affect performance positively.

More recently, Tenhiälä and Laamanen's (2016) findings show high-road firms benefit from individualised incentives and low vertical pay dispersion, while low-road firms perform better with non-individualised incentives, low base pay and high vertical pay dispersion which is entirely in keeping with alignment predictions. However, Andreeva, Vanhala, Sergeeva, Ritala, and Kianto, (2017) find that while rewards can have a positive effect on certain kinds of innovation in Finnish companies, it is not the case for all types of innovation and the role of 'fit' with other HR practices may be key.

Synthesising the literature on strategy and pay, it is evident that although the theoretical arguments for alignment with strategic types and their combined effect on HR and organisational outcomes is well developed, the empirical picture is mixed. A key limitation in drawing firm conclusions from the extant literature is the variety of different ways organisational performance is operationalised; some studies focusing of purely financial measures, others on a combination of financial, operational and HR measures. Kaifeng *et al*. (2012) however note that while researchers may look at the relationships between HR practices and more distal outcomes from different perspectives, HR outcomes are nearly always viewed as a critical path from practices to operational and financial outcomes which suggests a common starting point.

Furthermore, there is a mix of objective and subjective measures employed in the empirical studies reviewed. The focus on various pay practices is also problematic; some studies include a wide range of practices while others choose one or two. And finally, even though there are well developed strategic typologies, the interpretation of these differs with some researchers choosing to separate innovators and quality strategies and others retaining them as a single 'differentiator' group. However, while there may be contrasting views as to whether specific pay practices align to either strategy type and the extent of the effect on performance, it is possible to construct a proposed framework of strategic pay practices aligned to business strategy types.

In comparing the pay systems analysed in this section with those in Table 3.1, clear similarities are apparent between the 'strategic' pay practices identified from new pay literature and the 'experiential' pay practices theorised to align with a high-road business strategy; and between 'traditional' pay and 'alogrithmic' pay theorised to align with a low-road business strategy. While the terminology may be different, the groups of practices are essentially the same. This is logical when considering that the traditional pay model was developed by and for mature organisations operating in broad, stable markets (Risher, 1999; Trevor, 2010). These are the same organisations that conform to the low-road strategic type as described by Miles and Snow (1984), Porter (1985, 2004) and Gerstein and Reisman (1983). Equally, it is reasonable to assume that organisations adopting new, experiential pay practices will be the innovators, the organisations pursuing growth through differentiation, in short, the high-road strategists.

The theoretical framework is illustrated in Table 3.3 and forms the basis of the next two hypotheses based on strategic pay literature.

> H3. Organisations with a low-road strategic orientation will be more likely to select an algorithmic pay configuration and organisations with a high-road strategic orientation will be more likely to select an experiential pay configuration.

> H4. Alignment of strategic orientation and pay configuration will have a positive effect on HR performance outcomes.

Table3.3 Strategic pay configurations for organisational performance

Strategic pay policy dimensions	Strategic orientation / pay configuration	
	High-road strategy / Experiential pay	Low-road strategy / Algorithmic pay
Hierarchical vs. egalitarian	Broadbanding; individual pay structures or job family structures Low vertical pay dispersion	Narrow-graded pay structures or pay spines High vertical pay dispersion
Pay level – high vs. low	Above market pay	At or below market pay Cost as pay level / review determiner
External vs. internal equity	Market-based pay No job evaluation	Job evaluation
Person vs. job focussed pay	Performance, skills, competencies or employee value as criteria for base pay progression	Service-based pay progression
High vs. low (employee) risk	Extensive performance-based pay	Minimal or no performance-based pay
Group vs. individual performance	Organisation/group/individual/ level performance pay e.g. combination schemes, gainsharing, goal-sharing, profit-sharing	Individual performance pay e.g. piece rates, sales commission
Variable vs. fixed pay	Extensive variable pay	Minimal variable pay
Open vs. secretive pay	Open pay	Pay secrecy
Long-term vs. short term pay	Long-term pay (share schemes / LTIs)	No long-term pay (no share schemes / LTIs

Adapted from: Balkin and Gomez-Mejia (1990); Gomez-Mejia and Balkin (1992); with additions from: Hambrick and Snow (1989); Boyd and Salamin (2001); Heneman and Dixon (2001); Allen and Helms (2002); Yanadori and Marler (2006); Chen and Jermias (2014); Tenhiälä and Laamanen (2016).

3.3.2.2 Employment group

The rationale for a theorised, horizontally aligned relationship between employment group, pay and organisational performance is drawn from SHRM concepts of human capital and

resource-based approaches (Wright *et al.*, 1994; Youndt *et al.*, 1996). The emphasis on externalities and vertical alignment in the development of strategic HRM and the consequential precedence of business objectives above all others has led to criticisms that the 'human' aspects of the concept have been neglected (Druker, White, Hegewisch and Mayne, 1996; Wright and McMahan, 2011). By contrast, the concept of human capital enhancement, developed initially by Becker (1993), is founded on the notion that employees possess unique sets of knowledge, skills and abilities which, when supported by appropriate HR practices, can help to develop an organisation's core competencies and yield desired organisational outcomes sustaining competitive advantage for the firm (Wright *et al.*, 1994; Youndt and Snell, 2004; Wright and McMahan, 2011). Configurational arguments propose that constructing internally consistent practices to support human capital enhancement which are also aligned with strategic orientations will positively influence organisational performance (Delery and Doty, 1996). This is a view adopted by Lepak and Snell (1999, 2002) with the additional proposition that there are likely to be differences in both human capital and employment type within organisations and that HR configurations are likely to vary according to the employment group being managed.

2.3.3.2.1 Differentiating pay by employment group

There is a strong argument in the pay literature for treating executive and top management pay differently from pay for other groups of employees. One argument holds that only executives make strategic business decisions which directly influence organisational performance and therefore only compensation for this group of employees can be 'strategic' (Milkovich, 1987). And certainly, research on the pay and performance link is dominated by a focus on linking executive pay to firm performance (Tenhiälä and Laamanen, 2016), largely drawing on concepts of incentive and agency (Fama, 1980; Perkins and Hendry, 2005).

Empirical evidence for pay differentiation between top management and other employment groups comes from Schuler and Jackson (1987b) who include 'organisational level' as a variable in their study of strategy and HRM practices. They operationalise organisation level as being four distinct employee groups: top management; other management; non-exempt salaried employees (i.e. not exempt from the Fair Labor Standards Act (US) which protects overtime for lower paid employees) and hourly paid employees. They find

evidence for the differentiation of pay practices not only between strategy types but also between top management and others, with this group more likely to receive stockholdings and flexible benefits packages whereas hourly paid employees are more likely than other employee groups to receive cost of living increases and incentive payments.

Human capital theory suggests however that *both* organisational leaders and employees at lower levels within the organisation will receive higher pay levels when they have higher human capital (Judge, Klinger, and Simon, 2010; Harris and McMahan, 2015). This is because employees with human capital (i.e. high levels of knowledge, skills and abilities) can be organisational resources which are valuable (create value for the organisation); rare (are difficult to source in the labour market); inimitable (are not easily imitated); and non-substitutable (are not easily replaced by technology) (Wright *et al.*, 1994). The argument made by Wright *et al.* (1994, p.304) is that these criteria for sustained competitive advantage only apply to human resources as a "pool of human capital". In contrast to Barney (1991) and Castanias and Helfat (1991), who view individuals and elite groups (such as top management) as potential sources of competitive advantage, Wright *et al.* (1994) propose that a wider base of employees may play a greater role in generating competitive advantage because a) they are directly involved in the production of the product or service and b) because of their lower visibility, lower mobility (between firms) and advantages such as social complexity (e.g. good working relationships, trust, etc.) other groups can be equally valuable and inimitable creating sustained, rather than short-term, competitive advantage.

This approach is supported by Milkovich (1987) who argues that any employee group can be critical to organisational performance and therefore considered strategically important. But despite acknowledging that employee groups besides executives and top management have the potential to contribute to organisational competitive advantage, not all groups will do so, and this distinction is dependent on both industry requirements and the type of work performed. For example, both Lawler (1986) and Gomez-Mejia and Balkin (1992) highlight that particularly in knowledge-work and high technology sectors, strategic pay practices that support depth of technical expertise, horizontal career orientation, team working, integration of activities, fluid tasks, knowledge exchange and problem solving will be far more effective than the traditional pay model. Suff, Reilly and Cox (2007) highlight the organisational benefits of pay plans for knowledge-workers that combine performance-

related pay within a mix of short- and long-term incentives and non-financial awards. And Bussin, Nicholls and Nienaber (2016) find that pay preferences are related to occupational culture for knowledge-workers in South Africa's ICT industry. It therefore appears likely that organisations might benefit from differentiating pay design for certain types of employment groups.

A contribution from McDonnell, Gunnigle, Lavelle and Lamare (2016, p.1299) suggests a strategic and differentiated emphasis on employee pay for those with "the greatest capacity to enhance competitive advantage". Using survey evidence from 260 multinational companies (MNCs) in Ireland, the study explores the extent to which 'key groups' of employees (those critical to the firm's core competence) are formally recognised and whether they are subject to differential pay practices (measured as pay-level policy; financial participation schemes; and variable pay). The results demonstrate that around half of MNCs identify a key group as distinct from both managers and the largest non-management occupational group in the workforce. They find that the most common categorisation of occupations forming key groups are technical staff, research and development (R&D) specialists, chemists, engineers, quality technicians and product designers. Findings also provide strong evidence for considerable differentiation in the pay practices between these three groups. Key groups are more likely to have pay-level positioned in the top quartiles relative to market comparators and are slightly more likely to be offered financial participation schemes (although managers were more likely to be given stock options) but there was no significant difference in performance-based pay for managers and key groups. Overall, the authors conclude that pay is differentiated for employee groups with key groups treated as being of sufficiently greater strategic value than those performing the more operational activities of the organisation. They also conclude that key group pay practices are similar to those of managerial groups.

Although the literature in this area is fairly limited, there is a clear indication that organisations make strategic differentiations between managers, professional and technical staff on one hand and lower skilled, broad-based employee groups on the other. Organisations may therefore seek to configure pay practices to support human capital enhancement for these different employment groups.

2.3.3.2.2   Configuration typologies

In configuring pay practices to support human capital enhancement for employment groupings there are a number of wider HR configurations proposed in the literature.

Miles and Snow's (1984) defender-type A / prospector-type B typology is the archetypal configuration of business strategies and HR systems. Delery and Doty (1996), drawing on Kerr and Slocum (1987); Osterman (1987); and Sonnenfeld and Peiperl (1988), propose a similar framework to Miles and Snow (1984) comprised of two differing employment systems; internal and market-based. Drawing these frameworks together, two strategic HRM systems emerge:

Type A / Internal / Developmental systems 'make' human resources. They rely on internal labour markets, extensive training, formal staff planning, process- and development-oriented appraisals. Some jobs will have tightly defined job descriptions. Pay is based on hierarchy and internal equity; there are few incentives and profit-sharing is minimal (algorithmic pay configuration).

Type B / Market-based / Acquisition systems 'buy' human resources from the market and emphasise sophisticated recruitment and selection, informal staff planning and little training and development. Performance appraisals and compensation are results oriented. There is little employment security and employee voice, and jobs are usually broadly defined. Pay is driven by incentives for individual performance, extensive profit-sharing and recruitment needs (experiential pay configuration). (Adapted from Miles and Snow, 1984; Youndt and Snell, 2004; Delery and Doty, 1996).

None of these proposed HR systems recommend differentiating practices according to employment group *within* organisations. Following configuration perspective logic, the implication is that these typologies are 'ideal types' which organisations will conform to, to varying degrees.

Lepak and Snell (2002), however, do seek to construct differentiated HR configurations for a framework of four different employment 'modes' based on the theorised level of the strategic value and uniqueness of human capital. According to the authors' proposition, employees working in a 'knowledge-based employment mode' are likely to be viewed as core to the organisation; they possess unique human capital and directly contribute to

strategic objectives. The knowledge-based employment mode is structured around "the skills and competencies of employees rather than the execution of programmed tasks and job routines" (Ibid., p.520). These are knowledge workers (e.g. analysts, middle management, engineers, functional managers, professional employees, R&D employees, research scientists) and the employment relationship is based on long-term commitment. Lepak and Snell (2002) propose that for this employment mode the most appropriate HR configuration is commitment-based practices aimed at enhancing long-term orientation and developing proprietary knowledge. Commitment-based practices are aligned to the 'make' orientation and emphasise promotion from within, employment security, employee voice in decision making, financial participation and developmental appraisals (Lepak and Snell, 2002).

The other group of employees theorised to hold high strategic value for the organisation work under a 'job-based employment mode'. While these employees may have human capital that has strategic value, it has limited uniqueness i.e. it does not provide a differentiating source of competitiveness. As Lepak and Snell (2002, p.520) explain, these workers "are able to make significant contributions to a firm while possessing skills that are widely transferable". Employees in this employment mode are hired to perform predetermined tasks and might include: administrative positions, salespeople, customer service agents, drivers/delivery representatives and assembly-line workers as well as semi-professionals such as account managers, engineers, HR practitioners, legal workers and trainers (Ibid). According to the model, employees working in job-based employment are likely to be managed through a productivity-based HR system similar to a 'buy' configuration. Given that their human capital is easily transferable, jobs will be standardised, skills will be acquired from the market rather than internally developed, appraisals will focus on job performance and be short-term and results oriented (Ibid).

Despite clear alignments between the commitment-based 'make' configuration proposed by Lepak and Snell (2002) and the defender / type A / internal / developmental types proposed by Miles and Snow (1984), Delery and Doty (1996) and Youndt and Snell (2004) respectively, the operationalisation of commitment-based pay practices does not wholly conform with the proposed algorithmic pay configuration (see Table 3.3). The pay elements of the commitment-based HR system include extensive benefits package, employee stock

ownership programs, incentives for new ideas and a lack of focus on short-term performance (Lepak and Snell, 2002). Conversely, despite apparent alignment between the productivity-based 'buy' configuration and the prospector / type B / market-based / acquisition type, the operationalisation of productivity-based pay does not conform to the experiential pay configuration. Instead it comprises compensation based on straight salary; valuing seniority; paying market-based wages; providing internal equity; and individual incentive / bonus focused on short-term productivity targets (Ibid.).

Lepak and Snell's (2002) results overall indicate support for a theoretical configuration of HR practices according to human capital characteristics (uniqueness and strategic value) and employment modes. Specifically, however they find some mixed results for their hypothesised alignments of knowledge-based employment with commitment-based HR and job-based employment with productivity-based HR. Some results indicate that the commitment-based HR configuration is associated with knowledge-based employment and the productivity-based HR configuration is associated with the job-based employment mode while others, indicate only weak relationships. It could be argued that the operationalisation of HR configurations without clearly justified links e.g. compensation based on market rate *and* internal equity for the job-based employment mode may be responsible for such mixed results.

Taking the findings in this section together, there are indications of reasonable support for links between employment groups and different HR systems.

2.3.3.2.3   *Employment group-pay-performance relationship*

Despite a strong theoretical argument resting on human capital and resource-based perspectives, there is scant evidence in the literature for a direct relationship between pay configured by employment group and HR / organisational performance. Where this evidence exists, pay is treated as a component of a wider set of HR practices. For example, Collins and Smith's (2006) study incorporates pay practices such as incentives based on organisational performance, high pay level compared to competitors and stock options, into a measure of a commitment-based approach to HR for high-tech knowledge workers and finds a positive association with firm financial performance. Similarly, Rodríguez and Ventura (2003) focus on managers and professionals only in a study of HR systems, strategy and firm performance. The results indicate that within their sample a 'make' HR system

has a positive effect on employee turnover and overall firm performance. However, the algorithmic pay practices associated with the 'make' HR system produce a negative effect on the firm's productivity leading to mixed support for a positive relationship between HR system and organisational performance.

These papers investigate just one employment group, but there are also studies comparing different groups, HR and pay practices and HR / organisational performance outcomes. McClean and Collins (2011) examine the relationship between high-commitment HR practices and perceived firm performance (measured as comparison to competitors, reaching potential, staff and customer satisfaction) in professional services firms examining the effort and performance of clerical workers and semi-professionals. The results indicate that high-commitment HR practices positively relate to firm performance for both employment groups but also that this relationship is moderated by the value of each group to firm competitive advantage. Specifically, when each group is highly valuable to firm competitive advantage, the impact of their effort on firm performance is much stronger than when that group is less valuable to firm competitive advantage. Furthermore, in their findings, semi-professionals (e.g. nurses, paralegals, etc.) are found to have greater competitive advantage than clerical workers (support staff, secretaries, payroll, etc.) (McClean and Collins, 2011). These findings are in line to those of Nyberg *et al.* (2016) who find that performance-based pay practices, namely merit pay, and bonus pay, had a positive effect on employee performance at all intra-organisational levels.

The theoretical arguments and empirical evidence presented in this section suggest the next two hypotheses concerning relationships between pay practices, employment group and HR performance:

> H5. Organisations will select an algorithmic pay configuration for employees working in a knowledge-based employment group (managers and professional employees) and an experiential pay configuration for employees working in a job-based employment group (other, broad-based employee groups).

> H6. Alignment of employment group and pay configuration will have a positive effect on HR performance outcomes.

3.3.2.3 Industry sector

Throughout the strategic pay literature, from both universal and alignment perspectives, the role of industry sector is prominent. Industry sector has been theorised as having the potential to influence the pattern of pay practices (as an independent variable in its own right e.g. Jackson *et al*., 1989), to explain a variable's relationship with pay (as a mediator or confounding variable) or to influence the strength of the effect of a variable on pay (as a moderator variable).

Of the studies analysed in this chapter, many are focussed on either manufacturing (e.g. Balkin and Gomez-Mejia, 1990; Rodríguez and Ventura, 2003) and its subsets such as high technology (e.g. Romero and Cabrera, 2001; Yanadori and Marler, 2006; Tremblay and Chênevert, 2008; Tsai *et al*., 2008) or service-oriented settings (e.g. banks for Delery and Doty, 1996; and Boyd and Salamin, 2001; professional services for McClean and Collins, 2011). This suggests a recognition of a manufacturing and production / service sector dichotomy leading many researchers to focus their studies on one industry sector to control for industry influence.

Jackson *et al*. (1989) propose that there are fundamental differences between the employee behaviour requirements of organisations operating in the service sector and those in manufacturing. First, services, by their very nature, are intangible rather than tangible; the consumption of services occurs as soon as they are produced rather than being stored for a later date as with typical manufactured products (Mills and Margulies, 1980). Because of the intangible nature of the 'product', employees in service organisations take on a crucial role in the organisation's delivery system; consumers interact with producers in the production of services (Ibid.). This means that it is more difficult to monitor employee performance and quality control directly, so employees must be trusted, but incentivised, to monitor their own performance (Ibid.). This has implications for pay practices and suggests service sector organisations will design pay systems that will both encourage self-monitoring and emphasise performance. Indeed, in their study of 267 organisations from forty different industries in the US, Jackson *et al.* (1989) find service organisations are more likely than manufacturing organisations to use performance results to determine pay, particularly for hourly paid employees.

Results of studies focusing on either manufacturing or services lend support to Jackson *et al.*'s (1989) findings. Rodríguez and Ventura (2003) find algorithmic compensation practices in manufacturing firms aligned to the 'make' HR system such as an emphasis on the job rather than employee skills as the basis for pay, internal consistency, and value of seniority in pay decisions. However, evidence also suggests that high-technology sections of the manufacturing sector utilise more flexible and adaptable compensation practices too (Tremblay and Chênevert, 2008). Conversely, Delery and Doty (1996) find organisations in financial services both utilise, and benefit from, extensive use of profit-sharing; a key experiential pay practice.

Taken together, the literature suggests that there will be different pay practices used by organisations operating in different industry sectors and that pay aligned with industry sector requirements has potential to have an effect on HR / organisational performance. This helps formulate the next pair of hypotheses.

> H7. Organisations operating in the manufacturing and production sector will be more likely to select an algorithmic pay configuration and organisations operating in private sector services will be more likely to select an experiential pay configuration.

> H8. Alignment of industry sector and pay configuration will have a positive effect on HR performance outcomes.

3.3.2.4 Organisation size

Similar to the treatment of industry sector, research studies included in this chapter have often sought to control for size of organisation (number of employees). For example, Rodríguez and Ventura (2003) only include companies with 100 or more employees whereas Lepak and Snell (2002) exclude companies with less than 200 employees. In both cases, this appears to be based on the premise that large organisations are more likely than small ones to have formal and well-developed HRM systems (Snell, 1992; Huselid, 1995; Huselid and Becker, 1996; De Winne and Sels, 2012).

Indeed, the indication from many studies is that there is a strong association between organisation size and manifestation of HRM (Jackson and Schuler, 1995; Leung, 2003; Rutherford, Buller and McMullan, 2003; Van de Woestyne, Dewettinck, and Van

Bruystegem, 2010; De Winne and Sels, 2012) and that HRM in small organisations is predominantly "informal and emergent" (Harney and Dundon, 2006, p.48). In seeking to explain what it is about the small size of these organisations that determines this approach to HRM, economic perspectives focus on SMEs' typical lack of financial resources; what Welsh and White (1981, p.18) refer to as, "resource poverty". There is also evidence to suggest that HR practices in SMEs are characterised by informality and flexibility (Bacon, Ackers, Storey and Coates, 1996; Verreynne, Parker and Wilson, 2013) due to external uncertainty (Hill and Stewart, 2000), 'proximity' to their environment (Westhead and Storey, 1996) and the "liability of smallness" (Williamson, 2000, p.30). However, small organisations are also theorised to be adept at innovation and change, based on the often-niche nature of their chosen markets meaning they actively differentiate from the standardised offerings from large competitors and have lower commitment to existing practices and products (Storey, 1994; De Winne and Sels, 2012). Conversely, larger organisations have the resources to exploit economies of scale in implementing more formal and sophisticated practices (Jackson and Schuler, 1995) but might be less 'fleet of foot' in adapting to market changes. Institutional theories suggest that larger organisations will also pursue more sophisticated HRM as they are more visible in society and under pressure to gain legitimacy (DiMaggio and Powell, 1983; Jackson and Schuler, 1995; Suchman, 1995).

According to Jackson, *et al.* (1989) as organisations grow from small to large, a number of changes typically occur, including more specialised jobs as a means to increase efficiency; more formalised control and the development of internal labour markets. These features are theorised to give rise to 'make' type HR systems which are characterised by internal promotion, career paths, formal procedures, extensive training, and algorithmic compensation based on rewards for seniority, hierarchical position, internal equity and low levels of variable pay (Ibid.; Miles and Snow, 1984; Delery and Doty, 1996; Youndt and Snell, 2004). While it does not automatically follow that small organisations will adopt a 'buy' HR system just because large organisations adopt a 'make' system, the characteristics of small firms (resource constraints, informality and flexibility, external uncertainty and a propensity for innovation and change) would suggest that an HR system that emphasises acquiring skills externally, informal planning, little training and development, and experiential, results-oriented compensation would be a natural fit.

Empirical research focussing on organisation size, pay and performance is scant. Indeed, Jackson *et al*. (1989) include organisation size in their wider study of organisational characteristics and HR practices as an exploratory comparison of practices in large and small organisation because they cannot develop *a priori* hypotheses given the lack of prior research. Overall, they find organisation size has the weakest association with HR practices of all the organisational characteristics tested, but results do indicate that hourly paid employees in small organisations (250 or fewer employees) were more likely to receive bonuses based on company profitability whereas both managers and hourly-paid employees in large organisations (1000 or more employees) were more likely to be stockholders. Given that both these pay practices could be classified as experiential (Table 3.3), there is no evidence for alignment with a pay configuration type, however this result does point to different practices being utilised by large and small organisations.

In examining the link between size, pay and organisational performance, Carlson, Upton and Seaman's (2006) study of 168 family-owned SMEs in the US tests the consequences of HR practices on firm performance. The results suggest that use of market competitive compensation designed to recruit and retain key employees is associated with high performing firms. In addition, their findings indicate that high performing firms use more cash incentive compensation at every employee level in the organisation. These results suggest an association between experiential pay practices and performance in SME organisations consistent with an alignment premise.

While there is little empirical evidence for a strong association between organisation size, pay practices and organisational outcomes, the theoretical arguments set out above suggest the final pair of hypotheses in this study.

> H9. Large organisations will be more likely to select an algorithmic pay configuration and SME organisations will be more likely to select an experiential pay configuration.

> H10. Alignment of organisation size and pay configuration will have a positive effect on HR performance outcomes.

This section has critically examined the theoretical basis and empirical evidence for a conceptual framework of strategic pay from contingency and configurational perspectives.

It is evident from the analysis that there are robust arguments for the alignment of pay practices with organisational characteristics, both vertical and horizontal, that suggest positive HR performance outcomes will result. Furthermore, contingency approaches propose two alternative strategic pay configurations: one experiential that is strongly reflective of the new pay set of strategic pay practices; and one algorithmic that is equally similar to the traditional pay model. In recognising these similarities, and other broad alignments between HRM systems and pay configurations identified in this chapter, and aligning these with business strategy typologies, employment groups, industry sectors and sizes of organisation, a clear picture of two broadly aligned systems emerges (see Table 3.4).

The following section incorporates these dichotomous alignment systems in its development of a conceptual framework based on the universalistic and alignment propositions evaluated in this chapter. It also sets out each hypothesis and its link to the proposed model of strategic pay.

Table3.4 Broad alignments between strategy, employment system, pay configuration, sector and organisation size

Strategic orientation			HRM system				Employment group	Pay bundle / pattern / configuration				Sector	Size
Miles & Snow (1978, 1984)	Porter (1980, 2004)	Gerstein & Reisman (1983)	Miles & Snow (1984)	Delery & Doty (1996)	Lepak & Snell (2002)	Youndt & Snell (2004)	Lepak & Snell (2002)	Lawler (1986) Schuster & Zingheim (1992)	Lawler (1990)	Gomez-Mejia & Welbourne (1988)	Gomez-Mejia & Balkin (1992)	Jackson *et al* (1989)	-
Defender	Cost leader	Extract profit - rationalisation	Type A	Internal-based	Commitment-based 'make'	Develop-mental	Knowledge-based	Old pay	Traditional pay	Mechanistic	Algorithmic	Manufacturing & production	Large
Prospector	Differentiator (innovation / quality)	Dynamic growth	Type B	Market-based	Productivity-based 'buy'	Acquisition	Job-based	New pay	Strategic pay	Organic	Experiential	Services	SME

3.4   Strategic pay in the UK

Much of the literature examined in this chapter originates in the United States. The extent to which strategic pay practices have been adopted by UK organisations has received little widespread attention in the academic literature. As Taylor (2000, p.14) notes, there has certainly been increased interest in new pay methods and the rhetoric of UK reward practitioners has embraced the language of strategic HRM, but "the extent to which any kind of fundamental shift has occurred in practice" is still in question.

Heery (1996, p.58) cites a CBI survey of more than 400 organisations as evidence that that there has been "some movement towards the new pay model in Britain". The survey records recent and planned innovation in pay management; increased links between pay and business performance; redesign of pay structures to reflect more flexible forms of organisation; widespread use of PFP systems and some increase in the incidence of team pay; systems which reward skill and competence acquisition; a trend towards greater benefit flexibility and increasing proportions of variable pay (Ibid.). Although this suggests an uptake of strategic pay practices, Heery (1996) cautions that the data are not representative, and the observed uptake of practices is generally modest rather than widespread. He also notes that certain changes have been driven by changes in legislation, rather than by the adoption of a coherent new pay model.

Over a decade later, Trevor (2010), in a qualitative exploratory study of UK organisations although limited to the fast-moving consumer goods (FMCG) sector, finds more consistent evidence of strategic pay practices. These include flexible base pay structures linked to market movements; significant levels of variable pay through the use of short-term incentive bonus systems; forms of share schemes and long-term incentive pay, and a comprehensive array of financial benefits emphasising choice and value to the individual.

The 2011 Workplace Employment Relations Survey (WERS) which is representative of British workplaces with five or more employees, does not distinguish explicitly between strategic or traditional pay practices, but does collect data on rates of collective bargaining and performance-based pay in organisations (van Wanrooy, Bewley, Bryson, Forth, Freeth, Stokes and Wood, 2014). The CIPD Reward Management Survey collects data on an approximately annual basis; the most current results in the public domain being from 2017. CIPD collects data on all the key areas of strategic and traditional pay and together with the WERS data can be used to provide a picture of the frequency of pay practices in the UK

There appears to be good evidence that traditional collective bargaining to determine pay is declining in favour of methods more in keeping with strategic pay approaches. Van Wanrooy *et al*. (2014) cite three decades of decline in union influence on pay setting culminating in just 7% of workplaces using collective bargaining by 2011. Similarly, the 2017 CIPD survey finds only 9% of private sector services firms using collective bargaining although the figure is higher for manufacturing and production companies at 19% (Bailey, Marriott and Perkins, 2017). Job evaluation, another traditional method of pay determination is used in combination with market rates by approximately a half of the respondents, whereas roughly a third determine pay solely on the organisation's ability to pay (Ibid.). The two surveys also find similar results on the rates of performance pay: WERS cites 60% of private sector organisations using some form of performance-based pay whereas CIPD finds 57% of private sector services and manufacturing and production companies use such schemes. The CIPD survey also finds that broadbanding, job families and individual pay rates are more common than more traditional pay spines or narrow-grades for managing base pay, and individual performance, competencies and market rates are used much more frequently than traditional service-based pay progression (Bailey *et al.,* 2017). As a whole, the data from both WERS and CIPD indicates that strategic pay practices have become commonplace in the UK private sector whilst more traditional practices are used less frequently, giving support to the contention that strategic pay has been widely taken up in UK organisations.

There are some however suggestions that the UK has been unwilling to uncritically adopt the premise of strategic pay. Thompson (1998, p.67) argues that managing pay is more often concerned with "short-term damage limitation" rather than the "strategic lever for change that appears so seductive in the writing of American commentators". And Druker and White (2000b, p.216) note that new pay theories have not been "translated fully or easily" into UK pay practice. Armstrong and Brown (2009) also caution against the wholesale acceptance of US pay models and propose an alternative perspective; a UK-oriented 'new realism' (Armstrong and Brown, 2009; Armstrong 2015). However, the 'new realism' remains essentially a softened version of new pay, retaining a unitarist emphasis on strategy, flexibility and individualism despite some qualifications around best practice universalism.

Trevor and Brown (2014, p.573), largely based on the previous empirical work of Trevor (2010), conclude that institutional and social factors create "unavoidable obstacles to the ability of management to implement pay systems aligned to strategic goals" which fundamentally limit the strategic applications of pay in UK organisations. Trevor's (2010) empirical research raises

some significant questions about the fundamental efficacy of the strategic pay model, in particular the claim that these practices will positively influence individual and organisational performance. A number of case study firms in the study experienced negative outcomes as a result of the 'strategic' pay practices they used, leading Trevor (2010) to conclude that these pay systems can diminish motivation, give rise to undesirable employee behaviours, absorb managers' time and effort, and misallocate pay spend. In short, pay managed in this way can produce outcomes entirely contrary to those intended, and ultimately has the potential to "consume and destroy more value than is created" (Trevor, 2010, p.139).

Despite acknowledging the failings of the strategic pay model himself, Trevor (2010) recognises that there is little by way of an alternative to the orthodoxy. Much of the criticism lacks empirical grounding and therefore inevitably lacks credibility both in the eyes of strategic pay advocates and practitioners. And, despite the misgivings, there is plenty of evidence to suggest that strategic pay has become the espoused 'standard model' of pay practice in the UK (Trevor and Brown, 2014, Perkins *et al.*, 2016).

3.5   Theorising the problem - framework and hypotheses

Drawing on the literature reviewed in this and the previous chapter, this section sets out the conceptual framework that guides the empirical phases of the study. It brings together the various hypothesised relationships between pay practices and organisational contingencies; business strategy, employment group, industry sector, and organisation size, with HR performance outcomes in one integrated strategic pay model.

3.5.1   Conceptual framework

3.5.1.1 Universalistic strategic pay model

The starting point underpinning the conceptual framework is the universalistic proposition that strategic pay practices will have an effect on organisational performance (Lawler, 1990; Delery and Doty, 1996; Cadsby, *et al.*, 2007; Eriksson and Villeval, 2008; Gerhart *et al.*, 2009; Fang and Gerhart, 2012; Nyberg *et al.*, 2018). Organisational performance in terms of operational and financial measures is achieved because pay practices contribute to 'HR outcomes', the attraction, retention and motivation of productive employees i.e. there is an intermediate stage on the critical path from practices to performance (Kaifeng *et al.*, 2012). For the purposes of this study, only hypotheses that test HR performance outcomes will be included given the more distal nature of financial and operational performance outcomes and associated methodological

constraints (see Chapter 4 for more detail including operationalisation of variables). In addition, the conceptual framework incorporates the universalistic idea of 'bundling' strategic pay practices advocated by new pay proponents (Lawler, 1990; Schuster and Zingheim, 1992) and in accordance with best practice HRM approaches maintaining that bundling practices has an additive effect on performance outcomes (Martín-Alcázar *et al.*, 2005). Figure 3.1 illustrates this foundational, central proposition, showing the hypothesised relationships between pay, HR outcomes and organisational performance (this last variable being outside the scope of this study and therefore greyed out).

Figure 3.1- Developing a strategic pay model - stage one universalistic concepts

3.5.1.2 Alignment strategic pay model

The second stage in the construction of a conceptual framework to guide empirical work is to build into the model vertical and horizontal alignment premises of contingency and configurational perspectives (Figure 3.2). First, that as organisations choose how to compete in the external product/service markets of their industry sector, pay practices will be selected to best meet the needs of fulfilling that business strategy and support organisational success through positive HR outcomes (Miles and Snow, 1984; Schuler and Jackson, 1987a, 1987b; Jackson *et al.*, 1989; Gomez-Mejia and Balkin, 1992; Montemayor, 1996; Allen and Helms, 2002; Chen and Jermias, 2014, Tenhiälä and Laamanen, 2016; Andreeva *et al.*, 2017). Second, in order to meet business strategy needs, organisations will configure pay practices that best meet human capital requirements for employees working in different employment groups and this too will contribute to positive HR / organisational outcomes (Lepak and Snell, 2002; McClean and Collins, 2011; McDonnell *et al.*, 2016). Finally, organisational size will also have an effect on the configuration of pay practices because of resource constraints, levels of formality and flexibility, as well as isomorphic institutional pressures (DiMaggio and Powell, 1983; Jackson and Schuler, 1995; Williamson, 2000; De winne and Sels, 2012; Verreynne *et al.*, 2013).
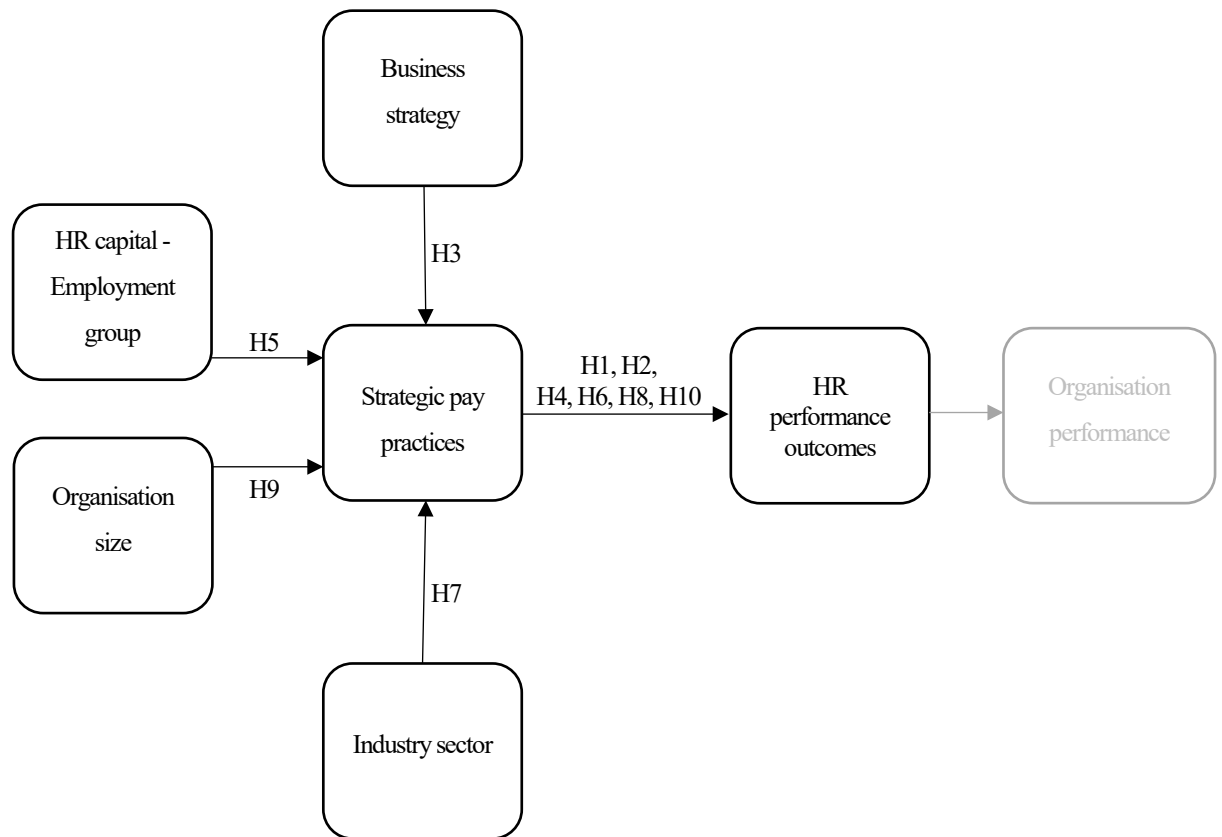
Figure 3.1 Developing a strategic pay model - stage two – vertical and horizontal alignments

3.5.1.3 Integrated strategic pay model

Analysis of the strategic pay literature identified two alternative pay configurations. The first is algorithmic pay, characterised by traditional job evaluation; valuing seniority; short-term performance orientation; minimal risk sharing; emphasis on internal equity and hierarchical position; high pay dispersion; below market pay; high job security; narrowly defined grade structures; and pay secrecy. The second is experiential pay, characterised by emphasis on individual skills and attributes; performance; extensive risk sharing; market sensitivity; more egalitarian compensation; low pay dispersion; multiple rewards at the individual and group level; and pay openness. These two pay configurations are in line with the universalistic differentiation of strategic (experiential) / traditional (algorithmic) pay. And these two 'ideal type' configurations of pay practices are theorised to align with dichotomous conceptualisations of business strategy (low-road and high-road) and employment groups (knowledge-based and job-based) as well as differentiated by industry sector (manufacturing and services) and organisation size (large and SME) as set out in Table 3.4. The proposed model of strategic pay

delineates this dichotomous model and represents the conceptual framework which informs the empirical phases of the study (Figure 3.3).
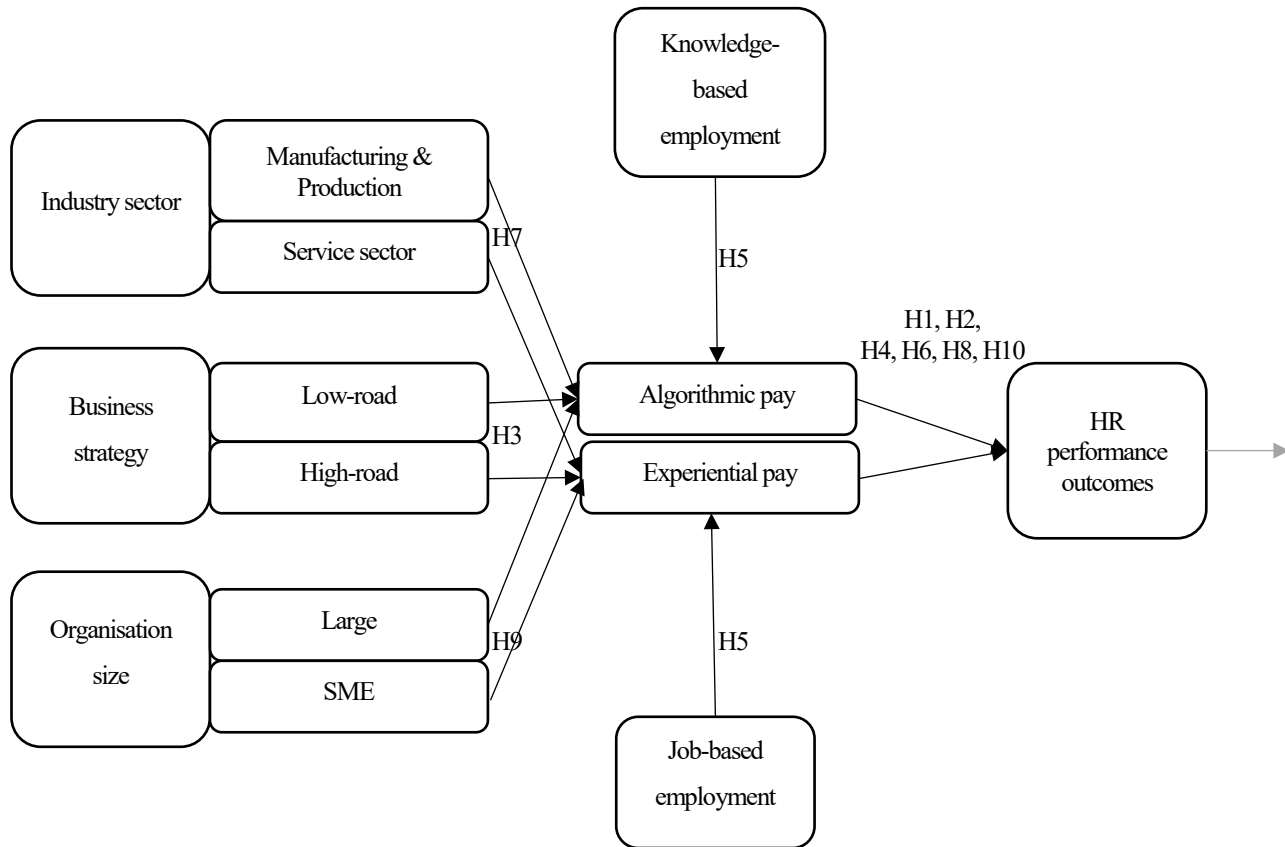
Figure 3.2 Proposed strategic pay model

3.5.2 Hypotheses

H1. HR performance outcomes will be positively related to experiential pay practices and negatively related to algorithmic pay practices.

H2. Organisations will bundle strategic pay practices and bundling will have an additive effect on HR performance outcomes.

H3. Organisations with a low-road strategic orientation will be more likely to select an algorithmic pay configuration and organisations with a high-road strategic orientation will be more likely to select an experiential pay configuration.

H4. Alignment of strategic orientation and pay configuration will have a positive effect on HR performance outcomes.

H5. Organisations will select an algorithmic pay configuration for employees working in a knowledge-based employment group (managers and professional employees) and an experiential pay configuration for employees working in a job-based employment group (other, broad-based employee groups).

H6. Alignment of employment group and pay configuration will have a positive effect on HR performance outcomes.

H7. Organisations operating in the manufacturing and production sector will be more likely to select an algorithmic pay configuration and organisations operating in private sector services will be more likely to select an experiential pay configuration.

H8. Alignment of industry sector and pay configuration will have a positive effect on HR performance outcomes.

H9. Large organisations will be more likely to select an algorithmic pay configuration and SME organisations will be more likely to select an experiential pay configuration.

H10. Alignment of organisation size and pay configuration will have a positive effect on HR performance outcomes.

3.6   Chapter summary

This chapter has synthesised the analysis of strategic pay literature to develop a conceptual framework in the form of a proposed model of strategic pay incorporating both universalistic and alignment (contingency and configurational) perspectives. As part of this model, ten hypothetical propositions have been articulated which have guided methods for data collection, testing and analysis. The methodological framework utilised in designing and executing this empirical research is detailed in the following chapter.

Chapter 4: Methodology

4.1   Chapter introduction

This chapter sets out the methodological approach and methods used in designing and executing the primary data collection and analysis for this study.   It considers the philosophical assumptions that have informed the research process and situates these within a framework of established research paradigms.   The research aim, questions and objectives of the study are restated followed by a stage-by-stage outline of the methodological process implemented to meet these objectives.   Next, the non-probability sampling strategy is defended and issues of potential sample bias and limitations in generalisability are considered.   This is followed by a section covering data collection which provides details of an initial 'study' (the 2011 CIPD Reward Management Survey), subsequent variable operationalisation as well as the administration of the final data collection instrument.   A section on data analysis techniques follows which charts the preliminary stages of data coding, scale development and statistical analysis techniques employed in the analysis stage.   Finally, the research ethics of the process are considered and justified.

4.2   Positivist research philosophy

In setting out the philosophical assumptions that underlie this study, aspects of knowledge development will be considered: ontological assumptions about the nature of reality and epistemological assumptions about the nature of knowledge (Saunders, Lewis and Thornhill, 2015). Critical reflection on these assumptions can help in both the formulation of a coherent research strategy and better understanding of what it is studied and found (Johnson and Clark, 2006).

This study is firmly placed within the positivist tradition which conform to an ontological standpoint discerning reality in social entities just as there is in physical and natural phenomena (Saunders *et al*., 2015). Within this paradigm, knowledge is judged acceptable if it is based on observable and measurable data leading to the production of law-like generalisations (Ibid.). The role of researcher is to be as neutral and objective as possible and researchers in this tradition generally apply statistical analysis to quantitative data collected from large samples (Ibid.). Under the positivist paradigm, it is common to use the science-based hypothetico-deductive (HD) method; moving from theory, to hypothesis, operational definitions, measurement,

hypothesis testing, and lastly, verification (Jankowicz, 2005) and indeed, this is the method chosen for use in this study.

Despite robust criticism from non-positivist positions which argue for alternative perspectives on what constitutes reality and what is deemed to be acceptable knowledge, positivist approaches remain dominant in many research disciplines (Jankowicz, 2005; Saunders *et al.,* 2015). However, researchers working in non-positivist traditions aiming for richer contextual understanding generally work with small samples, qualitative methods and data (Saunders *et al*., 2015) and the centrality of the CIPD data set to this study precludes the use of such methods. Nevertheless, a positivist position has not been adopted uncritically. Of key importance in ameliorating the potential pitfalls of a research design founded on positivistic principles is establishing a robust approach to developing theory.

4.3   Developing theory through deduction

Two principal forms of logical reasoning are available to researchers evaluating data, making inferences and constructing arguments for conclusions: deduction and induction (Adams, Khan, Raeside and White, 2007).   In deductivism (founded on work by Poincare in the early 1900s and Popper in the 1930s), theory is developed through the establishment of universal laws which continue to be tested and amended where their predictions are found to be false (Adams *et al*., 2007). In inductivism (set out in 1843 by John Stuart Mill (2009b)) the development of theory follows from empirical observation of a finite number of occurrences / cases.

The research questions for this study have been given prominence in determining both the approach to theory development and the research method. The research questions seek to establish and explain causal links between pay practices, organisational contingencies and HR outcomes (see 4.4.1 for details). This would suggest that deductive reasoning as a process of making logical inferences (Johnson-Laird, 2010) would be the most suitable approach and indeed, deductive reasoning is the predominant approach for developing conclusions in this study. Crucially, deduction starts with a set of premises or theory developed into testable propositions from which logical conclusions are derived. Conclusions based on deduction are deemed 'true' whenever all premises are 'true'; establishing the truth of each premise establishes the truth of the conclusion (Ketokivi and Mantere, 2010).

A deductive approach to research is further characterised by a highly structured methodology in order to facilitate the replication of results; reliability being an important aspect of validity in

deductive logic (Saunders *et al.*, 2015). Similarly, precise operationalisation of variables is necessary, allowing each element of the theory to be measured and tested (Ibid.). Finally, the nature of generalisation under deductive logic is directed from the general to the specific; from a given model to expected data, or as Gauch (2002, p.160) nicely frames it, "from the mind to the world". The benefit of this approach is the high level of certainty attained by fulfilling each of the elements of deduction; the conclusion will be true insofar as the premises have been shown to be true (Gauch, 2002). It is because of this apparent certainty of conclusions that deductive logic came to prominence in the twentieth century usurping the inductive approach as the normative method of theory development (Adams *et al.*, 2007).

The context of the research has also had a bearing on approaches to theory development. The participants in this study are organisations, made up of 10s, 100s or 1000s of people creating, negotiating and responding to social meanings and norms as they make decisions relating to how their businesses operate and how employees are managed. Deductive logic can help make sense of the myriad effects on, and of, these choices by isolating variables that are related, on an *a priori* basis, and determining, through observation and inference, the validity of these assumptions. But deduction and the HD method are, by necessity, reductive in nature; ideas are pared down to their core elements (Adams *et al*, 2007). It is only by using limited inductive reasoning that sound explanations based on amplified empirical observations and the validity of hypothesised relationships between variables can be made. The research process used in this study followed cycles of deduction and induction, there was an iteration between the formulation of hypotheses, testing, further empirical observation and examination of the literature as inferences were made and conclusions drawn.

4.4 Research design and methods

4.4.1 Research aim, questions and objectives

The aim of this research study is to reassess the strategic pay model by evaluating the extent of strategic pay practices in UK organisations and their impact on HR performance outcomes. From this aim flow three central research objectives and associated research questions derived from critical evaluation of extant theory and research evaluated in Chapters 2 and 3.

1. Objective: to test the proposition that pay practices will have an effect on HR performance outcomes.

Research question: what effect do pay practices have on HR performance outcomes?

2. Objective: to test the proposition that organisations will select pay practices that are in alignment with internal and external organisational contingencies.

Research question: to what extent do organisations align pay practices with external organisational contingencies such as business strategy and industry sector or internal contingencies such as employment group and organisation size?

3. Objective: to test the proposition that positive HR performance outcomes will result from selecting pay practices that are strategically aligned with organisational contingencies.

Research question: to what extent does alignment of pay practices with organisation contingencies have an effect on HR performance outcomes?

4.4.2 Hypothetico-deductive (HD) method

As explained above, in line with a positivist research approach, the overall method for addressing the research objectives and answering the research questions followed the HD method in the application of a number of distinct stages which were adapted from Jankowicz (2005) and Blaikie (2010), as follows:

1. *Putting forward a tentative idea, a premise, a hypothesis (a testable proposition about the relationship between two or more concepts or variables) or set of hypotheses to form a theory.* Through critical analysis of the strategic pay concept, a conceptual framework was developed, modelling the relationships between pay practices, business strategy, employment group, industry sector and organisation size and HR performance outcomes.

2. *Using existing literature, deduce a testable proposition or number of propositions.* Ten hypotheses were developed based on the theoretical propositions that pay practices have an effect on HR performance outcomes, pay will be dependent on organisational contingencies and pay aligned with organisational contingencies will have a positive effect on HR performance outcomes.

3. *Examining the premises and the logic of the argument that produced them, comparing this argument with existing theories to see if it offers an advance in understanding.* An iteration between literature and the developing model took place and clear potential for an advance in knowledge and understanding emerged relating to the interaction of variables as well as the integration of universalistic and alignment approaches to strategic pay.

4. *Testing the premises by collecting appropriate data to measure the concepts or variables and analysing them.* The variables, 'pay practices', 'business strategy', 'employment group', 'industry sector', 'organisation size', and 'HR performance outcomes' were operationally defined. Quantitative data were collected using an organisational-level survey questionnaire and analysed using a range of statistical tests.

5. *Drawing implications for the verification or falsification of the theory.* Conclusions were reached using deductive and inductive reasoning relating to verification of hypothetical statements. Implications for the validity of the strategic pay model were drawn and an extended strategic pay framework developed.

4.4.3 Sampling

4.4.3.1 Population and sampling frame

The population of interest to this study is UK private sector organisations. The strategic pay concept has been largely developed by United States (US) researchers and theorists; a contribution of this research project is the testing of the strategic pay model within a UK context, on organisations operating in the UK (although not necessarily UK-owned).

Because 'business strategy' as defined by Miles and Snow (Miles *et al.*, 1978; 1984) and Porter (1980, 2004) is a key variable, it was decided to admit data solely from private sector organisations as opposed to public sector and third sector (charity and not-for-profit) organisations which, while they may have business-like strategies, do not fit the standard business strategy typologies well. While the CIPD Reward Management Survey collects data from all three organisational groups, for the purposes of this study only private sector data was analysed.

In order to collect organisational-level data from a sample of UK private sector organisations, there needed to be representative survey respondents within each organisation who could act as a proxy respondent on behalf of their organisation (Lavrakas, 2008). Balkin and Gomez-Mejia (1990) and Montemayor (1996) both used senior HR professionals as informants because they

were likely to be intimately involved in formulating pay practices as well as possessing knowledge of business and pay strategy. In this research study too, participants were required to possess a high level of knowledge and understanding of the technicalities of pay practice in order for them to respond accurately to survey questions; they also needed to have knowledge of, and access to data on, organisational operations, business strategy and HR outcomes. Practising HR/reward professionals within each organisation were therefore the target proxy respondents because they were likely to have both the required knowledge and access to data.

Having identified a very broad scope for the population to be researched, it was necessary to obtain a representative sample (De Vaus, 2002). The Chartered Institute of Personnel and Development (CIPD) is the professional body for HR practitioners in the UK which had a membership of approximately 135,000 in 2012 (CIPD, 2013). Approximately 14,000 of these CIPD members had responsibility for pay and reward management and this large body of reward professionals provided an appropriate sampling frame from which to draw a sample (De Vaus, 2002). Saunders *et al.* (2015) stress the importance of accurate and up-to-date information when using membership databases such as the one held by CIPD. While the possibility of the database containing out-of-date contact details or email addresses was evident, the fact that to retain current CIPD membership (and therefore appear on the current membership database) individuals were required to subscribe at least annually, meant there was a likelihood that the contact information would be largely accurate.

4.4.3.2 Sample biases

3.4.4.2.1   Sample selection bias

The selection of private sector organisations via the CIPD membership database of HR/reward professionals as representative of the population of UK private sector organisations was made with some caution. There is the clear possibility of sample selection bias (Heckman, 1979; Berk, 1983) where the sample selected is not representative of the entire population because the sample is drawn from a sampling frame that differs from the population. And indeed, a crucial difference between the entire population of private UK organisations and the ones in the sample obtained is that the organisations in this study all employed HR/reward professionals who were CIPD members whereas there are many organisations in the UK private sector who do not. Indeed, it is reasonable to assume that there are many organisations which do not employ HR professionals at all. It is possible that the presence of HR professionals and CIPD members in many organisations materially influenced some of the variables in this study (e.g. pay practices

and HR outcomes). It is worth then assessing the likely impact of this possible bias. The aim of this research is to evaluate the *extent* of strategically aligned pay practices and their impact on HR outcomes and it is arguable that organisations employing HR practitioners who are members of the professional body, and indeed are actively engaging in research conducted by the professional body, are more likely to be at the forefront of normative strategic pay practice than organisations within the general population. Therefore, the risk is that results may over-state the incidence of strategic pay practices and this has to be considered in the final analysis of results. The corollary of this argument is that if strategic pay is not being practised in the sample organisations, it is perhaps less likely to be practised in the population of UK organisations.

3.4.4.2.2 *Non-response bias*

The entire sampling frame of 14,000 CIPD members with responsibility for pay/reward was invited to participate in the survey in 2012. This was standard practice for CIPD research where inclusive, open invitations to participate were preferred to some form of probability sampling technique which would have limited the number of opportunities organisations had to participate in research. In addition, it was recognised that the complexity and depth of the questionnaire was likely to dissuade or exempt some potential respondents and so a large sample was contacted in anticipation of a poor response rate. Indeed, the 2011 CIPD survey which acted as a pilot (see section 4.4.4.2. below) showed a response rate of 1.98% could be expected from a similar sized sample. In essence, the sampling strategy was to aim primarily for high quality responses and it was accepted that a likely consequence would be a low response rate.

Of course, this approach came with some disadvantages, primarily that, although all organisations had an equal chance of participating, the final sample was comprised of organisations that had self-selected into participation. This had the potential to be problematic as it could have created non-response bias in the results i.e. the responses of those that responded compared with those that did not respond could have been different and this could have influenced the end results (Cascio, 2012). The difference between non-respondents and respondents within the sampling frame is quite difficult to assess. Non-response could have been due to a number of passive factors such as unavailability or incorrect contact details or more salient, active non-response issues such as perceptions of sharing bad practice or even fear of reprisals (Thompson and Surface, 2007). Because the researcher's access to the CIPD membership database was restricted due to data protection, it was not possible to run tests for non-response bias (e.g. ANOVA) between responding and non-responding organisations. Although this issue does need to be factored in to the final assessment of results, similar studies

(e.g. Delery and Doty, 1996; Lepak and Snell, 2002) found no significant differences between respondents and non-respondents suggesting that this may not be a significant problem in studies of this type.

4.4.3.3 Generalisability

Taking the potential for sample biases into account, it is not reasonable to claim that the results of this study are generalisable to *all* UK private sector organisations. However, it is possible to generalise these results to organisations operating in the UK private sector that have internal HR/pay expertise. While clearly a limitation of generalisability, this focused applicability nevertheless allows for generalisation to a wide range of organisations, indeed, WERS and CIPD data suggests nearly a third of workplaces in the UK have an HR specialist present (Brown, Bryson, Forth and Whitfield, 2009; CIPD, 2014). Furthermore, as noted above, it might be reasonable to assume that organisations with HR expertise are more likely to be practising strategic pay that those with none given the increasing professionalisation of the function and its emphasis on 'strategic' practices (CIPD, 2014). It is among these organisations that any effects should be evident, and it is on this basis that the study contributes to knowledge about relationships between pay, strategy and performance.

4.4.3.4 Sample size

The minimum recommended sample size for this study was based on an assessment of the required degree of accuracy for the sample and the extent to which there is variation in the population regarding key variables (De Vaus, 2002). On the basis of the first consideration alone, accuracy, in aiming for a 95% confidence level with a sampling error of 5% (i.e. 95% confidence that the results in the population will be the same as in the sample plus or minus 5%) a minimum sample of 400 would be required (Ibid.). However, the second factor to be considered is the degree of diversity in key variables in the study and this can influence the minimum required sample size (Saunders *et al.*, 2015). The relevant variables for this study are industry sector (manufacturing / production or private sector services) and organisation size (SME or large). As will be explained below, business strategy was measured on a scored scale (1-5) and employment group was measured on an intra-organisation basis (i.e. most organisations contained *both* employee groups rather than one or the other) and therefore calculations relating to these variables were not influenced by sample size. Data from the 2011 CIPD Reward Management Survey, which acted as a pilot study, was used to establish the likely proportions of industry sector and organisation size categories. 2011 data showed the split of

24% manufacturing / production to 76% private sector services and 27% SMEs to 73% large companies from a total of 182 private sector respondents. These figures were used to calculate the minimum sample required following Saunders *et al.'s* (2015, p.704) formula:

$$n = p\% \text{ x } q\% \text{ x } (z \div e\%)^2$$

(n is the minimum sample size required, p % is the percentage belonging to the specified category, q % is the percentage not belonging to the specified category, z is the z value corresponding to the level of confidence required (always 1.96 for 95% confidence level), e % is the margin of error required.)

So, for industry sector the calculation of minimum required sample size was:

$$n = 24\% \text{ x } 76\% \text{ x } (1.96 \div 5)^2$$

$$= 1824 \text{ x } (0.392)^2$$

$$= 1824 \text{ x } 0.154$$

$$= \underline{281}$$

And for organisation size the calculation of minimum required sample size was:

$$n = 27\% \text{ x } 73\% \text{ x } (1.96 \div 5)^2$$

$$= 1971 \text{ x } (0.392)^2$$

$$= 1971 \text{ x } 0.154$$

$$= \underline{304}$$

Therefore, a figure of approximately 300 was considered an appropriate overall sample size for this study which would provide a 95% confidence level with a sampling error of 5%.

4.4.4   Data collection

The main data collection phase took place with the CIPD Reward Management Survey 2012 which was used to gather a quantitative dataset using a closed-ended, web-based questionnaire. The survey collected organisational-level data on: industry sector, size (employee numbers) and geographical ownership; business strategy; employee demographics; pay and benefits practices by employee category; pay transparency and HR outcomes. Not all data collected was relevant to the thesis but was a necessary part of CIPD's benchmarking research report (the full survey instrument is reproduced in Appendix B).

4.4.4.1 CIPD Reward Management Surveys

The Chartered Institute of Personnel and Development (CIPD) have been annually surveying their professional membership and publishing the results in survey reports since 2001. In late 2010 the CIPD contracted the University of Bedfordshire (and later London Metropolitan University) to produce survey reports bringing the expertise of an academic team (see Appendix A for team membership in 2012). The researcher was the lead in terms of questionnaire design (developing an existing survey instrument); data analysis and interpretation; and survey report writing with the other academic members of the team and the CIPD's senior adviser on performance and reward management contributing advice and guidance as well as input to the final published report (e.g. foreword / conclusion). The output of this collaborative project was the production of survey reports from 2011-17 (albeit with changing team personnel). The involvement of the researcher and academic team brought a more theoretical perspective to the research with the intention of examining pay issues in greater depth, particularly the relationships between strategy, pay and HR outcomes. During completion of the 2011 survey report it became clear that there was an opportunity for a notable contribution to theoretical and empirical studies of strategic pay, but that a project of such depth was beyond the scope of the annual CIPD survey reports. Nevertheless, the potential for the CIPD reward management data set to be expanded to collect relevant data was clear. The researcher, independently of the CIPD survey project but within the remit of the contract for services between the Universities and CIPD (see Appendix A4 and A.5), embarked upon the present study.

4.4.4.2 Development of 2012 CIPD survey

The 2011 CIPD Reward Management Survey was based on previous iterations of CIPD's Reward Management Surveys and provided data on pay practices, industry sector, organisation size and employee category. The researcher added to - and amended - previous 2011 survey questions to compile the 2012 survey instrument, for example by gathering data relating to different aspects of pay practice, transparency, business strategy and HR outcomes. The 2011 survey participants' feedback regarding user-friendliness helped to shape the wording of the 2012 survey questions as well as the sequence and layout of this survey instrument. The 2011 survey was also used to facilitate initial development of some of the elements of the theoretical framework of the thesis and to provide information to calculate the required minimum sample size necessary for the 2012 data collection forming the basis of this research.

4.4.4.3 Variable definitions and measures

The definition of variables and how they will be measured is a fundamental aspect of the HD method outlined in 7.3 above (Jankowicz, 2005). The variables that form each element of the theoretical framework detailed in Chapter 3 have been defined and operationalised based on a synthesis of the theoretical and empirical studies examined. The following sub-sections each relate to the main variables in this study; pay practices, business strategy, industry sector, organisation size, employment group and HR performance outcomes.

4.4.4.3.1   Pay practices

Pay practices were categorised as either experiential or algorithmic based on relevant literature, as presented in Table 3.3 in Chapter 3.   Table 4.1 shows these categorisations, provides some tighter definitions and indicates in the final column the relevant survey question used to gather data (see Appendix B for all survey questions).

Table 4.1 Experiential and algorithmic pay configurations

Experiential pay	Algorithmic pay	Survey question
Broadbanding or job family structures	Narrow-graded pay structures or pay spines	Q5
Low vertical pay dispersion	High vertical pay dispersion	Q31
Above market pay (Upper quartile or decile of market)	At or below market pay (Median, lower quartile or decile of market)	Q30
	Organisation's 'ability to pay' for pay level determination and reviews	Q6 & Q8
Market rates to determine pay*	Job evaluation to determine pay*	Q6
Market rates to progress pay		Q7
Movement in market rates, and recruitment and retention as pay review factors		Q8
Performance, skills, competencies or employee value / retention as criteria for pay progression	Length of service as a criterion for pay progression	Q7
Individual base pay rates / salaries	Collective bargaining	Q5 & Q6
Extensive performance-related reward (PRR)	Minimal or no performance-related reward (PRR)	Q9
Extensive employee coverage of PRR schemes	Minimal employee coverage of PRR schemes	Q12
Combination performance-related schemes (org./group/indiv.)	Piece rates	Q10
Individual bonus / cash incentives	Sales commission	Q10
Merit pay		Q10
Gainsharing		Q11
Goal-sharing		Q11
Profit-sharing		Q11
Open pay	Pay secrecy	Q32
Long-term pay (share schemes / long-term incentives)	No long-term pay (no share schemes / long-term incentives)	Q13

The categorisation of pay practices as either experiential or algorithmic was largely based on the framework as originally conceived by Balkin and Gomez-Mejia (1990) and Gomez-Mejia and Balkin (1992) incorporating elements from the strategic / traditional pay model charted by Lawler (1990) and Schuster and Zingheim (1992) as well as amendments and additions from Hambrick and Snow (1989); Boyd and Salamin (2001); Heneman and Dixon (2001); Allen and Helms (2002); Yanadori and Marler (2006); Chen and Jermias (2014); and Tenhiälä and Laamanen (2016).

Some of these categorisations are therefore slightly different from the original Balkin and Gomez-Mejia (1990) groupings. The most obvious one is the categorisation of 'above market pay' as an experiential pay practice and 'at or below market pay' as an algorithmic pay practice. As detailed in Chapter 3, Miles and Snow (1984) and Balkin and Gomez-Mejia (1990) propose that above market pay is included in the algorithmic configuration because it is a consequence of the low-road organisation's emphasis on internal equity, minimal risk-sharing and high job security. More recent studies by Boyd and Salamin (2001) and Yanadori and Marler (2006) however find that it is instead high-road firms that pay above the market. This supports Hambrick and Snow's (1989) argument that because low-road firms prioritise cost-control and minimising costs, they are more likely to pay at or below market pay whereas because working for a high-road firm means less security and higher risk, higher salaries are needed to attract and retain the talent required to pursue a strategy of innovation or quality. It is this argument that has led to the decision to place 'above market pay' in the experiential configuration and 'at or below market pay' in the algorithmic configuration but with an acknowledgement that this is a contestable categorisation.

Similarly, the categorisation of the use of competency pay as an experiential pay practice was not straightforward. For Lawler (1990), rewarding the development and demonstration of organisationally desired competencies is a key aspect of strategic pay and was thus included in the experiential pay configuration. However, competencies also feature as an element of the internal/make HR configurations outlined by Delery and Doty (1996) and Youndt and Snell (2004) because these systems are intended to develop competencies internally rather than acquiring them from the market; competency pay could therefore easily sit within the algorithmic pay configuration.

Both of the above cases are examples of slightly unclear alignments with arguments in the literature for inclusion in either pay category. It is therefore only possible to describe the configurations presented in Table 3.4, Chapter 3 as 'broadly aligned', recognising that there is a lack of consistent application in the literature that the present study has the opportunity to address.

Most of the pay practices in Table 4.1 were measured separately for each employment group: management and professionals, and other employees. Respondents' answers would indicate if their organisation used a pay practice for management and professionals only, other employees only, both groups, or not at all. In measuring the occurrence of these pay practices, an organisation was considered to operate a pay practice if they had selected it for either one of the employee groups or both. This was measured on a dichotomous basis as 'selected' if one or both groups were selected and 'not selected' if neither group had been selected.

Some of the survey questions however asked about pay practices that were not specific to employee group. Questions 9 and 13 determined if the organisations operated performance-related reward schemes and share-schemes or long-term incentives respectively on a yes / no basis. These answers were also measured on a 'selected' / 'not selected' basis. Subsequent questions then drilled down into which schemes were offered to which employee groups. This was primarily a case of user-friendly questionnaire design, so that if the response was negative, the respondent would skip the follow-up questions and be automatically taken to the next relevant question.

There were two other questions which did not collect dichotomous, selected / not selected data. Question 31 asked about pay dispersion and question 32 which asked about the level of pay transparency. In order to establish pay dispersion, measured as the range between lowest and highest paid employees in the organisation (Shaw, 2014), respondents were asked to provide total annual earnings (base pay plus performance pay) for the lowest paid, highest paid and median paid individual for each employee group. It was then possible to calculate the range not only within each employee category but also within each organisation. To establish the approach to pay transparency in organisations, respondents were asked the extent to which they agreed (on a five-point Likert scale) with four statement items regarding different levels of transparency / disclosure of pay within the organisation. Respondents were informed that transparency referred to the extent to which their organisation was prepared to disclose to its employees' information about pay scales, the provision of benefits and allowances, grading

systems, job evaluation, performance-related pay schemes and how different individuals or groups of employees are treated. A 'pay secrecy score' for each organisation was then created (see section on scale development below).

4.4.4.3.2   Business strategy

The operationalisation of 'business strategy' was based on typologies established in relevant strategic HRM literature. The literature points to two main strategy types, identified in Chapter 3 as 'high-road' or 'low-road' analogous with Miles and Snow's (Miles *et al*., 1978; 1984) prospector / defender typology and Porter's (1980, 2004) differentiator / cost leader types. Tests of this typology's reliability and validity have shown robustness across a variety of measures (Shortell and Zajac 1990, Hambrick, 2003).

To develop reliable and valid scales for business strategy to use in this study, 23 items were included in the questionnaire instrument based on competitive attributes associated with the strategy typologies of Miles and Snow (Miles *et al*.,1978; 1984) and Porter (1980, 2004) (see Table 4.2 below). Although a dichotomous typology has been proposed, the scale items also included descriptors from the 'analyser' and 'focus' types, partly for completeness and to act as a check on the dichotomous split. While Miles and Snow (Miles *et al*., 1978, 1984) identify the analyser as a distinct strategy type, they also present it as being a mid-point between prospector and defender, with elements of both types present. For Porter's 'focus' type, the competitive strategy will be similar (driven either by cost or differentiation) with only the niche focus of the market or product-range being different. Analyser and focus scale items were therefore included in the choices presented to participants.

Participants were asked to rate the level of importance their organisations attaches to 23 variables. Each item was rated on a five-point Likert scale from 'totally unimportant' to 'crucial' (see Appendix B, question 34). An exploratory factor analysis was then conducted to determine the number and characteristics of strategy types (see section on scale development below).

Table 4.2 Competitive business strategy questionnaire items

	Questionnaire items	Miles & Snow 1978	1984	Porter 1980	2004
1	Maintaining a safe niche in a relatively stable product / service domain	D A	D		
2	Offering a narrower set of products / services than its competitors	D	D	F	
3	Achieving the best performance in a relatively narrow product / service market domain	D		F	F
4	Paying little attention to changes in the industry that are not directly relevant to the firm	D			
5	Maintaining a limited line of products / services	D		F	
6	Leading in innovations in its industry	P		Q	
7	Operating in a broad product / service domain	P	P	C Q	C Q
8	Periodically redefining its products / services		P		
9	Being the first in the industry in development of new products		P		
10	Accepting that not all efforts invested in developing new products will be profitable	P			
11	Responding rapidly to early signs of opportunities in the environment	P A			
12	Having its actions lead to a new round of competitive activity in the industry		P		
13	Reducing operating costs		D	C	C
14	Improving co-ordination with customers and suppliers				C
15	Reorganising the work process		D	C	C
16	Improving measures of performance				C
17	Tight control of overhead costs		D	C	C
18	Developing new products and services	P		Q	Q
19	Undertaking research and development		P	Q	Q
20	Total quality management			Q	Q
21	Developing new operating techniques			Q	Q
22	Providing speciality products / services			Q F	
23	Producing products / services for high-price market segments			Q	

Note. D = Defender, P = Prospector, A = Analyser, C = Cost leader, Q = Differentiator, F = Focus.

4.4.4.3.3   Industry sector

Industry sector was categorised into two main groups: manufacturing and production, and the service sector following international standard industrial classifications (United Nations Statistics Division, 2017).

The manufacturing and production category included: agriculture and forestry; chemicals, oils and pharmaceuticals; construction; electricity, gas and water; engineering, electronics and metals; food, drink and tobacco; general manufacturing; mining and quarrying; paper and printing; textiles; and other manufacturing /production.

Private sector services included: call centres; communications; finance, insurance and real estate; hotels, catering and leisure; IT services; media (broadcasting and publishing, etc.); professional services (accountancy, advertising, consultancy, legal, etc.); retail and wholesale; transport, distribution and storage; and other private services.

4.4.4.3.4   Organisation size

Organisational size was categorised by employee numbers as small- and medium-sized enterprises (SMEs) with fewer than 250 employees and large companies with 250 or more employees according to European Commission (EC) definitions (EC, 2015). The EC definition also includes measures of turnover and / or balance sheet totals, but these were not collected by the CIPD survey in 2012 therefore organisational size was determined solely on a measure of employee numbers.

4.4.4.3.5   Employment groups

Employment groups were defined according to groupings identified in the literature. Evidence from Schuler and Jackson (1987b) and McDonnell *et al.* (2016) suggests that pay practices are differentiated according to employee group. Lepak and Snell (2002) identify two employment modes that correspond with strategic employee groupings: knowledge-based employment and job-based employment. Knowledge-based employment involves relationships in which firms develop and maintain a long-term commitment to full-time employees over time and, according to the authors, includes job roles such as analysts, middle management, engineers, functional managers, professional employees, research and development employees, and research scientists. Within the present study, the knowledge-based employment group has been operationalised as 'management and professional employees' which is defined as including senior managers, middle and front-line managers, professional, technical and scientific

employees. Lepak and Snell's (2002) job-based employment mode involves relationships in which employees are hired to contribute immediately to the firm by performing a specific, pre-determined set of tasks and might include: administrative positions, salespeople, customer service agents, drivers/delivery representatives and assembly-line workers as well as some semi-professionals. This study operationalised the job-based employment group as 'other employees' i.e. those not in management and professional job roles. This was defined for participants as including: administrative support, trades and production workers as well as customer service and sales staff.

4.4.4.3.6   HR performance outcomes

Chapter 3 established the variety of ways organisational performance outcomes have been operationalised in the HRM and pay literature. Kaifeng *et al.* (2012) however make the point that HR outcomes are a key stage on the critical path from HR practices to operational and financial outcomes and the theoretical framework presented in Chapter 3 delineates this relationship while scoping the testable premises of this study as stopping short of attempting to explain the link between HR outcomes and more distal measures of performance.

'HR performance outcomes' were defined as: employee relations climate; pay discontent; employee productivity levels a) compared with competitor organisations and b) compared with 3 years earlier; difficulties in recruitment and retention; and absenteeism problems (survey questions 35-38). These measures were chosen as a broad representation of human resources outcomes based primarily on standardised measures utilised in the research of the European Foundation for the Improvement of Living and Working Conditions (Eurofound, 2009). Questions on employee relations climate and labour productivity have also been used in the WERS series (Wood and De Menezes, 1998). And Balkin and Gomez-Mejia (1990) include employee attraction and retention as an organisational outcome.

There are several limitations with these measures. First, the productivity comparison questions are based on subjective (although informed) assessments which may not be accurate. Second, some of the other questions may well be reducing quite complex issues (such as the state of the employee relations climate) to a unidimensional scale (Wood and De Menezes, 1998). For these reasons it was decided to create an amalgamated 'HR performance outcomes' scale (see section on scale development below) which by combining the different aspects of this variable could improve overall validity (Hair, Black, Babin and Anderson, 2010).

4.4.4.4 Administering the survey

The CIPD's team contacted the approximately 14,000 members on their database with responsibility for pay/reward management and invited them to participate in the web-based survey by a direct email communication (see Appendix A, A.1 for the email transcript) at the beginning of February 2012. The email contained a link to a secure web-based survey which was not accessible in any other way in order to retain control over who completed the survey. Participants were informed that the survey would close at the end of March 2012. Two weeks before the survey closed, a reminder email was sent in order to maximise the number of participants.

The questionnaire was structured in eight sections with a total of 38 questions although not all of them were related to the variables examined in this study. On accessing the web-based survey link, respondents navigated through 22 screens and were able to save and leave the survey at any point, only submitting their responses when they reached the final screen. The survey was estimated to take approximately 25 minutes to complete. This style of formatting and length was largely decided on by the CIPD and the academic research team (including the researcher) based on their experience and expertise of running multiple surveys over many years and balancing user-friendliness, quantity of data per participant and maximisation of quality responses.

4.4.5 Data analysis

This section details the statistical data analysis undertaken on CIPD Reward Management Survey (2012) data relating to this study. First, it outlines the preliminary steps that were undertaken to establish the actual sample size and response rate, then the processes of scale development are detailed and finally each phase statistical testing is explained in outline.

4.4.5.1 Preliminary data cleaning

When the survey closed at the end of March 2012, the CIPD researchers exported all the survey data to an SPSS file ready for analysis. At this point some 'cleaning' had already been undertaken which included the removal of six responses that has been started but not completed by respondents. These were classified as 'break off' non-responses i.e. the questionnaire had been started but less than 50% completed (Saunders *et al.*, 2015).

4.4.5.2 Sample size and response rate

The overall response for the CIPD Reward Management Survey was 455 returned, completed submissions. Of these, 302 were respondents for private sector firms and therefore eligible for inclusion in this study.

Neuman (2014) suggests two ways of calculating response rates. First, a total response rate can be calculated by dividing the total number of responses by the total number in the sample minus ineligible responses. For this study the total response rate was 3.29%, based on 455 total responses and a sample of 14,000 minus 153 ineligible responses (non-private sector organisations). Neuman's (2014) other suggested calculation is an 'active response rate' which is calculated by dividing the total number of responses by the total number in the sample, minus both ineligible and unreachable cases i.e. those that cannot be located or contacted. Unfortunately, there is no way of knowing for certain how many of the CIPD database contacts could be classified as unreachable; it is not known if the intended respondents received and read the emails sent to them. In a worst-case scenario, with infrequent database updates and CIPD members frequently changing jobs, the proportion of unreachable contacts could potentially be quite high, but some simple calculations based on estimated unreachable numbers indicates that the number of unreachable contacts would have to be very high indeed to improve markedly the response rate calculation. For example, an estimated 10% of unreachable contacts provides an active response rate of just 3.66%, 30% would mean a response rate of 4.72% and 50%, 6.66%. So even if half the intended sample were unreachable (which is rather unlikely), the response rate would still be considerably lower than 10%. While these low figures are not unusual for web-based surveys (De Vaus, 2002), they can have a detrimental effect on the final sample size achieved and can increase the risk of non-response bias (Saunders *et al.*, 2015). Fortunately, the final figure of 302 responses met the sample size criteria detailed in above, but it must be acknowledged that non-response bias i.e. that those who responded might have responded differently from those that did not respond, was more likely than had a larger response rate been achieved.

4.4.5.3 Coding and recoding

Most of the coding was done using pre-set numerical codes that were automatically applied at the point of data collection (Saunders *et al.*, 2015) using standard CIPD research conventions. From this, the majority of questionnaire responses could be recoded in a binary way with a '0'

indicating that a pay practice was not selected and '1' indicating it was selected which made them more suitable for the statistical tests to be undertaken.

Responses to some questions were recoded to simplify groupings. For example, question 3 on organisation size offered respondents nine categories of numbers of employees: fewer than 10, 10-49, 50-249, 250-999, 1,000-4,999, 5,000-9,999, 10,000-19,999, 20,000-49,999 and more than 50,000. In order to best address the hypothesis and due to the small number of responses in some of the higher categories, it was desirable to recode these categories into just two groups: SME (fewer than 250 employees) and large (250 or more employees).

Other questions required respondents to enter actual figures (e.g. question 12 on proportion of employees covered by performance-related reward schemes and question 31 on pay dispersion that required highest, median and lowest salary figures) which, as continuous data, was used for certain tests as it was entered but was also recoded for use in other tests as necessary and appropriate.

4.4.5.4 Missing data

De Vaus (2014) identifies a number of reasons for missing data. First, the data might not be required from the respondent because of a skip generated by a filter question in the survey. The CIPD survey contained skips that automatically transferred respondents to the next relevant question, leaving certain questions unanswered e.g. question 9 asked if respondent organisations operated performance-related reward schemes, if the answer 'yes' was given then they were transferred to questions 10 and 11 on types of scheme. If the answer 'no' was given then the survey skipped to question 12, therefore missing questions 10 and 11. This type of 'missing' data was not coded differently from data that was left intentionally blank as it implies an answer i.e. the pay practice is not selected (De Vaus, 2014).

Other cases of missing data may have been caused by the respondent refusing to answer the question (a non-response); the respondent did not know the answer, or the respondent may have missed a question by mistake (De Vaus, 2014). In cases where this was identifiable (e.g. where are respondent had not responded 'yes' or 'no') the missing data was coded '99' and excluded from the subsequent analyses (Saunders *et al.*, 2015).

4.4.5.5 Scale development

In order to conduct the statistical tests needed to test hypotheses, it was necessary to create scales for certain variables from the survey data. Scales for business strategy, the pay practice pay secrecy and HR performance outcomes were developed as follows.

5.4.4.5.1   Business strategy scales

A factor analysis was conducted in order to establish the number of distinct business strategy types in the sample and to form a basis for the development of strategy scales to be used in the main phase of testing. Despite having certain *a priori* assumptions regarding business strategy typologies, the analysis was exploratory, including an amalgam of strategy types and items based on theory representing more than one strategy type (Table 4.2).

A number of assumptions of factor analysis needed to be met. First, Hair *et al.* (2010) suggest that the most critical assumption relates to conceptual issues associated with the set of variables, primarily that some form of underlying structure exists. In this study, there was a good theoretical and empirical basis for there being a small number of business strategy types underlying the 23 items.

The factor analysis method was common factor analysis which is most appropriate when the primary objective, as in this case, is, "to identify the latent dimensions or constructs" (Hair *et al.*, 2010, p.108) represented by the variables. SPSS uses the 'principal axis factoring' extraction method to do this. An oblique rotation method was selected because it allows for the possibility of correlated factors which in this case was certainly possible if not likely – certain types of business strategy may well be negatively correlated with one another. The oblique rotation method used by SPSS is oblimin with Kaiser normalisation.

Having satisfied the conceptual assumption criteria for factor analysis, statistical issues then needed to be addressed. After the first analysis using the specified method, the 23 competitive business strategy items were examined for linearity, to ensure there was a sufficient degree of interrelatedness between them (Hair *et al.*, 2010). 21 items of the 23 items correlated at > 0.3 with at least one other item. The two items correlating at < 0.3 (items 1 and 3) were removed from the analysis and it was re-run. Next, although the Kaiser-Meyer-Olkin (KMO) overall measure of sampling adequacy was above the commonly recommended value of 0.6, item 4 was removed as it was less than the recommended KMO of 0.5 for individual items and the analysis was rerun. Examination of communalities post-extraction showed two items (items 2

and 5) with an extremely low proportion of variance being explained by the factor solution < 0.3 and these were removed (Hair *et al*., 2010).

At this point, an initial assessment of some of the criteria to determine the number of factors indicated a possible five-factor model based on retention of factors with eigenvalues greater than one and the proportion of total variance explained (Hair *et al*., 2010). However, there were still a number of items with potentially problematic low communality and the pattern matrix showed at least four items cross-loading on more than one factor. It was decided that in order to reach a 'simple structure' (Thurstone, 1947) a forced extraction of a two-factor model should be adopted using the *a priori* assumptions about a 2-type business strategy structure. This, according to Hair *et al*. (2010) and Laerd (2015a) is a reasonable criterion for determining the number of factors to extract. After re-running the analysis with a forced extraction, items 7, 8 and 23 were removed as these too had a communality of < 0.3.

The remaining 15 items (see Table 4.3) all correlated at > 0.3 with at least one other item in the correlation matrix. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy for the data set was 0.86 which is defined by Kaiser (1974) as 'meritorious' (in the 0.8s) and the anti-image correlation matrix diagonals showed all individual variables conformed to the > 0.5 KMO measure. In addition, Bartlett's test of sphericity was significant (χ^2 (253) = 2084.11, p < .05). See Appendix C for correlation matrices, KMO and Bartlett's test results in full. Finally, examination of post-extraction communalities indicated all were > 0.3 (see Table 4.4). Given these overall indicators, factor analysis was deemed to be suitable with the 15 remaining items.

Table 4.3 Competitive business strategy questionnaire items retained / removed for factor analysis

	Questionnaire items	Miles & Snow		Porter	
		1978	1984	1980	2004
1	Maintaining a safe niche in a relatively stable product / service domain	D A	D		
2	Offering a narrower set of products / services than its competitors	D	D	F	
3	Achieving the best performance in a relatively narrow product / service market domain	D		F	F
4	Paying little attention to changes in the industry that are not directly relevant to the firm	D			
5	Maintaining a limited line of products/services	D		F	
6	Leading in innovations in its industry	P		Q	
7	Operating in a broad product / service domain	P	P	C Q	C Q
8	Periodically redefining its products and services		P		
9	Being the first in the industry in development of new products		P		
10	Accepting that not all efforts invested in developing new products will be profitable	P			
11	Responding rapidly to early signs of opportunities in the environment	P A			
12	Having its actions lead to a new round of competitive activity in the industry		P		
13	Reducing operating costs		D	C	C
14	Improving co-ordination with customers and suppliers				C
15	Reorganising the work process		D	C	C
16	Improving measures of performance				C
17	Tight control of overhead costs		D	C	C
18	Developing new products and services	P		Q	Q
19	Undertaking research and development		P	Q	Q
20	Total quality management			Q	Q
21	Developing new operating techniques			Q	Q
22	Providing speciality products / services			Q F	
23	Producing products / services for high-price market segments			Q	

The two factors on which the 15 items loaded each had an eigenvalue of greater than one indicating that the factor explained more variance that a single variable would and hence should be retained (Kaiser, 1960). Laerd (2015a) suggests that a factor should be retained if it explains at least 10% of the total variance and both factors conform to this criterion as they explained 37.6%, 15.6% of the total variance respectively. The factors cumulatively accounted for 53.2% of the total variance which was somewhat below the ideal that retained factors will explain at least 60% of the total variance. Inspection of the scree plot (Figure 4.1) however indicated a fairly clear inflection point above which two factors should be retained (Cattell, 1966).
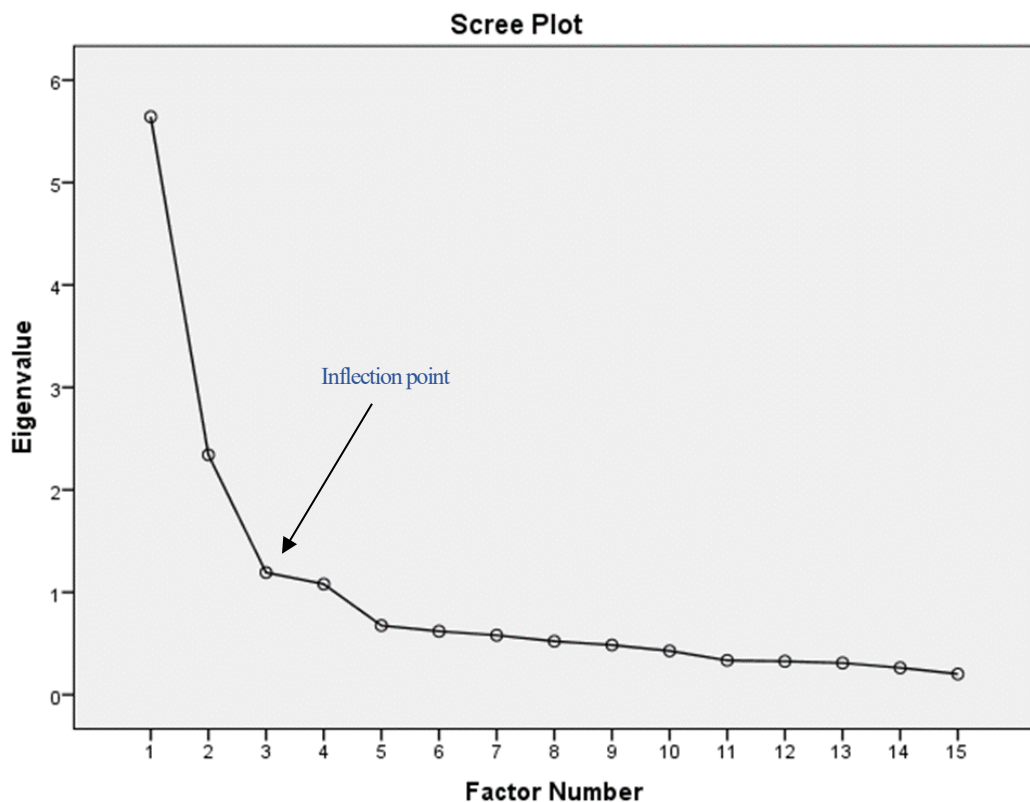
Figure 4.1 Scree plot showing inflection point and number of factors to be retained in model

The final criterion for number of factors to be extracted, and arguably the most important (Laerd, 2015a), is interpretability centred around the concept of 'simple structure' (Thurstone, 1947). The rotated solution exhibited 'simple structure' as all items with practical significance - a value > 0.5 - loaded on a single factor with no cross-loading (Hair *et al.*, 2010).

Having identified two clear factors, it was then necessary to identify them. The interpretation of the data was consistent with the business strategy attributes which question 34 was designed to measure with strong loadings of high-road (prospector / differentiator) items on Factor 1, and low-road (defender / cost leader) items on Factor 2. Factor loadings and communalities of the rotated solution are presented in Table 4.4.

Table4.4 Factor loadings and communalities (principal axis factoring analysis with oblimin rotation for 15 items, N = 252)

	Factor 1 'High-road'	Factor 2 'Low-road'	Communalities
6. Leading innovations in industry	**.790**	-.097	.595
9. Being first in industry to develop new products	**.867**	-.097	.719
10. Accepting not all product development will be profitable	**.656**	-.064	.413
11. Responding rapidly to opportunities	**.536**	.115	.331
12. Having actions lead to new round of competitive activity in industry	**.662**	.021	.446
13. Reducing operating costs	-.064	**.563**	.303
14. Improving co-ordination with customers / suppliers	.242	**.620**	.518
15. Reorganising the work process	.126	**.680**	.521
16. Improving measures of performance	.078	**.617**	.411
17. Tight control of overhead costs	-.158	**.605**	.343
18. Developing new products / services	**.723**	.004	.525
19. Undertaking research and development	**.788**	-.085	.595
20. Total quality management	**.501**	.196	.339
21. Developing new operating techniques	**.637**	.275	.570
22. Providing speciality products / services	**.555**	-.025	.301

Note. bold type indicates a factor loading of > 0.5 and association with Factor 1 or 2.

As the third column of Table 4.4 shows, eight of the variable items had a post-extraction communality of < 0.5 which is potentially problematic (Hair *et al*., 2010) because any value lower than 0.5 indicates that less than half the item's variance is explained by the factor solution.

These variables could have been considered for removal as being poorly represented in the factor solution, however because all communalities were above 0.3, the factor loadings for these items were significant and these items were considered to contribute to the research model, these eight items were retained.

Two summated scales were created for the two factors by combining the individual items into a composite measure based on a mean average score of the variables (Ibid.). Ten items loading highly on Factor 1 (6, 9, 10, 11, 12, 18, 19, 20, 21, 22) were combined and averaged to create a 'high-road score' whilst the five items loading highly on Factor 2 (13, 14, 15, 16, 17) created a 'low-road score'. The scale items were assessed for reliability and found to have a Cronbach's alpha of 0.89 for the high-road score and 0.75 for the low-road score which are both in excess of the lower acceptable limit of 0.7 (DeVellis, 2003).

5.4.4.5.2 Pay secrecy scale

The pay secrecy score was created from responses to Question 32 which asked for the organisational approach to pay transparency or secrecy based on four items, ranging from the most open, to semi-open, semi-secret and most secret. The ordinal Likert scale values of strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree and strongly disagree, were ascribed numeric values of 1-5 (reverse coded for the third and fourth items). The scale items were assessed for reliability and internal consistency and achieved a Cronbach's alpha of 0.62 which is below the accepted 'cut-off' of 0.7 (DeVellis, 2003) meaning that there may be a reduction in the analysis's ability to detect relationships that may exist. Scrutiny of the item statistics revealed that item 2 – semi-open – was poorly correlated with other items and was removed from the scale. The reliability test was rerun, and the scale showed an acceptable level of internal consistency with a Cronbach's alpha of 0.7 (see Appendix D).

5.4.4.5.3 HR performance outcomes scale

The HR outcomes score was created from responses to Questions 35 to 38, which contained seven distinct items relating to employee relations climate (Q35), labour productivity compared with competitors (Q36), labour productivity compared to three years ago (Q37), high employee absenteeism (Q38), employee attraction difficulties (Q38), employee retention difficulties (Q38) and pay discontent (Q38) (note these last four items were sub-components of one question).These were chosen as a broad representation of human resources outcomes and established Eurofound (2009) scales.

Questions 35, 36 and 37 were recoded to remove 'don't know' answers and then converted from a four-point scale to a three-point scale so they could be combined with the items in question 38 creating a composite HR outcomes score. In all three questions this was done by amalgamating the first two responses. For example, Question 36 asked respondents about their labour productivity compared with competitors and gave four options: 1) better, 2) somewhat better, 3) average, 4) below average. The three new categories were: 1) better / somewhat better, 2) average, 3) below average. These were also reverse coded to: 1) below average, 2) average, 3) better / somewhat better so the 'better' category aligned with the 'not at all' category in the question 38 items i.e. the higher the HR performance outcomes score, the better the HR performance outcomes.

The HR performance outcomes score scale was assessed for reliability and achieved a Cronbach's alpha of 0.76 which is in excess of the lower acceptable limit of reliability (DeVellis, 2003).

4.4.5.6 Statistical testing

There were three main phases of statistical testing:

> Testing that assessed the extent of vertical alignment of pay practices with business strategy and industry sector, and horizontal alignment of pay practices with organisation size (this included binomial logistic regression and multiple linear regression analyses). These tests and their results are reported in Chapter 5.

> Testing that assessed the extent of horizontal alignment of pay practices with employment group (this included McNemar's tests, paired-samples t-test and Wilcoxon signed rank test). These tests and their results are reported in Chapter 6.

> Testing that ascertained if pay practices, bundled pay practices and strategic alignment had an effect on HR outcomes (this included cluster analysis, linear regression analysis and hierarchical multiple regression analysis). These tests and their results are reported in Chapter 7.

The principles, assumptions and steps taken in the execution of each of these tests are outlined in the following chapters as indicated.

4.4.6   Ethical procedures

Saunders *et al.* (2015) and Chartered Association of Business Schools (2015) (in conjunction with The Higher Education Academy and British Academy of Management) outline a number of key principles associated with ethical practice in organisational research and particularly with data collection.

The responsibility for adhering to ethical research principles in the collection, management and reporting of data was partly dependent on the roles of the various parties involved in these activities.   This included the researcher, other members of the research team and the institutions associated with the research: Chartered Institute of Personnel and Development, and London Metropolitan University.   The researcher was part of the project team contracted by CIPD to conduct research and produce Reward Management Survey Reports from 2011 onwards. This was done in a collaborative project which included academic staff as well as the CIPD's Senior Adviser on Performance and Reward.   Appendix A details these roles and responsibilities.   For example, the researcher's role included design and formulation of questionnaire questions, data analysis and report writing; CIPD employees and third-party contractors were responsible for the administration of the questionnaire and collation of online responses into an SPSS file. Practices for data collection adhering to research ethics principles were established by the team during early stages of the project and confirmation sought from CIPD that these were adhered to.   Table 4.5 identifies the ethical issues considered in the research project along with the responsible parties and their actions.

Table 4.5 Ethical considerations, responsibilities and actions

Ethical issue identified by Saunders *et al* (2015) and CABS (2015)	Responsible party(ies)	Action / response
Respect for others, prevention from harm and researcher safety	Researcher / research team / CIPD	No safety risks were identified. CIPD editorial guidelines were followed in questionnaire language usage. There was collaborative and collegiate working within the project team.
Participant privacy, anonymity and data confidentiality	Researcher / CIPD	There was no individual personal data gathered in the survey data which only asked questions at an organisational level. Organisations were not identifiable from the data and all responses were anonymous. The majority of data collected was of low sensitivity i.e. it was not commercially sensitive or otherwise confidential information. The pre-survey screen for participants provided links to CIPD's privacy policy and terms and conditions of website usage advising potential participants of their rights and data usage (see Appendix A, A.2 and A.3).
Data management compliance	Researcher / CIPD	No personal information or organisationally identifiable data was collected. CIPD privacy policy – information is kept confidential and secure in compliance with Data Protection Act 1998 (see Appendix A, A.2). Data files password protected on researcher's personal computer. Permission from CIPD as client for researcher to use data was contained in the contract for services (see Appendix A, A.4).

Ethical issue identified by Saunders *et al* (2015) and CABS (2015)	Responsible party(ies)	Action / response
Voluntary nature of participation and right to withdraw	CIPD	The participants had a free choice in terms of their participation. They were able choose to withdraw from participation at any point in the completion of the online survey.
Informed consent	CIPD	The call for participants email advised that the information would be used to better understand the relationship between reward and performance. Links to CIPD's privacy policy and terms and conditions of website usage were provided (see Appendix A, A.2 and A.3).
Researcher integrity, objectivity and accurate reporting of data and findings	Researcher	The researcher took a reflective approach to personal ethical practice and integrity e.g. questioning personal motivation and perspectives. All data and findings were reported accurately and with objective intention.
Governance and management of ethical research practice	Researcher / London Metropolitan University	The Business and Law Research Ethics Review Panel (RERP) approved the research (see Research Ethics Form Appendix E).

4.4.7 Chapter summary

In this chapter the quantitative research design was explained and defended. Following positivist principles and logics, the study adopted an HD method including distinct stages of hypothesis development, data collection and analysis, and theory verification. A sampling strategy was based on the availability of participant organisations to the CIPD Reward Management Survey series and although this created the potential for sample biases, it also meant the final sample participants would be equipped with enough knowledge of organisational strategy and practice to provide in-depth, high quality responses. Additionally,

the sample provided an appropriate context for collecting data on pay practices informed by expert practitioners, an important population within which to study the development of strategic pay.

This chapter also provided justification for the careful operationalisation of variables based on literature, previous research and industry conventions. The 2012 questionnaire was developed from previous iterations to include questions providing data targeted at the research objectives. The survey was administered to participants through the CIPD membership database with a response rate of 3.29%. Despite being low, this response rate is arguably not unusual for web-based surveys and the actual response of 302 met the required sample size criteria providing a 95% confidence level with a sampling error of 5%.

Once initial data processing was complete, scales for variables were developed using statistical methods such as common factor analysis to determine latent constructs within the business strategy items. Two business strategy types were identified – low-road and high-road with summated scales that met Cronbach alpha internal consistency measure of 0.7. Scales developed for pay secrecy and HR performance outcomes achieved similar measures of reliability and consistency.

Finally, the principles and procedures of ethical research practice adopted in this study were considered. The responsibility for some of these ethical issues was dispersed among the original project team formed to produce the CIPD Reward Management Survey Report (Jones *et al*., 2012) and both CIPD and London Metropolitan University procedures and principles were adhered to.

The next three chapters report and analyse the procedures and results of statistical analysis. Chapter 5 analyses the effects of strategy, organisation size and industry sector on pay practice selection; Chapter 6 assesses the effect of employment group on pay practice selection and finally Chapter 7 evaluates the effect of strategic pay configurations on HR performance outcomes.

Chapter 5: The effect of strategy, sector and organisation size on pay practice selection

5.1 Chapter introduction

This chapter reports the results of data analysis that tested hypothetical relationships between business strategy, organisation size, industry sector and pay practice selection in organisations. Figure 5.1 illustrates the strategic pay model highlighting the proposed causal links that are the focus of this chapter. Based on the theoretical model, it is hypothesised that the strategic orientation of organisations will predict pay practice selection with low-road strategy being associated with an algorithmic pay configuration (traditional and cost-reduction focused pay practices) and high-road strategy being associated with an experiential pay configuration (strategic, market-oriented and person-centred pay practices). Furthermore, the model predicts that algorithmic pay practices will be selected by large organisations and those operating in the manufacturing and production sector, while experiential pay practices will be selected by small- and medium-sized (SME) organisations and firms operating in the service sector. These theoretical relationships have been hypothesised as follows:

H3. Organisations with a low-road strategic orientation will be more likely to select an algorithmic pay configuration and organisations with a high-road strategic orientation will be more likely to select an experiential pay configuration.

H7. Organisations operating in the manufacturing and production sector will be more likely to select an algorithmic pay configuration and organisations operating in private sector services will be more likely to select an experiential pay configuration.

H9. Large organisations will be more likely to select an algorithmic pay configuration and SME organisations will be more likely to select an experiential pay configuration.

The algorithmic and experiential pay configurations hypothesised to be related to strategic orientation, size and industry sector are set out in Table 5.1.
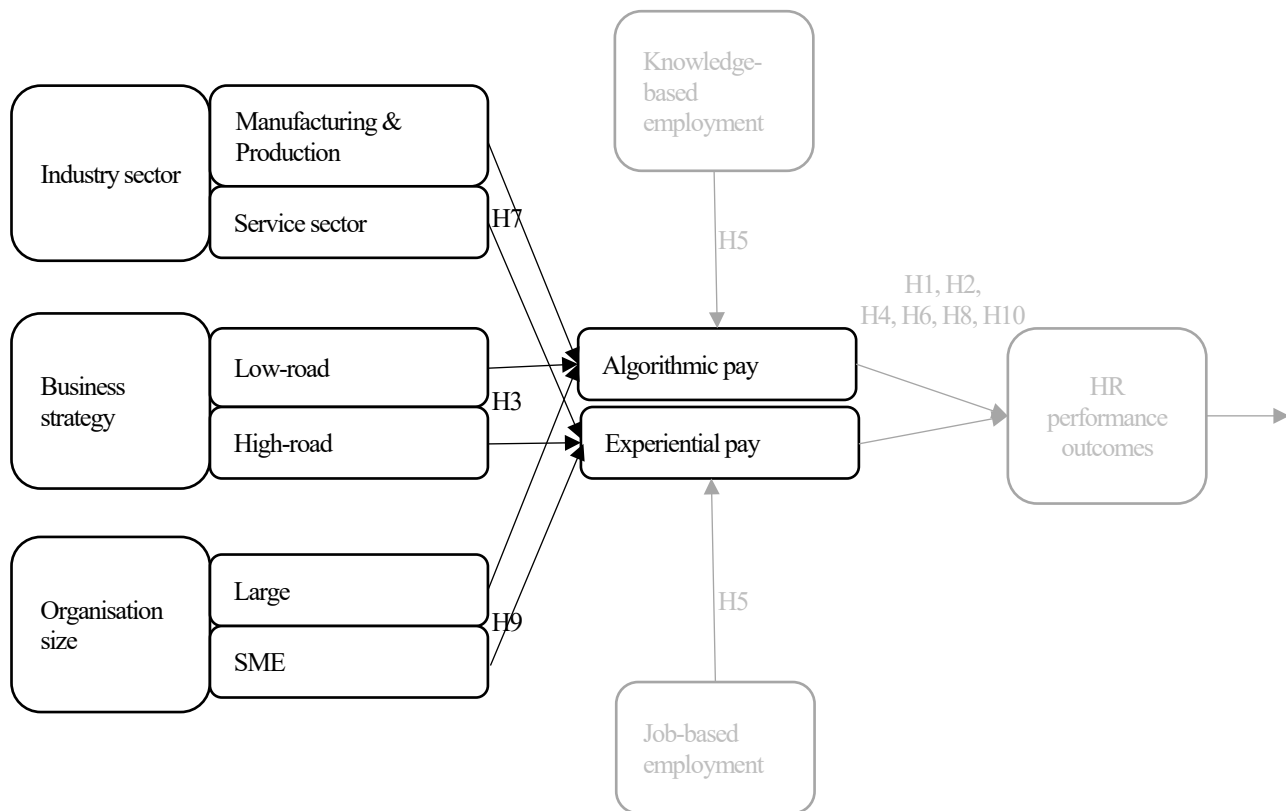
Figure 5.1 Hypothesised relationships between business strategy, organisation size, industry sector and pay practice selection.

Table 5.1 Experiential and algorithmic pay configurations for strategy, size and sector alignments

Experiential pay	Algorithmic pay
Broadbanding or job family structures	Narrow-graded pay structures or pay spines
Low vertical pay dispersion	High vertical pay dispersion
Above market pay (Upper quartile or upper decile of market)	At or below market pay (Median, lower quartile or lower decile of market)
	Organisation's 'ability to pay' for pay setting and reviews
Market rates to determine pay *	Job evaluation to determine pay*
Market rates to progress pay	
Movement in market rates, and recruitment and retention as pay review factors	
Performance, skills, competencies or employee value / retention as criteria for pay progression	Length of service as a criterion for pay progression
Individual base pay rates / salaries	Collective bargaining
Extensive performance-related reward	Minimal or no performance-related reward
Combination (org./group/indiv.) performance-related schemes	Piece rates
Individual bonus / cash incentives	Sales commission
Merit pay	
Gainsharing	
Goal-sharing	
Profit-sharing	
Long-term pay (share schemes / LTIs)	No long-term pay (no share schemes / LTIs)
Open pay	Pay secrecy

Notes. 1) * Q6 of the CIPD Reward Management Survey (Appendix B) asked which factor is most important in determining pay. CIPD questions were: 'market rates (with JE)' or 'market rates (without JE)' therefore when testing for the variable 'job evaluation' 'market rates (with JE)' was used.

2) The data for pay practice 'employee coverage of PRR schemes' was collected separately for employment groups and therefore was not suitable for testing in this phase.

The chapter begins with a full explanation and justification of methods of data analysis used. In subsequent sections, the results for each test are reported in full and the findings are analysed. The chapter concludes with a summary of results and an assessment of the extent to which they support the hypotheses.

5.2 Data analysis

The underpinning research philosophy of the study and overall method have been presented in Chapter 4. The intention in this section is to provide an overview of data analysis methods specific to the results in this chapter including a detailed assessment of the extent to which data met appropriate assumptions of the two main analytic techniques: binomial logistic regression and multiple linear regression. These regression tests were performed to ascertain the effects of organisations' business strategy, industry sector and organisation size on the likelihood that they selected particular pay practices according to hypothesised relationships. Most of the results reported in this chapter are results of logistic regression tests. However, for two pay practices (pay dispersion and pay secrecy) linear regression tests were performed due to the type of data collected.

5.2.1 Binomial logistic regression

Logistic regression is one test in a wider group of generalised regression models that, unlike standard linear regression, allow the modelling of relationships between multiple independent variables where the dependent variable is not continuous (Laerd, 2015b). Logistic regression tests were performed to predict the selection of pay practices (the dependent variable) based on strategy, sector and size (the independent variables).

Four aspects of the binomial logistic regression results were examined. First, how well the data fitted the model. This was determined by a Chi-square measure of significance where a p value of < 0.05 was interpreted as a good fit. In some cases where the Chi-square test was borderline, the Hosmer and Lemeshow 'goodness of fit' test was applied, where any non-significant value i.e. > 0.05 indicates a good fit of data to the model (Hosmer, Lemeshow, and Sturdivant, 2013).

The second aspect examined was the amount of variance in the dependent variable that was explained by the independent variables. This was determined by a so-called pseudo R^2 value, Nagelkerke R^2, which indicates the proportion of variance e.g. a value of 0.1 equates to 10% of the variance in selection of a pay practice being explained by organisational strategy, size and sector. It is worth noting at this stage that pseudo R^2 values are often more conservative estimates

than R^2 values used in linear regression (Laerd, 2015b) and so may underestimate the variance explained.

Third, the percentage accuracy in classification (PAC) indicates how accurately the model classifies pay practice selection and non-selection based on predicted and observed classifications.

Finally, there is an assessment of which independent variables (if any) have a statistically significant effect on the dependent variable and the change in odds of pay practice selection per one-unit change in the independent variable by assessment of the odds ratio value. For the two strategy scales this means that for every point increase / decrease on the five-point strategy scale there is an x-times increase / decrease in odds of a pay practice being selected. However, for the two categorical independent variables, sector and size, the one-unit increase is from 0 to 1 with SMEs and private sector services being classified as '0' and large and manufacturing and production being classified as '1'. So, here the change in odds, signified by the odds ratio value, indicates how much more likely or less likely large organisations are to select a pay practice than SMEs; or manufacturing and production than private sector services. Odds ratio values < 1.0 indicate decreased odds for every one-unit increase of the independent variable; so, for the categorical variables size and sector, this means values less than one indicate *increased* likelihood of pay practice selection in the '0' coded groups. Because of this, for clarity, the odds ratio is sometimes inverted (divided by 1.0) so that increase in odds for SMEs and private sector services (both coded '0') can be reported.

5.2.2   Multiple linear regression

Two pay practices, pay dispersion and pay secrecy were analysed using multiple linear regression analysis because both were continuous, scale variables as opposed to the dichotomous selected / not selected categories of the other pay practices being tested. Linear regression assesses overall significance of the model through ANOVA and the significance of the F-test statistic. The variance in the dependent variables (pay dispersion and pay secrecy) is measured by the R^2 and adjusted R^2 values which provide the percentage variance in the sample and expected percentage variance in the population respectively. The R^2 values also provide an estimate of effect size based on Cohen's (1988) and Rosenthal's (1996) classifications of small (.10), medium (.30), large (.50) and very large (.70).

The unstandardised B coefficients indicate the change in the dependent variable per one-unit change in the independent variable, so in the case of pay dispersion the change is measured in

pounds sterling. Similar to the logistic regression interpretation explained above, for the two strategy scales this is fairly self-explanatory but for the two categorical independent variables the *B* coefficient represents the difference between '0' and '1'; SME and large; private sector services and manufacturing / production.

In each of the pay practices analyses examined, interpretation of the data further determines if significant results support the hypothesised relationships between low-road strategy, large, manufacturing / production, and algorithmic pay on one hand and high-road strategy, SME, private sector services and experiential pay on the other.

5.2.3 Assumptions

Binomial logistic regression and multiple linear regression analyses require certain assumptions to be met to produce accurate and valid results (Hair *et al*., 2010). These assumptions include the type of data suitable for testing; linearity between variables; the absence of multicollinearity; assessment of the impact of outliers, leverage and influential points; sample size; independence of observations, homoscedasticity and normality of distribution (Ibid.). Each assumption is considered in the following sub-sections and in overview in Table 5.2.

Table5.2 Summary of data assumptions for binomial logistic regression and linear regression.

Statistical tests	Assumption	How met / tested
Binomial logistic regression	One or more IVs measured at the continuous or binary level	Sector*, size*, business strategy scores
Multiple linear regression	One DV measured at the binary level (logistic regression)	Pay practices*
	One DV measured at the continuous level (linear regression)	Pay practices (dispersion and secrecy)
	Independence of observations	Study design Durbin-Watson test
	Linearity	Scatterplot of studentised residuals by unstandardised predicted values[+]
	Homoscedasticity	Scatterplot of studentised residuals by unstandardised predicted values[+]
	Normal distribution	Histogram, Normal P-P Plot, Normal Q-Q Plot, z-score for skewness[+]
	No significant outliers	Box plot, residual statistics / case diagnostics
	Sample size and minimum number of cases (logistic regression)	Maximum sample of 302 cases Event per variable (EPV) measures

Note. *binary variables coded as dummy variables '0' or '1', [+]continuous variables only

5.2.3.1 Data type

The first assumption relates to a research design issue and the suitability of the types of data collected for the required tests. For binomial logistic regression the test requires a dichotomous dependent variable: a pay practice is either 'selected' or 'not selected'; and continuous and/or nominal independent variables: low-road strategy score (continuous), high-road strategy score (continuous), industry sector (nominal, two categories: manufacturing and production or private sector services), and organisation size (nominal, two categories: large organisations (250+ employees) and SMEs (< 250 employees)).

For linear multiple regression tests, the dependent variable must be in the form of continuous data: pay dispersion (difference between lowest and highest salaries in pounds sterling) and pay secrecy score; as well as continuous and/or nominal independent variables (as above). Therefore, the assumption for the required type of data is met for both sets of tests.

5.2.3.2 Independence of observations

Similarly, the second assumption is a largely a study design issue in that all observations must be independent of one another (Laerd, 2015b, 2015c). Data was collected and processed in a way that meant there was no relationship between categories of variables. For example, an organisation could select or not select narrow-grading, but not both; and they could be categorised as large or SME, but not both. This ensured the assumption of independence of observations was met for both logistic and linear tests. As a check however, the Durbin-Watson test was used which tests independence of residuals. A statistic value of approximately 2.0 indicates residuals and therefore observations are not auto-correlated. In all cases this assumption was met.

5.2.3.3 Linearity

A further assumption relates to linearity between variables; that there should be some sort of linear relationship between the independent variables and the dependent variable. For binomial logistic regression, linearity of the continuous variables with the dependent variable had to be assessed with respect to the logit of the dependent variable. This was assessed via the Box-Tidwell (1962) procedure which created natural log transformations and associated interaction terms for the two continuous independent variables (high-road and low-road strategy scores). A Bonferroni correction was applied using all seven terms in the model (two categorical independent variables, two continuous variables, two interaction terms and the intercept) resulting in statistical significance being accepted when $p < .007143$ (Tabachnick and Fidell, 2014). Based on this assessment, as all p values were greater than .007143, both continuous independent variables were found to be linearly related to the logit of the dependent variable in each logistic test (see Appendix F).

Linearity for the two multiple linear regression analyses (pay dispersion and pay secrecy) was assessed by scatterplots of studentised residuals against unstandardised predicted values, both collectively - that the independent variables were linearly related to the dependent variable; and individually - that each continuous independent variable was approximately linearly related to

the dependent variable (Laerd, 2015c) (see Appendix G for pay dispersion, Appendix H for pay secrecy).

5.2.3.4 Homoscedasticity

The assumption of homoscedasticity, that the residuals are equal for all values of the predicted dependent variable, is only relevant to the two multiple linear regression analyses reported in this chapter. Homoscedasticity is assessed by inspection of the same scatterplot of studentised residuals by unstandardised predicted values used to assess linearity. A fairly constant spread of data points across the scatterplot indicates homoscedasticity (Laerd, 2015c). Scatterplots of both the pay dispersion and pay secrecy tests indicate that this assumption was met (see Appendices G and H).

5.2.3.5 Absence of multicollinearity

Multicollinearity occurs when two or more independent variables are highly correlated with each other and can potentially cause problems in understanding which independent variables contribute to the variance in the dependent variable (Laerd, 2015c). But as Hair *et al.* (2010) accept, some level of multicollinearity is almost unavoidable; it would be odd to find independent variables highly related to the dependent variable, but with no relationships among themselves.

The presence and extent of multicollinearity was ascertained through examination of tolerance/variation inflation factor (VIF) values resulting from a set of regression analyses where each independent variable was treated as a dependent variable. Multicollinearity is considered to be acceptable when VIF < 3.0 and tolerance > 0.2 (O'Brien, 2007). In all cases only extremely weak multicollinearity was detected (Appendix I) and therefore the assumption of absence of multicollinearity was met.

5.2.3.6 Normal distribution

Normality of data distribution in the independent variables is a requirement of linear regression analysis (Hair *et al.*, 2010). Normality was assessed by inspection of histograms with super-imposed normal curve, P-P plots (probability-probability plot) and z-scores for skewness ±2.58 (Laerd, 2015c). In both the pay dispersion and pay secrecy tests, the data was skewed and therefore breached the assumption of normal distribution. Logarithmic transformations of the data were applied in both cases which corrected the skewness (see Appendices G and H and sections 5.4.8 and 5.4.9.1 below for further detail).

5.2.3.7 Outliers

Outliers (data points that do not follow the usual pattern of other observations i.e. they are very different from their predicted value) can be detrimental to the fit or generalisation of the regression equation (Laerd, 2015b, 2015c). The presence of outliers was identified in logistic and linear regression tests using studentised residuals $> \pm 3$ SD (Hair *et al.*, 2010).

Logistic regression tests for piece rates and for lower decile pay positioning both identified cases which were outliers. These cases were inspected but no data errors identified, and the outliers were therefore retained. In both tests, few organisations selected these particular practices, and this could well have had a bearing on the data (see section 5.2.3.8 below on 'events per variable').

Linear regression tests for pay dispersion identified two outlier cases both of which were inspected and retained. Case diagnostics for pay secrecy (transformed data) identified no outliers.

For linear regression tests, further unusual points were tested for. High leverage points i.e. those observations made at extreme values of the independent variable, are data points with leverage values > 0.2; none were detected in the tests run for pay dispersion and secrecy. Influential points i.e. outlying observations that greatly influence the regression result, are measured by Cook's Distance values > 1.0 (Laerd, 2015c). Again, none were detected in the tests reported in this chapter.

5.2.3.8 Sample size and number of cases (EPV)

The final assumption relates to sample size and the number of 'events per variable'. According to Hair *et al.* (2010) sample size is a particularly important consideration when using logistic regression analysis as the test utilises maximum likelihood as the estimation technique (MLE) and MLE requires larger sample sizes than standard multiple linear regression. Lower sample sizes can lack statistical power to identify significant results leading to increased risk of type II errors i.e. false negatives (Ibid.). An overall sample size of 400 is recommended (Hosmer *et al.*, 2013) and additionally a division of the sample into an analysis sample and a 'holdout' sample is recommended to enable validation (Hair *et al.*, 2010). This in effect requires a doubling of the sample size (Ibid.). Given that the total possible maximum sample size (not taking account of any missing data) for this study is 302, the recommended overall sample size for logistic regression was not met and a division of the sample was not possible. It was deemed important therefore to be especially rigorous regarding the minimum number of cases in the sample using

the 'event per variable' (EPV) measure (Peduzzi, Concato, Kemper, Holford and Feinstein, 1996). Peduzzi *et al.* (1996) established that logistic regression measures such as regression coefficients, estimates of sample variance and Wald statistics were all influenced by low EPV values that undermined the validity of the logistic model. These authors found no major problems with EPV values above 10 however, and this is therefore recommended as a minimum EPV level (Ibid.). The event per variable is calculated by Peduzzi *et al.* (1996) as the number of cases in the smaller of the binary groups in the dependent variable, divided by the number of independent variables, as follows:

$$g \div c = EPV$$

(g = the number of cases in the smallest group of the dependent variable; c = the number of covariates).

For example, to calculate the EPV for a logistic regression analysis in this study using broadbanding as the dependent variable (with 72 respondents selecting broadbanding and 177 respondents not selecting broadbanding) and low-road strategy, high-road strategy, size and sector as the four independent variables this calculation would be as follows:

$$72 \div 4 = 18 \text{ (above the minimum threshold of 10)}$$

This calculation can be extrapolated to determine the minimum number of cases required for sample groups of the dependent variable (Medcalc, 2017) as follows:

$$N = 10c$$

(N = the minimum dependent variable group size; c = the number of covariates)

For all the logistic regression analyses in this study there are four independent variables which means N will be 40 for all tests conducted. These calculations were made for all dependent variables and seven were determined to fall below the required minimum of 40 cases per group / 10 EPV. These dependent variables were: pay spines, individual performance-related pay (progression), piece rates, gainsharing, upper decile pay, lower quartile pay, and lower decile pay. For individual PRP this was due to low numbers of non-selections; in all other cases it was due to low number of selections (see full summary of calculations in Appendix J). For the sake of fullness of testing, these tests were retained, and the results reported (with 'low EPV' noted).

So, it is acknowledged that there may be a reduction in statistical power and an associated increased risk of type II error because the overall sample was on the low side, but adherence to

the minimum number of cases per dependent variable group following Peduzzi *et al.* (1996) helped to counterbalance this deficiency.

5.3   Experiential pay results

5.3.1   Broadbanding

The logistic regression model for broadbanding was statistically significant, $\chi^2(4) = 13.310, p = .010$. The model explained 7.4% (Nagelkerke R^2) of the variance in selection of broadbanding and correctly classified 72.3% of cases. Of the four predictor variables two were statistically significant: size and high-road strategy (as shown in Table 5.3). Large organisations had more than twice the odds of selecting broadbanding to manage base pay than SME firms. Increasing high-road strategy scores were also associated with an increased likelihood of selecting broadbanding.

In terms of hypothesis support, there is a mixed picture here. As broadbanded pay structuring is an experiential practice, the theoretical model predicts that it will be more often selected by organisations with high-road business strategies, SME and private sector service organisations. While there is clearly good support for the association between broadbanding and high-road strategy, its use by large organisations is counter to the hypothesis. However, from a practical point of view any type of more formal pay structuring would seem more likely in larger organisations as the larger number of employees presumably necessitates more structure in order to manage the array of job titles and pay levels which could explain the result.

Table 5.3 Logistic regression predicting likelihood of selection of broadbanding based on size, sector, high-road strategy and low-road strategy.

	B	SE	Odds ratio	95% C.I. for Odds Ratio	
				Lower	Upper
Size	.731	.293	2.078*	1.169	3.693
Sector	.246	.311	1.279	.695	2.355
High-road strategy	.474	.212	1.606*	1.060	2.434
Low-road strategy	-.343	.257	.710	.429	1.175
Constant	-1.680	1.106	.186		

Note. $* = p \le .05$, $** = p \ge .005$, B = unstandardised regression coefficient, SE = standard error of regression coefficient, C.I. = confidence intervals.

5.3.2   Individual base pay

For individual pay rates, ranges and spot salaries, the logistic regression model was statistically significant, $\chi^2(4) = 12.317$, $p = .015$. The model explained 6.5% (Nagelkerke R^2) of the variance in selection of individual base pay and correctly classified 57.0% of cases. Of all the predictor variables only high-road strategy added significantly to model (as shown in Table 5.4). Organisations with a high-road strategic orientation had deceased odds of selecting individual pay rates, ranges and/or spot salaries to manage base pay.

This result is counter to the hypothesis that proposes organisations with high-road strategies are more likely to use individualised base pay arrangements that are flexible, non-mechanistic and allow for managerial discretion. The results for this test show no such association.

Table 5.4 Logistic regression predicting likelihood of selection of individual base pay based on size, sector, high-road strategy and low-road strategy

	B	SE	Odds ratio	95% C.I. for Odds Ratio	
				Lower	Upper
Size	-.226	.265	.798	.475	1.341
Sector	-.249	.287	.779	.444	1.369
High-road strategy	-.550	.187	.577**	.400	.832
Low-road strategy	.117	.232	1.124	.714	1.770
Constant	1.902	1.016	6.702		

Note. $* = p \le .05$, $** = p \ge .005$, B = unstandardised regression coefficient, SE = standard error of regression coefficient, C.I. = confidence intervals.

5.3.3 Competency pay

The logistic regression model for competency pay was right on the borderline of being statistically significant, $\chi^2(4) = 9.446$, $p = .051$. Given that this was so close to the threshold of $p \geq .050$, a second test of model fit, the Hosmer and Lemeshow test (Laerd, 2015b) was carried out which demonstrated that the regression model was not a poor fit, $\chi^2(8) = 6.896$, $p = .548$.

The model explained 5.0% (Nagelkerke R^2) of the variance in selection of competencies for progressing base pay and correctly classified 53.8% of cases. Only high-road strategy was statistically significant as a predictor variable (as shown in Table 5.5). Increasing high-road strategy scores predicted increased likelihood of selecting competencies to progress pay (for every increase in score the organisation was over one and a half times more likely to use this pay practice). This is in line with the hypothesis that pay progression based on competencies will be used by high-road strategy organisations as they reward individual behaviours that are required to compete on product or service quality or innovation.

Table 5.5 Logistic regression predicting likelihood of selection of competency pay based on size, sector, high-road strategy and low-road strategy

	B	SE	Odds ratio	95% C.I. for Odds Ratio	
				Lower	Upper
Size	-.312	.263	.732	.438	1.225
Sector	-.153	.287	.858	.489	1.506
High-road strategy	.503	.182	1.653**	1.157	2.362
Low-road strategy	-.155	.229	.856	.547	1.340
Constant	-.919	.996	.399		

Note. * $= p \leq .05$, ** $= p \geq .005$, $B =$ unstandardised regression coefficient, SE $=$ standard error of regression coefficient, C.I. $=$ confidence intervals.

5.3.4 Skills-based pay

The logistic regression model for skills-based pay was statistically significant, $\chi^2(4) = 13.300$, $p = .010$. The model explained 6.9% (Nagelkerke R^2) of the variance in selection of skills for progressing base pay and correctly classified 56.2% of cases. Only high-road strategy was statistically significant as a predictor variable (as shown in Table 5.6). Increasing high-road strategy scores predicted increased likelihood of selecting skills to progress pay (for every increase in high-road strategy score the organisation was over one and three-quarter times more likely to use this pay practice).

Similar to the result for competency pay, this result supports the hypothetical association between high-road strategy organisations and pay systems designed to reward the development of skills that are required to produce high quality or innovative products.

Table58.6 Logistic regression predicting likelihood of selection of skills-based pay based on size, sector, high-road strategy and low-road strategy

				95% C.I. for Odds Ratio	
	B	SE	Odds ratio	Lower	Upper
Size	-.042	.265	.958	.571	1.610
Sector	.286	.289	1.332	.756	2.344
High-road strategy	.574	.185	1.775**	1.236	2.549
Low-road strategy	-.037	.229	.964	.615	1.511
Constant	-1.965	1.013	.140		

Note. $* = p \le .05$, $** = p \ge .005$, B = unstandardised regression coefficient, SE = standard error of regression coefficient, C.I. = confidence intervals.

5.3.5 Movement in market rates (pay review)

The logistic regression model was statistically significant, $\chi^2(4) = 15.001$, $p = .005$. The model explained 7.9% (Nagelkerke R^2) of the variance in selection of movement of market rates as a top-three factor in reviewing pay during 2011 and correctly classified 65.9% of cases. Both high-road strategy and low-road strategy were statistically significant as predictor variables (as shown in Table 5.7). Increasing high-road strategy scores predicted increased likelihood of selecting movement in market rates as an important pay review factor (for every increase in high-road strategy score the organisation was over one and a half times more likely to select this pay review factor). Conversely, increasing low-road strategy scores predicted decreased likelihood of firms selecting movement in market rates as an important pay review factor.

This result provides good support for the hypothesis that high-road strategy organisations will select pay practices that are more market driven compared with low-road strategy organisations which de-emphasise market considerations in pay decision-making.

Table5.7 Logistic regression predicting likelihood of selection of movement in market rates (pay review) based on size, sector, high-road strategy and low-road strategy

	B	SE	Odds ratio	95% C.I. for Odds Ratio	
				Lower	Upper
Size	.499	.273	1.647	.965	2.811
Sector	-.409	.302	.664	.368	1.200
High-road strategy	.522	.195	1.685**	1.150	2.469
Low-road strategy	-.591	.241	.554*	.345	.888
Constant	-.019	1.016	.982		

Note. $* = p \leq .05$, $** = p \geq .005$, B = unstandardised regression coefficient, SE = standard error of regression coefficient, C.I. = confidence intervals.

5.3.6 Performance-related reward schemes

The logistic regression model for performance-related reward (PRR) was statistically significant, $\chi^2(4) = 18.660, p = .001$. The model explained 10.7% (Nagelkerke R^2) of the variance in use PRR schemes and correctly classified 76.3% of cases. Of the four independent variables, three were statistically significant: size, sector and high-road strategy (as shown in Table 5.8). Large organisations were over twice as likely to use performance-related reward schemes compared to SMEs. Service sector firms were over two and a half times more likely to use these schemes than manufacturing and production sector firms (odds ratio inverted). And finally, increasing high-road strategy scores predicted increased likelihood of using performance-related reward (for every increase in high-road strategy score, the organisation was over one and a half times more likely to use PRR).

This result, for a core experiential pay practice, offers some good support for the hypothesis that high-road strategy and service sector organisations are more likely to select pay practices that are variable, where elements of pay need to be re-earned, and that emphasise performance. However, the finding that large organisations are significantly more likely to use PRR schemes than smaller firms is counter to the hypothesis. It could be that large organisations are more likely to have the resources and expertise not available to SMEs to develop these schemes.

Table 5.8 Logistic regression predicting likelihood of selection of performance-related reward schemes based on size, sector, high-road strategy and low-road strategy

	B	SE	Odds ratio	95% C.I. for Odds Ratio	
				Lower	Upper
Size	.773	.317	2.165*	1.162	4.034
Sector	-.987	.330	.373**	.195	.711
High-road strategy	.482	.202	1.619*	1.090	2.406
Low-road strategy	-.283	.269	.753	.444	1.277
Constant	.580	1.180	1.785		

Note. * = $p \le .05$, ** = $p \ge .005$, B = unstandardised regression coefficient, SE = standard error of regression coefficient, C.I. = confidence intervals.

5.3.7   Share schemes and long-term incentives

The logistic regression model for share schemes and long-term incentives (LTIs) was also statistically significant, $\chi^2(4) = 25.377, p < .0005$. It explained 13.2% (Nagelkerke R^2) of the variance in selection of these schemes and correctly classified 64.7% of cases. Of the four independent variables, two were statistically significant: size and low-road strategy (as shown in Table 5.9). Large organisations were over three times more likely to use share / long-term incentive schemes compared to SMEs, whereas increasing low-road strategy scores were associated with a reduction in the likelihood of using shares/LTIs.

Share schemes and LTIs were classified as experiential pay practices because they emphasise the sharing of financial success or risk between employer and employee. The result for this pay practice partially supports the hypothesis finding that low-road strategy organisations are less likely to use this experiential practice. However, large organisations, hypothesised to use algorithmic practices are significantly more likely to use LTIs. Again, there may be a practical element at play here; larger, publicly traded organisations would presumably be in a position to offer share schemes much more readily than smaller, private firms.

Table 5.9 Logistic regression predicting likelihood of selection of shares / long-term incentives based on size, sector, high-road strategy and low-road strategy

	B	SE	Odds ratio	95% C.I. for Odds Ratio	
				Lower	Upper
Size	1.142	.283	3.133**	1.800	5.454
Sector	.539	.302	1.715	.948	3.101
High-road strategy	.285	.194	1.330	.910	1.944
Low-road strategy	-.611	.249	.543*	.333	.883
Constant	.240	1.052	1.272		

Note. $* = p \leq .05$, $** = p \geq .005$, B = unstandardised regression coefficient, SE = standard error of regression coefficient, C.I. = confidence intervals.

5.3.8   Merit pay

The logistic regression model for merit pay was right on the borderline of being statistically significant, $\chi^2(4) = 9.441, p = .052$. Given that this was so close to the threshold of $p \le .050$, a second test of model fit, the Hosmer and Lemeshow test (Laerd, 2015b) was carried out which demonstrated that the regression model was not a poor fit, $\chi^2(8) = 10.963, p = .204$.

The model explained 5.0% (Nagelkerke R^2) of the variance in selection of merit pay rises and correctly classified 59.4% of cases. Only high-road strategy was statistically significant as a predictor variable (as shown in Table 5.10). Increasing high-road strategy scores predicted increased likelihood of using merit pay rises (for every increase in high-road score the organisation was more likely to use merit pay by a factor of 1.603).

The use of merit pay, a consolidated increase to base salary based on individual performance or contribution, and its association with high-road organisations would be expected if the theoretical model was accurate.

Table5.10 Logistic regression predicting likelihood of selection of merit pay based on size, sector, high-road strategy and low-road strategy

				95% C.I. for Odds Ratio	
	B	SE	Odds ratio	Lower	Upper
Size	.427	.266	1.532	.910	2.578
Sector	-.186	.291	.830	.469	1.469
High-road strategy	.472	.186	1.603*	1.113	2.308
Low-road strategy	-.137	.231	.872	.554	1.372
Constant	-1.608	1.012	.200		

Note. $* = p \le .05$, $** = p \ge .005$, B = unstandardised regression coefficient, SE = standard error of regression coefficient, C.I. = confidence intervals.

5.3.9   Individual cash incentives

The logistic regression model with all four independent variables was not statistically significant indicating a poor overall model fit, $\chi^2(4) = 7.867, p = .097$. Despite this, inspection of the variables in the equation showed a significant odds ratio value for the sector variable.   A univariate logistic analysis was then run with sector as the sole independent variable and this model was statistically significant $\chi^2(1) = 9.491, p = .002$.   The model explained 5.3% (Nagelkerke R^2) of the variance in selection of individual cash incentives and correctly classified 80.3% of cases.   The odds ratio value showed that manufacturing and production organisations were over three times more likely to use individual cash incentives compared to private sector services (see Table 5.11).

This result is not consistent with the hypothesis that firms in the service sector will be more likely to use experiential, variable pay practices such as individual cash incentives.   Additionally, the initial result of the multivariate logistic regression indicates that the four-variable model could well be deficient in determining pay practice selection in some cases.

Table5.11 Logistic regression predicting likelihood of selection of individual cash incentives based on sector

				95% C.I. for Odds Ratio	
	B	SE	Odds ratio	Lower	Upper
Sector	1.144	.407	3.139**	1.413	6.974
Constant	-2.277	.371	.103		

Note. $* = p \leq .05$, $** = p \geq .005$, B = unstandardised regression coefficient, SE = standard error of regression coefficient, C.I. = confidence intervals.

5.3.10 Upper quartile pay

The logistic regression model for upper quartile pay was statistically significant, $\chi^2(4) = 10.453$, $p = .033$. The model explained 6.5% (Nagelkerke R^2) of the variance in positioning pay level in the upper quartile of the market and correctly classified 79.9% of cases. Of the four predictor variables, only high-road strategy was statistically significant (as shown in Table 5.12). Increasing high-road strategy scores predicted increased likelihood of upper quartile pay (for every increase in high-road strategy score the organisation was more likely to position pay in the upper quartile by a factor of 1.664).

As represented in Chapter 4, there is some debate in the literature as to whether above market pay should be classified as experiential or algorithmic. This result supports the proposition that high-road strategy organisations are more likely to position pay levels at high levels in the market; potentially to secure better quality employees or to offset some of the risk of outcome uncertainty associated with other variable forms of pay (Hambrick and Snow, 1989).

Table 5.12 Logistic regression predicting likelihood of upper quartile pay based on size, sector, high-road strategy and low-road strategy

				95% C.I. for Odds Ratio	
	B	SE	Odds ratio	Lower	Upper
Size	.064	.328	1.066	.561	2.026
Sector	.651	.338	1.917	.988	3.720
High-road strategy	.509	.243	1.664*	1.033	2.680
Low-road strategy	-.119	.292	.888	.501	1.575
Constant	-3.045	1.279	.048		

Note. $* = p \leq .05$, $** = p \geq .005$, B = unstandardised regression coefficient, SE = standard error of regression coefficient, C.I. = confidence intervals.

Results examined in this section so far indicate partial support for H3, H7 and H9; organisations with high-road strategies are more likely to select experiential pay practices such as broadbanded pay structures, competency and skills-based pay, market-driven pay reviews, performance-related reward and above market pay levels, as predicted in the theoretical model. However, only performance-related reward is significantly more likely to be selected by private sector services firms whereas none of the experiential pay practices are significantly more likely to be practised by SMEs. On the contrary, three experiential practices, broadbanding, performance-related reward and long-term pay practices are more likely to be selected by large organisations.

In addition, there are many more results for experiential pay practices that, according to the hypothesised model, should show an association with high-road strategy, SMEs and the service industry, but do not. These non-significant results suggest there is no relationship between strategy, size and sector and certain pay practices.

5.3.11 Non-significant results

Table 5.13 shows the list of experiential pay practices that showed no significant results in logistic regression tests. In most cases this meant there was no overall significance to the model and there were no significant odds ratio values for the four independent variables i.e. none of the four variables, size, sector, high-road and low-road strategy had a significant effect on the selection of the pay practice being tested (see Table 5.23 in the chapter summary for full results).

In two cases, individual bonuses and gainsharing, there were significant odds ratio values but no overall significance of the model. As with individual cash incentives, a univariate test was run with the significant predictor variable (high-road strategy score in both cases) but these did not yield significant results.

Two of the non-significant pay practices, upper decile pay, and gainsharing had low event per variable (EPV) values which could well have had an effect on the result (see full discussion on EPV in section 5.2.3.8 above).

Aside from these issues, there are clearly some key experiential practices on this list such as market-driven pay determination and progression and group-based performance schemes such as profit-sharing and gainsharing which, if the strategic alignment model was accurate, would be significantly associated with high-road strategy, SME and service sector firms. The absence of significant results for these practices indicates that the model may well be deficient in fully explaining why organisations select their pay practices.

Table5.13 Experiential pay practices with no significant association with size, sector, high-road strategy and low-road strategy

Job family pay structures	Combination (org./group/indiv.) performance-related reward schemes
Market rates to determine base pay	
Market rates to progress base pay	Individual bonus
Individual performance-related pay (IPRP)*	Goal-sharing
Employee value / retention as a criterion for base pay progression	Profit-sharing
	Gainsharing*
Recruitment and retention as pay review factor	Upper decile pay*

Note. * = low EVP

5.4   Algorithmic pay results

5.4.1   Pay spines (low EPV)

The logistic regression model for pay spines was statistically significant, $\chi_c^2(4) = 13.839$, $p = .008$. The model explained 10.0% (Nagelkerke R^2) of the variance in selection of pay spine base pay structures and correctly classified 87.1% of cases. Two predictor variables were statistically significant: size and high-road strategy (as shown in Table 5.14). Large organisations had higher odds of selecting pay spines compared with SMEs by a factor of 2.355 whereas increasing high-road strategy scores were associated with a reduction in the likelihood of using pay spines to manage base pay. Both these results show good support for the theorised association between organisation size and pay practice selection and strategy and pay practice selection although low EPV, due to very small numbers of organisations in the survey using pay spines, means this result should be treated with caution.

Table5.14 Logistic regression predicting likelihood of selection of pay spines based on size, sector, high-road strategy and low-road strategy

	B	SE	Odds ratio	95% C.I. for Odds Ratio	
				Lower	Upper
Size	.857	.404	2.355*	1.067	5.199
Sector	.728	.406	2.071	.934	4.590
High-road strategy	-.519	.250	.595*	.365	.971
Low-road strategy	.508	.353	1.662	.832	3.320
Constant	-2.920	1.575	.054		

Note. * = $p \leq .05$, ** = $p \geq .005$, B = unstandardised regression coefficient, SE = standard error of regression coefficient, C.I. = confidence intervals.

5.4.2 Job evaluation

The logistic regression model for job evaluation (JE) was statistically significant, $\chi^2(4) = 21.287$, $p < .0005$. The model explained 11.2% (Nagelkerke R^2) of the variance in selection of job evaluation to determine base pay and correctly classified 66.3% of cases. Of the four independent variables, three were statistically significant: size, high-road strategy and low-road strategy (as shown in Table 5.15). Organisations with a high-road strategic orientation had increased odds of selecting JE to determine pay level (for every increase in strategy score the organisation was two and a quarter times more likely to use JE) whereas increasing low-road strategy scores were associated with a reduction in the likelihood of using this method of pay determination. Large organisations were also one and three-quarter times more likely to select this practice in comparison to SMEs.

These results are partially supportive of the hypothetical association between large organisation size and increased use of algorithmic pay practices. However, the key finding here is that, rather than being more likely to be used by low-road strategy firms as the theoretical model predicts, JE appears to be not only *less* likely to be used by these organisations, but also significantly *more* likely to be used by firms with high-road strategic orientation. The explanation for this result is not readily apparent but may centre on the low-road firm's attachment to cost efficiency, given job evaluation has been perceived to be a costly and inflationary pay practice (Lawler, 1986).

Table 5.15 Logistic regression predicting likelihood of selection of job evaluation based on size, sector, high-road strategy and low-road strategy

	B	SE	Odds ratio	95% C.I. for Odds Ratio	
				Lower	Upper
Size	.552	.280	1.737*	1.004	3.006
Sector	.000	.302	1.000	.553	1.809
High-road strategy	.807	.214	2.242**	1.474	3.410
Low-road strategy	-.527	.250	.590*	.362	.964
Constant	-1.620	1.057	.198		

Note. $* = p \leq .05$, $** = p \geq .005$, B = unstandardised regression coefficient, SE = standard error of regression coefficient, C.I. = confidence intervals.

5.4.3   Collective pay bargaining

The logistic regression model for collective pay bargaining was statistically significant, $\chi^2(4) =$ 25.152, $p < .0005$. The model explained 15.7% (Nagelkerke R^2) of the variance in use of collective bargaining to determine base pay and correctly classified 82.3% of cases. Of the four independent variables, two were statistically significant: size and sector (as shown in Table 5.16). Large organisations were nearly three times more likely to use collective bargaining compared to SMEs. Manufacturing and production sector firms were three and a half times more likely than service sector firms to determine pay levels, rates and ranges this way. Both results support the hypothesis that traditional pay determination practices will be used to a greater extent in large firms and those operating in the manufacturing / production sector.

Table 5.16 Logistic regression predicting likelihood of selection of collective pay bargaining based on size, sector, high-road strategy and low-road strategy

	B	SE	Odds ratio	95% C.I. for Odds Ratio	
				Lower	Upper
Size	1.033	.365	2.810**	1.374	5.745
Sector	1.257	.363	3.515**	1.725	7.160
High-road strategy	-.307	.234	.736	.465	1.163
Low-road strategy	.373	.319	1.452	.777	2.713
Constant	-3.056	1.420	.047		

Note. $* = p \le .05$, $** = p \ge .005$, B = unstandardised regression coefficient, SE = standard error of regression coefficient, C.I. = confidence intervals.

5.4.4 Ability to pay (pay determination)

The logistic regression model for ability to pay as the most important pay determination factor was statistically significant, $\chi^2(4) = 34.035, p < .0001$. The model explained 17.0% (Nagelkerke R^2) of the variance in use of ability to pay and correctly classified 64.7% of cases. All four predictor variables were statistically significant (as shown in Table 5.17). Organisations in the manufacturing and production sector were one and a half times as likely to select ability to pay. Inverting the odds ratio for organisational size (dividing 1.0 by the odds ratio) shows SMEs were more likely to determine pay levels based on their ability to pay than their large counterparts by a factor of 2.58. Every point decrease in high-road strategy score equates to a reduction in odds of using ability to pay by a factor of 2.31 whereas every increase in low-road strategy score means the organisation is twice as likely to use ability to pay.

This set of results supports the theoretical proposition that manufacturing and low-road strategy organisations will use pay practices driven by cost reduction imperatives and suggests that firms with high-road strategies are less likely to treat cost as the most important factor in pay decisions. The finding that SMEs are more likely than large organisations to base pay levels on their assessment of affordability is perhaps unsurprising given the resource poverty and liabilities of smallness associated with small organisation size (Welsh and White, 1981; Williamson, 2000; Verreynne *et al.*, 2013) discussed in Chapter 3. It is however counter to the hypothesis that large organisations will use algorithmic pay practices and gives rise to further questions as to the applicability of the model to organisational size as a variable.

Table5.17 Logistic regression predicting likelihood of selection of ability to pay (pay determination) based on size, sector, high-road strategy and low-road strategy

| | | | | 95% C.I. for Odds Ratio | |
	B	SE	Odds ratio	Lower	Upper
Size	-.947	.279	.388**	.224	.670
Sector	.460	.304	1.584*	.873	2.873
High-road strategy	-.837	.202	.433**	.291	.644
Low-road strategy	.726	.250	2.066**	1.265	3.376
Constant	.301	1.043	1.351		

Note. $* = p \leq .05$, $** = p \geq .005$, B = unstandardised regression coefficient, SE = standard error of regression coefficient, C.I. = confidence intervals.

5.4.5 Service-based pay

The logistic regression model for length of service with all four independent variables was not statistically significant indicating a poor overall model fit, $\chi^2(4) = 5.276, p = .260$. Despite this, inspection of the variables in the equation showed a significant odds ratio value for the high-road strategy variable. A univariate logistic analysis was then run with high-road strategy as the sole independent variable and this model was statistically significant $\chi^2(1) = 4.380, p = .025$. The model explained 2.5% (Nagelkerke R^2) of the variance in selection of length of service for pay progression and correctly classified 80.3% of cases.

The odds ratio value showed that for every increase in high-road strategy score there was a one and a half times reduction in likelihood of selecting length of service as a pay progression criterion (see Table 5.18). Although the result supports the hypothesis that high-road organisations will be less likely to use algorithmic pay practices, the poor fit of the full four variable model gives rise to questions as to its appropriateness in all cases.

Table 5.18 Logistic regression predicting likelihood of selection of length of service-based pay based on high-road strategy

	B	SE	Odds ratio	95% C.I. for Odds Ratio	
				Lower	Upper
High-road strategy	-.400	.191	.670*	.461	.974
Constant	.021	.684	1.022		

Note. $* = p \leq .05$, $** = p \geq .005$, B = unstandardised regression coefficient, SE = standard error of regression coefficient, C.I. = confidence intervals.

5.4.6 Sales commission

The logistic regression model for sales commission was statistically significant, $\chi^2(4) = 17.575$, $p = .001$. The model explained 9.5% (Nagelkerke R^2) of the variance in its use and correctly classified 64.3% of cases. Of the four predictor variables, sector and high-road strategy were statistically significant (as shown in Table 5.19). Service sector firms were over three times more likely to use commission than manufacturing and production companies. In addition, increasing high-road strategy scores predicted increased likelihood of using sales commission; for every increase in high-road strategy score the organisation was over one and a half times more likely to use sales commission.

Both of these results are counter to the hypothetical proposition that commission will be used by low-road and manufacturing firms. The classification of commission as an algorithmic pay practice stems from the new pay writers' differentiation between new, flexible forms of variable pay versus traditional individual incentives including commission and piece rates (e.g. Lawler, 1990) discussed in Chapter 3. This classification could be challenged on the basis that commission schemes meet the experiential criteria being variable, risk/benefit sharing, and performance-oriented. It is also worth considering this result from a functional point of view; commission can be associated with sales roles which might be arguably more common in the service industry and in organisations pursuing growth-oriented business strategies.

Table5.19 Logistic regression predicting likelihood of selection of sales commission based on size, sector, high-road strategy and low-road strategy

	B	SE	Odds ratio	95% C.I. for Odds Ratio Lower	Upper
Size	.042	.284	1.043	.598	1.819
Sector	-1.208	.343	.299**	.153	.585
High-road strategy	.479	.199	1.614*	1.092	2.385
Low-road strategy	-.090	.246	.914	.565	1.479
Constant	-1.749	1.073	.174		

Note. $* = p \leq .05$, $** = p \geq .005$, $B =$ unstandardised regression coefficient, SE = standard error of regression coefficient, C.I. = confidence intervals.

5.4.7 Lower quartile pay (low EPV)

The logistic regression model for lower quartile pay was statistically significant, $\chi^2(4) = 11.797$, $p = .019$. The model explained 9.3% (Nagelkerke R^2) of the variance in positioning pay level in the lower quartile of the market and correctly classified 88.4% of cases. Of the predictor variables, both high-road strategy and low-road strategy were statistically significant (as shown in Table 5.20). Increasing high-road strategy scores predicted a reduced likelihood of paying in the lower quartile; with every one-point increase equating to a reduced likelihood by a factor of 1.99. Conversely, increasing low-road strategy scores were associated with increased likelihood of paying in the lower quartile; for every increase in low-road strategy score the organisation was 2.278 times more likely to position pay in the lower quartile.

These results support the hypothesis that low-road strategy organisations will be more likely to pay at lower levels and high-road organisations at higher levels and is consistent with the finding in section 5.3.10 above that high-road organisations are more likely to pay in the upper quartile of the market. However, as another case of low EPV, the result should be treated with some caution.

Table 5.20 Logistic regression predicting likelihood of lower quartile pay based on size, sector, high-road strategy and low-road strategy

	B	SE	Odds ratio	95% C.I. for Odds Ratio	
				Lower	Upper
Size	.307	.426	1.360	.590	3.135
Sector	-.286	.487	.752	.289	1.953
High-road strategy	-.691	.259	.501*	.302	.832
Low-road strategy	.823	.389	2.278*	1.063	4.882
Constant	-3.238	1.735	.039		

Note. $* = p \leq .05$, $** = p \geq .005$, B = unstandardised regression coefficient, SE = standard error of regression coefficient, C.I. = confidence intervals.

5.4.8 High pay dispersion

A multiple linear regression analysis was run to predict pay dispersion (pounds sterling) from organisation size, sector, high-road strategy and low-road strategy. All assumptions were met with the exception of normality (see Appendix G). There was linearity and homoscedasticity as assessed by partial regression plots and a plot of studentised residuals against the predicted values. There was no evidence of multicollinearity of independent variables, as assessed by tolerance values > 0.2 (Appendix I). There were two studentised deleted residuals > ±3 standard deviations which were inspected and retained, but no leverage values greater than 0.2, nor values for Cook's distance > 1.0. As the data was strongly positively skewed, as assessed by histogram, P-P Plot of standardised residuals and z-score of skewness ±2.58 (9.466), a logarithmic transformation was applied to the pay dispersion data to attempt to gain a normal distribution. The log transformed data met the assumption of normality (z-score = -1.586) and the regression analysis was re-run. It was clear from comparison of results however that the non-normality of the original pay dispersion scale had little impact on the outcomes of the test. It was therefore decided to report the original data (results from the transformed data are presented in Appendix G for comparison) for the sake of clarity; reporting pounds sterling difference in change in pay dispersion rather than the log value.

So, for the original test, the regression model was statistically significant, $F(4, 80) = 2.890$, $p = .027$, and the effect size was adj. $R^2 = .083$, i.e. the model explained 8.3% of the variance from the mean pay dispersion. Regression coefficients and standard errors can be found in Table 5.21.

One predictor variable, size of organisation, added statistically significantly to the prediction, $p \leq .005$. The unstandardised regression coefficient indicates that large organisations are likely to have a pay dispersion between the highest and lowest paid of nearly £71,000 more than SME organisations. This result supports the theoretical proposition that large organisations will have higher pay dispersion as an algorithmic pay practice but also makes practical sense in terms of the number of people and roles within larger firms being more likely to result in a larger spread of salaries.

Table 5.21 Multiple regression analysis predicting pay dispersion based on size, sector, high-road strategy and low-road strategy

	B	SE	*β*	95% C.I. for *B* coefficient	
				Lower	Upper
(Constant)	204501.44	93275.87		18876.54	390126.34
Size	70914.58**	24375.68	.308	22405.44	119423.72
Sector	-39472.18	26916.15	-.158	-93037.02	14092.66
High-road strategy	5358.00	16318.23	.036	-27116.30	37832.31
Low-road strategy	-27433.06	21570.76	-.141	-70360.24	15494.11

Note. * = $p \leq .05$, ** = $p \geq .005$, B = unstandardised regression coefficient, SE = standard error of regression coefficient, β = standardised coefficient, C.I. = confidence intervals (all rounded to 2 decimal places except β).

The significant results for algorithmic pay practices show very few of the associations predicted by the theoretical model and H3, H7 and H9. Just two algorithmic practices, the organisation's ability to pay as a determiner of pay level and lower quartile pay are more likely to be selected by organisations with low-road strategic orientations. Large organisations are more likely to use pay spine pay structures, job evaluation, collective pay bargaining and have higher pay dispersion whereas manufacturing and production firms are also more likely to use collective bargaining for pay determination. There are some results counter to the hypotheses: job evaluation and sales commission are more likely to be selected by organisations with high-road strategies, and service sector firms are also more likely to use commission. Additionally, there are more results for algorithmic pay practices that, according to the hypothesised model, should show an association with low-road strategy, large organisations and the manufacturing / production sector but do not. These non-significant results suggest there is no relationship between strategy, size and sector and certain pay practices.

5.4.9   Non-significant results

Table 5.22 shows results from logistic tests on algorithmic pay practices that did not yield any significant results (see Table 5.24 in chapter summary for full results). Two of the results, piece rates and pay positioning in the lower decile of the market, had low event per variable (EPV) values as well as outlier cases due to very small numbers of respondents selecting these practices, and this could well have had an effect on these results. Of the other non-significant results, that narrow-grading is not more likely to be selected by large organisations, manufacturing and

production firms or those pursuing a low-road strategy is perhaps the most surprising given its clear connection with the traditional, algorithmic pay model. Pay secrecy too, despite assumptions that it will be associated with more traditional, bureaucratic organisations, shows no relationship with organisational contingencies.

Table 5.22 Algorithmic pay practices with no significant association with size, sector, high-road strategy and low-road strategy

Narrow-grading
Ability to pay (pay review)
Median pay
Lower decile pay*[+]
Piece rates*[+]
Pay secrecy

Note: *=low EPV, [+]=outlier(s)

5.4.9.1 Pay secrecy

A multiple linear regression was run to predict pay secrecy from organisation size, sector, high-road strategy and low-road strategy. All assumptions except for normality of distribution were met. Normality was assessed by histogram, P-P Plot and z-score for skewness which indicated the pay secrecy scale data was strongly negatively skewed (Appendix H). A reflect and logarithmic transformation was applied to correct the distribution (Laerd, 2015d) and the multiple regression analysis was run for a second time. All other assumptions were met (Appendix H). The multiple regression model was not statistically significantly, $F(4, 251) = 1.418$, $p \geq .05$, adj. $R^2 = .007$. The coefficient for the sector variable however was significant, $p = .036$ indicating that increased secrecy scores could be associated with private sector services and so a univariate linear regression analysis was run subsequently. In this analysis there was no significance, $F(1, 267) = 3.425$, $p \geq .05$, adj. $R^2 = .009$. In summary, no relationship between pay secrecy and size, sector, high-road strategy and low-road strategy was found.

5.5   Summary of results and key findings

There are a number of findings that emerge from the results in this chapter. First, despite the relatively small number of significant results (see Tables 5.23, 5.24 and 5.25 below for a full summary of results), there are a number of experiential and algorithmic pay practices that are related to strategy, size and sector in ways that correspond to the theoretical alignment model. High-road strategy organisations were more likely to use many of the experiential practices such

as broadbanding, individual competencies and skills for pay progression, market-driven pay reviews, performance-related pay schemes and above market pay levels. They were also less likely to use certain algorithmic practices such as pay spines, length of service to progress pay, below market pay and ability to pay. Conversely, low-road strategy organisations were more likely to select algorithmic practices, ability to pay and below market pay, while being less likely to use experiential practices such as market-rates for pay reviews and long-term incentives. These results support the hypothesis (H3) that organisations pursuing business strategies based on growth and diversification of products and services will favour pay practices that are performance-driven, market competitive and flexible while those organisations pursuing strategies associated with stable product markets and efficient operations will select pay practices that are cost-focused. There are also results for the size and sector variables that support the theoretical model and hypotheses H7 and H9. Large organisations were more likely to use algorithmic pay practices such as pay spines (although low EPV should be noted), job evaluation and collective pay bargaining as well as having higher pay dispersion than SMEs. Manufacturing and production firms were more likely than service sector companies to use collective bargaining and ability to pay whereas the service industry was much more likely to use performance-related reward schemes than manufacturing. Taken as a whole, the above results appear to provide good evidence for the use of certain experiential and algorithmic practices being related to the type of business strategy adopted, as well as the organisation's size and the industry they are operating in.

However, not all significant results supported these hypothetical relationships. There are a number of results that run counter to the theoretical model. As well as being more likely to use some experiential pay practices, high-road strategy organisations were also more likely to use a number of algorithmic practice such as job evaluation to determine pay levels and sales commission. High-road organisations were also found to be less likely to use the experiential individual base pay arrangements and low-road organisations were less likely to use the archetypal algorithmic pay practice, job evaluation. Similarly, large organisations were found to be more likely than SMEs to use broadbanding, performance-related reward and long-term incentives. In addition, algorithmic sales commission was more likely to be used by the service sector and experiential individual cash incentives by manufacturing. The clear implication of these counter-hypothetical results is that the two theoretical pay configurations, experiential and algorithmic pay, are not being used exclusively by the organisations in this study. Instead there appears to be relationships between practices from both configurations with organisational

characteristics. This suggests that some organisations are using both algorithmic and experiential practices alongside one another in a blended approach rather than opting for one configuration or the other.

One of the common features of the significant results shown in Tables 5.23 and 5.24 is the apparently low Nagelkerke R^2 values which typically indicate less than 10% of the change in selection of pay practices is accounted for by the four-variable model tested. It is recognised that these logistic regression R^2 values will be lower than those for more common linear regression (Hair *et al.*, 2010) but the low proportions indicate only a small effect size (Cohen, 1988). This suggests that the selection of pay practices is determined by (an)other factor(s) besides strategies, size or sector and that these three factors have only a limited effect on organisational pay choices. Glass (1976) argues that effect size needs to be understood in the context of the research and in this case, it would not be reasonable to suggest pay decisions were driven entirely by these three factors. Nevertheless, the apparently very low effect size of the model on pay practice selection is an important finding in addressing the research questions of this study.

Aside from the significant results reported in this chapter, there are a large number of pay practices for which no significant results were found. Some of these, including market rates to determine and progress pay, IPRP, profit-sharing and gainsharing from the experiential configuration and narrow-grading, pay secrecy and piece rates from the algorithmic list, are surprising omissions. The results clearly show no relationship between these practices and the three hypothesised factors, strategy, size and sector. The implication is that factors other than these three organisational contingencies determine whether or not these practices are selected.

Another finding emerging from this set of results is the clear indication that while business strategy (and particularly high-road strategy) has an effect on pay practice selection, the relationship between pay practice selection and organisation size and sector may not be as strong. There were fewer significant relationships between pay practices and size or sector than there were for high- and low-road strategies. It seems clear that of the three factors hypothesised to influence pay practice selection, business strategy is predominant. Why size, and particularly sector, do not have the same impact is not immediately clear although it is noted that the literature contributing to the theoretical model for these factors was far sparser than that for strategy.

Table 5.23 Summary of logistic regression results predicting likelihood of selection of experiential pay practices based on organisation characteristics

Pay policy area	Experiential pay practice	Nagelkerke R^2	$\chi^2(4)$	Odds ratios		H support
Base pay management / structures	Broadbanding	7.4%	13.310*	Size	2.078*	N
				Sector	1.279	N
				High-road	1.606*	Y
				Low-road	.710	N
	Job families	0.5%	0.906	Size	1.017	N
				Sector	1.062	N
				High-road	1.127	N
				Low-road	1.125	N
	Individual base pay	6.5%	12.317*	Size	.798	N
				Sector	.779	N
				High-road	.577**	N
				Low-road	1.124	N
Pay level determination	Market rates	0.9%	1.586	Size	1.024	N
				Sector	.779	N
				High-road	.901	N
				Low-road	.933	N
Base pay progression criteria	Individual PRP (low EPV)	0.6%	0.770	Size	1.092	N
				Sector	1.427	N
				High-road	.914	N
				Low-road	.983	N
	Competency-pay	5.0%	9.446 H&L: $\chi^2(8) = 6.896$, $p = .548$	Size	.732	N
				Sector	.858	N
				High-road	1.653**	Y
				Low-road	.856	N
	Skills-based pay	6.9%	13.300*	Size	.958	N
				Sector	1.332	N
				High-road	1.775**	Y
				Low-road	.964	N
	Market rates	3.5%	6.538	Size	1.640	N
				Sector	.883	N
				High-road	1.283	N
				Low-road	.688	N

Pay policy area	Experiential pay practice	Nagelkerke R^2	$\chi^2(4)$	Odds ratios		H support
Pay review factors	Employee value / retention	3.0%	5.648	Size	.738	N
				Sector	1.546	N
				High-road	1.242	N
				Low-road	.862	N
	Movement in market rates	7.9%	15.001**	Size	1.647	N
				Sector	.664	N
				High-road	1.685**	Y
				Low-road	.554*	Y
	Recruitment and retention	2.5%	4.694	Size	1.465	N
				Sector	1.203	N
				High-road	1.234	N
				Low-road	.770	N
Performance-related reward	Performance-related reward	10.7%	18.660**	Size	2.165*	N
				Sector	.373**	Y
				High-road	1.619*	Y
				Low-road	.753	N
Individual variable pay	Combination schemes	2.2%	3.988	Size	1.631	N
				Sector	.980	N
				High-road	1.069	N
				Low-road	.784	N
	Merit pay	5.0%	9.441 H&L: $\chi^2(8) = 10.963$, $p = .204$	Size	1.532	N
				Sector	.830	N
				High-road	1.603*	Y
				Low-road	.872	N
	Individual bonus	3.5%	6.664	Size	1.515	N
				Sector	.887	N
				High-road	1.428*	N
				Low-road	.846	N
	Individual cash incentives	5.3%	9.491**	Size	-	N
				Sector	3.139**	Y
				High-road	-	N
				Low-road	-	N

Pay policy area	Experiential pay practice	Nagelkerke R^2	$\chi^2(4)$	Odds ratios		H support
Long-term pay	Share schemes/Long-term incentives	13.2%	25.377**	Size	3.133**	N
				Sector	1.715	N
				High-road	1.330	N
				Low-road	.543*	Y
Group PRR	Gainsharing (low EPV)	4.4%	5.939	Size	.922	N
				Sector	.928	N
				High-road	1.880*	N
				Low-road	1.091	N
	Goal-sharing	3.1%	5.348	Size	1.708	N
				Sector	.667	N
				High-road	.899	N
				Low-road	1.073	N
	Profit-sharing	2.2%	3.639	Size	1.091	N
				Sector	.641	N
				High-road	1.375	N
				Low-road	.853	N
Market positioning of pay	Upper decile pay (low EPV)	3.9%	4.961	Size	.869	N
				Sector	1.191	N
				High-road	1.646	N
				Low-road	1.272	N
	Upper quartile pay	6.5%	10.453*	Size	1.066	N
				Sector	1.917	N
				High-road	1.664*	Y
				Low-road	.888	N

Note. $* = p \leq .05$, $** = p \geq .005$, χ^2 = chi square statistic, (4) = degrees of freedom, N = no, Y = yes, H&L = Hosmer and Lemeshow test.

Table5.24 Summary of logistic regression results predicting likelihood of selection of algorithmic pay practices based on organisation characteristics

Pay policy area	Algorithmic pay practice	Nagelkerke R^2	$\chi^2(4)$	Odds ratios		H support
Base pay management / structures	Pay spines (low EPV)	10.0%	13.839*	Size	2.355*	Y
				Sector	2.071	N
				High-road	.595*	Y
				Low-road	1.662	N
	Narrow-grading	1.8%	3.106	Size	1.230	N
				Sector	1.386	N
				High-road	1.038	N
				Low-road	1.192	N
Pay level determination	Job evaluation	11.2%	21.287**	Size	1.737*	Y
				Sector	1.000	N
				High-road	2.242**	N
				Low-road	.590*	N
	Collective bargaining	15.7%	25.152**	Size	2.810**	Y
				Sector	3.515**	Y
				High-road	.736	N
				Low-road	1.452	N
	Ability to pay	17.0%	34.035**	Size	.388**	N
				Sector	1.584*	Y
				High-road	.433**	Y
				Low-road	2.066**	Y
Base pay progression criteria	Service-based pay	2.5%	4.380*	Size	-	N
				Sector	-	N
				High-road	.670*	Y
				Low-road	-	N
Pay review factors	Ability to pay	3.4%	5.311	Size	.638	N
				Sector	.665	N
				High-road	.886	N
				Low-road	1.623	N
Individual variable pay	Piece rates (low EPV)	14.1%	5.382	Size	.783	N
				Sector	2.153	N
				High-road	.455	N
				Low-road	6.341	N

Pay policy area	Algorithmic pay practice	Nagelkerke R^2	$\chi^2(4)$	Odds ratios		H support
Market positioning of pay	Sales commission	9.5%	17.575**	Size	1.043	N
				Sector	.299**	N
				High-road	1.614*	N
				Low-road	.914	N
	Median	1.6%	2.986	Size	1.148	N
				Sector	1.448	N
				High-road	1.032	N
				Low-road	.763	N
	Lower quartile pay (low EPV)	9.3%	11.797*	Size	1.360	N
				Sector	.752	N
				High-road	.501*	Y
				Low-road	2.278*	Y
	Lower decile pay (low EPV)	9.5%	2.914	Size	.869	N
				Sector	1.191	N
				High-road	1.646	N
				Low-road	1.272	N

Note. $* = p \leq .05$, $** = p \geq .005$, χ^2 = chi square statistic, (4) = degrees of freedom, N = no, Y = yes, H&L = Hosmer and Lemeshow test.

Table5.25 Summary of regression results predicting extent of pay dispersion and secrecy based on organisation characteristics

Pay policy area	Adjusted R^2	F(df, residual df)		β	H Support
Pay dispersion	8.3%	2.890* (4, 80)	Size	.308*	Y
			Sector	-.158	N
			High-road	.036	N
			Low-road	-.141	N
Pay secrecy	0.7%	1.418 (4, 251)	Size	.036	N
			Sector	-.136*	N
			High-road	.082	N
			Low-road	.022	N

Note. $* = p \leq .05$, $** = p \geq .005$; Adjusted R^2 = proportion of variance explained by model adjusted for population; F = F-test statistic; (df) = degrees of freedom; β = standardised regression coefficients; N = no, Y = yes

Finally, taking these findings together, despite the small effect size, the lack of evidence for two clear pay configurations and the considerable number of non-significant results, one clear

indication arising from the results is that strategy, and to some extent size and sector, do have an effect on the selection of some pay practices. Table 5.26 sets out the significant findings by pay practice and organisation contingency and shows some clear differences in pay practice selection according to different strategic orientations, size and sector of operation.

Table 5.26 Summary of significant logistic regression and linear regression results – pay practices and organisation characteristics

	Business strategy		Size		Sector	
	High-road	Low-road	SME	Large	Private sector services	Manufacturing & production
Broadbanding	√		X	√		
Individual base pay	X					
Competency pay	√					
Skills-based pay	√					
Movement in market rates (review)	√	X				
Performance-related reward	√		X	√	√	X
Shares / LTI schemes		X	X	√		
Upper quartile pay	√					
Pay spines	X		X	√		
Job evaluation	√	X	X	√		
Collective bargaining			X	√	X	√
Ability to pay (determination)	X	√	√	X	X	√
Service-based pay	X					
Sales commission	√		X	√	√	X
Merit pay	√					
Lower quartile pay	X	√				
High pay dispersion			X	√		

Note. √ = more likely to select, X = less likely to select.

The following chapter will report and analyse the results of tests undertaken to establish the extent to which organisations select pay practices according to workforce employment group.

Chapter 6: The effect of employment group on pay practice selection

6.1   Chapter introduction

This chapter sets out results for data analysis testing the hypothesised associations between employment group and pay practice selection. Figure 6.1 illustrates the proposed relationships between the job-based employment group and experiential pay practices and between the knowledge-based employment group and algorithmic pay practices as organisations, in theory, select different pay practices for different groups of employees depending upon the human capital requirements of the type of work performed. These theorised associations have been framed as Hypothesis 5:

> H5. Organisations will select an algorithmic pay configuration for employees working in a knowledge-based employment group (managers and professional employees) and an experiential pay configuration for employees working in a job-based employment group (other, broad-based employee groups).

The two employment groups have been operationalised in this study as: management and professional employees (includes senior managers, middle and front-line managers, professional, technical and scientific employees) representing the knowledge-based employment group; and other employees (includes administrative support, trades and production workers as well as customer service and sales staff) representing the job-based employment group. Pay practices that form algorithmic and experiential pay configurations for these employment groups are detailed in Table 6.1.
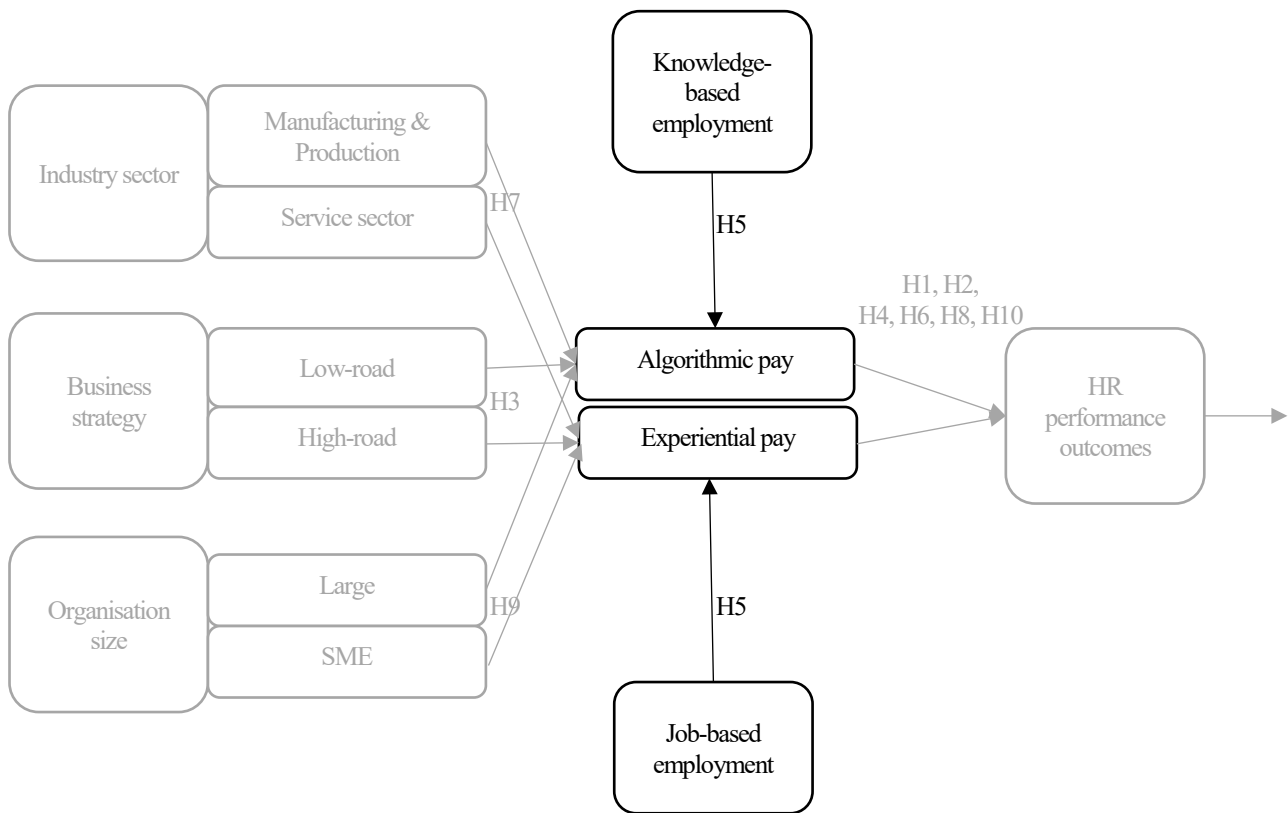
Figure 6.-1 Hypothesised relationships between employment group and pay practice selection.

Table6.1 Experiential and algorithmic pay configurations for job-based and knowledge-based employment groups

Experiential pay	Algorithmic pay
Broadbanding or job family structures	Narrow-graded pay structures or pay spines
Low vertical pay dispersion	High vertical pay dispersion
Above market pay (upper quartile or upper decile of market)	At or below market pay (median, lower quartile or lower decile of market)
	Organisation's 'ability to pay' for pay setting and reviews
Market rates to determine pay*	Job evaluation to determine pay*
Market rates to progress pay	
Movement in market rates, and recruitment and retention as pay review factors	
Performance, skills, competencies or employee value / retention as criteria for pay progression	Length of service as a criterion for pay progression
Individual base pay rates / salaries	Collective bargaining
Extensive employee coverage of performance-related reward schemes	Minimal employee coverage of performance-related reward schemes
Combi (org./group/indiv.) performance-related schemes	Piece rates
Individual bonus / cash incentives	Sales commission
Merit pay	
Gainsharing	
Goal-sharing	
Profit-sharing	

Notes. 1) * Q6 of the CIPD Reward Management Survey (Appendix B) asked which factor is most important in determining pay. CIPD questions were: 'market rates (with JE)' or 'market rates (without JE)' therefore when testing for the variable 'job evaluation' 'market rates (with JE)' was used.

2) The data for pay practices 'PRR schemes' and 'shares / LTIs' was not collected separately for employment groups and therefore was not suitable for testing in this phase.

The chapter begins with a with a full explanation and justification of methods of data analysis used. Following this, the results for each test are reported in full and the findings analysed. The chapter concludes with a summary of results to the extent they support the hypothesis.

6.2 Data analysis

Three different sets of statistical tests were performed to generate the results considered in this chapter: McNemar's test, paired-samples t-test and Wilcoxon signed-rank test. These tests were chosen for suitability in terms of the study design and types of data collected. All of the tests reported in this chapter were performed to ascertain the effects of workforce employment group on pay practice selection, specifically to determine if there were differences in selection of pay practices between the knowledge-based employment group and the job-based employment group. Each type of test and associated assumptions are considered below.

6.2.1 Assumptions

McNemar's test, paired-samples t-test and Wilcoxon signed-rank test have certain data requirements that must be met in order to gain accurate and valid results. Table 6.2 summarises these assumptions and demonstrates how the variables tested in this study met these requirements.

Table 6.2 Summary of data assumptions for McNemar test, paired-samples t-test and Wilcoxon signed rank test

Statistical tests	Independent variable (IV) requirements	IV tested	Dependant variable (DV) requirements	DVs tested	Other requirements
McNemar's test	One IV with two categorical related groups	Employment group – knowledge-based and job-based	One dichotomous DV with two mutually exclusive groups	Pay practices 'selected' or 'not selected'	-
Paired-samples t-test	One IV with two categorical related groups	Employment group – knowledge-based and job-based	One DV measured at the continuous level	Pay dispersion - measured in £	a) Distribution of differences between groups is normal. b) There are no significant outliers.
Wilcoxon signed-rank test	One IV with two categorical related groups	Employment group – knowledge-based and job-based	One DV measured at the continuous level	Employee coverage in performance-pay schemes - measured in % employees	Distribution of differences between groups is symmetrical.

Adapted from Laerd, 2015e, 2015f, 2015g.

6.2.1.1 Data types

Table 6.2 shows that one common assumption for all three tests is that the independent variable must be comprised of two categorical related or paired groups. For this study, the 302 participant organisations were each considered as having two employment group categories a) a knowledge-based employment group (managers and professionals) and b) a job-based employment group (all other non-management employees including administrative support staff, trades and production workers as well as customer service and sales staff) based on Lepak and Snell's (2002) employment mode model. Therefore, the requirement for an independent

variable with two *related* categories (management and professional, and other employees) was met.

Table 6.2 shows the different requirements for dependent variable data according to the different tests. For McNemar's test the dependent variable must be dichotomous and each category must be mutually exclusive. In this study, each pay practice response was coded as 'selected' or 'not selected' for each of the two employment group conditions. This meant that the dependent variable requirements for the McNemar test were met: there was a dichotomous dependent variable (pay practice selected or not selected)

For both the paired-samples t-test and the Wilcoxon signed-rank test, the dependent variable was required to be measured at the continuous level (i.e. ratio or interval data). Again, the specific pay practices, pay dispersion (measured in pounds sterling) and extent of employee coverage in performance-pay schemes (measured in percentage of employees) met these requirements.

6.2.1.2 Normal Distribution

Normal distribution of differences between the independent variable categories is a requirement of paired-samples t-tests (Laerd, 2015f). Normality for pay dispersion difference data was assessed by inspection of a Normal Q-Q (quantile-quantile) plot and was found to be positively skewed. A logarithmic transformation of the data corrected this skewness (see Appendix K).

Data for difference in employee coverage in performance-pay schemes was initially assessed for normality of distribution and found to be normal, however due to large numbers of outliers (see 9.2.1.3) the data was not suitable for a paired-samples t-test. Instead a Wilcoxon signed-rank test was used being far less affected by outliers than the paired-samples t-test because it tests medians rather than means (Laerd, 2015g). However, a requirement of the Wilcoxon signed-rank test is that the shape of the distribution of the differences must be symmetrical (Ibid.). Symmetricity was assessed by histogram and found to be adequate for the Wilcoxon signed-rank test (Appendix L).

6.2.1.3 Outliers

The absence of significant outliers among the independent variable observations is a requirement of the paired-samples t-test (Laerd, 2015f). The presence of outliers in pay dispersion data was assessed by box-plot. Two outliers (more than 1.5 times the inter-quartile range from the upper quartile) and four extreme outliers (more than 3 times the inter-quartile

range from the upper quartile) were identified by SPSS. A box-plot of logarithmically transformed data showed an absence of outliers (Appendix K).

6.2.2   McNemar's test

The majority of the results presented in this chapter are results of McNemar's tests carried out to establish differences in pay practice selection between groups within organisations. The test starts with the assumption that the proportion of non-selections will be equal between different groups and then compares this assumed proportion with the actual observed figure. A statistically significant difference in proportions (using the chi-squared χ^2 measure) indicates that organisations select pay practices according to employee group and supports the proposition that pay will be configured with employment group. In this chapter 'McNemar' or 'McNemar's test' refers to the procedure defined by McNemar (1947) with continuity correction (Edwards, 1948).

The McNemar test assesses equality of (marginal) proportions (Laerd, 2015e). In the tests computed for this study, this means that the test determines if there is a difference between the proportions of non-selection of each pay practice for the knowledge-based employment group and the job-based employment group. The null hypothesis is that the proportion of selections and non-selections of pay practice x will be equal across both the knowledge-based and job-based employment groups.

Table 6.3 McNemar test compares 'discordant pairs'

Management & professional group	Other employees group	
	Not selected	Selected
Not selected	A	B
Selected	C	D

McNemar's test tests this null hypothesis by comparing the 'discordant pairs' B and C in the cross-tabulation above (Table 6.3) where organisations have chosen to apply a pay practice to either management and professionals (C) or other employees (B) but not both groups. If the proportions are unequal and statistically significant (using the chi-squared χ^2 measure) then the null hypothesis is rejected in favour of the alternative hypothesis. In this case, the alternative hypothesis is that the proportion of selections and non-selections will *not* be equal across both

employment groups i.e. that organisations select different pay practices for different groups of employees.

6.2.3   Paired-samples t-test

Another statistical test used to produce results in this chapter is a paired samples t-test which is used specifically to determine if pay dispersion (measured as the range of salaries within each group) is different for knowledge-based employees compared to job-based employees. The paired samples t-test is similar in principle to the McNemar test in that it compares differences between groups where the groups are related (in this case, they are within the same organisation). However, the test is parametric, as outlined above it assumes normality of distribution and is suitable for continuous data (in this case pounds sterling differences in salaries). It also has a different starting assumption in that it compares the difference in observed means to zero. If this is statistically significant (using the t-value measure), the indication is that pay dispersion levels are different for the different employment groups.

6.2.4   Wilcoxon signed-rank test

The Wilcoxon signed-rank test was used to determine if there was a difference in median proportions of employees covered by variable performance-based reward schemes in organisations (% of employees). This test is a non-parametric alternative to the paired samples t-test and does not require data to be normally distributed or to have an absence of outliers, as discussed above. As the Wilcoxon signed rank test tests differences between medians rather means, outliers could be retained in the data set and a useful assessment made as to differences in proportions of knowledge-based and job-based employee groups being covered by variable pay schemes.

In the following four sections of this chapter the results of the tests outlined above are reported. In all cases, interpretation of the data further determines if significant results support the hypothesised relationships between knowledge-based employment and algorithmic pay on one hand and job-based employment and experiential pay on the other.

6.3   Job-based employment and experiential pay results

This section details the results that support the first part of H5; that job-based employment is associated with experiential pay practices aimed largely at supporting the 'acquisition' of required human capital from the labour market (Youndt and Snell, 2004). For each pay practice

the percentage of organisations in the survey selecting the pay practice is provided along with the McNemar's test statistic and p value indicating statistical significance.

6.3.1   Individual base pay

If organisations were conforming to the theoretical model illustrated in Figure 6.1, it would be expected that pay for job-based employees would be managed through flexible pay arrangements such as individual pay rates or salaries that can flex to suit individual employee value and market comparisons. And results show that 64.2% of organisations use individual base pay arrangements for job-based employees whereas a considerably smaller proportion, 48.7%, use this practice for knowledge-based groups (McNemar statistic: $\chi^2(1) = 28.986$, $p < .005$). This result supports the hypothesised association between experiential pay and job-based employment.

6.3.2   Individual performance-related pay

Pay progression driven by individual performance (IPRP) is classified as an experiential pay practice in the strategic pay model and therefore associated with job-based employment. And indeed 37.8% of organisations use this practice for their job-based employees compared to only 15.9% for knowledge-based employee groups (McNemar test statistic: $\chi^2(1) = 55.592$, $p < .005$). This result indicates support for the hypothesis that organisations will select experiential pay practices for employees in job-based employment.

6.3.3   Merit pay

Merit pay, the consolidated increase in pay associated with individual merit, is widely used for both groups being selected by 60.3% of organisations for the knowledge-based employment group and 67.6% of organisations for their job-based groups. However, the McNemar test result was significant $\chi^2(1) = 14.7$, $p < .005$ and demonstrated merit pay was more often selected for job-based employees.

6.3.4   Market rates (pay determination)

The strategic pay model predicts that in determining base pay rates and ranges, organisations will use market rates for job-based employees. The survey found that 34.8% of organisations used this method of pay determination for job-based employees while only 25.8% used it for knowledge-based employees (McNemar statistic: $\chi^2(1) = 11.429$, $p < .005$) demonstrating support for this hypothesis.

6.3.5 Movement in market rates (pay review)

Similarly, the hypothetical model predicts market-driven pay reviews for job-based employees and 69.9% of organisations choose to base pay reviews for job-based employees on a movement in market rates compared to 59.9% for knowledge-based employee groups (McNemar test statistic: $\chi^2(1) = 26.281$, $p < .005$). Again, this indicates that a market pay approach, a key aspect of the experiential pay configuration, is used for job-based employee groups.

6.3.6 Recruitment and retention issues (pay review)

70.5% of organisations chose recruitment and retention issues as an important factor in reviewing base pay for job-based employee groups compared to 63.3% for knowledge-based employees. The McNemar test statistic was significant, $\chi^2(1) = 12.250$, $p < .005$ indicating that this factor was more relevant to pay reviews for job-based employees.

6.3.7 Profit-sharing

Profit-sharing is a staple of the strategic pay formula recommended by the new pay writers as a powerful lever in directing employee efforts at improving organisational performance (Lawler, 1990; Schuster and Zingheim, 1992). As such it is hypothesised that this key experiential pay practice will be selected more frequently for job-based employees and results confirm that this is the case. 83.4% of organisations use profit-sharing for job-based employee groups compared to 79.5% for knowledge workers (McNemar test statistic: $\chi^2(1) = 4.654$, $p = .031$).

The results above provide good support for H5 and there are a number of clear themes emerging from these findings. First, the association of both individual pay rates / salaries to manage base pay and individual PRP with job-based employment points to an individualisation of pay for this group of employees. Individual (rather than collective) pay systems and the use of individual performance-related pay decisions are very much a feature of the strategic, experiential pay model and the association between these practices and the job-based employment group is entirely consistent with the strategic pay model. Second, it appears that market rates are a significant determinant of setting pay levels for job-based workers as well as in reviewing their pay. That the market appears to drive pay for job-based groups rather than knowledge-based employees is logical if organisations are protecting their higher value knowledge workers from the vagaries of labour market volatility or stagnation in the internal labour market model consistent with a 'make' algorithmic model (Miles and Snow, 1984; Youndt and Snell, 2004) and conversely 'buying' job-based labour directly from the market.

Lastly, alongside the individualisation of base pay, results suggest that broad-based variable pay schemes such as profit-sharing are not only widespread among organisations but are selected significantly more often for job-based employees with more transferable human capital.

However, there are a number of results that, according to the hypothesised model, should show an association between job-based employment and experiential practices but do not. These non-significant results suggest organisations do not differentiate between employment groups when selecting certain pay practices.

6.3.8   Non-significant results

Table 6.4 shows experiential pay practices for which McNemar tests showed no significant results for either job-based employment (as hypothesised) or knowledge-based employment. Figures in bold type indicate higher rates of selection and, despite lack of significance, there are actually slightly higher percentages of experiential pay practice selection for knowledge-based employees in the majority of cases. But in terms of theorised associations between job-based employment and key aspects of the experiential pay model such as broadbanded pay structures, skills-based pay, market-driven pay progression and gainsharing there is no significant difference in the use of these practices between job- and knowledge-based employee groups. This suggests that if organisations choose to use these practices then they do so for both groups.

Table 6.4 Non-significant results of McNemar tests for experiential pay practices

Pay practice	% organisations selecting for knowledge-based employees	% organisations selecting for job-based employees	McNemar test statistic $\chi^2(1)$
Broadbanding	**25.5**	21.5	3.361
Job families	18.2	**19.2**	0.129
Skills-based pay	**41.1**	40.7	0.000
Market rates (base pay progression)	**56.3**	53.3	1.255
Individual cash incentives	14.6	**17.2**	1.531

Gainsharing	**10.3**	8.3	1.250
Upper decile pay	**9.3**	6.3	3.048
Upper quartile pay	15.2	**20.9**	0.973

Note. $* = p \leq .05$, $** = p \geq .005$, bold type = higher selection rate.

6.4 Knowledge-based employment and algorithmic pay results

The results for algorithmic pay practices examined in this section are theorised to be selected by organisations for application to their knowledge-based employees (those working as managers, technical and professional staff).

6.4.1 Job evaluation (pay determination)

Whereas pay determination for job-based employment groups has been found to be driven by market rates alone, it was hypothesised that for knowledge-based employment groups, more traditional job evaluation schemes would be used alongside market rates as a way of balancing internal and external equity considerations. Of 302 participant organisations, 34.8% use job evaluation for knowledge-based groups as opposed to 25.8% for job-based workers. The McNemar test statistic was significant $\chi^2(1) = 20.485, p < .005$ demonstrating a significant difference in the proportion of non-selections between groups and supporting the hypothesis that algorithmic pay practices will be selected for knowledge-based groups.

6.4.2 Ability to pay (pay review)

It was proposed that an algorithmic pay configuration would involve closer attention to controlling the cost of pay decisions although this logic was drawn predominantly from theories relating to the connection between low-road business strategies that sought to control operational costs generally. The theoretical reason for organisations using their ability to pay as a criterion for reviewing pay of knowledge workers is less clear, but the McNemar test provides evidence that this is the case. 84.1% of organisations used ability to pay in 2011 pay reviews compared to 80.1% for job-based employees. Although seemingly a small difference, the McNemar test statistic was significant, $\chi^2(1) = 4.321, p = .038$, indicating that ability to pay as a pay review

criterion may well be related to knowledge-based employment as part of an algorithmic pay configuration.

6.4.3 Sales commission

Sales commission, an individual output-based pay scheme where employees receive a variable amount related to the value of products sold, is identified by new pay writers as a traditional, algorithmic form of incentive (Lawler, 1990). It is used by 26.8% of organisations for their knowledge-based employees compared to 20.5% for job-based employees (McNemar test statistic: $\chi^2(1) = 5.891, p = .015$). This result suggests commission is used more extensively for employees in the knowledge-based employment group.

6.4.4 High pay dispersion

According to the hypothesis, knowledge-based employment groups will conform to the algorithmic pay system with high pay dispersion evident in comparison to job-based employment groups that should have lower pay dispersion.

A paired-samples t-test was used to determine whether there was a statistically significant mean difference between the pay dispersion of the knowledge-based employee group compared to the job-based employee group. Data are mean ± standard deviation, unless otherwise stated.

As discussed in sections 6.2.1.2 and 6.2.1.3, the assumption of normality was violated as the data was positively skewed and six outliers were detected. In order to assess whether or not either the outliers and/or violation of normality were having an appreciable effect on the analysis, tests were rerun (Laerd, 2015f). In the first re-test, pay dispersion data distribution was normalised through logarithmic transformation (Laerd, 2015d). In the second re-test, the six outlier cases were removed from the data-set. Neither of the rerun tests showed markedly different results from the original in terms of statistical significance or effect size indicating that results were not appreciably affected by either the outliers or violation of normality, therefore it was decided the original paired-samples t-test results were valid and would be reported (see Appendix K for test results for normality and outliers, and paired-samples t-test results for logarithmically transformed data with outliers removed).

Results showed that organisations (N=88) had higher pay dispersion for the knowledge-based employment group with a mean difference between the highest and lowest paid of £114,803 (± £113,838). The job-based employment group had a mean difference of just £24,424 (± £31,945) between the lowest and highest paid. There was a statistically significant increase of £90,378

(95% CI, 68,018 to 112,739), $t(87) = 8.034, p < .005, d = 0.86$, classified as a large effect (Cohen, 1988; Rosenthal, 1996).

This result indicates that pay dispersion is greater within knowledge-based groups of employees providing support for the hypothesised relationship between knowledge-based work and high pay dispersion.

Results examined in this section so far indicate some reasonable support for H5; knowledge-based employment is associated with traditional pay practices such as job evaluation and sales commission alongside characteristics of algorithmic pay configurations such as high pay dispersion between the highest and lowest paid employees, and an emphasis on salary control. However, given the range of different algorithmic pay practices this is a fairly limited selection. There are many more results for algorithmic pay practices that, according to the hypothesised model, should show an association with knowledge-based employment but do not. These non-significant results suggest organisations do not differentiate between employment groups when selecting certain pay practices.

6.4.5 Non-significant results

The results in Table 6.5 show the algorithmic pay practices that have no statistically significant relationship with either knowledge-based employment or job-based employment. Figures in bold type indicate the higher rate of selection between job- and knowledge-based groups and it is interesting to note that although none are statistically significant, there are higher percentages for the job-based employment group in all but two cases, perhaps indicating that some algorithmic practices are more commonly associated with job-based employment. In addition, the p value for the difference in non-selections between employee groups for lower quartile pay positioning was just outside the acceptable cut off of 0.05 suggesting there could be a relationship between this pay practice and job-based employment. Additionally, the numbers of organisations positioning pay in the lower decile of the market and those using piece rates are very small indeed, which does not influence the validity of the test statistic, but clearly very small proportions might be more susceptible to sampling fluctuations (Hair *et al.*, 2010).

Table 9.5 Non-significant results of McNemar tests for algorithmic pay practices

Pay practice	% organisations selecting for knowledge-based employees	% organisations selecting for job-based employees	McNemar test statistic $\chi^2(1)$
Narrow-grading	17.2	**20.5**	1.761
Ability to pay (determination)	40.1	**41.7**	0.356
Service-based pay	13.3	**13.6**	0.000
Piece rates	0.7	**1.7**	0.571
Median pay	**59.3**	58.3	0.78
Lower quartile pay	4.6	**8.0**	3.375
Lower decile pay	**1.3**	1.0	0.000

Note. $* = p \leq .05$, $** = p \geq .005$, bold type = higher selection rate.

Taking these results at face value suggests that only the minority of algorithmic pay practices have any relationship with the knowledge-based employment group and, given the lack of significance found in McNemar tests for many algorithmic practices, there is only partial support for the hypothesis that organisations select algorithmic pay practices for knowledge-based employees.

Findings examined so far in this chapter have focused on significant results that have provided support for H5, or for non-significant results. The following two sections analyse significant results that are contrary to expected associations; first, where algorithmic pay practices have been found to be more commonly selected for job-based employment groups and, in the following section, where experiential pay practices have been selected for knowledge-based employment groups.

6.5 Significant results counter to hypothesised associations - Job-based employment and algorithmic pay

A number of algorithmic pay practices that were hypothesised to be associated with knowledge-based employment appear instead to be more commonly selected by organisations for their job-

based employee groups. This section will analyse these results and suggest potential explanations for these findings that are counter to the hypothesis.

6.5.1 Pay spines

Pay spines, a traditional method of managing base pay, with ascending incremental pay points and usually tied closely to job evaluation outcomes, was only selected by 5.0% of the 302 survey participants for the knowledge-based group (management and professionals) whereas 10.9% selected pay spines for the job-based employment group (other employees). A McNemar's test determined that the difference in the proportion of non-selections between employment groups was statistically significant, $\chi^2(1) = 9.031$, $p = .003$. This result is contrary to the hypothetical relationships between employment groups and pay configurations suggesting, that while organisations clearly differentiate between job- and knowledge-based employment groups in their selection of pay spines, they use them less frequently for knowledge workers.

6.5.2 Collective bargaining

Similarly, for the use of collective bargaining to determine pay levels, there was also a clear association with the job-based employment group. Whereas just 3.6% of organisations used collective bargaining for their management and professional employee group, over four times as many, 15.6%, selected this for the job-based group. The McNemar test statistic was $\chi^2(1) = 25.521$, $p < .005$ demonstrating a significant difference in the use of collective bargaining between groups.

These two results support the hypothesis that organisations select pay practices according to employment group, but they provide direct evidence against algorithmic pay practices being solely used for knowledge-based employees. The use of pay spines and collective bargaining for job-based employees suggests that some organisations may be using traditional, algorithmic methods for these employees to determine and manage base pay. However, the percentages for both pay spines and collective bargaining are small for both groups and therefore the results may be more susceptible to sampling variations (Hair *et al.,* 2010).

6.6   Significant results counter to hypothesised associations - Knowledge-based employment and experiential pay

In addition to the algorithmic pay practices found to be associated with the job-based employment group, there were a number of experiential pay practices that were found to be

more commonly used for knowledge-based employees instead of job-based employee groups. This section will analyse these results and suggest potential explanations for these findings that, similar to those in the previous section, are counter to the hypothesis.

6.6.1   Competency pay

The majority of organisations use competencies as criteria for base pay progression for the knowledge-based employee group (48.3%) as opposed to the job-based employee group (38.1%). The McNemar test statistic was significant, $\chi^2(1) = 19.149$, $p < .005$, indicating an association between this experiential pay practice and the knowledge-based employment group. The reason for this contrary finding is perhaps easy enough to explain and highlights some of the inconsistencies in the configurational classifications of make / buy, algorithmic / experiential. The sort of work knowledge workers perform requires the development and expression of competencies to a greater extent than is required for other types of work (Lawler, 1990; Lepak and Snell, 2002) and so rewarding these competencies through base pay progression would be a logical way for organisations to encourage and support these behaviours.

6.6.2   Employee value / retention (pay progression)

Many more organisations (59.9%) make base pay progression decisions based on an assessment of an employee's potential, value and / or the likelihood of retention for knowledge-based employee groups, compared to job-based employee groups (34.1%). The McNemar test statistic was significant $\chi^2(1) = 60.052$, $p < .005$. This result suggests support for the theory that the human capital of knowledge workers is of greater value to organisations than that of job-based employees (Lepak and Snell, 2002) and will be rewarded accordingly. But it does not fit with the proposition that pay for employees in the knowledge-based employment group should be aligned with a 'make' / algorithmic configuration that downplays the value of the individual.

6.6.3   Combination performance-related-pay schemes

Combination schemes, where the award depends on a mix of individual, group and/or organisational performance, are more likely to be used for knowledge-based employees (32.5%) than job-based employees (22.5%). The McNemar statistic was $\chi^2(1) = 18.283$, $p < .005$. Again, this result indicates that organisations use experiential pay practices for employees working in the knowledge-based employment group rather than the job-based group as hypothesised.

6.6.4 Individual bonus

Individual bonuses are also associated with knowledge-based employment, with 44.4% of organisations selecting them for knowledge-based employees compared to just 28.5% for job-based employees (McNemar: $\chi^2(1) = 35.629, p < .005$). Both this practice and the combination performance-related scheme result above suggest that organisations seek to share the risk of performance with this group of employees to a greater extent than with job-based groups. On the one hand it makes sense that managers, technical and professional staff who can influence organisational performance more than those in roles that have less direct influence (Lepak and Snell, 2002) will share the both the benefits of success and risks of poor performance to a higher degree than their colleagues. However, pay variability is a key tenet of the strategic, experiential pay model and is not consistent with the low-risk sharing, algorithmic pay configuration. This result is contrary to the theory that these practices are used more commonly for knowledge-based workers.

6.6.5 Goal-sharing

Another key proposition of the strategic pay model is that group-based incentives, as opposed to individual schemes alone, would be more effective in encouraging creative collaborative behaviours that improve organisational performance (Lawler, 1990). As such, group-based performance-related reward schemes such as goal-sharing, where group bonuses are paid based on group/sub-unit/team achievement of specific group performance objectives, are hypothesised to be part of the experiential framework of pay practices utilised for job-based employees. However, 24.5% of organisations use goal-sharing schemes for knowledge-based employee groups compared to 17.6% for job-based groups with a significant McNemar statistic of $\chi^2(1) = 13.793, p < .005$. Once again, this result suggests that some experiential pay practices are being used more commonly for knowledge-based workers rather than job-based employees.

6.6.6 Extensive employee coverage of PRR schemes

A Wilcoxon sign-rank test was used to determine if there was a statistically significant difference in median proportions of each employee group covered by performance-related reward schemes. Higher proportions of employees in variable, performance-based schemes would be expected in experiential pay configurations where organisations are sharing the benefit and/or risk of organisational success with employees. According to the hypothesis, it would be

expected that the job-based employee group would have a higher median proportion of employees covered by such schemes.

Of the 220 participants responding to this question, there was no difference between proportions of knowledge-based employees and proportions of job-based employees being covered by variable pay schemes in 109 cases. In 25 cases the proportion of employee coverage was higher for job-based employees and in 86 cases it was higher for knowledge-based employees. The Wilcoxon signed-rank test determined that there was a statistically significant median difference in variable pay scheme coverage between the knowledge-based employment group (100%) and the job-based group (80%), $z = -4.626$, $p < .005$. This result indicates that there are greater proportions of knowledge-based employees included in variable performance-based reward schemes than job-based employees and is consistent with findings above for the greater use of combination, bonus and goal-sharing schemes among knowledge-based employee groups.

From the results outlined above it is clear that organisations do appear to be choosing experiential pay practices for employees working in the knowledge-based employment group when it comes to making choices about the criteria for progressing base pay through pay grades / bands and in variable pay schemes linked to performance. This finding is in direct opposition to the H5 proposition that experiential pay practices will be selected for job-based employee groups rather than knowledge-based groups. In explaining why these particular experiential pay practices are being used for knowledge-based employees, there appear to be some fairly logical arguments as to why organisations might choose to treat this group of employees differently. Using competencies and an assessment of employee potential / value to progress base pay increments for managers and technical / professional staff is very much in line with the view of these groups as valuable core employees who possess unique human capital attributes which the organisation wishes to encourage and retain (Lepak and Snell, 2002). Given that organisations may assume this unique human capital will contribute directly to organisational strategic objectives, sharing the financial benefits (or the risk) with employees who have the most influence on organisational performance is also a good way of incentivising and retaining them. Therefore, using bonuses, group and combination performance schemes may be expected for this group. The finding that greater proportions of knowledge-based employees are covered by variable pay schemes also suggests these experiential pay practices are targeted at this group. Taken together then, there has to be a question over whether these results indicate that the proposed experiential / algorithmic pay configurations are adequately capturing the nuances of organisational decision-making on pay for different groups of employees.

6.7   Summary of results and key findings

The full list of results of tests conducted to establish support for hypothesised associations between pay configurations and employment group are listed in Tables 6.6 to 6.9. There are some key themes that emerge from considering the results as a whole. First, while there are results for certain pay practices that support the hypothesis, overall there is little support for the proposition that organisations select an experiential pay configuration for job-based employment group and an algorithmic pay configuration for knowledge-based employment group. Tables 6.6, 6.7, 6.8 and 6.9 show the nine practices that do conform to the hypothetical model (indicated by a 'Y' in the final column). Individualised base pay management and IPRP, market-driven pay setting and reviews and profit-sharing are selected in significantly greater proportions for employees working in the job-based employment group whereas job evaluation, commission, high pay dispersion between the highest and lowest paid, and pay reviews based on the organisation's ability to pay are selected in greater proportions for employees in the knowledge-based employment group. In pay practice selection for job-based groups there does appear to be a somewhat co-ordinated approach; there are practices that emphasise both individualisation and market-based pay for example but also those that give less emphasis to variable pay and are more traditional (collective bargaining and pay spines). It is more difficult to discern a coherent pattern in the pay practices selected for knowledge-based workers, but there appears to be an emphasis on internal equity, rewarding individual value and behaviours and greater pay variability. Overall though, there is very little evidence that organisations select only algorithmic practices for their managers, technical and professional staff and only experiential practices for their administrative, trades, production, sales and service staff.

Table6.6 Summary of results for McNemar tests for differences in experiential pay practice selection according to employment group

Pay policy area	Experiential pay practice	Organisations selecting for employment groups (N=302)		$\chi^2(1)$	H5 support
Base pay management / structures	Broadbanding	Both	53	3.361	N
		Job-based	12		
		Knowledge-based	24		
		Neither	213		
	Job families	Both	41	0.129	N
		Job-based	17		
		Knowledge-based	14		
		Neither	230		
	Individual base pay	Both	134	28.986**	Y
		Job-based	60		
		Knowledge-based	13		
		Neither	95		
Pay level determination	Market rates	Both	197	11.429**	Y
		Job-based	28		
		Knowledge-based	7		
		Neither	70		
Base pay progression criteria	Individual performance	Both	43	55.592**	Y
		Job-based	71		
		Knowledge-based	5		
		Neither	183		
	Competencies	Both	107	19.149**	N
		Job-based	8		
		Knowledge-based	39		
		Neither	148		
	Skills	Both	96	0.000	N
		Job-based	27		
		Knowledge-based	28		
		Neither	151		
	Market rates	Both	140	1.255	N
		Job-based	21		
		Knowledge-based	30		
		Neither	111		
Pay review factors	Employee value / retention	Both	99	60.052**	N
		Job-based	4		
		Knowledge-based	73		
		Neither	126		

Pay policy area	Experiential pay practice	Organisations selecting for employment groups (N=302)		$\chi^2(1)$	H5 support
	Movement in market rates	Both	180	26.281**	Y
		Job-based	31		
		Knowledge-based	1		
		Neither	90		
	Recruitment & retention	Both	184	12.250**	Y
		Job-based	29		
		Knowledge-based	7		
		Neither	82		
Individual variable pay	Combination schemes	Both	60	18.283**	N
		Job-based	8		
		Knowledge-based	38		
		Neither	196		
	Individual bonus	Both	79	35.629**	N
		Job-based	7		
		Knowledge-based	55		
		Neither	161		
	Individual cash incentives	Both	32	1.531	N
		Job-based	20		
		Knowledge-based	12		
		Neither	238		
	Merit pay rises	Both	178	14.700**	Y
		Job-based	26		
		Knowledge-based	4		
		Neither	94		
Group PRR	Gainsharing	Both	18	1.250	N
		Job-based	7		
		Knowledge-based	13		
		Neither	263		
	Goal-sharing	Both	49	13.793**	N
		Job-based	4		
		Knowledge-based	25		
		Neither	224		
	Profit-sharing	Both	233	4.654*	Y
		Job-based	19		
		Knowledge-based	7		
		Neither	43		
Market positioning of pay	Upper decile market pay	Both	13	3.048	N
		Job-based	6		
		Knowledge-based	15		
		Neither	268		

Pay policy area	Experiential pay practice	Organisations selecting for employment groups (N=302)		$\chi^2(1)$	H5 support
	Upper quartile market pay	Both	24	0.973	N
		Job-based	15		
		Knowledge-based	22		
		Neither	241		

Note. $* = p \leq .05$, $** = p \geq .005$; χ^2 = chi square statistic, (1) = degrees of freedom, N = no, Y = yes.

Table6.7 Summary of results of McNemar tests for differences in algorithmic pay practice selection according to employment group.

Pay policy area	Algorithmic pay practices	Organisations selecting for each employment group (N=302)		$\chi^2(1)$	H5 support
Base pay management / structures	Narrow-grading	Both	34	1.761	N
		Job-based	28		
		Knowledge-based	18		
		Neither	222		
	Pay spines	Both	8	9.031*	N
		Job-based	25		
		Knowledge-based	7		
		Neither	262		
Pay level determination	Job evaluation	Both	75	20.485**	Y
		Job-based	3		
		Knowledge-based	30		
		Neither	194		
	Collective bargaining	Both	5	25.521**	N
		Job-based	42		
		Knowledge-based	6		
		Neither	249		
	Ability to pay	Both	101	0.356	N
		Job-based	25		
		Knowledge-based	20		
		Neither	156		
Base pay progression criteria	Length of service	Both	23	0.000	N
		Job-based	18		
		Knowledge-based	17		
		Neither	244		
Pay review factors	Ability to pay	Both	234	4.321*	Y
		Job-based	8		
		Knowledge-based	20		
		Neither	40		
Individual variable pay	Piece rates	Both	0	0.571	N
		Job-based	5		
		Knowledge-based	2		
		Neither	295		
	Sales commission	Both	44	5.891*	Y
		Job-based	18		
		Knowledge-based	37		
		Neither	203		

Pay policy area	Algorithmic pay practices	Organisations selecting for each employment group (N=302)		$\chi^2(1)$	H5 support
Market positioning of pay	Median market pay	Both	152	0.078	N
		Job-based	24		
		Knowledge-based	27		
		Neither	99		
	Lower quartile market pay	Both	7	3.375	N
		Job-based	17		
		Knowledge-based	7		
		Neither	271		
	Lower decile market pay	Both	2	0.000	N
		Job-based	1		
		Knowledge-based	2		
		Neither	297		

Note. $* = p \leq .05$, $** = p \geq .005$, N = no, Y = yes.

Table6.8 Summary of results of paired-samples t-test

	Job-based employment group		Knowledge-based employment group				H5 support
	M	*SD*	*M*	*SD*	*t*	*df*	
Pay dispersion (£)	24,424	31,945	114,803	113,838	8.034**	87	Y

Note. Pay dispersion measured as £ range between highest and lowest salaries within each group, *M* = Mean, *SD* = Standard Deviation, *t* = t-test value, * = $p \leq .05$, ** = $p \geq .005$, N = no, Y = yes

Table6.9 Summary of results of Wilcoxon signed rank test

	Job-based employment group	Knowledge-based employment group		H5 support
	Mdn	*Mdn*	*z*	
Employees covered by variable pay schemes (%)	80	100	-4.626**	N

Note. *Mdn* = Median, *z* = z value, * = $p \leq .05$, ** = $p \geq .005$, N = no, Y = yes

Another finding arising from this set of results is the clear indication that when using some pay practices, organisations do not treat employee groups markedly differently. The substantial number of non-significant results suggests that it is often the case that organisations selecting a pay practice will use it for employees regardless of which employment group they are working in. This appears to be true for some 'core' algorithmic practices such as narrow-grading, piece rates and service-based pay as well as for 'core' experiential practices such as broadbanding, skills-based pay and gainsharing. It is also the case for market positioning of pay levels across the board; whether organisations choose to position their pay levels in the upper or lower quartile, upper or lower decile or at the median rate, if they do so for one group, they do so for both. This may well be down to a number of factors. A commitment to narrow-grading or service-based progression could be a legacy issue; it is what the organisation has always done and is retained either because it works well or there is no stomach for reform. Adoption of

'newer' practices such as broadbanding, skills-based pay or gainsharing may well be a firm statement about doing things differently. In both cases these practices seem to be 'all or nothing' policy decisions that imply wholesale implementation. Similarly, market positioning of pay level appears to be consistently applied across employment groups implying an organisation-wide policy perhaps in line with espoused values. Another explanation might relate to the size of organisation; presumably organisations with fewer employees have no requirement for narrow-grading for example and so there are practical reasons for non-selection across both groups of workers. Regardless of the reasons however, the finding that organisations do not differentiate employee groups in their use of some pay practices further undermines the proposition that pay will be configured algorithmically or experientially according to employment group.

The third finding from these results is that, although the algorithmic / experiential pattern does not appear to be in evidence, in the majority of the tests conducted there was a significant difference in pay practice selection according to employment group. All pay practices with significant results are detailed in Table 6.10 according to employment group. The breakdown shows a mix of pay practices from both algorithmic and experiential configurations being applied for both employment groups. There are results that are wholly contrary to expected selections based on the hypothesis but that nonetheless make logical sense; pay spines for job-based employees and competencies for knowledge-based employees are two notable examples (see sections 6.5.1 and 6.6.1).

Table6.10 Results for pay practices associated with employment groups

	Job-based employment group	Knowledge-based employment group
Base pay management / structures	Pay spines	
	Individual base pay arrangements	
Pay level determination	Market rates	Market rates with job evaluation
	Collective bargaining	
Base pay progression criteria	Individual PRP	Competency pay
		Employee value / retention
Pay review factors	Movement in market rates	Ability to pay
	Recruitment and retention	
Individual PRR	Merit pay rises	Individual bonus
		Sales commission
		Combination PRR schemes
Group PRR	Profit-sharing	Goal-sharing
Variable pay coverage	Lower employee coverage	Higher employee coverage
Pay dispersion	Lower pay dispersion	Higher pay dispersion

This chapter has tested the proposition that pay practice selection is dependent on workforce employment groups and, in summary, organisations do appear to select many pay practices according to the knowledge-based or job-based employment group of their employees.

However, there is no compelling evidence for associations between employment groups and experiential or algorithmic pay configurations.

The next chapter brings together the various elements of the strategic pay model illustrated in Figure 6.1. Chapter 7 reports the results of tests assessing the proposition that strategic pay practices have an effect on HR outcomes and furthermore that configurations of pay practices with strategy, employment group, organisation size and industry sector have an enhanced effect on HR performance.

Chapter 7: The effect of strategic pay configurations on HR performance outcomes

7.1   Chapter introduction

This final results chapter reports and analyses results and findings associated with tests of the hypothesised relationship between strategic pay practices and human resource performance outcomes. As in previous results chapters, this one opens with an explanation of the statistical procedures undertaken to test the hypothetical relationships highlighted in Figure 7.1. This final phase of the strategic pay model proposes that organisations will 'bundle' pay practices and these bundles will have different effects on HR outcomes. These relationships have been framed as Hypotheses 1 and 2:

H1. HR performance outcomes will be positively related to experiential pay practices and negatively related to algorithmic pay practices.

H2. Organisations will bundle strategic pay practices and bundling will have an additive effect on HR performance outcomes.

The following four hypotheses propose that aligning pay bundles with business strategy (H4), employment group (H6), industry sector (H8) and organisation size (H10) will have a further effect on the relationship between pay and HR performance outcomes:

H4. Alignment of strategic orientation and pay configuration will have a positive effect on HR performance outcomes.

H6. Alignment of employment group and pay configuration will have a positive effect on HR performance outcomes.

H8.   Alignment of industry sector and pay configuration will have a positive effect on HR performance outcomes.

H10. Alignment of organisation size and pay configuration will have a positive effect on HR performance outcomes.

HR performance outcomes have been operationalised as a scale score based on seven distinct items relating to employee relations climate, labour productivity compared with competitors, labour productivity compared to three years previously, employee absenteeism, employee attraction, employee retention and pay discontent (see Chapter 4, for full details). The hypothetical strategic pay configurations, 'experiential' and 'algorithmic' are delineated in Table 7.1 below.
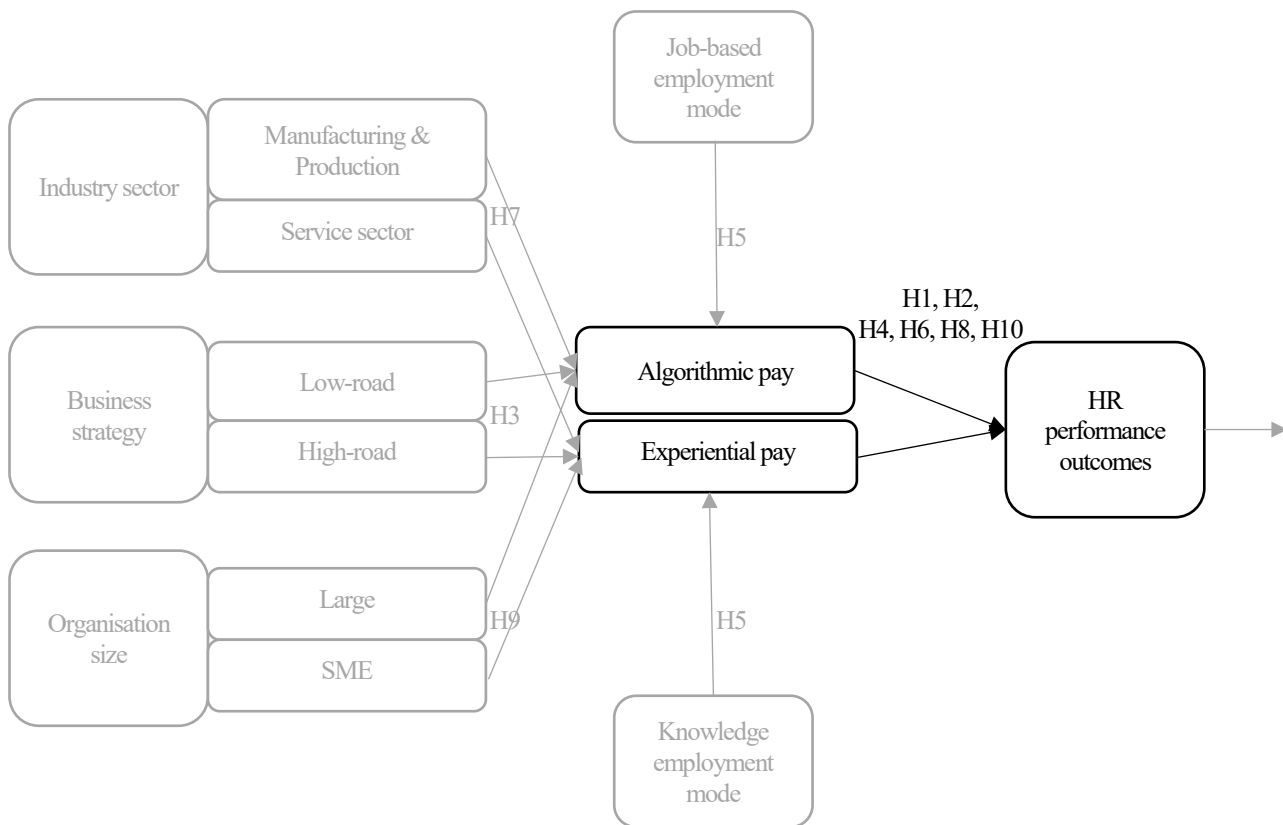
Figure 7.1 Hypothesised associations between strategic pay configurations and HR performance outcomes.

Table7.1 Experiential and algorithmic pay configurations

Experiential pay	Algorithmic pay
Broadbanding or job family structures	Narrow-graded pay structures or pay spines
Low vertical pay dispersion	High vertical pay dispersion
Above market pay (upper quartile or upper decile of market)	At or below market pay (median, lower quartile or lower decile of market)
	Organisation's 'ability to pay' for pay setting and reviews
Market rates to determine pay *	Job evaluation to determine pay*
Market rates to progress pay	
Movement in market rates, and recruitment and retention as pay review factors	
Performance, skills, competencies or employee value / retention as criteria for pay progression	Length of service as a criterion for pay progression
Individual base pay rates / salaries	Collective bargaining
Combination (org./group/indiv.) performance pay schemes	Piece rates
	Sales commission
Individual bonus / cash incentives	
Merit pay	
Gainsharing	
Goal-sharing	
Profit-sharing	
Long-term pay (share schemes / LTIs)	No long-term pay (no share schemes / LTIs)
Open pay	Pay secrecy

Notes. 1) * Q6 of the CIPD Reward Management Survey (Appendix B) asked which factor is most important in determining pay. CIPD questions were: 'market rates (with JE)' or 'market rates (without JE)' therefore when testing for the variable 'job evaluation' 'market rates (with JE)' was used.

2) The data for pay practice 'employee coverage of PRR schemes' was collected separately for employment groups and therefore was not suitable for testing in this testing phase.

3) The data for pay practice 'PRR schemes' was not included as a separate practice in this testing phase because, on the questionnaire it acted as a 'gateway' question to further questions on types of PRR scheme and could have adversely effected the cluster analysis results.

7.2 Data analysis

In order to test the hypotheses detailed in the previous section, three different sets of statistical tests were performed. First, linear regression analysis was used to test the universalistic proposition, H1, that there would be relationships between pay practices and HR performance outcomes. Second, in order to test the first part of H2 that organisations will 'bundle' pay practices, a cluster analysis was performed to identify pay bundles. Using the results of the cluster analysis, the final set of statistical tests used hierarchical multiple regression analysis to test the second part of H2 that bundles of pay will have additive effects of HR performance outcomes. These tests also assessed whether, when configured with pay bundles, organisational contingencies, strategic orientation (H4), employment group (H6), industry sector (H8) and organisation size (H10) would have further effects on HR performance. These tests were chosen for suitability in terms of the study design and types of data collected. Each type of test and associated assumptions are considered below.

7.2.1 Linear regression analysis

Linear regression analysis (also referred to as simple linear regression) was used to test H1 - HR performance outcomes will be positively related to experiential pay practices and negatively related to algorithmic pay practices. In this series of tests, the HR outcomes score was the dependent variable in all cases while each of the pay practices in Table 7.1 were the independent variables tested one by one. All pay practices were dichotomous (selected / not selected) except for pay secrecy and pay dispersion which were both continuous scale data. Pay data was for either or both employment groups. If H1 was true it would be expected that the HR performance outcomes score would significantly increase in cases where experiential pay practices were present and decrease where algorithmic pay practices were used.

7.2.2 Cluster analysis

To test the first part of H2, that organisations will 'bundle' pay practices, a cluster analysis was performed. This was done as an alternative to straightforward adoption of the experiential / algorithmic pay configurations because empirical evidence from data analysis reported in previous chapters indicated potential alternative combinations (see Tables 5.26 and 6.10). Cluster analysis is an exploratory multivariate method which classifies cases or variables into a number of different groups so that similar objects are placed in the same group (Cornish, 2007).

Hair *et al.* (2010) stress the importance of underpinning theoretical connections between the objects being grouped, in this case pay practices. This is because cluster analysis has no mechanism for differentiating the relevance of connections (Cornish, 2007). There is good theoretical support for pay practices being used in bundles (Prince *et al.*, 2016) and the strategic pay framework developed *a priori* provides a sound argument for organisations selecting patterns of pay practices based on encouraging role behaviours aligned to support of organisational contingencies. Because cluster analysis is an exploratory technique it does not specify the number of clusters to be formed (Hair *et al.*, 2010).

In deciding the procedures for cluster analysis, sample size, the binary nature of the data and the objective of seeking connections between variables (rather than cases) determined which options were selected. Pay practices were entered into the cluster analysis as binary variables. The procedure followed for forming clusters was hierarchical with an agglomerative method in which each observation begins as a single cluster and is successively joined to the next most similar cluster, forming progressively fewer clusters (Ibid.; Norusis, 2012). The clustering algorithm used was Ward's method (with squared Euclidean distance) where the mean for each cluster is calculated and then the distance to the next cluster mean is calculated. At each step of the procedure, the two clusters that are joined to form a new cluster are those that result in the smallest increase in the overall sum of the squared within-cluster distances (Norusis, 2012). For the pay practices being clustered in this analysis the coefficients used as measures of similarity relate to their selection (1) or non-selection (0) by organisations responding to the survey. This means, in short, that the cluster analysis is seeking to group pay practices with similar selection profiles. The results of cluster analysis will therefore group together pay practices with similar rates of selection, but the analysis cannot determine if the same pay practices are being selected by the same organisations which is a clear limitation. This means that a) the 'bundles' identified by the analysis must have clear theoretical support in terms of their associations and b) the bundles can only be a suggested pattern of pay practice usage.

7.2.3 Hierarchical multiple regression analyses

Hierarchical multiple regression analysis is a form of linear regression that allows understanding of the unique contribution of different independent variables in predicting the dependent variable (Hair *et al.*, 2010). In this study, hierarchical multiple regression analysis was used to test whether the bundles of pay practices emerging from the cluster analysis had an effect on HR outcomes and if strategy, size and sector had an additive effect on this relationship. For each

pay bundle identified by cluster analysis, two hierarchical regression analyses were run; one using pay practices for knowledge-based employees and one for job-based employees. In both cases the HR performance outcome scale was the dependent variable. First, pay practice bundles were entered into the multiple regression analysis to test the relationship between bundled pay and HR outcomes (H2); next, predictor variables size and sector were added to the model to test their effect on HR outcomes in addition to pay practices (H8 and H10); and finally, the two strategy scores, high-road and low-road, were entered into the model to test their additive effect on HR outcomes in combination with the pay bundles, size and sector (H4). H6, that pay practices aligned with employment group will have a positive effect on HR performance outcomes, was tested by comparing results for each different pay bundle for the two employment groups, knowledge-based and job-based.

7.2.4 Assumptions

Both simple linear regression and hierarchical multiple regression analyses have certain data requirements that must be met in order to gain accurate and valid results. Table 7.2 summarises these assumptions and demonstrates how the data were tested in this study to ensure these requirements were met. Cluster analysis does not have the same assumption requirements as the regression analyses, but in the following sections, where relevant, procedures for cluster analysis are referred to.

Table 7.2 Summary of data assumptions for linear regression and hierarchical multiple regression.

Statistical tests	Assumption	How met / tested
Linear regression	One IV measured at the continuous or binary level	Pay practices*
Multiple hierarchical regression	One or more IVs measured at the continuous or binary level	Pay practices*, sector*, size*, business strategy scores
	One DV measured at the continuous level	HR outcomes score
	Independence of observations	Study design Durbin-Watson test
	Linearity	Scatterplot of studentised residuals by unstandardised predicted values[+]
	Homoscedasticity	Scatterplot of studentised residuals by unstandardised predicted values[+]
	Normal distribution	Histogram, Normal P-P Plot, Normal Q-Q Plot, z-score for skewness
	No significant outliers	Box plot, residual statistics / case diagnostics

Note. *binary variables coded as dummy variables '0' or '1', [+]continuous variables only

7.2.4.1   Data type

For the simple linear regression and hierarchical multiple regression tests, continuous independent variables such as pay secrecy, pay dispersion, high-road business strategy and low-road business strategy met the required data type following coding procedures described in Chapter 4. Similarly, binary independent variables were suitable for regression as they had all been previously coded as 'dummy' variables i.e. with a '0' or '1' coding so that a difference in the HR outcomes score could be discerned from a one-unit change (0 to 1) in the independent variable(s). In all of the regression tests the dependent variable was the continuous HR outcomes score scale.

Only binary ('1' selected; '0' not selected) variables were included in the cluster analysis as it is desirable for cluster analysis data to be in standard format (Hair *et al*., 2010). For pay dispersion

and pay secrecy this meant transforming the data from scale to categorical data to match the other dichotomous variables. This was done for each scale by assigning '1' to all values ≥ mean and '0' for all values < mean.

Therefore, all assumptions regarding data types for independent and dependent variables in regression analyses and cluster analysis were met.

7.2.4.2 Independence of observations

For the regression tests, there was independence of observations built into the study design and data collection / processing. For example, an organisation could select or not select narrow-grading, but not both; and they could be categorised as large or SME, but not both. However, in order to ensure there was no violation of independence of observations due to autocorrelation (correlation arising from data processing procedures) the Durbin-Watson test was used. The Durbin-Watson statistic should be approximately 2.0 for observations to be independent (Laerd, 2015c) and this was the case for all of the regression tests reported in this chapter.

Cluster analysis and the final groupings formed by the analysis can be influenced by the ordering of variables in the procedure. Therefore, the procedure was run a second and third time with different ordering, achieved by randomised selection of variables, to validate the stability of the cluster groupings (Hair *et al*., 2010).

7.2.4.3 Linearity

Linearity for both the simple regression and hierarchical multiple regression analyses was assessed by scatterplots of studentised residuals against unstandardised predicted values. This was done both collectively, in that the independent variables were linearly related to the dependent variable; and individually, that each continuous independent variable was linearly related to the dependent variable (Laerd, 2015c) (see Appendix M).

7.2.4.4 Absence of multicollinearity

The presence and extent of multicollinearity was ascertained through examination of Tolerance/variation inflation factors (VIF) values resulting from a regression analyses where each continuous independent variable (high-road strategy and low-road strategy) were treated as a dependent variable. In both cases only extremely weak multicollinearity was detected; all tolerance values were > 0.1 with corresponding VIF values of < 10.0 (Appendix N) and therefore the assumption of absence of multicollinearity was met.

7.2.4.5 Homoscedasticity

The assumption of homoscedasticity, that the residuals are equal for all values of the predicted dependent variable, was assessed by inspection of the same scatterplot of studentised residuals by unstandardised predicted values used to assess linearity. Scatterplots of all tests indicated a fairly constant spread of data points and therefore homoscedasticity (Laerd, 2015c) (Appendix M).

7.2.4.6 Normal distribution

Normality of data distribution in the independent variables is a requirement of linear regression analysis (Hair *et al.*, 2010). Normality of the HR outcomes scale was initially assessed by Normal Q-Q plot and z-score for skewness ± 2.58 (Laerd, 2015d) for the whole scale (i.e. prior to running any statistical tests). Results indicated that the HR outcomes scale was not normally distributed; analysis of skewness showed that the scale was negatively skewed ($z = -6.45$). It was therefore decided to transform the HR outcomes scale data using 'reflect and logarithmic' transformation (Laerd, 2015d). The transformed data (referred to as the HR log scale) met all assumptions of normality (z score for skewness $= 2.38$) (Appendix O). Subsequently, normality of distribution for each simple linear regression test and each hierarchical multiple regression test was assessed by inspection of histogram with super-imposed normal distribution curve and Normal P-P plot and in all cases the HR log scale data was approximately normally distributed (see Appendices P and Q).

7.2.4.7 Outliers

Box-plot analysis of the HR outcomes score scale showed there were nine outliers that could influence the outcomes of linear and hierarchical multiple regression tests, although there were no extreme outliers (see Appendix O). The logarithmic transformation of the scale undertaken to correct the data skewness also eliminated the nine outliers. Outlier cases within each test were identified using studentised residuals $> \pm 3$ SD (Hair *et al.*, 2010). No outliers were evident in simple linear regression tests with the HR log scales as dependent variable. One outlier was identified in two hierarchical multiple regression tests; it was inspected but retained in the analysis.

For regression tests, further unusual points were tested for. There were no high leverage points (i.e. data points with leverage values > 0.2) and no influential points (i.e. data points with Cook's Distance values > 1.0) (Laerd, 2015c).

No outlier screening for cluster analysis was undertaken because of the binary nature of the data there were no 'normal distributions' to be calculated for each variable.

7.2.5   Reporting test results

Comparing regression test results for the original HR outcomes score scale and HR log scale there were only minor differences in significance levels, R^2 values and F values indicating that neither the data distribution (discussed in 10.2.4.6) nor the outliers (10.2.4.7) had a substantive influence on results. It was therefore decided to report both sets of results for the sake of clarity, particularly because the direction of logarithmic data is reversed so, counter-intuitively, negative values actually indicate an increase in the unstandardised B coefficient (HR score).

7.3   Pay practices and HR outcomes

Results of simple linear regression analyses with statistical significance are reported in this section; first for experiential pay practices, followed by those for algorithmic practices.

7.3.1   Experiential pay

7.3.1.1   Competency pay

The selection of competency pay significantly predicted the HR outcome score (HR log), $F(1, 297) = 9.48$, $p \leq .005$ and accounted for 3.1% of the variation in HR outcomes, with adjusted $R^2 = 2.8\%$. However, this is a very small effect size based on Cohen's (1988) and Rosenthal's (1996) classifications.   Using competencies as a criterion for pay progression positively increased HR performance outcomes by .140 (-.037 in HR log scale). Despite the small effect, this significant result supports the hypothetical positive relationship between a strategic pay practice and positive HR outcomes.

7.3.1.2   Skills-based pay

Similarly, the selection of skills as pay progression criteria base pay significantly predicted HR performance outcome score (HR log), $F(1, 297) = 4.01$, $p \leq .05$ and accounted for 1.3% of the variation in HR performance outcomes, with adjusted $R^2 = 1.0\%$, again another very small effect size. Nevertheless, using skills-based pay progression positively increased HR outcome scores by .087 (-.024 in HR log scale).

7.3.1.3   Merit pay

Results for merit pay, show a statistically significant prediction of HR performance outcome score (HR log), $F(1, 297) = 5.10$, $p \leq .05$. Merit pay accounted for 1.7% of the variation in HR

outcomes, with adjusted R^2 = 1.4% and improved HR outcomes score by .096 (-.028 on HR log scale).

7.3.1.4 Profit-sharing

Regression results for the practice of profit-sharing also show a statistically significant positive relationship with HR outcomes (HR log) $F(1, 297)$ = 7.34, p ≤ .05. Profit-sharing accounted for 2.4% of the variation in HR outcomes, with adjusted R^2 = 2.1% and improved HR outcomes score by .141 (-.039 in HR log scale).

7.3.1.5 Recruitment and retention issues (pay review)

Finally, among experiential pay practices, using recruitment and retention as a pay review factor has a statistically significant association with HR outcomes (HR log) $F(1, 297)$ = 14.82, p ≤ .005 and accounted for 4.8% of the variation in HR outcomes, with adjusted R^2 = 4.4%. Determining pay reviews using recruitment and retention issues reduced HR outcomes score by -.183 (.047 in HR log scale).

Of all the linear regression results for separate experiential pay practices, pay reviews based on recruitment and retention needs is the only one that has a negative relationship with HR outcomes and does not support H1. Results from the other four experiential pay practices reported in this section all have small but positive effects on HR performance outcomes. An initial assessment of these results appears to indicate therefore that some experiential practices do have positive effects but not all of them; providing generally good support H1.

7.3.2 Algorithmic pay

7.3.2.1 Ability to pay (pay determination)

Using the organisation's ability to pay as a criterion for base pay determination also statistically significantly predicted HR performance outcomes score (HR log), $F(1, 297)$ = 12.66, p ≤ .005 and accounted for 4.1% of the variation in HR outcomes (adjusted R^2 = 3.8%). Basing pay on ability to pay decreased HR outcomes score by -.155 (.042 on HR log scale) providing further support for H1.

7.3.2.2 Lower quartile and lower decile pay

Positioning pay in the lower quartile and lower decile both significantly predicted HR outcomes scores (HR log); lower quartile, $F(1, 297)$ = 14.61, p ≤ .005; lower decile, $F(1, 297)$ = 4.10, p ≤ .05. Lower quartile pay positioning accounted for 4.7% of the variation in HR outcomes (adjusted R^2 = 4.4%) while lower decile pay positioning accounted for 1.4% of the variation in

HR outcomes (adjusted R^2 = 1.0%). Low pay positioning decreased HR outcome scores: by -.282 for lower quartile (.074 on HR log scale) and by -.397 for lower decile (.095 on HR log scale). These two results clearly support the H1 proposition that algorithmic pay practices will have an adverse effect on HR outcomes.

7.3.2.3   Pay secrecy

Finally, in this section, pay secrecy significantly predicted HR outcomes score (HR log), $F(1, 286)$ = 5.60, p ≤ .05 and accounted for 1.9% of the variation in HR outcomes (adjusted R^2 = 1.6%). For every point increase on the 5-point pay secrecy scale, HR outcomes scores decreased by .051 (.014 on HR log scale).

The results outlined in this section have provided reasonable support for H1, but these must be considered alongside the large number of non-significant results finding many experiential and algorithmic pay practices had no significant effect on HR outcomes (see Appendix R). Indeed, the majority of pay practices do not appear, at least individually, to have a significant effect on HR performance which could suggest that the role of pay in influencing employee performance has been over-stated.

Moreover, H1, and the resultant analysis, are limited to examining the association between specific pay practices and HR outcomes whereas the assumption evident in much of the strategic pay literature is that pay practices will be used in conjunction with one another in 'bundles' of practice. This is the proposition of H2, that organisations will bundle strategic pay practices and this bundling will have an additive effect on HR performance outcomes.

7.4   Identifying pay bundles

In order to identify potential bundles a cluster analysis was run with dichotomous (selected / not selected) pay practice variables and the 302 respondent cases. Because of the large amount of missing pay dispersion data, this variable was excluded from the final cluster analysis which therefore contained 34 pay practice variables. Table 7.3 shows part of the agglomeration schedule resulting from the analysis. In determining the final number of clusters in the model, Hair *et al.* (2010) recommend a cut-off point before the percentage increase in agglomeration coefficient shows a marked increase. This is because the coefficient is a measure of similarity between variables with the largest numbers indicating greater dissimilarity. Table 7.3 shows the average proportionate increase for the final 10 stages in the procedure (stages 24 to 33) is 8.3% and this served as a rough indicator in determining what constituted a marked increase in

dissimilarity (Ibid.). On this basis, a three-cluster solution which occurred at the stage before a 10.1% increase in heterogeneity appears to be a sensible cluster definition point (circled, Table 7.3).

Table7.3 Agglomeration schedule for hierarchical cluster analysis with Ward's method of clustering and squared Euclidean distance measure

Stage	Cluster 1*	Combined with cluster	Coefficient** (Similarity measure)	Difference from previous coefficient	Proportion increase in heterogeneity	No. of clusters after combining
24	10	14	1048.9	64.7	6.6%	10
25	7	18	1114.4	65.5	6.2%	9
26	19	22	1185.8	71.4	6.4%	8
27	2	31	1261.0	75.2	6.3%	7
28	7	19	1338.7	77.7	6.2%	6
29	5	10	1426.5	87.8	6.6%	5
30	2	7	1518.7	92.2	6.5%	4
31	5	11	1629.1	110.4	7.3%	(3)
32	1	2	1793.1	**164.0**	**10.1%**	2
33	1	5	2167.5	374.4	20.9%	1

Note. *each number indicates a specific pay practice, **rounded to nearest 0.1, bold type signifies the stage at which a marked increase in dissimilarity, circle signifies the cluster solution number.

Hair *et al.* (2010) emphasise the importance of a conceptual rationale for the clustering of groups in the analysis. At a theoretical level, this study has developed a framework of two distinct pay bundles, experiential and algorithmic, although empirical work undertaken thus far has suggested there may be alternative groupings (see Table 5.26, Chapter 5 and Table 6.10, Chapter

6). This provides a solid foundation for examination of the three-cluster solution resulting from the cluster analysis. The diagrammatic representation of the cluster formations shows some familiar groupings despite the formation of three rather than two clusters (Figure 7.2).

1. Traditional pay

- 30. Upper quartile pay
- 3. Job families
- 2. Narrow-grading
- 4. Pay spines
- 29. Upper decile pay
- 25. Gain-sharing
- 20. Piece rates
- 33. Lower decile pay
- 8. Collective bargaining
- 13. Service-based pay
- 32. Lower quartile pay

3. Individual / cost-driven pay

- 34. Pay secrecy
- 10. Indiv. PRP
- 14. Market rates (progression)
- 12. Skills-based pay
- 5. Indiv. base pay
- 16. Ability to pay (review)
- 11. Compe-tency pay
- 9. Ability to pay (determ.)
- 15. Employee value / retention (review)

2. Market / flexible pay

- 18. Recruit & retain (review)
- 26. Goal-sharing
- 22. Merit pay
- 7. Market rates (determ.)
- 19. Combi PRP
- 23. Indiv. bonus
- 6. Job evaluation
- 1. Broad-banding
- 21. Comm-ission
- 24. Indiv. cash incentives
- 17. Market rates (review)
- 28. Shares / LTIs
- 31. Median pay
- 27. Profit-sharing

Figure 7.2 Three pay practice cluster solution resulting from hierarchical cluster analysis

217

7.4.1 Pay bundle 1: Traditional pay

Cluster 1, composed of 11 pay practices, is broadly similar to the algorithmic / traditional pay model including: base pay management using pay spines and narrow-grading; pay determination through collective bargaining; service-based pay and piece rates. There are two pay practices in this cluster that are usually associated with experiential pay; gainsharing and job families. If these pay practices are being used by the same organisations, which is speculative seeing that cluster analysis only gave an indication of association based on selection, it might indicate that organisations use hybrid pay structures with a narrow-graded structure super-imposed on a pay spine or job family framework. The connection between job families and higher pay levels would also give support to the use of internal-type pay systems which emphasise career development and both job and economic security (Delery and Doty, 1996).

7.4.2 Pay bundle 2: Market / flexible pay

The second cluster emerging from the three-cluster solution contains 14 pay practices and is broadly reflective of the strategic / experiential pay model. It includes core experiential practices such as broadbanded pay structures, combination variable pay schemes (based on individual, group and organisation performance), share schemes / long-term incentives and a range of other flexible and variable pay practices. Practices aimed at market-competitiveness are clearly in evidence from market-based pay determination and reviews as well as pay levels positioned at the market median. Sales commission which has been classified as a more traditional pay practice is included in this bundle although it does have a pedigree as a long-standing variable pay practice. However, job evaluation which has long been cast as the archetypal traditional algorithmic pay practice (Lawler, 1986; Risher, 1999) was also included. Again, while the cluster analysis only gives a suggested association, it is noteworthy that both of these practices have been shown to be related to high-road strategy alongside experiential practices (see Chapter 5) indicating a relationship.

7.4.3 Pay bundle 3: Individual / cost-driven pay

The final pay practice cluster suggests a distinct set of pay practices from the experiential / algorithmic model. This is the smallest cluster containing nine pay practices and there is a clear theme emerging from the types of variables included. Five practices are explicitly related to individual forms of pay management and pay driven by individual contribution either in the form of IPRP or more input-based contributions such as skills and competencies. Alongside the

emphasis on individual pay is the inclusion of both organisational 'ability to pay' variables, one relating to pay level determination and the other relating to pay reviews. The other variable of note in this bundle is pay secrecy which could be seen as a logical fit with individualised pay arrangements as presumably organisations might wish to keep these, potentially iniquitous, arrangements confidential. Together these variables indicate the possibility of fairly unstructured, closed pay arrangements; paying on an individual basis determined by what the organisation can afford.

The three-cluster solution clearly indicates a different model from the dichotomous algorithmic / experiential pay configuration hypothesised. However there remains a clear pattern of practices albeit spread over three rather than two clusters. Moreover, those patterns are broadly reflective of both the traditional / algorithmic practices grouped together and market-driven, flexible / experiential practices grouped together. While certain practices do not appear to conform to the original groupings, in broad terms there is evidence here for associations between practices that are in line with aspects of the theoretical model. On this basis, it was decided to use these three bundles of pay practices to provide the framework for pay configurations, with the potential to interact with strategy, organisation size, industry sector and employment group to have a hypothesised effect on HR performance outcomes.

The following section examines multiple hierarchical regression results for each of the pay configurations and covariates.

7.5 Pay configurations, strategy, size, sector, employment group and HR performance outcomes

7.5.1 Bundle 1: Traditional pay

Two sets of hierarchical multiple regression analyses were run to determine if the addition of size and sector, and then strategy, improved the prediction of HR performance outcomes over and above traditional / algorithmic pay practices alone. The first hierarchical multiple regression was run using pay practice data from the knowledge-based employment group (management and professional and technical employees); the second used pay practice data from the job-based employment group (other employees including administrative support, trades and production, sales and customer services staff).

7.5.1.1 Knowledge-based employment

The first hierarchical multiple regression was run to determine if the addition of sector and size and then of high-road and low-road strategy scores improved the prediction of HR performance outcomes over and above traditional / algorithmic pay practices for knowledge-based employees. See Table 7.4 for full details of each regression model. The full model of traditional pay practices, sector, size and strategy to predict HR outcomes (Model 3, + Strategy) was statistically significant, $R^2 = .159$, $F(15, 232) = 2.933$, $p \leq .005$; adjusted $R^2 = .105$. The addition of sector and size to the prediction of HR outcomes (Model 2, + Sector & Size) led to an increase in R^2 of .016, $F(2, 234) = 2.031$, but this was not statistically significant $p \geq .05$. The addition of strategy scores to the prediction of HR outcomes (Model 3, + Strategy) did however lead to a statistically significant increase in R^2 of .062, $F(2, 232) = 8.508$, $p \leq .005$. These results indicate that neither sector nor size had an effect on the relationship between algorithmic pay practices and HR performance outcomes but that strategy, when added to other predictor variables, did have an effect on HR outcomes and with the addition of strategy into the model, size too had an effect.

Only two predictor variables added significantly to the final regression model. The use of pay spines for knowledge-based employees significantly reduced the HR performance outcome score by .425, $p \leq .005$ whereas high-road strategy was associated with an increase in HR performance; for every one-unit increase in high-road strategy score there was a corresponding increase of .136 in the HR performance outcome score, $p \leq .005$.

Table7.4 Hierarchical multiple regression predicting HR performance outcome scores from traditional pay practices for knowledge-based employees, by sector, size, high-road strategy and low-road strategy (N=248)

	HR performance outcome score					
	Pay bundle 1		+ Sector & Size		+ Strategy	
Variable	B	B^{log}	B	B^{log}	B	B^{log}
(Constant)	2.462	.178	2.514	.164	2.224	.238
Narrow-grading	.023	-.009	.032	-.012	.023	-.010
Job families	-.030	.005	-.030	.004	-.030	.004
Pay spines	-.481**	.120**	-.460**	.114**	-.425**	.104**
Collective bargaining	.102	-.038	.117	-.042	.111	-.040
Service-based pay	.040	-.011	.027	-.007	.027	-.007
Piece rates	.166	-.020	.105	-.004	.212	-.034
Gainsharing	-.080	.020	-.082	.021	-.113	.029
Upper decile pay	.076	-.023	.073	-.022	.054	-.017
Upper quartile pay	-.037	.006	-.033	.005	-.067	.014
Lower quartile pay	-.232	.055	-.219	.051	-.184	.041
Lower decile pay	.110	-.025	.105	-.024	.121	-.028
Sector			-.029	.009	-.063	.018
Size			-.094	.026	-.095	.025*
High-road score					.136**	-.037**
Low-road score					-.044	.013
R^2	.082	.075	.098	.091	.159	.158
F	1.919*	1.730	1.950*	1.810*	2.933**	2.913**
ΔR^2	.082	.075	.016	.017	.062	.067
ΔF	1.919*	1.730	2.031	2.156	8.508**	9.252**

Note. $* = p \leq .05$, $** = p \geq .005$; B = unstandardised regression coefficient HR outcome score; B^{log} = unstandardised regression coefficient logarithmic transformed HR outcome score; Δ = change.

7.5.1.2   Job-based employment

A subsequent hierarchical multiple regression was run to determine if the addition of sector and size and then of high-road and low-road strategy scores improved the prediction of HR performance outcomes over and above traditional pay practices for job-based employees (see Table 7.5 for full details). The full model of traditional pay practices, sector, size and strategy to predict HR outcomes (Model 3, + Strategy) was statistically significant, $R^2 = .162$, $F(11, 236) = 2.984$, $p \leq .005$; adjusted $R^2 = .108$. The addition of sector and size to the prediction of HR outcomes (Model 2, + Sector & Size) led to an increase in R^2 of .021, $F(2, 234) = 2.690$, but this was not statistically significant $p \geq .05$. The addition of strategy scores to the prediction of HR outcomes (Model 3, + Strategy) did however lead to a statistically significant increase in R^2 of .057, $F(2, 232) = 7.829$, $p \leq .005$.

Similar to the results for knowledge-based employees, the R^2 results for how well the data fits the model indicate that the addition of sector and size to the model does not significantly influence HR performance outcomes. However, examination of the model coefficients (see Table 7.5) suggests that size does contribute significantly to the model, with large organisations seeing a reduction of .107 in HR performance score, $p \leq .05$. Once again, high-road strategy, when added to the model, is responsible for an improvement in HR outcomes (a .134 increase in HR performance score for every one-unit increase in high-road strategy score). The only pay practices that significantly contributed to the model are both to do with the positioning of pay in the market. Upper decile pay was responsible for a .195 increase in HR performance scores ($p = .070$; HR log $B = -.058$, $p \leq .05$) whereas lower quartile pay was responsible for a .195 reduction in HR performance scores, $p \leq .05$.

Table7.5 Hierarchical multiple regression predicting HR performance outcome scores from traditional pay practices for job-based employees, by sector, size, high-road strategy and low-road strategy (N=248)

| | HR performance outcome score | | | | | |
| | Pay bundle 1 | | + Sector & Size | | + Strategy | |
Variable	B	B^{log}	B	B^{log}	B	B^{log}
(Constant)	2.458	.177	2.511	.163	2.226	.241
Narrow-grading	.040	-.009	.047	-.011	.035	-.008
Job families	.004	-.001	.013	-.003	-.004	.002
Pay spines	.100	-.022	.115	-.026	.122	-.029
Collective bargaining	-.083	.020	-.037	.008	-.016	.002
Service-based pay	-.007	-.001	-.014	.001	.020	-.009
Piece rates	-.172	.041	-.159	.037	-.115	.025
Gainsharing	-.126	.035	-.117	.033	-.161	.045
Upper decile	.237*	-.070*	.240*	-.070*	.195	-.058*
Upper quartile	-.053	.012	-.039	.009	-.072	.018
Lower quartile	-.244*	.064*	-.243*	.063*	-.195*	.050*
Lower decile	-.530	.106	-.530	.106	-.498	.097
Sector			-.055	.014	-.087	.023
Size			-.105*	.028*	-.107*	.028*
High-road score					.134**	-.037**
Low-road score					-.045	.013
R^2	.085	.080	.105	.101	.162	.164
F	1.982*	1.874*	2.115*	2.019*	2.984**	3.032**
ΔR^2	.085	.080	.021	.021	.057	.063
ΔF	1.982*	1.874*	2.690	2.672	7.829**	8.750**

Note. $* = p \leq .05$, $** = p \geq .005$; B = unstandardised regression coefficient HR outcome score; B^{log} = unstandardised regression coefficient logarithmic transformed HR outcome score; Δ = change.

7.5.2 Bundle 2: Market / flexible pay

The next set of hierarchical multiple regression analyses were run to determine the effect of pay bundle 2 practices, industry sector and organisation size and finally strategy, on HR performance outcomes.

7.5.2.1 Knowledge-based employment

The first hierarchical multiple regression in this set was run to determine if the addition of sector and size and then of high-road and low-road strategy scores improved the prediction of HR performance outcomes over and above market / flexible pay practices for knowledge-based employees (see Table 7.6 for full details of each regression model). The full model of traditional pay practices, sector, size and strategy to predict HR outcomes (Model 3, + Strategy) was statistically significant, $R^2 = .242$, $F(18, 229) = 4.055$, $p \le .0005$; adjusted $R^2 = .182$. The addition of sector and size to the prediction of HR outcomes (Model 2, + Sector & Size) led to a statistically significant increase in R^2 of .044, $F(2, 231) = 6.109$, $p \ge .005$. The addition of strategy scores to the prediction of HR outcomes (Model 3, + Strategy) also led to a statistically significant increase in R^2 of .067, $F(2, 229) = 10.063$, $p \le .0005$.

A number of predictor variables added significantly to the final regression model. The use of recruitment and retention as a pay review factor and sales commission for knowledge-based employees were associated with a reduction in HR performance outcomes (.211, $p \le .0005$; .147, $p \le .05$ respectively). Merit pay and profit-sharing however were both associated with increased HR performance (.138, $p \le .05$; .146, $p \le .05$ respectively). Table 7.6 also shows that in the final regression model, the sector organisations operate within had a significant effect on HR outcomes with a .117 reduction in HR scores for manufacturing and production compared with those in private sector services, $p \le .05$. Similarly, size of organisation also added significantly to the final regression model; large organisations having a .131 reduction in HR scores compared to SMEs, $p \le .05$. High-road strategy and low-road strategy significantly contributed to the final regression model; for every one-unit increase in high-road score there was a .146 increase in HR outcome score, $p \le .0005$ whereas for every one unit increase in low-road score there was a .078 reduction in HR outcome score, $p = .063$ (HR log B coefficient, $p \le .05$).

Table 7.6 Hierarchical multiple regression predicting HR performance outcome scores from market / flexible pay practices for knowledge-based employees, by sector, size, high-road strategy and low-road strategy (N=248)

	HR performance outcome score					
	Pay bundle 2		+ Sector & Size		+ Strategy	
Variable	B	B^{log}	B	B^{log}	B	B^{log}
(Constant)	2.392	.194	2.461	.176	2.322	.210
Broadbanding	.010	-.002	.039	-.010	.024	-.006
Job evaluation	.019	-.009	.037	-.013	-.022	.002
Market rates (pay determination)	.062	-.017	.076	-.021	.050	-.014
Market rates (review)	-.030	.007	-.034	.008	-.055	.014
Recruit & retain (review)	-.184***	.047**	-.199***	.051***	-.211***	.054***
Combi PRR	.002	-.002	.014	-.005	.013	-.005
Commission	-.097	.023	-.119*	.028	-.147*	.036*
Merit pay	.132*	-.033*	.144*	-.037*	.138*	-.035*
Individual bonus	.045	-.015	.050	-.016	.026	-.010
Individual cash incentives	-.035	.007	-.057	.013	-.035	.007
Goal-sharing	.037	-.011	.039	-.012	.060	-.017
Profit-sharing	.164*	-.041*	.153*	-.038*	.146*	-.036*
Shares / LTI schemes	-.010	.007	.035	-.005	.023	-.002
Median pay	.016	.001	.018	.000	.018	.000
Sector			-.084	.020	-.117*	.029*
Size			-.152**	.040**	-.131*	.034*
High-road score					.146***	-.039***
Low-road score					-.078	.022*
R^2	.131	.128	.175	.171	.242	.241
F	2.518**	2.454**	3.063***	2.968**	4.055***	4.036***
ΔR^2	.131	.128	.044	.042	.067	.070
ΔF	2.518**	2.454**	6.109**	5.850**	10.063***	10.611***

Note. $* = p \le .05$, $** = p \le .005$, $*** = p \le .0005$; B = unstandardised regression coefficient HR outcome score; B^{log} = unstandardised regression coefficient logarithmic transformed HR outcome score; Δ = change.

7.5.2.2   Job-based employment

Another hierarchical multiple regression was run to determine if the addition of sector and size and then of high-road and low-road strategy scores improved the prediction of HR performance outcomes over and above market / flexible pay practices for job-based employees. See Table

7.7 for full details of each of the three regression models. The full model of experiential pay practices, sector, size and strategy to predict HR outcomes (Model 3, + Strategy) was statistically significant, $R^2 = .176$, $F(18, 229) = 2.719$, $p \leq .0005$; adjusted $R^2 = .111$. The addition of sector and size to the prediction of HR outcomes (Model 2, + Sector & Size) led to a statistically significant increase in R^2 of .028, $F(2, 231) = 3.661$, $p \leq .05$. The addition of strategy scores to the prediction of HR outcomes (Model 3, + Strategy) also led to a statistically significant increase in R^2 of .049, $F(2, 229) = 6.821$, $p \leq .0005$. These results clearly indicate that size, sector and strategy have an incremental additional effect with experiential pay practices on HR performance outcomes.

Table 7.7 shows two predictor pay practice variables contributed significantly to the final regression model. Similar to the results for knowledge-based employees, the use of recruitment and retention as a pay review factor for job-based employees was associated with a .162 reduction in HR performance outcomes, $p \leq .005$. However, the selection of profit-sharing for employees in the job-based employment group was responsible for an increase of .149 in HR scores, $p \leq .05$. Size of organisation also added significantly to the final regression model; large organisations having a .113 reduction in HR scores compared to SMEs, $p \leq .05$. High-road strategy significantly contributed to the final regression model; for every one-unit increase in high-road score there was a .125 increase in HR outcome score, $p \leq .0005$.

Table7.7 Hierarchical multiple regression predicting HR performance outcome scores from market / flexible pay practices for job-based employees, by sector, size, high-road strategy and low-road strategy (N=248)

	HR performance outcome score					
	Pay bundle 2		+ Sector & Size		+ Strategy	
Variable	B	B^{log}	B	B^{log}	B	B^{log}
(Constant)	2.324	.210	2.393	.192	2.222	.236
Broadbanding	.021	-.006	.034	-.009	.015	-.004
Job evaluation	.081	-.026	.084	-.027	.036	-.014
Market rates (pay determination)	.088	-.024	.078	-.021	.047	-.013
Market rates (review)	-.021	.004	-.010	.001	-.028	.006
Recruit & retain (review)	-.141*	.040*	-.157*	.044**	-.162**	.045**
Combi PRR	-.007	.000	-.010	.001	-.021	.004
Commission	.010	$<.000$	-.010	.005	-.028	.010
Merit pay	.084	-.024	.076	-.022	.063	-.018
Individual bonus	.069	-.019	.065	-.018	.075	-.020
Individual cash incentives	-.072	.017	-.071	.016	-.061	.014
Goal-sharing	.081	-.022	.077	-.021	.071	-.020
Profit-sharing	.146*	-.037*	.156*	-.040*	.149*	-.038*
Shares / LTI schemes	-.006	.005	.033	-.006	.020	-.002
Median pay	.079	-.016	.080	-.016	.077	-.015
Sector			-.056	.013	-.098	.024
Size			-.126*	.033*	-.113*	.030*
High-road score					.125***	-.034***
Low-road score					-.055	.016
R^2	.099	.105	.127	.132	.176	.186
F	1.835*	1.958*	2.100*	2.202*	2.719***	2.902***
ΔR^2	.099	.105	.028	.027	.049	.053
ΔF	1.835*	1.958*	3.661*	3.609*	6.821**	7.505**

Note. $* = p \leq .05$, $** = p \leq .005$, $*** = p \leq .0005$; B = unstandardised regression coefficient HR outcome score; B^{log} = unstandardised regression coefficient logarithmic transformed HR outcome score; Δ = change.

7.5.3 Bundle 3: Individual / cost-driven pay

The final set of hierarchical multiple regression analyses were run to determine the effect of pay bundle 3 practices, industry sector and organisation size and strategy, on HR performance outcomes.

7.5.3.1 Knowledge-based employment

Table 7.8 shows results for the first hierarchical regression analysis which was run to determine if the addition of sector and size and then of high-road and low-road strategy scores improved the prediction of HR performance outcomes over and above individual / cost-driven pay practices for knowledge-based employees. The full model of individual / cost-driven pay practices, sector, size and strategy to predict HR outcomes (Model 3, + Strategy) was statistically significant, $R^2 = .147$, $F(13, 242) = 3.036$, $p \leq .0005$; adjusted $R^2 = .099$. The addition of sector and size to the prediction of HR outcomes (Model 2, + Sector & Size) led to a statistically significant increase in R^2 of .038, $F(2, 231) = 4.979$, $p \geq .05$. The addition of strategy scores to the prediction of HR outcomes (Model 3, + Strategy) also led to a statistically significant increase in R^2 of .027, $F(2, 229) = 3.574$, $p \leq .05$.

Only one predictor pay practice added significantly to the regression models; organisational 'ability to pay' as a criterion for base pay progression was associated with a reduction of .120 in HR outcomes in the final model. Size and high-road strategy both significantly contributed to the prediction of HR outcomes. Large organisations had a reduction in HR performance score of .150 compared to SMEs, $p \geq .05$ and high-road strategy was associated with an improvement of .095 in HR outcomes for every one-unit increase, $p \leq .05$.

Table7.8 Hierarchical multiple regression predicting HR performance outcome scores from individual / cost-driven pay practices for knowledge-based employees, by sector, size, high-road strategy and low-road strategy (N=243)

	HR performance outcome score					
	Pay bundle 3		+ Sector & Size		+ Strategy	
Variable	B	B^{log}	B	B^{log}	B	B^{log}
(Constant)	2.669	.112	2.779	.082	2.544	.146
Individual base pay	-.035	.012	-.054	.017	-.031	.011
Ability to pay (determination)	-.124*	.032*	-.148*	.039*	-.120*	.031*
Individual PRP	-.106	.029	-.091	.025	-.071	.019
Competency pay	.100	-.025	.074	-.018	.062	-.014
Skills-based pay	.042	-.011	.045	-.012	.040	-.010
Market rates (progression)	.026	-.008	.035	-.010	.021	-.006
Employee value / retention (progression)	-.057	.013	-.052	.012	-.064	.016
Ability to pay (review)	-.014	.006	-.027	.010	-.014	.006
Pay secrecy	-.032	.010	-.034	.010	-.033	.010
Sector			-.042	.011	-.063	.017
Size			-.152**	.041**	-.140*	.038**
High-road score					.095*	-.026**
Low-road score					-.034	.010
R^2	.082	.088	.120	.127	.147	.157
F	2.327*	2.496*	2.875**	3.067**	3.036***	3.275***
ΔR^2	.082	.088	.038	.039	.027	.029
ΔF	2.327*	2.496*	4.979*	5.226*	3.574*	3.987*

Note. $* = p \leq .05$, $** = p \leq .005$, $*** = p \leq .0005$; B = unstandardised regression coefficient HR outcome score; B^{log} = unstandardised regression coefficient logarithmic transformed HR outcome score; Δ = change.

7.5.3.2 Job-based employment

The final hierarchical regression analysis was run to determine if the addition of sector and size and then of high-road and low-road strategy scores improved the prediction of HR performance outcomes over and above individual / cost-driven pay practices for job-based employees (see results in Table 7.9). The full model of individual / cost-driven pay practices, sector, size and strategy to predict HR outcomes (Model 3, + Strategy) was statistically significant, $R^2 = .163$, $F(13, 229) = 3.441$, $p \leq .0005$; adjusted $R^2 = .116$. The addition of sector and size to the prediction of HR performance outcomes (Model 2, + Sector & Size) led to a statistically significant increase in R^2 of .042, $F(2, 231) = 5.689$, $p \geq .0005$. The addition of strategy scores

to the prediction of HR outcomes (Model 3, + Strategy) also led to a statistically significant increase in R^2 of .025, $F(2, 229) = 3.471$, $p \leq .05$.

Similar to the results for knowledge-based employees, using ability to pay to determine pay added significantly to all three regression models. In the final model, using ability to pay reduced HR performance outcomes by .118, $p \leq .05$. And again, both size and high-road strategy incrementally added to the prediction of HR outcomes over and above pay practices alone. The HR outcome score was reduced by .151, $p \leq .005$ for large organisations compared to SMEs and increased by .092, $p \leq .005$ for every increase in high-road strategy score.

Table7.9 Hierarchical multiple regression predicting HR performance outcome scores from individual / cost-driven pay practices by job-based employees, sector, size, high-road strategy and low-road strategy (N=243)

| | HR performance outcome score | | | | | |
| | Pay bundle 3 | | + Sector & Size | | + Strategy | |
Variable	B	B^{log}	B	B^{log}	B	B^{log}
(Constant)	2.619	.128	2.730	.098	2.530	.151
Individual base pay	-.060	.016	-.064	.017	-.047	.013
Ability to pay (determination)	-.124*	.032*	-.151**	.039*	-.118*	.030*
Individual PRP	-.033	.008	-.054	.014	-.062	.016
Competency pay	.124	-.028	.105	-.023	.100	-.022
Skills-based pay	.024	-.010	.049	-.017	.028	-.011
Market rates (progression)	.018	-.006	.036	-.011	.027	-.009
Employee value / retention (progression)	.026	-.004	-.004	.004	-.007	.005
Ability to pay (review)	-.072	.020	-.072	.020	-.072	.020
Pay secrecy	-.031	.009	-.030	.009	-.029	.009
Sector			-.053	.014	-.078	.021
Size			-.162**	.044**	-.151**	.041**
High-road score					.092*	-.026**
Low-road score					-.032	.010
R^2	.096	.096	.138	.141	.163	.170
F	2.737***	2.752***	3.364***	3.447***	3.441***	3.618***
ΔR^2	.096	.096	.042	.045	.025	.029
ΔF	2.737***	2.752***	5.689***	6.037***	3.471*	4.056*

Note. $* = p \leq .05$, $** = p \leq .005$, $*** = p \leq .0005$; B = unstandardised regression coefficient HR outcome score; B^{log} = unstandardised regression coefficient logarithmic transformed HR outcome score; Δ = change.

7.6   Summary of results and key findings

There are a number of findings emerging from the all results analysed in this chapter. First, there is some support for the hypothesis (H1) that HR performance outcomes will be positively related to experiential 'strategic' pay practices and negatively related to algorithmic 'traditional' pay practices. Where there are statistically significant results, these largely support hypothesised associations; 'experiential' pay practices, such as using competency and skills-based pay, merit

pay and profit-sharing significantly improved HR performance outcomes whereas traditional practices such as pay secrecy and cost control-related pay positioning and determination significantly worsened HR scores (see Table 7.10 below). These results provide good evidence for the universalist 'new' pay idea that basing pay practices on 'the person' and their performance or contribution, linking pay to individual skills and behaviours and enabling employees to share in the financial success of the business has a positive effect on human resource outcomes which are then assumed to positively influence organisational performance. The results simultaneously cast traditional and algorithmic pay arrangements, such as high pay secrecy and cost-driven pay, as detrimental to achieving such outcomes.

However, one significant result runs counter to the hypothesis. Pay driven by recruitment and retention needs, which has been identified as an experiential practice (Miles and Snow, 1984), was associated with deteriorating HR outcomes rather than improvements. This may well be because one of the seven items on the HR outcomes score scale is 'difficulties in recruitment and retention' and it would be logical that organisations experiencing these recruitment and retention difficulties would be more likely to make pay decisions based on this issue. Nevertheless, the result does indicate that this particular experiential pay practice has a negative impact on HR outcomes.

On the face of it, aspects of the new pay proposition appear to be borne out by these results, but these tests also showed a large number of non-significant results indicating no relationship between many strategic or traditional pay practices and HR performance outcomes. These included non-significant results for key experiential practices such as gainsharing and broadbanding as well as key algorithmic practices such as job evaluation. In addition, as subsequent analysis showed, organisations do not practise single pay practices; they are likely to use practices in parallel with one another, sometimes in bundles, and therefore results for specific practices can only provide limited information on their effectiveness. So overall, while the significant results from the initial regression analyses provides some good evidence in support of H1, the complete picture suggests that only certain practices, and quite a limited number of practices, have any effect on HR performance.

Table7.10 Summary of significant linear regression results of single pay practices on HR performance outcomes

Pay practices with a positive effect on HR outcomes	Pay practices with a negative effect on HR outcomes
Competency pay	Recruitment and retention driven pay reviews
Skill-based pay	Lower quartile and lower decile pay positioning
Merit pay	Ability to pay as criteria for pay determination
Profit-sharing	Pay secrecy

As regards H2 and bundling of pay practices, cluster analysis indicated that a three-bundle model of pay practices might be used by respondent organisations in this study as opposed to the dichotomous model evident in the strategic pay literature. Hair *et al.* (2010) caution against generalising from cluster analysis data to the general population, and the limitations of the cluster analysis have been flagged. Nevertheless, that the three clusters appear to conform to aspects of algorithmic / experiential theoretical model indicates potential for a wider application than to this sample alone. Two of the identified bundles broadly reflect key elements of either the algorithmic / traditional pay model or the experiential / strategic pay model. The third pay bundle is formed of elements of both types centring on individualised base pay arrangements (experiential), cost-driven pay determination and review, and pay secrecy (algorithmic). The common factor for pay practices in this third 'hybrid' pay bundle is the lack of structured, formalised pay systems. In this pay bundle there are no pay structures; base pay is set for the individual based on the organisation's ability to pay and progressed according to the individual's performance, behaviours, skills and their value to the organisation; pay reviews are determined by movements in market rates and what the organisation can afford; there is also an organisational preference for secrecy over pay matters. Putting all this together, the emerging picture is of a rather reactive, informal pay system. This is not a pay system evident in the strategic pay literature – even as a counter-point to pro-active practices of experiential pay or formalised structures of algorithmic pay. So, while these findings must be treated with a caution given the analysis limitations, there is some support for the first element of H2, that organisations will bundle strategic pay practices.

The final set of findings is related to results from the multiple hierarchical regression analyses and H4, H6, H8 and H10; that aligning pay practice configurations with business strategy,

employment group, organisation size and industry sector will have greater positive effects on HR performance outcomes than pay practices alone.

The first finding of note here is that none of the pay configurations, either on their own or aligned with strategy, size and sector, had a clear positive or negative effect on HR performance outcomes. Table 7.11 below summarises significant results for each configuration.

Table7.11 Summary of significant multiple regression results of pay configurations on HR performance outcomes (based on final regression model in each test).

	Positive HR outcomes		Negative HR outcomes	
	Knowledge-based employees	Job-based employees	Knowledge-based employees	Job-based employees
Traditional pay practices	-	Upper decile pay	Pay spines	Lower quartile pay
	High-road strategy	High-road strategy	-	-
	SME size	SME size	Large size	Large size
Market / flexible pay practices	Profit-sharing	Profit-sharing	Recruitment & retention (pay review)	Recruitment & retention (pay review)
	Merit pay	-	Sales commission	-
	High-road strategy	High-road strategy	Low-road strategy	-
	SME size	SME size	Large size	Large size
	Private sector services	-	Manufacturing & production	-
Individual / cost-driven pay practices	-	-	Ability to pay (determination)	Ability to pay (determination)
	High-road strategy	High-road strategy	-	-
	SME size	SME size	Large size	Large size

It is apparent that two of the three pay configurations contains pay practices that improve HR performance outcomes *and* pay practices that worsen HR outcomes. The results for the traditional bundle show that using pay spines for knowledge-based employees and lower

quartile pay for job-based employees negatively affected HR performance outcomes whereas positioning pay in the upper decile for job-based employees had a positive effect on HR outcomes. Results for the market / flexible pay configuration show that recruitment and retention as a pay review factor and using sales commission for knowledge-based employees reduced HR performance outcomes whereas merit pay for knowledge-based employees and profit-sharing increased HR outcomes. For the final pay configuration, individual and cost-driven pay practices, using the organisation's ability to pay as a pay determination criterion had a negative effect on HR performance outcomes and there were no pay practices in this configuration with positive effects. It is therefore not possible to claim any one pay configuration is associated with entirely positive HR outcomes although the individual / cost-driven pay configuration is only associated with negative HR performance.

It is interesting to note that most of the pay practices shown to have a significant effect on HR outcomes in the linear regression tests (see Table 7.10) continue to have an effect when part of a pay bundle. Merit pay, profit-sharing, recruitment and retention pay review criteria, lower quartile pay positioning and ability to pay all have similar effects on HR outcomes when they form part of their respective pay configurations. Other pay practices such as competency and skills-based pay, and pay secrecy, although having significant effects on HR outcomes individually, do not appear to have the same effect when part of a configuration. Furthermore, there are other practices such as pay spines, sales commission and upper decile pay positioning that individually have no significant effect on HR outcomes but do when part of a configuration. Potentially, this result is because, when bundled, the effect of individual practices is either mitigated or enhanced. If this is the case, it would be evidence to support the latter proposition in H2, that bundling pay practices will have an additive (or indeed subtractive) effect on HR performance outcomes.

An alternative explanation for the different effects of single and bundled pay practices may be to do with alignment by employment group (linear regression results were for single pay practices selected by the organisation as a whole whereas the bundled pay practices were for one employee group or another). In general, different pay configurations have different HR performance effects according to employment group which lends some support to the proposal of H6; that alignment of employment group and pay practices will have a positive effect on HR performance outcomes. For knowledge-based employees only market / flexible pay practices, profit-sharing and merit pay, have a positive HR effect. However, sales commission and pay reviews based on recruitment and retention needs, also market / flexible pay practices, have a

negative effect on HR performance outcomes. For employees working in the job-based employment group, both upper decile pay positioning (traditional) and profit-sharing (market / flexible) have positive effects on HR outcomes. So again, there are no clear wholly positive or negative configurations. In addition, a number of pay practices (profit-sharing, recruitment and retention pay reviews and ability to pay) appear to have an effect on organisational HR outcomes when applied to both employment groups suggesting alignment by employment group is not playing a role in the impact on HR outcomes. But, despite a mixed picture for H6, there are some results here, for pay positioning, pay spines, merit pay and commission, that suggest using pay practices according to employment group can have an effect on HR outcomes, albeit in most cases this effect is negative.

In all three pay configurations, in nearly all cases, the addition of the variable size of organisation has a significant effect on HR performance outcomes. Aside from knowledge-based employees with traditional pay where there is no significant effect for size, in all other configurations, HR performance outcomes are negatively affected by large size of organisation and positively affected by SME size of organisation. This finding appears to contradict the proposition of H10, that alignment of organisation size and pay practices will have a positive effect on HR performance outcomes; the assumption being that large organisations using traditional pay practices and SMEs using experiential pay practices would benefit from improved HR outcomes. The results of regression appear to show that HR outcomes are positive for SMEs and negative for large organisations regardless of alignment or non-alignment of pay configurations. The only result that provides a modicum of support for the hypothesis is that in organisations where there are knowledge-based workers with traditional pay practices, the negative effect of larger size is not significant, although if H10 were true, there would be a positive effect of larger size in this aligned configuration. While these findings clearly show no support for H10, it is interesting that smaller organisations appear to have more positive HR scores than their larger counterparts indicating that size of organisation does have a role in determining HR outcomes, albeit seemingly unrelated to pay configuration.

Whereas size of organisation was found to be significantly contributing to changes in HR performance outcomes, there were a lack of significant results for industry sector. In only one of the final regression models (when the strategy variables are added) does industry sector have a significant effect on HR outcomes. In organisations where there are knowledge workers with market / flexible pay practices, operating in the manufacturing and production sector has a detrimental effect on HR outcomes whereas operating in private sector services has a positive

effect. This finding appears to support the hypothesised association between private sector services and experiential pay practices (see Table 3.4, Chapter 3) but if fully aligned this would be for job-based not knowledge-based employees. Furthermore, there are no results indicating any relationship between industry sector and other pay configurations. At best then, the results only provide very limited support for H8 that alignment of industry sector and pay practices will have a positive effect on HR performance outcomes.

Finally, to turn to results for H4, alignment of strategic orientation and pay configuration will have a positive effect on HR performance outcomes. The results show positive significant effects of high-road strategy on HR outcomes in each of the six regression models. Similar to results for size of organisation, these results could indicate that high-road strategy has positive effects on HR outcomes regardless of alignment with pay configuration and therefore does not support H4. Nonetheless, there are some interesting aspects to highlight here. High-road strategy had the most impact when used in conjunction with market / flexible pay for knowledge-based employees (where HR outcomes scores improved by .146 per point of the high-road scale) and least impact when used with individual / cost-driven pay for job-based employees (where the improvement in HR score was .092 per high-road point). Despite not strictly conforming to the hypothetical model, these differentiated effects perhaps indicate that aligning pay practices and employment groups with high-road strategy will be more effective in some combinations than others.

There was only one statistically significant result for low-road strategy. The effect of low-road strategy was to significantly worsen HR outcomes where the market / flexible pay configuration was used for knowledge workers. Seeing that this configuration was the one which high-road strategy had the most positive impact on, this result suggests quite clearly that organisations with high-road business strategies will see better HR performance outcomes by paying knowledge-based employment groups according to market / flexible pay practices, than those pursuing low-road business strategies.

Overall, while the hypothesised effects of alignment on HR performance outcomes (H4, H6, H8, H10) do not appear to have been supported by these results, there is evidence for certain combinations of pay practices, employment group, size, sector and business strategy having a positive or negative effect on HR outcome scores.

The following chapter of this thesis takes the main findings from this and the preceding two chapters and examines them in the round, examining their significance and identifying the extent

to which a deeper understanding of the research problem has been achieved in the light of extant theory and research.

Chapter 8: Discussion

8.1   Chapter introduction

This chapter identifies the significance of the findings presented in the preceding three chapters in light of the extant strategic pay theory. It discusses theoretical and methodological explanations for the results and interprets the findings in the context of the literature in order to evaluate the implications arising from the findings of this study for the normative strategic pay model delineated in Chapter 3.

8.2   Research questions and key findings

The research objectives and questions that directed this research study focused on three aspects of the strategic pay model. First, determining the effect of pay practices on HR performance outcomes; second, establishing the extent to which pay practices are aligned with organisational contingencies and third, establishing the extent to which the alignment of pay practices with organisational contingencies had an effect on HR performance outcomes. The results and findings presented in Chapters 5-7 provide evidence upon which to base answers to these three lines of enquiry.

8.2.1   What effect do pay practices have on HR performance outcomes?

8.2.1.1   Finding 1: Specific pay practices can have positive or negative effects on HR performance outcomes

Results reported in Chapter 7 showed that the selection of certain pay practices and combinations of practices (bundles) can have a positive or negative effect on HR performance outcomes (employee relations climate; pay discontent; employee productivity; difficulties in recruitment and retention; and absenteeism problems). Although there were large numbers of non-significant results and the effect size of the significant results was generally small, there were clearly a number of individual practices that were associated with improved or worsened HR outcomes. Furthermore, it appears that the pay practices associated with either positive or negative HR performance fell into two recognisable groups. 'Experiential' pay practices (competency pay, skills-based pay, merit pay and profit-sharing) were associated with improved HR performance, whereas 'algorithmic' practices (pay secrecy, low market positioning of pay and cost-driven pay determination) were associated with worsened HR performance outcomes. So, some pay practices do have a small effect on HR performance (although many appear not

to) and the type of practice, whether based on either algorithmic pay principles or the experiential model, largely determines if this effect is positive or negative.

These findings appear to provide fairly good support for H1 - HR performance outcomes will be positively related to experiential 'strategic' pay practices and negatively related to algorithmic 'traditional' pay practices. Clearly, of the pay practices associated with an effect on HR outcomes, the ones identified as 'strategic' by new pay writers (e.g. Lawler, 1990; Schuster and Zingheim, 1992; Cira and Benjamin, 1998) have had a small, but significant, positive effect. Furthermore, these positive practices appear to be associated with certain aspects of the new pay approach, namely, pay should be person-focused (rather than job-focused) i.e. competency pay, skills-based pay and merit pay; and based on organisational performance i.e. profit-sharing. But it should also be noted that not all practices classified as 'strategic' have a positive effect on HR outcomes. Pay reviews driven by recruitment and retention needs are associated with worsened HR performance, so it is not a uniformly positive result for strategic pay.

The position is also rather unclear for the latter part of H1 – that algorithmic / traditional pay practices will be associated with poorer HR outcomes. The practices with significant effects on HR performance outcomes are certainly identifiable as 'algorithmic' following Gomez-Mejia and Balkin's (1992) framework, but do not feature in the list of 'traditional' pay practices denounced by new pay writers (see Table 3.1, Chapter 3). Indeed, the core traditional practices determined by new pay proponents to be detrimental to organisational performance such as job evaluation, narrow-grading and collective bargaining have no significant effect on HR performance outcomes at all. The pay practices that do have a negative effect on HR performance appear to be related to a cost-driven approach to pay i.e. organisational ability to pay for pay setting and low positioning of pay in the market or are to do with pay secrecy. This indicates that particular approaches, or drivers of pay practice selection, rather than all traditional pay practices, are associated with worsened HR performance.

What this means then, in terms of responding to the research question, is that a limited number of pay practices have a small effect on HR outcomes. However, the finding that strategic pay practices focussing on individual contribution / attributes and organisational performance have a positive effect on HR performance, and conversely traditional pay practices driven by low-cost and secrecy have a negative effect on HR performance, is of critical importance in furthering understanding of the relationship between pay and its effects. The notable contribution here is not that strategic practices are primarily positive and traditional practices

primarily negative, but that pay practices resulting from certain drivers or orientations towards employees are likely to have an effect. Organisations valuing individual inputs and sharing the profits from organisational performance are likely to reap positive HR outcomes whereas organisations driven by low-cost principles and keeping employees uninformed of, and un-consulted about, pay issues are likely to suffer from worsened HR performance. This seems to be as much to do with principles of policy-making than with the mechanics of the practices themselves and as such is an important finding and contribution.

8.2.1.2   Finding 2: Pay bundles are evident but there is little evidence for an additive effect on HR outcomes

Moving on to discuss the findings related to H2 - organisations will bundle strategic pay practices and bundling will have an additive effect on HR performance outcomes - results in Chapter 7 provided evidence for organisations bundling pay practices. These bundles were defined as 'traditional pay', 'market / flexible pay' and 'individual / cost-driven pay'. The identification of three bundles of pay practices was an unexpected result of cluster analysis. As was explored in Chapter 3, the strategic pay literature most often presents a dichotomous view of pay bundles; new or old (Lawler 1986; Schuster and Zingheim, 1992), strategic or traditional (Lawler, 1990); organic or mechanistic (Gomez-Mejia and Welbourne, 1988) and of course, experiential or algorithmic (Gomez-Mejia and Balkin, 1992). Two of the bundles identified in Chapter 7 are broadly in line with these dichotomous pay patterns. The bundle labelled 'traditional pay' is mostly composed of practices that are found in the old / traditional / mechanistic / algorithmic models whereas the 'market / flexible pay' bundle broadly comprised practices evident in the new / strategic / organic / experiential models. The big difference of course, was that the analysis identified a distinct *third* bundle, mixing elements from both models. Identified as an 'individual / cost-driven pay' bundle, this set of practices contained the person-focused aspects of new / strategic pay alongside affordability related practices and pay secrecy from traditional / algorithmic models.

This finding could be related to the specific composition of the CIPD survey sample as cluster analysis is acknowledged as limited in generalisability of findings (Hair *et al.*, 2010). However, it could also indicate that the dichotomous model of pay bundles or patterns, now over 25 years old, should be questioned. The literature on strategic pay practices treats them as components of either HRM bundles of 'best practice' (Purcell *et al*, 2003; Pfeffer, 2005) or HRM configurations (Martín-Alcázar *et al*. 2005; Medcof and Song, 2013), or as noted by Prince *et al*. (2016, p.64), the literature examines pay practices independently of one another ignoring "the

reality that firms adopt combinations of practices" in operationalising their pay strategy. Another key contribution of this study is the identification of the potential for a three-bundle model of pay practices which suggests that while the dichotomous split of pay practices along strategic / traditional or experiential / algorithmic lines is not wholly unjustified, there is scope to explore a more nuanced adoption of combinations of pay practices.

That organisations might be operating a 'third way' characterised by loosely structured pay, closed pay arrangements and pay determined individually by what the organisation can afford, seems to be a previously unexamined aspect of strategic pay systems in organisations. This is perhaps because, given the nature of the practices in this bundle, the approach is informal and reactive, the very antithesis of rationalist notions of deliberate 'strategy' as planned and formalised (Whittington, 2001). But, as noted in Chapter 3, strategic pay researchers tend to follow the emergent view of strategy as responsive to organisational conditions and discernible in patterns of action over time (Milkovich and Newman, 2002); a 'strategic pragmatism' (Brown and Perkins, 2007) or 'strategic flexibility' (Xiu *et al*., 2017). So, if confirmed, this finding may well indicate a shift in practice that has not yet been charted in the strategic pay literature. Traditional pay systems may be declining (Van Wanrooy *et al*., 2013; Bailey *et al*., 2017), but the uptake of the 'standard model' of strategic pay practices in the UK has been fraught with difficulties and unintended consequences (Trevor, 2010; Trevor and Brown, 2014). This may well have created space for a hybrid pay approach, with elements of both models; either organisations are on a journey towards 'being more strategic' or existing in such a tough economic environment that pay choices are both constrained and reactive. To speculate further is outside the scope of this thesis, but this tentative finding suggests that the dichotomous strategic / traditional or experiential / algorithmic view of pay patterns in organisations may not be the complete picture.

What is more, when the bundles are related to HR performance outcomes, the 'individual / cost-driven' pay bundle appears to be the only one which had a clear negative effect. None of the pay practices in this bundle had a significant positive effect on HR outcomes, even those such as competency pay or merit pay that had positive effects when tested independently. Despite the data being segmented by employment group (job-based or knowledge-based employees rather than one or both) this finding could suggest bundling pay practices has the potential for an additive, or in this case subtractive, effect on HR performance outcomes. The only significant result in the bundle was for the use of 'ability to pay' to determine pay which reduced the HR outcomes score, whereas competency pay, skills-based pay and merit pay had no significant

effects. One possible explanation for this is that the bundling of individual / cost-driven pay practices diminished the positive effects of these practices i.e. combinations of practices can have different combined effects than individual practices. This suggests, at least the potential for, bundling as a means of enhancing positive effects or mitigating negative effects of pay practices on HR performance outcomes. Given the very scant evidence for this from this study however, this would need to be confirmed by further research.

So, in answering the research question, there is no clear evidence that bundling pay practices has any additive effect on HR performance outcomes. However, there is reason to believe that organisations do not tend to operate individual pay practices, they bundle them (although most likely in different formations from established models) and that these combinations of bundled practices have the potential to mitigate or enhance the effects of the individual practices contained within them.

8.2.2 To what extent do organisations align pay practices with organisational contingencies?

8.2.2.1 Finding 3: Organisations align pay practices with business strategy

Of all the organisational contingencies examined by this study, the clearest results were found for business strategy. There was good evidence for H3 – that organisations with a low-road strategic orientation will be more likely to select an algorithmic pay configuration and organisations with a high-road strategic orientation will be more likely to select an experiential pay configuration. Specifically, high-road strategy organisations were more likely to use broadbanding, individual competencies and skills for pay progression, market-driven pay reviews, performance-related pay schemes and above market pay levels. They were also *less* likely to use certain algorithmic practices such as pay spines, service-based pay, below market pay and ability to pay for pay determination. Conversely, low-road strategy organisations were more likely to select algorithmic practices such as ability to pay and below market pay, while being *less* likely to use experiential practices such as market-rates for pay reviews and long-term incentives.

This finding provides good evidence for the broad theoretical framework of aligned pay practices and business strategy typologies originally developed by Miles and Snow (1984) and Gomez-Mejia and Balkin (1992) examined in Chapter 3. Overall the results are similar to the findings of Montemayor (1996), Heneman and Dixon (2001), Allen and Helms (2002) and Chen and Jermias (2014) all of whom found broad support for organisations with low-road

strategies being more likely to select more traditional and algorithmic pay practices, and high-road strategy organisations more likely to select performance-based 'strategic' pay practices.

While the results of this study clearly demonstrate an alignment between business strategy and pay practice selection, there were some results that did not fit neatly with the experiential / high-road, algorithmic / low-road framework. Similar to Romero and Cabrera's (2001) findings, there was no apparent relationship found between low-road strategies and selection of service-based pay progression, or between high-road strategies and either long-term incentives or pay transparency. Whereas Long and Fang (2015) found partial support for a relationship between profit-sharing and low-road strategy (entirely at odds with the alignment framework), in this study there was no evidence for profit-sharing being associated with either business strategy type. There were also elements of the alignment framework that were found in previous studies but were not in evidence in this study. For example, Montemayor (1996) found high-road strategy organisations were more likely to favour pay transparency and Romero and Cabrera (2001) found low-road strategy was associated with pay secrecy. Romero and Cabrera (2001) also found high-road strategy was associated with IPRP. None of these findings were confirmed by results from this study.

Conversely, Chapter 5 details wholly unexpected results that were both counter to the algorithmic / experiential model and previous research. High-road strategy organisations were more likely to use both job evaluation and sales commission; both classified as algorithmic practices whereas low-road organisations were less likely to use job evaluation. In addition, there were some notable non-significant results for key pay practices from both models e.g. market-based pay, individual bonuses, narrow-graded pay structures and pay secrecy which suggested no clear relationship with either business strategy and thus were unexpected findings. Lastly, there was also a notable difference between the number of pay practices associated with each strategic orientation; there were far more significant results for high-road strategy than for low-road strategy.

Given that there does appear to be generally good evidence for alignment between business strategy and pay practices, these anomalous and unexpected results might be explained by a number of factors. First, the rigid experiential / algorithmic framework of pay practices might be questioned. Indeed, as indicated by the cluster analysis results discussed in Finding 2 above, there appears to be sound reasons to reject the notion that organisations select pay practices according to a dichotomous, either / or choice. Second, it appears that certain pay practices are

selected by organisations for reasons unrelated to business strategy, some of which might be related to other organisational contingencies yet to be discussed, but may well be related to factors outside the immediate control of organisations. Third, alignment of pay practices with business strategy appears to be something more commonly undertaken by organisations pursuing a high-road strategy. This could be because the conditions that give rise to organisations pursuing such business strategies also give rise to the selection of specific pay practices (potentially reverse causality) or alternatively, high-road business strategies (differentiation, growth or diversification) require organisations to adopt particular pay practices in a way that those pursuing low-road strategies do not need to. Either way, the finding that high-road strategies are more likely to have an effect on pay practice selection than low-road strategies is an important one and another contribution of this study.

As the evidence of further findings is analysed, these explanations will be revisited and developed further. For now however, it seems clear that for the most part, the counter-hypothetical results were fairly minor departures from the overall direction of the results indicating that the selection of many pay practices is associated with the organisation's business strategy. And, while not every practice selected clearly conforms to the alignment model, on the whole, high-road strategy organisations appear more likely to select experiential practices while low-road strategy organisations appear more likely to select algorithmic pay practices. Taken as a whole then, it can be claimed with some confidence that the results in this study support the hypothesis (H3). This is a key contribution to understanding pay practice selection in organisations: that organisations pursuing business strategies based on growth, differentiation and diversification of products and services will favour pay practices that are performance-driven, market competitive and flexible while those organisations pursuing strategies associated with stable product markets and efficient operations will select pay practices that are cost-focused.

8.2.2.2   Finding 4: Organisations align pay practices with workforce employment group

Results reported in Chapter 6 showed that organisations in this study selected significantly different pay practices according to employment group (see Table 6.10, Chapter 6). The job-based employment group (administrative support, trades and production workers, customer service and sales staff) was associated with pay spines or individual base pay structures, market-based pay determination and reviews, collective bargaining, individual PRP, merit pay, profit-sharing, low proportions of employees in PRR (variable pay) schemes and low pay dispersion. The knowledge-based employment group (senior managers, middle and front-line managers,

professional, technical and scientific employees) meanwhile, was associated with job evaluation, pay progression based on competencies and employee value / retention, ability to pay as a pay review factor, individual bonuses or combination schemes, sales commission, goal-sharing, high proportions of employees in PRR schemes and high pay dispersion.

These results provided partial support for elements of H5 - organisations will select an algorithmic pay configuration for employees working in a knowledge-based employment group and an experiential pay configuration for employees working in a job-based employment group. Results certainly show organisations are selecting different pay practices for employment groups but there is very little evidence that organisations select only algorithmic practices for their managers, technical and professional staff and only experiential practices for their administrative, trades, production, sales and service staff. Indeed, the final lists of practices associated with each employment group bear little resemblance to either the experiential or algorithmic pay configuration (Table 6.10, Chapter 6).

These results conform to findings apparent in the extant literature. Suff *et al.* (2007) and McDonnell *et al.* (2016) found that pay practices were differentiated according to human capital characteristics that have the potential for organisational strategic advantage. Lepak and Snell (2002) found some support for a theoretical relationship between human capital characteristics, employment mode and HR practices, although their operationalisation of HR configurations does not entirely conform with the experiential / algorithmic pay framework despite drawing on analogous models: Miles and Snow (1984), Delery and Doty (1996) and Youndt and Snell (2004).

So, while there is clear evidence for organisations aligning pay by employment group, once again the dichotomous pay model based on a distinction between experiential and algorithmic practices receives little support from findings in this study, further undermining this aspect of the theoretical strategic pay framework.

Furthermore, the substantial number of non-significant results suggests that when using some pay practices, organisations do not always treat employee groups markedly differently. For several practices including narrow-grading, piece rates, service-based pay, broadbanding, skills-based pay and gainsharing as well as market positioning of pay levels, organisations do not appear to distinguish significantly between employment groups. This indicates that selection of these practices is based on factors besides the intended human capital characteristics of the

workforce. As mentioned in Chapter 6, the reasons may be to do with organisational culture or values but may equally be related to external factors beyond the scope of this study.

In answer to the research question then, organisations do appear to align some pay practices according to workforce employment groups although not all of them. Again, this is an important finding in contributing to knowledge about pay practice selection in organisations. Internal human capital differences between employee groups accounts for differences in pay practice selection as well as external drivers such as business strategy.

8.2.2.3 Finding 5: There is limited alignment between pay practices and industry sector

In Chapter 5, results for testing the hypothesis that organisations operating in the manufacturing and production sector would be more likely to select an algorithmic pay configuration and organisations operating in private sector services would be more likely to select an experiential pay configuration (H7) showed some, but limited, evidence for such a proposition. The only significant results were in line with the hypothesis; manufacturing and production firms were more likely than service sector companies to use both collective bargaining and ability to pay – algorithmic practices; the service industry was much more likely to use performance-related reward schemes – experiential practices. This is in line with Rodríguez and Ventura (2003) who find algorithmic pay practices in manufacturing firms, although not specifically these two practices. And both Jackson *et al.* (1989) and Delery and Doty (1996) find performance-based pay in some form associated with the service industries. These results were expected given the different role of the employee in the production of goods (in manufacturing) as opposed to services and the subsequent differences in pay design: particularly emphasising employee performance in the customer-oriented service sector (Mills and Margulies, 1980; Jackson *et al.*, 1989).

But with just three significant results from tests of 36 different pay practices (see Chapter 5 for details) there is clearly not a body of evidence to suggest organisations in this study are broadly aligning their pay practices based on the industry sector they operate in. Explanations for why this might be centre on alternative factors having a more powerful effect on pay practice selection. It has been already observed that business strategy has a more obvious effect on pay practice selection than industry sector and this might account for these limited results. Similarly, there might well be other factors not considered within this study that determine organisational choices regarding pay design.

8.2.2.4   Finding 6: There is limited alignment between pay practices and organisation size

Chapter 5 also showed limited support for H9 - large organisations will be more likely to select an algorithmic pay configuration and SME organisations will be more likely to select an experiential pay configuration. The findings showed that large organisations were more likely to use algorithmic pay practices such as pay spines, job evaluation, collective pay bargaining and sales commission as well as having higher pay dispersion than SMEs. These results provide some support for Jackson *et al.*'s (1989) theory of the development of more formal, internally-oriented pay systems aligned to the 'make' HR configuration (i.e. developmental, internal, secure employment) in large organisations but there is no evidence of SMEs adopting the experiential pay practices – market-based pay and cash incentives – found by Carlson *et al.* (2006) or any others.   Furthermore, large organisations in this study also selected a number of experiential pay practices such as broadbanding, performance-related reward and long-term incentives while the only pay practice significantly more likely to be used by SMEs was using the organisation's ability to pay as the basis for pay determination.

It was proposed in Chapter 3 that SMEs, constrained by resource poverty and proximity to an uncertain environment (Welsh and White, 1981; Westhead and Storey, 1996; Hill and Stewart, 2000; Williamson, 2000), would develop informal and flexible pay systems (Harney and Dundon, 2006; Verreynne *et al.*, 2013) and may be more experimental and adaptive than their larger counterparts (Storey, 1994; De Winne and Sels, 2012). These aspects of SMEs could make the experiential pay configuration a natural fit for SMEs; reactive to the market, flexible and innovative, and yet the SMEs in this study do not appear to have adopted these practices. That 'ability to pay' features as the only pay practice significantly more likely to be adopted by SMEs in this sample lends support to the view that the pay decisions of these organisations are largely constrained by their resources, but this does not appear to have translated to a flexible and innovative approach to pay design.

However, that there are some clear differences in pay practice selection between large organisations and SMEs suggests there is a relationship between organisation size and pay practices. Given the type of pay practices selected by large organisations – broadbanding, job evaluation, pay spines, collective bargaining, share / LTI schemes, PRR schemes – there is no evidence for either an experiential or an algorithmic pay configuration being associated with large organisation size. What is apparent from these results is that large organisations seem to be adopting pay practices facilitating formalisation, structure and stability; an entirely logical consequence of managing pay for large numbers of employees. So, while there is little evidence

to suggest clear pay configurations associated with organisation size, the results of this study do show a relationship between the type of pay practices selected and the size of organisation, albeit on a piecemeal basis.

8.2.2.5 Finding 7: Alignment of pay with organisational contingencies is evident but not extensive and systematic

Taking the evidence of the previous four findings together, although there are clear indications of relationships between organisational contingencies and specific pay practices, there are also suggestions that the associations are often limited and ad hoc. There are many examples of pay practices that seem to have no significant relationship with organisational contingencies and examples of relationships unanticipated by the standard strategic pay model. Small effect sizes across the board also indicate that other factors may exert a far greater effect on pay practice selection. In making sense of this finding, both methodological and theoretical explanations will be considered later in the chapter, but for now, it is clear that while alignment is evident it is not extensive and systematic.

8.2.3   To what extent does alignment of pay practices with organisation characteristics have an effect on HR outcomes?

8.2.3.1   Finding 8: Alignment of pay with high-road business strategy can have a positive effect on HR outcomes

Results analysed in Chapter 7 show the positive effects of high-road strategy on HR performance outcomes for each of the three proposed pay configurations and for both job-based and knowledge-based employment groups. This could well indicate that organisations pursuing a high-road business strategy are likely to have better HR performance outcomes regardless of the pay configuration adopted. However, results also show that when organisations used a market / flexible pay configuration for knowledge-based workers, the addition of high-road strategy had the most impact on HR outcomes. Conversely, when organisations used individual / cost-driven pay for job-based employees, high-road strategy has the least impact. It seems then, that different combinations of configurations of pay practices, business strategy and employment groups can have different effects on HR performance outcomes and therefore these results indicate some support for H4 – alignment of strategic orientation and pay configuration can have a positive effect on HR performance outcomes.

Results in Chapter 7 also show that low-road strategy appears to have virtually no significant effects on HR outcomes aside from worsening HR outcomes where organisations used a market / flexible pay configuration for knowledge workers. As noted in Chapter 7, this was the pay configuration upon which high-road strategy had the most positive impact, which suggests that organisations with high-road business strategies will see better HR performance outcomes by paying knowledge-based employee groups according to market / flexible pay practices, than those pursuing low-road business strategies.

Despite this finding, the results as a whole do not provide overwhelming support for the sort of comprehensive aligned pay-strategy-performance relationship found by Balkin and Gomez-Mejia (1990) and subsequently by Montemayor (1996), Chen and Jermias's (2014) and Tenhiälä and Laamanen's (2016). In some ways, the results of this study echo findings of Tsai *et al*. (2008) who found only partial support for a relationship between pay policy, innovation strategy and organisational performance and question the universal application of the strategy-pay alignment model. Caveats around operationalisation of business strategy and the scope of pay practices included in these studies aside, that high-road strategy and market / flexible pay practices appear to interact to impact positively with HR outcomes in this study is in line with previous research findings. It is, however, only an indication rather than a definitively positive finding – after all, even within the market / flexible pay configuration only two pay practices have positive effects on HR outcomes, two others have negative effects and the rest have no significant effect at all.

8.2.3.2   Finding 9: Alignment of pay with employment group can have an effect on HR outcomes

The results in Chapter 7 indicate quite clearly that different pay practices have different HR performance effects according to employment group. This finding lends some support to the proposal of H6: that alignment of employment group and pay practices will have a positive effect on HR performance outcomes.   Where employees working in a knowledge-based employment group have a market / flexible pay system which contains profit-sharing and merit pay there is a positive effect on HR outcomes. But the results are ambiguous; other elements of the market / flexible pay configuration – sales commission and pay reviews based on recruitment and retention needs – when applied to knowledge-workers, have a negative effect on HR performance outcomes. Basing pay determination on the organisation's ability to pay also worsens HR outcomes. So, the theoretical premise formed in Chapter 3, that aligning the knowledge-based employment group with *traditional* pay practices based on a commitment-

oriented, 'make' HR system would result in positive HR performance (Miles and Snow, 1984; Delery and Doty, 1996; Lepak and Snell, 2002; Youndt and Snell, 2004) has not been verified. But the results are similar to those of Collins and Smith (2006) who found incentives based on organisational performance for knowledge workers improved firm performance and to those of Rodríguez and Ventura (2003) who found that algorithmic pay practices associated with the 'make' HR system produced a negative effect on the firm's productivity.

Similarly, for employees working in the job-based employment mode, there is no clear indication from the results that alignment with one pay configuration results in better HR outcomes. Positioning pay in the upper decile (from the traditional pay configuration) and profit-sharing (from the market / flexible pay configuration) when applied to job-based workers both have positive effects on HR outcomes. However, for job-based employees, lower quartile pay, recruitment and retention-based pay reviews and pay determination by ability to pay, all from different pay configurations, have negative effects on HR performance. Again, there is no indication from these results that aligning the job-based employment group with an experiential pay configuration based on Lepak and Snell's (2002) productivity-based HR which in turn was based on the market-oriented 'buy' HR system (Miles and Snow, 1984; Delery and Doty, 1996) produces better HR outcomes.

Another issue arising from these results is the evidence of pay practices (profit-sharing, recruitment and retention as a pay review factor and ability to pay) that have effects on HR outcomes when applied to both employment groups suggesting alignment by employment group is not playing a role here. This finding is similar to that of McClean and Collins (2011) whose results indicated that high-commitment HR practices positively related to firm performance for both employee groups in their study and Nyberg et al. (2016) who find performance-pay positively influences performance for all employee levels. The results of this study too suggest that a commitment-oriented performance pay practice – profit-sharing – has positive effects when applied to each group. There is also good evidence to suggest that certain pay practices, in this case pay reviews based on recruitment and retention needs and pay determination based on ability to pay, universally have negative effects on HR outcome regardless of employment group.

Overall, although the specific theoretical effects of aligning employment groups with pay configurations have not been borne out by the results of this study, the key finding here is that selecting pay practices according to employment group can have a positive, or indeed negative,

effect on organisational HR outcomes. Again, however there seems to be a piecemeal approach to practice adoption rather than a configurational one.

8.2.3.3 Finding 10: Alignment of pay with industry sector does not have an extensive effect on HR outcomes

The results analysed in Chapter 7 showed very little support for H8 – alignment of industry sector and pay practices will have a positive effect on HR performance outcomes. In all but one case, the addition of industry sector to the regression models had no significant effects on HR outcomes indicating that there is no clear HR benefit for organisations selecting their pay practices according to whether they operate in manufacturing and production or the service sector. That said, one result showed that in organisations where there were knowledge workers with a market / flexible pay configuration, operating in private sector services had a positive effect on HR outcomes. This finding appears to support the hypothesised association between private sector services and experiential pay practices and indicates that, at least for knowledge-workers, service sector organisations choosing market / flexible pay practices could see improved HR performance. This echoes the findings of Delery and Doty (1996), who found organisations in the financial services industry using profit-sharing saw better firm performance. However, there is scant literature in this area and the results of this study do little to establish a clear connection between pay practices, alignment with industry and performance.

8.2.3.4 Finding 11: Alignment of pay with organisation size does not appear to have an effect on HR outcomes but size itself does

The results detailed in Chapter 7 show that HR outcomes are nearly always positive for SMEs and negative for large organisations regardless of alignment or non-alignment with pay configurations. This finding appears to offer very little support for the proposition of H10 – that alignment of organisation size and pay practices will have a positive effect on HR performance outcomes. As discussed in Chapter 7, the only result that provides a small degree of support for the hypothesis is that in organisations where there are knowledge-based workers with traditional pay practices, the effect of larger size is not significant. This rather neutral finding could indicate that the seemingly universal negative effect of larger organisation size on HR outcomes is mitigated because organisation size and pay configuration are aligned, but this is certainly not clear evidence for the effect of alignment on HR performance. These results largely confirm Jackson *et al.*'s (1989) finding that organisation size has a weak association with HR practices

and there is no evidence to support Carlson *et al.*'s (2006) findings which suggest a relationship between experiential pay practices and high performance in SMEs.

As noted in Chapter 7, although findings from this study clearly show no support for H10, it is interesting that SMEs appear to have more positive HR outcomes than their larger counterparts. This might well indicate that size of organisation has a role in shaping HR performance, but seeking to determine why this might be is outside the scope of this research. One thing that is fairly clear from the findings of this study however is that HR outcomes appear unrelated to the alignment of pay configuration with size of organisation.

8.2.3.5 Finding 12: Alignment of pay with organisational contingencies has a minimal effect on HR performance outcomes

In pulling the previous four findings together then, there appears to be very little evidence for a significant relationship between alignment of pay with organisational contingencies and HR performance outcomes. Clearly, some contingency factors, notably high-road business strategy, do appear to work in conjunction with pay configurations to have a positive effect on HR performance. And there does seem to be a clear difference in HR outcomes for using different pay practices according to employment group. There are however many discrepancies, unexpected or non-significant results, and small effect sizes which suggest a mixed picture. In short, this study has not found a uniformly conclusive set of results for the effect of pay alignment on HR performance.

8.3   Universalistic, contingency and configurational perspectives

The twelve main findings of this study have implications for the universalistic and alignment perspectives on strategic pay explored in Chapter 3.

8.3.1   Evidence for new pay

First, there appears to be good evidence for aspects of the universalistic, new pay proposition that certain strategic pay practices will enhance organisational performance (Lawler, 1990, 2000; Schuster and Zingheim, 1992; Delery and Doty, 1996; Martocchio, 1998; Risher, 1999; Zingheim and Schuster, 2000; Milkovich and Newman, 2002). Finding 1 indicates that basing pay practices on 'the person' and their performance or contribution, linking pay to individual skills and competencies and enabling employees to share in the financial success of the business has a positive effect on HR performance outcomes. Clearly, not all strategic pay practices were

shown to have positive effects on HR outcomes but on balance, where there were significant positive effects, these were associated with the experiential rather than algorithmic practices. That certain types of pay practice can influence employee behaviours and attitudes to the extent that there is an effect on HR performance follows not only from the universalistic perspective on strategic pay but also from antecedent theories of sorting, incentive and equity effects discussed in Chapter 2. Pay does appear to act as an economic and psychological lever influencing decisions to join and stay with organisations, employee motivation, satisfaction, and ultimately behaviour with the potential to contribute to the achievement of organisational objectives. However, as discussed above, aside from supporting prior research in this area, the new contribution made by this study is that the overall driver of or approach to pay design – whether it is based on principles of low-cost and minimal information sharing or person-centred reward and sharing profit – is as important as the individual practices themselves and certainly more important than whether it is a practice categorised as strategic or traditional.

Second, the universalistic idea that organisations bundle practices, derived from the 'best practice' approach to HRM strategy (Pfeffer, 1998, 2005; Appelbaum *et al*., 2000; Purcell *et al*., 2003), also appears to be supported by findings of this study. Three potential bundles were found in this study; one representing the traditional pay model rejected by the strategic pay proponents and the other two representing segmented aspects of the new pay's orthodoxy of pay flexibility, market competitiveness, and individualism. However, there was no solid evidence to suggest that these bundles had any marked additive effect on HR outcomes although one of the bundles – an individual / cost-driven approach to pay – did have wholly negative consequences for HR performance. So, there were only suggestions that bundling had potential to mitigate or enhance the negative or positive effects of individual practices but no firmer evidence than this. This finding is important because organisations rarely use pay practices in isolation, so understanding the combined effect of practices is imperative to understanding the influence on HR performance outcomes. Despite the lack of any hard evidence for positive effects of bundles in this study, because there is an indication that selecting practices in combination can have different outcomes than when used independently, the logical consequence is that there might well be certain combinations that prove more effective than others at enhancing HR performance. An elusive 'golden' pay bundle may exist, although this study has not found it.

8.4 Contingencies and configurations

Other findings suggest that organisations select practices based on organisational characteristics which is much more in line with an alignment perspective as opposed to the universalistic approach. Contingency approaches tend to differentiate between alignment of organisational practices either *vertically* related to external factors such as industry sector or competitive business strategy (Miles and Snow, 1984; Schuler and Jackson, 1987a, 1987b; Jackson *et al.*, 1989; Christiansen and Higgs, 2008), or *horizontally* related to internal factors such as organisation size (Jackson *et al.*, 1989), and the employment groupings of its workforce (Wright, *et al.*, 1994; Wright and Snell, 1998; Wright, *et al.*, 2001; Lepak and Snell, 2002). This study found selection of pay practices associated with both vertical and horizontal factors suggesting good support for this element of the contingency proposition.

8.4.1 Vertical alignment

In relation to the first vertical factor investigated, business strategy, finding 3 is unambiguous; organisations, particularly those pursuing high-road business strategies, select pay practices that are aligned with their strategy. Contingency theory suggests organisations do this to encourage desired employee role behaviours consistent with achieving specific business strategies (Schuler, 1987; Schuler and Jackson, 1987a, 1987b). And results strongly suggest pay practices in high-road organisations are more likely to emphasise individual contribution (basing pay progression on competencies and skills) high levels of reward (upper quartile pay positioning) but with a variable element based on performance (PRR schemes) and flexible pay structures (broadbanding), presumably designed to encourage the sorts of employee behaviours – autonomy, creativity, quality work and high performance – needed to pursue successful high-road business strategies of growth, diversification and differentiation. For low-road strategy organisations, the findings are less convincing. Schuler and Jackson (1987a) suggest these organisations will select practices based on encouraging repetitive and predictable employee behaviours with an emphasis on results. The finding that the only two pay practices more likely to be selected by low-road strategy organisations were lower quartile pay positioning and pay levels determined by ability to pay certainly suggests 'cost reduction' as a driver for pay practice selection. Lower pay levels would also presumably secure routine rather than high performance consistent with low-road requirements, but besides this there is no strong evidence for selection of pay practices to shape employee behaviour in these organisations. As discussed in 11.2.2.1 above, the reason for the lack of association between low-road strategy and pay practices other

than the cost-oriented ones, is difficult to determine without further research. But given the evidence from findings appears to suggest that cost-orientated practices are often associated with poorer HR performance outcomes, then the association of low-road strategy with cost-driven pay is likely to be an important one.

The other vertical alignment factor examined in this study was industry sector, and findings suggest only limited alignment here compared with business strategy. Manufacturing and production companies' use of collective bargaining and ability to pay to determine pay levels as well as the service sector's use of PRR schemes are in alignment with the different employee behaviours required to produce goods (repetition and routine behaviours) and services (customer-service and self-monitored performance) but this is only limited evidence for use of a contingency model. Clearly, organisations do not appear to be selecting pay practices contingent upon the industry sector they operate in as proposed by contingency theorists (e.g. Jackson *et al.*, 1989) and the results are limited compared with those for business strategy.

8.4.2   Horizontal alignment

Based on human capital enhancement theories (Becker, 1993; Wright *et al.*, 1994; Youndt and Snell, 2004; Wright and McMahan, 2011), the horizontal alignment concept proposes that unique employee knowledge, skills and abilities helps develop an organisation's core competencies and leads to desired organisational outcomes sustaining competitive advantage for the firm, when they are supported by appropriate HR practices. Lepak and Snell (2002) proposed designing different practices according to different employment groups based on the type of strategic advantage their knowledge, skills and abilities bring to the firm. Findings from the present study indicate that organisations do align many pay practices with the employment group of the workforce; knowledge work and job-based employment are associated with different practices across the spectrum of strategic pay dimensions. Pay practices for job-based employees appear to be more market-oriented, with less emphasis on variable pay and include more traditional practices such as collective bargaining and pay spine structures. Knowledge work meanwhile is associated with an emphasis on internal equity, rewarding individual value or behaviours and much more pay variability. Despite being contrary to hypothesised pay patterns, these findings can still be interpreted within the context of alignment between pay and the differing human capital requirements of different employment groups. For example, it makes logical sense for organisations to pay job-based employees according to the market in which they trade their transferable skills and abilities but to have greater emphasis on internal

equity for knowledge-based employees whose more specialist skills need to be retained longer-term within the organisation. It is also reasonable to offer the broad-base of job-centred employees a standardised pay plan with predictable costs but to tailor variable pay schemes according to myriad individual, group or organisation outcomes for the knowledge-based employees who have more direct influence on those outcomes. So, it is apparent that horizontal alignment, at least according to workforce employment group, is in evidence.

The other horizontal alignment factor examined in this study was size of organisation and, as discussed above, these results indicate that large organisations select pay practices that help to facilitate formalisation, structure and stability in keeping with managing pay for large numbers of employees whereas SMEs determine pay levels according to their ability to pay consistent with the resource constraints that come with smaller size. So, the results of this study do show a relationship between the type of pay practices selected and the size of organisation consistent with a contingency perspective although the specific predictions of the strategy pay model are not evident.

8.4.3   Alignment effects

A key premise of the contingency and configurational perspectives on pay is that alignment, with either individual organisational characteristics in the case of contingency approaches or multidimensional internal and external organisational features in the case of configurational perspectives, will lead to a significant improvement in HR, and ultimately organisational, performance outcomes (Delery and Doty, 1996; Martín-Alcázar *et al.*, 2005). There are indications that aligning pay with high-road strategies (finding 8) and employment group (finding 9) can have a positive effect on HR outcomes. However, analysing findings 8 to 11 together, there is very little compelling evidence that alignment either by organisational contingencies individually or in configurations leads to enhanced HR outcomes (finding 12).

8.5   Methodological explanations for results

Considering the body of literature theorising a relationship between pay, HR outcomes and organisational contingencies as well as the considerable evidence for the incentive and sorting effects of pay on employee behaviours, the finding that there are limited indications of such a relationship is surprising. In making sense of this set of findings a number of possible explanations might be considered. First there are a number of possible methodological explanations for the absence of strong evidence for the effect of pay alignment on HR

performance outcomes. It is possible that the operationalisation of one or more variables could be invalid or inappropriate for the sample. However, the six variables groups in this study (pay practices, business strategy, employment groups, industry sector, organisation size and HR outcomes) were operationalised with careful consideration for reliability and validity based on both previous research and practical means of measurement as detailed in Chapter 4. There is also the possibility that the sample biases, both sample selection bias (that the sampling frame differed in some key respects from the whole population because the organisations in the sample were very likely to employ professional HR practitioners who were CIPD members) and non-response bias (that there were likely to be some key differences between respondents and non-respondents to the survey) meant the results were invalid. However, as discussed in Chapter 4, if they had an effect, these biases were more likely to mean the results would over-state the extent of strategic pay practices rather than under-state it. That the results showed a lack of evidence for alignment effects suggests they are less likely to be found in the wider population of UK organisations even than the results of the sample have found. Finally, there is also the possibility that alternative analytic techniques might have found evidence for the effect of aligned pay on HR outcomes missed by the multiple hierarchical regression analyses. Again, Chapter 4 details the suitability of this statistical testing procedure for the type of data collected as well as for the specific hypotheses being tested but this does not rule out scope for future research to employ alternative techniques.

8.6   Theoretical explanations for results

Having considered and largely rejected methodological explanations for the lack of evidence for a relationship between strategic pay alignment and HR performance outcomes, another possible explanation is to question the soundness of the perspectives from which the hypotheses were formed. There have long been criticisms of the universalistic approach for its emphasis on unidimensional, linear relationships between isolated variables rather than strong theoretical foundations (Martín-Alcázar *et al.*, 2005). However, this thesis has demonstrated a robust basis for examining the effect of pay practice selection on HR outcomes given the substantial literature providing evidence for the economic and psychological effects of pay on employee behaviour. Despite this, there are still real concerns that strategic pay is a myth, rhetoric rather than reality, and this is certainly a view that has been expressed by critical voices over recent years (e.g. Taylor, 2000; Trevor, 2010; Trevor and Brown, 2014). Like previous studies (e.g. Delery and Doty, 1996), the results of this research project have demonstrated good evidence for a

relationship between pay practices and HR outcomes but found very little benefit in aligning those pay practices with business strategy or other employment or organisational characteristics. This gives weight to Milkovich's (1987, p.3) description of strategic pay alignment as a mere "leap of faith" and to both Gerhart and Rynes (2003) and Shields (2015) who conclude that there is limited evidence for pay alignment improving HR outcomes or organisational performance. It is possible that if other internal organisational characteristics such as organisation life-cycle stage (Baird and Meshoulam, 1988; Delery, 1998), organisational culture (Cabrera and Bonache, 1999), and the organisation's structure or technology (Jackson *et al.*, 1989) had been included in the study, there could have been different results. However, given the very mixed picture for the contingencies studied as well as previous findings, this is by no means certain.

Perhaps then, it is the premise of the contingency and configurational perspectives that needs to be examined as being inadequate to fully capture pay decision-making in organisations. It was noted in Chapter 3 that the contingency approach tends towards framing organisational choices as dichotomous decisions (Doty and Glick, 1994). The choices are presented as polar: external or internal alignment; vertical or horizontal alignment; alignment with business strategy or human capital. And whilst the configurational perspective is heralded as more suited to capturing the complexity of organisations because it emphasises holistic combinations of internal and external factors and their synergistic interactions (Delery and Doty, 1996; Martín-Alcázar *et al.*, 2005), there remains a dichotomous framing of organisational choices. The configuration typologies, although often acknowledged as 'ideal' types, are always opposites: Type A or Type B (Miles and Snow, 1984); internal or market-type (Delery and Doty, 1996); commitment or productivity-based (Lepak and Snell, 2002); acquisition or developmental (Youndt and Snell, 2004). Using these perspectives, this study sought to delineate pay configurations based on the strategic pay literature, and as noted above, these too tend to be dichotomous: old or new; strategic or traditional; experiential or algorithmic. However, indications from this study suggest that pay configurations selected by organisations may not conform to a dichotomous model. Furthermore, recurrent themes through the analysis of findings show a) the apparent mixing of practices from different configurations, contrary to hypothesised associations (e.g. high-road strategy firms selecting algorithmic job evaluation and sales commission alongside experiential practices); b) for certain pay practices no significant difference in selection rates between organisations with different characteristics (e.g. levels of pay secrecy were not significantly different across organisation with different business

strategies) and c) small effect sizes for almost all of the significant test results indicating that the predicted associations do not fully explain changes in the response variables.

Taken together, this analysis of results points towards deficiencies in the contingency / configurational model in explaining pay practice selection and the effect on HR outcomes. Arguably this is because, despite offering a more holistic perspective than universalistic approaches, there is still a failure to take account of the complexity of competing, often contradictory, pressures organisations may face.

8.7   Chapter summary

This chapter has synthesised an analysis of findings from results reported in previous chapters and, based on the evidence drawn from primary and secondary research, it has provided responses to the research questions posed at the beginning of this thesis. There is good evidence that pay practices can have an effect on HR performance outcomes but no clear indication that bundling has an additive effect, at least not in the bundles formations suggested in this study. There is also fairly good evidence that organisations select pay practices that align with aspects of their internal and external environment. Externally, organisations pursuing different competitive business strategies select different pay practices broadly in line with the experiential and algorithmic models but there is only limited alignment between pay and industry sector. Internally, organisations also differentiate pay practices according to employment group providing some evidence for organisations aligning pay with human capital enhancement requirements, although here too there is no evidence for an experiential / algorithmic pay pattern, and there is only limited evidence for alignment with organisational size. However, the proposition that alignment with these organisational characteristics would lead to positive HR performance outcomes has not been evidenced by findings from this study. Despite some indications that individual pay practices have positive or negative effects on HR outcomes, when configured in pay bundles aligned with strategy, employment group, sector and size there is no compelling evidence to suggest that organisations benefit from strategic pay alignment, at least not in terms of HR performance outcomes.

So, while aspects of the universalistic and alignment perspectives to strategic pay have been confirmed by these findings, key features including evidence for benefits of a configurational approach have not been found. In explaining why this might be, this chapter explored some possible methodological explanations as well as deficiencies in the standard treatment of strategic pay.

Chapter 9:   Conclusions

9.1   Chapter introduction

This chapter briefly restates the research problem addressed in this thesis and outlines the steps taken in conducting the enquiry before drawing together the main findings of this research study to reach key overall conclusions.   Limitations of the research are examined, in terms of the validity of results and the extent to which the conclusions can be generalised.   The contribution of this work to both theory and practice is also stated with reference to useful implications for practice and recommended avenues for future research in this field.

9.2   Strategic pay unpacked

In outline then, the thesis aimed to reassess the strategic pay model by evaluating the extent of strategic pay practices in UK organisations and their impact on HR performance outcomes.   This investigation was prompted by an apparent disconnect between the rhetoric of strategic pay presented in much of both the extant academic literature and practitioner commentary and the seeming lack of evidence for these claims.   This perceived reality gap had provoked calls for better thinking and better evidence about the reality of relationships between organisational contingencies, pay and performance in organisations (Bevan, 2005; Gupta and Shaw, 2014). And this study was designed to provide both a clearer theoretical basis upon which to conduct research and firmer evidence about the reality of strategic pay in the UK.

The secondary research for this study was drawn from multi-disciplinary research evidence and theoretical literature from fields including strategic HRM, organisation behaviour, psychology and economics.   The power of pay to shape employee responses is an established feature of the literature; there is solid evidence that pay can have a sorting effect by determining who joins and leaves organisations (Lazear, 2000; Gerhart and Fang, 2014) and a powerful incentive effect by changing employee effort and behaviour (Locke, *et al*., 1980; Cadsby, *et al*., 2007) although the longer-term organisational benefit of this behaviour change is disputed (Kohn, 1993; Deci, *et al*., 1999).   The principle of strategic pay rests on an assumption that organisations can harness these powerful effects by designing pay systems to attract and retain employees with appropriate qualities and to motivate them to behave and perform in ways consistent with achieving organisational objectives.   These ideas were given much attention as forces of competitive globalisation prompted huge structural changes to Western economies requiring rapidly

changing human capital needs. The 'new pay' concept appeared to offer a response to this new world order by proposing greater pay flexibility driven by market forces and, by emphasising high performance working aimed at achieving organisational success; new pay was considered a 'strategic' management tool (Lawler, 1990, 2000). Furthermore, this strategic set of pay practices was framed as distinctively different from the existing traditional pay model seen as encumbered with bureaucratic, internally-focused and expensive practices unsuitable for a changed (and changing) economic environment. However, this universalistic perspective of strategic pay was regarded by some as both unidimensional and insufficient in explaining why different organisations might benefit from choosing different practices (Delery and Doty, 1996). Contingency and configuration perspectives appeared to offer a more nuanced and holistic understanding of organisational pay practice selection and performance outcomes (Martín-Alcázar *et al*., 2005). The theoretical proposition being that organisations would achieve enhanced employee performance outcomes if they aligned their pay practices with organisational contingencies; externally with business strategy and industry; internally with employee human capital needs and numbers. And, broadly based on the distinction between strategic pay practices and traditional pay practices, a framework for selecting appropriate pay practices aligned with organisational requirements was developed which included two types of pay practice: experiential (market-competitive, performance-oriented, individualised and variable pay) and algorithmic (emphasising hierarchy, internal equity and cost-control / reduction) (Gomez-Mejia and Balkin, 1992).

Having established a theoretical basis for the strategic pay model, in order to test its propositions empirically, a research strategy was designed using the Hypothetico-Deductive (HD) method, a mono-method, quantitative survey in line with explanatory and evaluative research objectives. Data was gathered using the CIPD Reward Management Survey in 2012, in which the author played a significant design and analysis role, with a final sample of 302 respondents from a cross-section of private-sector UK-based organisations. Ten hypotheses based on the literature were developed which were tested using a range of statistical techniques including non-parametric tests, linear and logistic regression analyses, cluster analysis and hierarchical multiple regression.

9.3   Alignment

Findings showed some support for elements of the strategic pay model. First, there is good evidence for a level of alignment between business strategy and pay practices; high-road strategy

organisations generally selecting strategic pay practices and low-road strategy firms choosing cost-driven pay practices. There was also clear evidence for organisations choosing different practices according to employment group with pay practices for the knowledge-based group being based on internal equity, individual value or behaviours and pay variability; and pay practices for job-based employees being more market-oriented, fixed and traditional. And, despite there being more limited alignment between pay practices and industry sector or organisation size, there was evidence that manufacturing firms select more traditional and cost-driven practices whereas the service sector is more likely to use performance-driven reward. Similarly, large organisations adopt pay practices facilitating formalisation, structure and stability whereas reward in SMEs is based on ability to pay. So, there is certainly evidence for alignment; the selection of pay practices depends, to some extent, on business strategy, differing human capital requirements, industry and organisation size.

9.4   Bundling

Second, there are indications that organisations may choose pay practices in co-ordinated bundles. Some organisations operate 'traditional' pay practices; structured base pay determined by collective bargaining, service-related progression, piece rates or gainsharing and pay positioning either higher or lower than the market-median. Others adopt 'market / flexible' practices with broadbanded pay structures, variable pay schemes and pay determined, reviewed and positioned according to market pay conditions. But this study also proposes a third pay bundle; some organisations choose loosely structured pay, determined individually, by what the organisation can afford and operated with minimal transparency.

9.5   Performance outcomes

Finally, this study found some evidence for pay practices having an effect on HR performance outcomes. Profit-sharing and paying according to merit, skills and competencies will improve HR outcomes whereas pay secrecy, low market positioning of pay, cost-driven pay setting and pay reviews based on recruitment and retention needs all worsen HR outcomes. When pay bundles are configured with strategy, employment group, sector and size, there are slightly different results but still evidence that combinations of practices and organisational characteristics can have effects on HR performance. For SMEs operating in the service sector with high-road business strategies, using profit-sharing and merit pay for knowledge-based employees has positive effects. Profit-sharing also has a positive effect on HR outcomes for

job-based employees in similar contexts. In contrast, for large organisations in manufacturing with low-road strategies, using sales commission and recruitment / retention needs to review pay for knowledge workers has negative effects. This suggests that certain combinations of pay practices, in combination with organisational contingencies, do have differing effects. There is no clear evidence for certain pay configurations being superior to others, but there is an indication that choice of pay practices according to specific organisational conditions can partly determine the level of HR performance. This may suggest that there may be other benefits of aligning pay with organisational contingencies besides HR outcomes. These could be to do with legitimisation, what is culturally and politically acceptable within the organisation or even just cost-saving, but outside the scope of this study.

9.6 Explaining unexpected results

The findings above need to be qualified however. Alongside the good evidence for relationships between certain pay practices, organisational contingencies and HR performance outcomes were large numbers of non-significant results indicating the absence of any relationship. Many pay practices appeared to have no clear association with business strategy, employment group, industry sector or organisation size. Equally, many pay practices appeared to have no relationship with HR performance outcomes, not even when combined in aligned configurations with those organisational characteristics. Furthermore, even for the significant results, the effect sizes were small – the associations only explained a small part of the change in either pay practice selection or HR outcome.

9.7 Conclusions

From these findings a number of conclusions have been determined:

1. Organisations select some pay practices according to their business strategy and the employment groups of their workforce. In doing so they are likely to be intending to create conditions in which the behaviour and performance of employees is directed at achieving particular outcomes; there is a strategic intention in pay practice selection.

2. The industry sector and size of organisations will also shape the pay practices selected although to a more limited extent. Within industry sectors this is likely to be related to the differences in employee behaviours in producing either goods in manufacturing and production firms (routine behaviours) or customer-oriented services in the service sector (performance behaviours). For organisations of different sizes, large organisations select

practices associated with formality, structure and stability which is both practical for managing large numbers of employees and bestows institutional legitimacy. The constraints of resource-paucity in SMEs are likely to be responsible for their focus on pay affordability.

3. Organisations use pay practices in bundles which may have distinctive characteristics: traditional pay, market / flexible pay or individual / cost-driven pay.

4. The selection of pay practices can have an impact on HR outcomes. Organisations can benefit from using person-based pay practices and profit-sharing whilst using non-transparent, low-cost pay will have a detrimental effect on HR performance. Certain configurations of organisational contingencies and pay practices have positive or negative effects suggesting the potential for effects on HR outcomes. It is clear that organisational selection of pay practices and the resultant impact on HR outcomes is not solely related to alignment of pay with contingency factors. Other pressures and factors may well be shaping the selection of pay practices in organisations.

9.8 Limitations

There are a number of methodological limitations that might have an effect on the validity and generalisability of the empirical results. First, there are limitations associated with the HD methodological approach. Deductive reasoning is non-ampliative, the validity of conclusions is dependent on the validity of its premises and it can fail to account for alternative explanations. The HD method is also reductionist – big, complex and sometimes nebulous ideas are necessarily reduced down to a tightly defined set of operationalised variables. Again, detailed consideration of variable operationalisation based on extant literature was taken in this study. But, despite these attempts to mitigate the limitations of the HD approach, there is room to assume that a different methodological approach may have found, if not different results, then certainly the opportunity for a broader scope of possible explanatory factors. The use of a mono-method and a quantitative, cross-sectional research design allowed a certain amount of focus, definition and the discovery of statistically robust relationships in the data, but this design is limited in its ability to explore both the nuanced and unpredictable nature of human decision-making in organisations as well as changes in longer term trends and emphases.

There were also some constraints related to working within the scope of an established survey instrument. The CIPD Reward Management Survey was, and still is, primarily used as a benchmarking tool, reporting frequencies of reward practices within the practitioner

community. Trends in these frequencies would be reported year-on-year and therefore there were certain restrictions in terms of consistency of approach and specific questions that needed to be maintained. For this research project, additional questions were added to the 2012 survey to collect the required data, but concerns around the length of the questionnaire and user-friendliness meant there were limits to the number of questions that could be asked. This meant that many of the questionnaire questions were not relevant to the hypotheses but also there was no opportunity to ask a wider range of questions (for example on other possible organisational contingencies such as wider HR practices, organisational life-cycle stage, structure or culture) which would have widened the scope of the present study. Limitations in identity tracking of participant organisations as well as changes to some questions year-on-year also meant a longitudinal study would have been extremely challenging using this data source.

The potential sample biases arising from using the CIPD survey for data collection discussed in Chapter 4 may also limit the generalisability of findings. The results tell us about the extent and effects of strategic pay practices among UK private sector organisations that employ professional HR practitioners. It is possible that if the study had targeted organisations with little or no HR presence the results would have been profoundly different. The rationale for collecting data on strategic pay through CIPD was based on an assumption that organisations employing qualified HR professionals would be more likely to use normative strategic pay practices than those with minimal HR support i.e. if strategic pay was going to be found anywhere it would be among this sample frame. It was also necessary to target respondents with enough technical knowledge to be able to answer the questionnaire accurately. So, it is accepted that the results may overstate the incidence of strategic pay alignment and that in the general population of UK organisations the pattern of practices and their effects may be somewhat different.

9.9   Implications for further research and practice

The conclusions of this study provide important evidence with which to inform the development of strategic pay theory and practice. First, this study has established evidence for theorised relationships between pay, strategy, human capital needs, organisational context and HR performance outcomes in UK private sector organisations. That these relationships exist has implications; strategic pay is not 'all myth and no reality' as often claimed. Organisations do align pay practices with their strategic context and specific pay practices do have positive effects on HR outcomes. However, the varying extent of these relationships and especially the lack of evidence for positive effects of pay alignment, also has implications. Linear assumptions about

organisational conditions informing management intentions, leading cleanly to effectively implemented pay practices and onwards to desired HR outcomes are shown to be a simplistic interpretation of reality that may not take account the potential for competing internal and external pressures and the possibility of complex human responses.

The outcomes of this study contribute towards bridging the gap between theoretical strategic pay perspectives developed more than 25 years ago in a time of global economic transition, and a new perspective of pay, strategy, performance and context in a twenty-first century that continues to see huge economic and political upheavals. Because, undoubtedly pay continues to be important; the findings of this study have established that pay choices have consequences for employees and organisations, and those choices, while not always free and without constraint, should be made with care and consideration. HR and reward practitioners have an important role to play in guiding their organisations to make pay choices that not only take account of desired organisational outcomes but that also respond to an array of pressures. With greater awareness and understanding of the forces shaping pay practice selection and their potential consequences, professionals will be better placed to help organisations make those decisions. Evidence about organisational approaches to pay will also contribute to ongoing debates about managing people. The knowledge that approaches focused on valuing individual attributes and sharing the benefits of organisational performance can have a positive effect on HR performance whereas low-cost imperatives and secrecy can have a negative effect, may be useful for practitioners not only in designing and implementing pay systems but in wider issues around how values and culture shape people management and organisational success.

It is anticipated that it would be beneficial for future researchers in the strategic pay field to explore the utility of alternative approaches to universalism and alignment perspectives. There is a need here to develop a new or extended model of strategic pay based on alternative perspectives; not excluding the role of organisational contingencies but framing them in a less linear and static way. Widening the scope of variables to include a greater variety of contextual contingencies and their interaction would also help to further develop the theoretical model of strategic pay. Longitudinal research into strategic pay patterns within organisations over time would also contribute to a deeper understanding of pay choices and consequences than this cross-sectional study has been able to provide. Finally, different methodological approaches to this topic, for example qualitative or mixed-method studies, would provide additional dimensions of understanding this complex and multi-faceted concept.

9.10 Chapter summary

In summary, this thesis makes a significant contribution to knowledge about why organisations choose the pay practices they do and the consequences of these choices. These choices are based partly on organisational conditions such as strategic orientation and human capital needs but are unlikely to be appear systematic or co-ordinated. The outcomes of these choices too may not always be as intended, but, this thesis has shown, there is potential for the selection of pay practices to have a positive effect on HR performance outcomes which, if realised, could shape employee and organisational experience of pay practice in the UK.

Glossary

The Glossary is provided for information and clarification. The entries are not intended to be definitive definitions but are the meanings ascribed to terms used in this thesis based generally on those used by Chartered Institute of Personnel and Development.

Bonus: a non-consolidated payment (i.e. not added to salary) which can be discretionary or non-discretionary. May be used in an attempt to influence employee performance or behaviour to meet pre-set objectives or used on a more ad hoc or retrospective basis to reward past achievements.

Broadbanding: a pay structure using a small number of pay bands / grades, typically four or five.

Competency pay: basing pay rises on an assessment of employee competencies in a range of areas (focusing on employee input to the job, rather than performance or achievement), for example customer service or communication skills.

Gainsharing: a group bonus based on improvements in group / sub-unit / team productivity or production cost against historical benchmarks.

Goal-sharing: a group bonus based on improvements in group / sub-unit / team achievement of specific group performance goals / objectives.

Incentive: a non-consolidated cash payment (i.e. not added to salary) aiming to influence future employee behaviour or performance, usually through the use of targets.

Job evaluation: a method of determining pay level / grade on a systematic basis according to the relative importance / value of the job within the organisation.

Job family: a pay structure system grouping jobs within similar occupations or functions together (e.g. Sales, R&D, etc.), usually with around six to eight levels. There are usually separate pay structures for different 'families'. Career families are a variant system which involves the use of a common pay structure across all job families, rather than operating separate pay structures for each family.

Long-term incentives (LTIs) / share schemes: schemes which deliver company shares to employees in some form. LTIs may have specific conditions attached that the employee must meet before shares are released.

Merit pay: a way of managing pay by linking awards to an assessment of individual merit, often including performance or contribution and usually measured against pre-agreed objectives. The salary increase is usually consolidated but can involve non-consolidated cash payments.

Narrow-grading: a pay grading structure comprising a large number of grades, typically 10 or more, with jobs of broadly equivalent worth slotted into each of the grades.

Pay-for-performance (PFP): a system of linking pay to performance outcomes, often relating to variable pay schemes i.e. those that are not consolidated into salary payments.

Pay positioning: positioning pay level in the market; either in the upper decile (top 10%), upper quartile (top 25%), median (mid-point), lower quartile (bottom 25%) or lower decile (bottom 10%).

Pay spine: a pay grading structure similar to narrow-grading, based on a series of incremental points that usually allow for pay progression through the spinal salary points.

Performance-related-pay (PRP) or individual PRP: a way of managing pay by linking salary progression to an assessment of individual performance, measured against pre-agreed objectives.

Piece rates: a variable payment made retrospectively according to the number of units produced.

Profit-sharing: a formal system to share organisational or business unit profits usually in a bonus or other non-consolidated payment.

Skills-based pay: pay rises are linked to the acquisition of additional skills or specific qualifications levels.

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Appendix A: CIPD Reward management survey information

Table A.1 Research team participants and responsibilities

Name and institution in 2012	Primary role	Responsibilities
Sarah Jones (University of Bedfordshire)	Researcher	Questionnaire design, data analysis and interpretation, report writing lead
Liz Marriot (University of Bedfordshire)	Data analyst	Data analysis
Professor Stephen Perkins (University of Bedfordshire)	Researcher	Questionnaire design, report writing contribution
Professor Michelle Brown (University of Melbourne)	Researcher	Data analysis support
Professor John Shields (University of Sydney)	Researcher	Questionnaire design, report writing contribution
Charles Cotton (CIPD Senior Adviser on Performance and Reward)	Client	Questionnaire design, data collection co-ordination, report writing contribution

A.2   Email text to CIPD members inviting participation in CIPD Reward Management Survey 2012:

Dear

As a reward/HR professional, you know the impact that reward has on your organisation and what effective reward management looks like. That's why I'm inviting you to complete our online survey.

Your contribution will benefit us all

Your response will help us understand the key reward management issues in today's workplace and the impact that they're having on business performance. It's also an opportunity for you to reflect on the success of your own strategies and help us set standards for good practice.

Easy to complete

The survey is easy to complete and should take no longer than 25 minutes. You don't need to complete it in one sitting; you can save your answers and come back to them at a later date. The survey will close on 31 March 2012.

We respect your confidentiality

Each completed survey will be collated and analysed independently and we will not see individual responses. Please also note that we will not update any membership data based on the information that you provide in this survey.

Thank you in advance for your support; it is very much appreciated by us all at the CIPD

Please complete the survey [link to survey]

Charles Cotton

CIPD Adviser, Performance and Reward

On clicking the 'please complete the survey' link, participants were taken to a pre-survey screen:

"The survey has been designed to give you the opportunity to help us understand the key reward management issues in today's workplace and the impact that they're having on business performance. The survey is also an opportunity for you to reflect on the success of your own strategies.

The survey is easy to complete and should take no longer than 25 minutes. You don't need to complete it in one sitting; you can save your answers and come back to them at a later date.

The survey will close on 31 March 2012.

For your security and peace of mind, CIPD and its subsidiaries will not supply your details to any organisation for marketing purposes. By submitting this response you confirm that you

agree to the use of your information as set out in our privacy policy and agree to our website terms and conditions of use."

A.3   CIPD Privacy Policy

1. Data Protection and privacy

1.1 "CIPD" shall mean the Chartered Institute of Personnel and Development and its subsidiaries, including, but not limited to, CIPD Enterprises Limited and any future names by which these entities may be known.

1.2 This privacy policy applies to any information acquired by and/or provided to CIPD including but not limited to:

  1. This privacy policy applies to any information acquired by and/or provided to CIPD including but not limited to:
  2. information acquired/provided through use of the following websites: the CIPD website (including the CIPD Professional Communities) at www.cipd.co.uk and the HR Talking Talent website at www.hrtalkingtalent.asia (together the "Websites");
  3. information acquired/provided during the course of orders, transactions and bookings;
  4. information acquired/provided through enquiries or by the completion of any request and or invitation for information;
  5. information acquired/provided through awards and competition entries;
  6. information acquired/provided through any other source which we obtain in relation to you.

1.3 CIPD recognises that your privacy is important to you. The information you submit to CIPD will be kept confidential and secure once received. The information will be processed by CIPD or on its behalf under strictly regulated conditions in accordance with the provisions of the Data Protection Act 1998.

2. How we use your personal information

2.1. Any personal information provided by you to or obtained from other sources by CIPD will only be used for the following purposes:

  1. updating and enhancing customer, contact and membership records and those of other related CIPD activities
  2. compiling information relating to your use of CIPD's products and services and defining areas of interest to you
  3. improving the Websites to meet users' habits and requirements and compiling information relating to users' movements across the Website in accordance with our Cookie Policy
  4. handling orders, delivering products and services, processing payments, communicating with you about orders, products and services and generally maintaining your account
  5. advising you of other products and services which may be of interest
  6. inviting you to participate in research studies and/or market research activities
  7. compiling case studies in relation to the purpose for which the information was submitted (eg. awards nominations), or otherwise in an anonymised format unless otherwise expressly notified to you in advance
  8. responding to queries from members of the public about your membership status
  9. providing you with information about and communications from your local branch network.

3. Disclosure

3.1 CIPD will only disclose this information in the following circumstances:

1. where your consent has been obtained
2. where there is a legal obligation
3. where there is a public duty or
4. in connection with the assignment or transfer of all or any of its rights and obligations to any of its group companies or to any other third party.

3.2 For operational reasons and/or in order to meet specific requests data may also be:

1. processed on behalf of CIPD by external organisations under strictly regulated conditions in accordance with the provisions of the Data Protection Act 1998.

4 Accuracy

4.1 CIPD will take reasonable steps to create an accurate record of any personal data you have submitted. However, CIPD does not assume responsibility for confirming the ongoing accuracy of your personal data. You can update your personal data by making amendments in the 'My Profile' section of the Website by emailing us at database@cipd.co.uk or by calling us on +44 (0)20 8612 6208. Please note that it will take up to 21 days for the changes to come into effect.

4.2 If you wish to change your mailing preferences or opt-out of specific marketing communications sent from CIPD and its subsidiaries you may notify us by clicking here and completing the notification form. Alternatively you may contact us on +44 (0)20 8612 6208. It may take up to 21 days for the changes to come into effect. Please note that this will not alter your current email subscription preferences.

4.3 If you would like to request a copy of your personal data under the Data Protection Act 1998, or have any other related queries, please email secretariat@cipd.co.uk. Please note that proof of your identity, payment and/or other information may be required in order to respond to your request.

5. Cookies and Google Analytics

5.1. CIPD may gather information about you when you use our Website by using cookies. Information collected in this way will be anonymised and aggregated. Please view our Cookie Policy for further information.

5.2. CIPD and/or its subsidiaries reserve the right to anonymously track and report a user's activity inside of the Websites. The Website uses Google Analytics, a web analytics service provided by Google, Inc. ("Google"). Google Analytics uses cookies and or an Application Programming Interface ("API") to help analyse how the Website is used. The information generated by the cookie or API about your use of the Websites (including your IP address) will be transmitted to and stored by Google on servers in the United States.

5.3. Google will use this information for the purpose of evaluating your use of the Websites, compiling reports on Website activity for Website operators and providing other services relating to Website activity and internet usage. Google may also transfer this information to third parties where required to do so by law, or where such third parties process the information on Google's behalf. Google will not associate your IP address with any other data held by Google.

5.4. By using the Websites, you consent to the processing of data about you by Google in the manner and for the purposes set out above.

6. Policy Modification

Any modifications to the privacy practices of CIPD will be reflected first within this area of our website. If there is a material change in our privacy practices, CIPD will indicate on this site that CIPD's privacy practices have changed, and make the necessary amendments to the current privacy policy. If CIPD considers using the information collected from you in a manner materially different from that stated at the time of collection, CIPD will send written notice by email of the change.

7. Consent

By disclosing personal information to CIPD you consent to the collection, storage and processing of information in the manner described in this policy. Please note that your continued use of the Websites and/or products and services constitutes your agreement to any changes to this policy, the CIPD Website Terms and Conditions and the HR Talking Talent Website Terms and Conditions.

CIPD Privacy Policy
January 2012

A.4   CIPD Website Terms and Conditions

These Website Terms and Conditions govern your access to and use of the website including the CIPD Professional Communities (the 'Website'). By accessing, using or contributing to the Website you agree that you have read and accept these Website Terms and Conditions and that they shall apply to your use. If you do not wish to be bound by these Website Terms and Conditions, please leave the Website and or cease to contribute to the CIPD Professional Communities.

1. Contact details

1.1 This Website is operated by the Chartered Institute of Personnel and Development (CIPD). The CIPD is a registered charity and a company incorporated by Royal Charter. Its registered office is at 151 The Broadway, London SW19 1JQ, registered charity number 1079797 and VAT number GB 756 202 737.

1.2 Through the Website you may gain access to the commercial products and services of CIPD Enterprises Limited (CIPDE), CIPD's 'Subsidiary') which is wholly owned by the CIPD, and of Haymarket Media Group ('Haymarket'), the CIPD's publishers, who produce and distribute People Management Magazine (the 'Magazine'), the HR News Application by People Management Magazine for Smartphones and the People Management Magazine App for Tablets for and on behalf of the CIPD. You may also gain access to the subscription services of Alliance Media, who administer magazine subscriptions on behalf of Haymarket. In addition to these Website Terms and Conditions the provision of such products and services will be governed by such additional terms and conditions as you may be made aware of at the time of ordering.

1.3 If you have any queries relating to your registration with and use of the Website, please email web support

2. Registration

2.1 In order to register with the Website you are required to submit your first and last names, email address, user name and password. You must also indicate whether you are a guest, CIPD member, a member through an organisational subscription or a *People Management* subscriber. If you have any queries about your details on the CIPD database, please email database@cipd.co.uk.

2.2 You are able to provide additional information including your postal addresses, another email address and sign up and or manage your newsletters subscriptions via the 'My Profile' area of the Website. You are not obliged to submit this additional information in order to register with or to use the Website, but if you choose to do so, then, subject to paragraph 4 below, the CIPD may use this information in order to provide you with a more personalised service.

2.3 We may suspend and/or terminate (either in whole or in part) your use of any user name, password or this Website immediately for any reason.

3. Use of the jobs service and display advertising by members and non-members

PM jobs is a service for recruiters and job applicants to facilitate the transfer of information for recruitment purposes. Please view *People Management* Jobs: User Information and/or *People Management* Terms of Business for Recruiters for more information.

4. Data protection and privacy

For your security and peace of mind, the CIPD and its Subsidiaries will not supply your details to any organisation for marketing purposes. Please view our Privacy Policy for further information.

5. Intellectual Property

5.1 All intellectual property rights (IPRs) in the design and layout of the Website and, save as described in 5.3 below, in the material and information published on the pages of the Website, including, but not limited to, copyright and rights in registered and unregistered trademarks, are owned by or licensed to the CIPD.

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5.3 IPRs in any contribution shared by you on the CIPD Professional Communities shall remain with you and by making a contribution (in whatever form, including but not limited to text, graphic, photo, other image type or audio) you agree to grant to the CIPD, free of charge, perpetual and irrevocable worldwide licence to use the contribution in whatever manner it may wish.

5.4 In making a contribution to the CIPD Professional Communities, you confirm that your contribution is your own original work, is not defamatory, does not infringe any laws or the rights of others in any jurisdiction, and that you have the right to grant the CIPD a licence to use the materials as specified above.

5.5 If you do not wish to grant the CIPD a licence to use your contribution as envisaged by these Website Terms and Conditions, please do not submit or share your contribution on the Website.

6. 'Link to us' policy

6.1 The CIPD 'Link to us' logos may be downloaded and used on your website to provide a hypertext link to the CIPD Website. They are available from this area of the site.

6.2 The CIPD 'Link to us' logos are provided at the CIPD's absolute discretion and may be altered, or removed from your site, by us, at any time.

6.3 The CIPD's 'Link to us' logos must not be presented on your site in a way which suggests that the CIPD has an official association with your organisation or has endorsed any of your products.

6.4 The CIPD is not responsible for the content contained on any website using one of our 'Link to us' logo links.

7. CIPD professional communities use

The CIPD Professional Communities is a CIPD Member-only resource. The purpose of the CIPD Professional Communities is to allow Members to exchange ideas, views, advice and resources with other Members in a secure and supportive environment. Please view the CIPD Professional Communities Guidelines for further information.

8. Disclaimer

8.1 The material and information contained on the Website is for general information only and does not constitute any form of offer for sale (except for products available to purchase on our online sales website at www.cipd.co.uk/bookstore), advice or recommendation by the CIPD. You should not rely on the material or information on the Website as a basis for making any business, legal or other decisions. You should seek appropriate independent advice before making any such decisions.

8.2 The CIPD does not warrant or represent and excludes all warranties or representations that the material and information, including advertising material, on the Website is accurate, true or complete or that it is free of viruses or that it does not contain any material which is defamatory, obscene or illegal in any way.

8.3 In no circumstances will the CIPD be liable to you or any other third parties for any loss or damage (whether direct or indirect, including loss of profits, loss of opportunity or any consequential loss) resulting from or in any way connected with your use of the Website or its content, whether caused by negligence, misrepresentation, breach of any statutory duty, or breach of contract or otherwise. The CIPD does not limit or exclude its liability for death or personal injury resulting from its negligence.

8.4 The content contained within the CIPD Professional Communities is provided by individual contributors. You are advised to treat any information contained within the CIPD Professional Communities with an appropriate level of caution. Contributors' views are their personal views alone and neither the CIPD nor its Subsidiaries are responsible for any content, unless specifically stated otherwise.

8.5 You may access other websites via hypertext links from the Website. You use such links and other websites entirely at your own risk. Such websites are provided by independent third parties and neither the CIPD nor its Subsidiaries accept any responsibility for the availability, content or use of such websites or information contained on them. Any links to third party websites do not amount to any endorsement of that site by the CIPD or its Subsidiaries.

8.6 The CIPD endeavours to ensure that the information it provides through the Website is accurate and accepts no liability for any errors and omissions, misuse of copyright or personal information in breach of the above rules.

9. Indemnity

You agree to indemnify and to keep the CIPD indemnified from and against any costs, claims, demands, expenses and liabilities suffered or incurred by the CIPD arising from or which are directly or indirectly related to your access to and/or use of the Website and/or any other person or entity's use of the Website, including but not limited to where such person or entity was able to access the Website using your password.

10. General

10.1 The CIPD reserves the right to assign or transfer all or any of its rights and obligations under these Website Terms and Conditions to any of its group companies or to any other third party. In the event of assignment or transfer to any other third party, notification will either be given to you by email or posted on the Website.

10.2 Failure by the CIPD to exercise or enforce any right conferred upon it shall not be deemed to be a waiver of any such right nor operate so as to bar the exercise or enforcement of that or any other right on any later occasion.

10.3 The CIPD reserves the right to vary these Website Terms and Conditions from time to time. Such changes will either be notified to you by email or posted on the Website. Changes in this manner shall be deemed to have been accepted if you continue to use the Website after a period of 2 (two) weeks from the date of transmission of the email or of posting on the Website, whichever occurs later.

10.4 These Website Terms and Conditions are governed by and will be interpreted in accordance with English law. The English courts shall have exclusive jurisdiction to settle any claim or dispute which may arise out of or in connection with these Website Terms and Conditions.

11. The CIPD Profession Map

HR professionals and organisations are using the Profession Map standards to define great HR, assess areas of success and improvement, build capability in relevant areas and recognise achievement through professional qualifications and membership.

Please view our terms and conditions for further information.

12. Comment and Insight: contributor terms and conditions

12.1 By providing any Comment and Insight contribution to the CIPD, you grant us a worldwide, irrevocable, exclusive, royalty-free licence to use your contribution in any way and in any current or future media format (including modifying and adapting it for operational or editorial reasons). You also grant us the right to sub-license these rights and to bring an action for any infringement.

12.2 CIPD reserves the right to decline to publish any Comment and Insight contribution at its absolute discretion. You indemnify CIPD and its subsidiaries from any claims or actions arising from any of your Comment and Insight contributions including, but not limited to, where content is considered illegal, unlawful or to infringe any third party's legal or other rights.

12.3 By affirming your acceptance or providing any contribution for use on Comment and Insight, you agree to the above terms and conditions.

CIPD Website Terms and Conditions
Last update: January 2012

A.5   Extract from contract of services CIPD / London Metropolitan University.

"Special Terms: The Supplier is permitted to use the Services/Deliverables for their own academic purposes, such as teaching, lecturing and research."

A.6 Email statement from Charles Cotton, CIPD Senior Advisor on Performance and Reward Management regarding independence of thesis.

Subject	**Re: Sarah Jones - independent research for PhD**
From	Stephen Perkins
To	Sarah Jones
Cc	Susan Shortland
Sent	03 October 2018 15:42

Dear Sarah,

Please find below Charles's confirmatory message to meet one of your examiners' conditions.

Best wishes

Stephen

On Wed, 3 Oct 2018 at 15:31, Charles Cotton <C.Cotton@cipd.co.uk> wrote:

Dear Stephen

I'm happy to confirm that Sarah's PhD thesis is an independent piece of work.

Kind regards,

Charles

Dear Charles,

We spoke. If you are content with the form of words below, kindly respond with confirmation. This will be conveyed to Sarah Jones's PhD examiners.

"Following consultation with Professor Perkins, I am writing to confirm that, while I understand that Sarah Jones has drawn on the 2011 and 2012 reward management surveys developed for the CIPD, her subsequent PhD thesis is an independent piece of work."

With thanks and best wishes

Stephen

Professor Stephen J. Perkins JP DPhil (Oxon) Chartered FCIPD CMgr FCMI FHEA

Emeritus Professor, London Metropolitan University | Electra House | 84 Moorgate | London EC2M 6SQ

Web | Twitter Editor-in-Chief: *Routledge Companion to Reward Management*

CIPD

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Appendix B: Survey questionnaire

SURVEYS STYLES LIBRARIES REPORTS USERS INVITATIONS SETTINGS LOGOUT

Ultimate Survey
ENTERPRISE EDITION

Survey Manager   Survey Editor   Completion Events   Properties   Style   Permissions   Activation

Home → Survey Manager → Survey Editor

User: **pkiresearch**

Survey Editor: Reward Management 2012

View: All Pages

Hidden Items   New Page   Preview   Print   Export

Page 1

Add Item   Conditions   Branching   Copy   Move   Delete

There are no conditions. This page will always be displayed.

Edit   Move   Copy   Insert   Export   Delete

Section 1: Your organisation

Conditions   There are no conditions. This item will always be displayed.

Edit   Move   Copy   Insert   Export   Delete

1. Which of the following categories best describes the sector(s) in which your organisation operates?
Please tick more than one sector if appropriate.

Conditions   There are no conditions. This item will always be displayed.

Edit   Move   Copy   Insert   Export   Delete

Manufacturing and production

- [ ] Agriculture and forestry
- [ ] Chemicals, oils and pharmaceuticals
- [ ] Construction
- [ ] Electricity, gas and water
- [ ] Engineering, electronics and metals
- [ ] Food, drink and tobacco
- [ ] General manufacturing
- [ ] Mining and quarrying
- [ ] Paper and printing
- [ ] Textiles
- [ ] Other manufacturing/production

Conditions   There are no conditions. This item will always be displayed.

Edit   Move   Copy   Insert   Export   Delete

Private sector services

☐ Call centres

☐ Media (broadcasting and publishing, etc)

☐ Communications

☐ Professional services (accountancy, advertising, consultancy, legal, etc)

☐ Finance, insurance and real estate

☐ Retail and wholesale

☐ Hotels, catering and leisure

☐ Transport, distribution and storage

☐ IT services

☐ Other private services

Conditions   There are no conditions. This item will always be displayed.

Edit Move Copy Insert Export Delete

Voluntary, community and not-for-profit

☐ Care services   ☐ Housing association

☐ Charity services ☐ Other voluntary

Conditions   There are no conditions. This item will always be displayed.

Edit Move Copy Insert Export Delete

Public services

☐ Central government ☐ Local government

☐ Education   ☐ Other public services

☐ Health

Conditions   There are no conditions. This item will always be displayed.

Page 2

Add Item Conditions Branching Copy Move Delete

There are no conditions. This page will always be displayed.

Edit Move Copy Insert Export Delete

2. What is the organisation for which you are responding best described as?

◯ Mainly UK-owned organisation

◯ Division of mainly UK-owned organisation

◯ Division of an internationally owned organisation

Conditions   There are no conditions. This item will always be displayed.

3. What is the total number of UK employees (headcount) covered by your response (including part-time, fixed-term employees but excluding agency workers)?

- ◯ Fewer than 10
- ◯ 10–49
- ◯ 50–249
- ◯ 250–999
- ◯ 1,000–4,999
- ◯ 5,000–9,999
- ◯ 10,000–19,999
- ◯ 20,000–49,000
- ◯ More than 50,000

Conditions — There are no conditions. This item will always be displayed.

4. For each employee category, please give your best estimate regarding the approximate percentage of employees (including part-time and fixed-term) who fall within each demographic sub-group (for example, what percentage of managers is female? What percentage of managers is university-degree-qualified?):

Note: Where there are no employees in a particular category please indicate by entering '0'.
Please indicate if you do not collect this information or do not know.

	Management & professional employees* %	Other employees** %	Do not know / do not collect data
Female			☐
Aged under 30 years			☐
University degree qualified			☐

Conditions — There are no conditions. This item will always be displayed.

*'Management & professional employees' includes senior managers, middle and front-line managers, professional, technical and scientific employees
**Other employees' includes admin support, trades and production workers as well as customer service and sales staff.

Conditions — There are no conditions. This item will always be displayed.

Page 3

There are no conditions. This page will always be displayed.

Section 3: UK base-pay policies

5. By employee category, how does your organisation manage base pay?

Please tick ALL THAT APPLY.

	Management & professional employees*	Other employees*
Narrow-graded pay structures with narrow pay ranges (eg 80% minima to 120% maxima around mid-point)	☐	☐
Broadbanded pay structures with wide pay ranges (eg minima below 80% of mid-point and maxima above 120% mid-point)	☐	☐
Job family/career grade structures (that is, base pay where pay level is based on assessment of personal skills and/or competencies)	☐	☐
Pay spines and/or service-related increments	☐	☐
Individual pay rates/ranges/'spot' salaries	☐	☐

*If there are different reward practices within each employee category across the organisation for which you are responding, please indicate the approach that applies to the greatest number of employees in the group.

6. By employee category, which factor is the MOST important when you determine salary levels/rates/ranges/mid-points within the general pay structure of your organisation?

Please tick ONE box only per employee category.

	Management & professional employees*	Other employees*
Market rates (using job evaluation database)	☐	☐
Market rates (not using job evaluation database)	☐	☐
Collective bargaining	☐	☐
Orgaisation's ability to pay	☐	☐

There are no conditions. This item will always be displayed.

Conditions

*If there are different reward practices within each employee category across the organisation for which you are responding, please indicate the approach that applies to the greatest number of employees in the group.

Conditions
There are no conditions. This item will always be displayed.

7. By employee category, what criteria does your organisation use to manage individual base pay progression?

Please tick ALL THAT APPLY.

	Management & professional employees*	Other employees*
Individual performance	☐	☐
Competencies (that is, personal attributes associated with how people behave in their roles)	☐	☐
Skills	☐	☐
Length of service	☐	☐
Market rates	☐	☐
Employee potential/value/retention	☐	☐

Conditions
There are no conditions. This item will always be displayed.

*If there are different reward practices within each employee category across the organisation for which you are responding, please indicate the approach that applies to the greatest number of employees in the group.

Conditions
There are no conditions. This item will always be displayed.

8. Which THREE factors have been the most important in determining the overall size of your organisation's base pay review in 2011 (taking into account both individual base pay progression and, if applicable, general or cost-of-living pay rises.)

Please tick UP TO THREE per column.

	Management and professional employees*	Other employees*
Organisation's ability to pay	☐	☐

Inflation	☐	☐
Movement in market rates	☐	☐
The 'going rate' of pay rises elsewhere	☐	☐
Recruitment and retention issues	☐	☐
Union/staff pressures	☐	☐
Level of government funding/pay guidelines	☐	☐
National Minimum Wage	☐	☐
Shareholder views	☐	☐

Conditions
There are no conditions. This item will always be displayed.

Edit   Move   Copy   Insert   Export   Delete

*If there are different reward practices within each employee category across the organisation for which you are responding, please indicate the approach that applies to the greatest number of employees in the group.

Conditions
There are no conditions. This item will always be displayed.

Page 4

Add Item   Conditions   Branching   Copy   Move   Delete

Branching rules:
If answer to "9. Do you operate one or more performance-related reward, incentive or recognition schemes?" is equal to "Yes" then go to Page 5
If answer to "9. Do you operate one or more performance-related reward, incentive or recognition schemes?" is equal to "No" then go to Page 6

Edit   Move   Copy   Insert   Export   Delete

Section 4: Performance-related reward, incentive and recognition

Conditions
There are no conditions. This item will always be displayed.

Edit   Move   Copy   Insert   Export   Delete

* 9. Do you operate one or more performance-related reward, incentive or recognition schemes?

◯ Yes   ◯ No

Conditions
There are no conditions. This item will always be displayed.

There are no conditions. This page will always be displayed.

Edit Move Copy Insert Export Delete

10. Which types of individual performance-related schemes does your organisation use for each employee category?

Please tick ALL that apply.

	Management & professional employees*	Other employees*
Ad hoc/project-based schemes	☐	☐
Combination schemes (the award depends on a mix of individual, group and/or organisational performance)	☐	☐
Piece rates	☐	☐
Sales commissions	☐	☐
Merit pay rises (permanent annual pay increases based on assessment of individual performance)	☐	☐
Individual bonuses (bonuses based on individual performance that do not raise base pay)	☐	☐
Other individual-based cash incentives	☐	☐
Individual non-monetary recognition awards	☐	☐

Conditions There are no conditions. This item will always be displayed.

Edit Move Copy Insert Export Delete

11. Which types of group performance-related schemes does your organisation use for each employee category?

Please tick ALL that apply.

	Management & professional employees*	Other employees*
Gain-sharing (group bonuses based on improvements in group / sub-unit / team productivity or production cost against historical benchmarks)	☐	☐
Goal-sharing (group bonuses based on group/sub-unit/team achievement of specific group performance goals/objectives)	☐	☐
Profit-sharing (formal system to share organisational or business unit profits)	☐	☐
Group or team-based non-monetary recognition awards	☐	☐
Group or team-based non-monetary incentives	☐	☐

Edit Move Copy Insert Export Delete
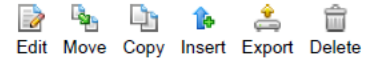
12. Focusing on bonus and incentive schemes, please indicate the approximate total percentage of employees in each employee category currently covered by such arrangements.

Note: Where there are no employees in a particular category please indicate by entering '0'.

	Proportion of employees in each occupational group covered by bonus and incentive schemes (%)
Management & professional employees*	
Other employees*	

Edit Move Copy Insert Export Delete

*If there are different reward practices within each employee category across the organisation for which you are responding, please indicate the approach that applies to the greatest number of employees in the group.

Page 6

Add Item Conditions Branching Copy Move Delete
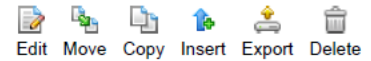
Branching rules:
If answer to "13. Does your organisation have any share scheme arrangements or other long-term incentives for employees?" is equal to "Yes" then go to Page 7
If answer to "13. Does your organisation have any share scheme arrangements or other long-term incentives for employees?" is equal to "No" then go to Page 8

Edit Move Copy Insert Export Delete
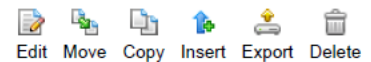
Section 4: UK employee share schemes and long-term incentive plans
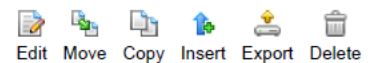
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* **13. Does your organisation have any share scheme arrangements or other long-term incentives for employees?**

○ Yes ○ No

313

Page 7

Add Item Conditions Branching Copy Move Delete

There are no conditions. This page will always be displayed.

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14. Which schemes are offered? NB: This question is intended for 'for-profit' company respondents only.
Please tick ALL THAT APPLY.

Conditions — There are no conditions. This item will always be displayed.

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Broadly based share schemes

- ☐ Save as you earn (SAYE)
- ☐ Share incentive plan (SIP)
- ☐ Company share option plan (CSOP)

Conditions — There are no conditions. This item will always be displayed.

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Executive share schemes

- ☐ Enterprise management incentives (EMIs)
- ☐ Executive share option schemes
- ☐ Executive restricted/performance share plan
- ☐ Executive deferred/co-investment share plan
- ☐ 'Phantom' share scheme (that is, in non-listed organisation or division of plc)
- ☐ Stock appreciation rights (SARs)/Equity-settled SARs
- ☐ Executive deferred annual cash-based bonus

Conditions — There are no conditions. This item will always be displayed.

Page 8

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Branching rules:
If answer to "15. Does your organisation offer to contribute to a pension scheme for its employees? " is equal to "Yes" then go to Page

314

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Section 5: UK pensions and benefits

Conditions   There are no conditions. This item will always be displayed.

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* 15. Does your organisation offer to contribute to a pension scheme for its employees?

◯ Yes ◯ No

Conditions   There are no conditions. This item will always be displayed.

Page 9

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There are no conditions. This page will always be displayed.

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16. What are the main types of pension arrangements at your organisation?
Please tick ALL THAT APPLY.

	Open	Closed to new employees but not future accruals	Closed to new employees and future accruals	In wind up
Defined-benefit scheme (such as final salary or career average)	◯	◯	◯	◯
Defined-contribution (such as occupational DC, GPP or stakeholder)	◯	◯	◯	◯
Hybrid (for example, cash balance)	◯	◯	◯	◯
Contribution to a personal pension	◯	◯	◯	◯
Other	◯	◯	◯	◯

Conditions   There are no conditions. This item will always be displayed.

Page 10

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* 17. In the next 12 months, does your organisation intend to make changes (or is required to make changes) to its pension arrangements?

○ Yes   ○ No

Conditions   There are no conditions. This item will always be displayed.

Page 11

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There are no conditions. This page will always be displayed.

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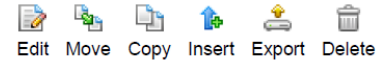
18. What type of pension changes are you planning?
Please tick ALL THAT APPLY.

☐ Introduce salary sacrifice

☐ Close defined-benefit (DB) scheme to new staff but not existing members

☐ Close DB scheme to future accrual

☐ Introduce a defined-contribution (DC) pension with employer contributions

☐ Reduce the value of the DB plan (for example increase the pension age or cap pensionable pay)

☐ Reduce employee DB contributions

☐ Increase employee DB contributions

☐ Increase employer DB contributions

☐ Reduce employer DB contributions

☐ Reduce employee DC contributions

☐ Increase employee DC contributions

☐ Other (please specify): _____

☐ Increase employer DC contributions

☐ Reduce employer DC contributions

☐ Introduce a DC pension with no employer contributions

☐ Introduce a 'Save More for Tomorrow' scheme

☐ Introduce a cash alternative to pensions for senior staff

☐ Amend the DC default investment options

☐ Apply for the NAPF's Pension Quality Mark

☐ Shift from RPI to CPI

☐ Shift from contract to trust DC

☐ Comply with auto-enrolment requirements

Conditions   There are no conditions. This item will always be displayed.

Page 12

316

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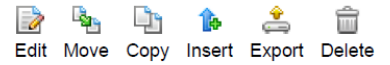
19. Which benefits does your organisation currently offer to employees?

Please tick all that apply for each benefit listed (these may be within or outside a flex or voluntary benefits scheme.)

	Provide to all employees	Provision dependent on grade / seniority	Part of a flexible benefits scheme only	Part of a voluntary benefits scheme only
25 days' and over paid leave (excluding statutory)	☐	☐	☐	☐
All employee car ownership schemes	☐	☐	☐	☐
Carbon credits	☐	☐	☐	☐
Canteen/dining room (free/subsidised)	☐	☐	☐	☐
Car allowance	☐	☐	☐	☐
Car loan	☐	☐	☐	☐
Childcare vouchers	☐	☐	☐	☐
Christmas hampers/vouchers etc	☐	☐	☐	☐
Christmas party/lunch	☐	☐	☐	☐
Company car	☐	☐	☐	☐
Company sports day	☐	☐	☐	☐
Company picnic/barbeque	☐	☐	☐	☐
Concierge benefits	☐	☐	☐	☐
Critical illness insurance	☐	☐	☐	☐
Cycle-to-work scheme loan	☐	☐	☐	☐
Dental insurance	☐	☐	☐	☐
Discounted own products/services	☐	☐	☐	☐
Dress-down days	☐	☐	☐	☐
Emergency childcare support	☐	☐	☐	☐
Emergency eldercare support	☐	☐	☐	☐
Employee assistance programme	☐	☐	☐	☐
Enhanced maternity/paternity leave	☐	☐	☐	☐
Eye care vouchers	☐	☐	☐	☐
Formal coaching/mentoring schemes	☐	☐	☐	☐
First-time buyer's home deposit assistance	☐	☐	☐	☐
Free financial education/advice	☐	☐	☐	☐

317

Fuel allowance	☐	☐	☐	☐
Flu jabs	☐	☐	☐	☐
Gym (on-site or membership)	☐	☐	☐	☐
Healthcare cash plans	☐	☐	☐	☐
Health screening	☐	☐	☐	☐
Home computers	☐	☐	☐	☐
Homeworker allowance	☐	☐	☐	☐
Learning assistance (not work-related)	☐	☐	☐	☐
Life assurance	☐	☐	☐	☐
Luncheon vouchers	☐	☐	☐	☐
Mobile phone (salary sacrifice)	☐	☐	☐	☐
Mentoring/coaching programme	☐	☐	☐	☐
On-site car parking (free/subsidised)	☐	☐	☐	☐
On-site crèche	☐	☐	☐	☐
On-site massages	☐	☐	☐	☐
On-site medical facility	☐	☐	☐	☐
Paid carer's leave	☐	☐	☐	☐
Paid leave to train and compete in sports events	☐	☐	☐	☐
Paid leave for military reserve activities	☐	☐	☐	☐
Permanent health insurance	☐	☐	☐	☐
Private medical insurance	☐	☐	☐	☐
Personal fitness trainer	☐	☐	☐	☐
Relocation assistance	☐	☐	☐	☐
Sabbaticals (paid)	☐	☐	☐	☐
Sabbaticals (unpaid)	☐	☐	☐	☐
Social club	☐	☐	☐	☐
Tea/coffee/cold drinks – free	☐	☐	☐	☐
Time off for voluntary work	☐	☐	☐	☐
Training and career development	☐	☐	☐	☐
Theatre/concert trips	☐	☐	☐	☐
Travel season ticket loan	☐	☐	☐	☐
Welfare loans for financial hardship	☐	☐	☐	☐

Conditions   There are no conditions. This item will always be displayed.

	Please specify:	Provide to all employees	Provision dependent on grade/ seniority	Part of a flexible benefits scheme only	Part of a voluntary benefits scheme only
Other (excluding pensions)		☐	☐	☐	☐

Conditions   There are no conditions. This item will always be displayed.

Page 13   Add Item Conditions Branching Copy Move Delete

Branching rules:
If answer to "21. Does your organisation offer financial education in the workplace?" is equal to "Yes" then go to Page 14
If answer to "21. Does your organisation offer financial education in the workplace?" is equal to "No" then go to Page 15
If answer to "21. Does your organisation offer financial education in the workplace?" is equal to "No, but introducing in 2012 " then go to Page 15

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20. Does your organisation provide the following benefits?

	Yes	No	No, but introducing in 2012
Voluntary/affinity benefits	○	○	○
Flexible/home-working	○	○	○
Corporate wrapper workplace benefits	○	○	○
Flexible benefits	○	○	○
Access to debt advice/counselling/guidance	○	○	○
Access to a credit union	○	○	○

Conditions   There are no conditions. This item will always be displayed.

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* 21. Does your organisation offer financial education in the workplace?

○ Yes ○ No ○ No, but introducing in 2012

Conditions   There are no conditions. This item will always be displayed.

Page 14

There are no conditions. This page will always be displayed.

22. Which of the following categories of employee are eligible to receive financial education?

Please tick ALL THAT APPLY.

☐ Management & professional employees*   ☐ Other employees*

There are no conditions. This item will always be displayed.

*If there are different reward practices within each employee category across the organisation for which you are responding, please indicate the approach that applies to the greatest number of employees in the group.

There are no conditions. This item will always be displayed.

23. How is the financial education delivered?

Please tick ALL THAT APPLY.

	Management & professional employees*	Other employees*
Print material	☐	☐
Online training/video	☐	☐
Group seminars	☐	☐
Individual face-to-face meetings	☐	☐

There are no conditions. This item will always be displayed.

	Please specify:	Management & professional employees*	Other employees*
Other		☐	☐

There are no conditions. This item will always be displayed.

*If there are different reward practices within each employee category across the organisation for which you are responding, please indicate the approach that applies to the greatest number of employees in the group.

Conditions   There are no conditions. This item will always be displayed.

Page 15

Add Item   Conditions   Branching   Copy   Move   Delete

Branching rules:
If answer to "24. Does your organisation provide total reward statements to your employees?" is equal to "Yes" then go to Page 16
If answer to "24. Does your organisation provide total reward statements to your employees?" is equal to "No" then go to Page 17
If answer to "24. Does your organisation provide total reward statements to your employees?" is equal to "No, but introducing in 2012" then go to Page 17

Edit   Move   Copy   Insert   Export   Delete

* **24. Does your organisation provide total reward statements to your employees?**

◯ Yes   ◯ No   ◯ No, but introducing in 2012

Conditions   There are no conditions. This item will always be displayed.

Page 16

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There are no conditions. This page will always be displayed.

Edit   Move   Copy   Insert   Export   Delete

25. Which of the following categories of employee are eligible to receive total reward statements?
Please tick ALL THAT APPLY.

☐ Management & professional employees*   ☐ Other employees*

Conditions   There are no conditions. This item will always be displayed.

Edit   Move   Copy   Insert   Export   Delete

*If there are different reward practices within each employee category across the organisation for which you are responding, please indicate the approach that applies to the greatest number of employees in the group.

Conditions   There are no conditions. This item will always be displayed.

Edit   Move   Copy   Insert   Export   Delete

26. How are the total reward statements delivered?

Please tick ALL THAT APPLY.
*If there are different reward practices within each employee category across the organisation for which you are responding, please indicate the approach that applies to the greatest number of employees in the group.

	Management & professional employees*	Other employees*
Print material	☐	☐
Online training/video	☐	☐
Group seminars	☐	☐
Individual face-to-face meetings	☐	☐

Conditions   There are no conditions. This item will always be displayed.

Edit   Move   Copy   Insert   Export   Delete

	Please specify:	Management & professional employees*	Other employees*
Other		☐	☐

Conditions   There are no conditions. This item will always be displayed.

Page 17

Add Item   Conditions   Branching   Copy   Move   Delete

Branching rules:
If answer to "28. In 2012, what do you predict will happen to your organisation's total spend (excluding pensions) on employee benefits? " is equal to "Stay the same" then go to Page 19

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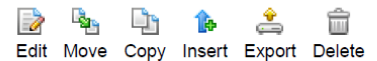
27. Which external parties is your organisation planning to use to help it prepare for pension auto-enrolment?

Please tick ALL THAT APPLY.

☐ Using our payroll system/provider

☐ Using our pension provider

☐ Using our HRIS

☐ Using a system which links to our payroll, HRIS and pension providers
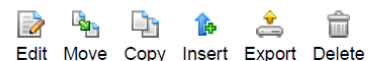
Conditions   There are no conditions. This item will always be displayed.

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* 28. In 2012, what do you predict will happen to your organisation's total spend (excluding pensions) on employee benefits?

○ Increase

○ Stay the same

○ Decrease

Conditions There are no conditions. This item will always be displayed.

Page 18

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There are no conditions. This page will always be displayed.

Edit | Move | Copy | Insert | Export | Delete

29. What is driving the predicted change in your benefit spend (excluding pensions)?
Please tick ALL THAT APPLY.

☐ Increases in the cost of benefits

☐ Reductions in the cost of benefits

☐ Increases in the cost of benefit administration

☐ Reductions in the cost of benefit administration

☐ Employing more staff

☐ Employing fewer staff

☐ Need to maintain/increase attractiveness to employees

☐ Other

Conditions There are no conditions. This item will always be displayed.

Page 19

Add Item | Conditions | Branching | Copy | Move | Delete

There are no conditions. This page will always be displayed.

Edit | Move | Copy | Insert | Export | Delete

Section 6: Reward strategy as reflected in current practices

Conditions There are no conditions. This item will always be displayed.

Edit | Move | Copy | Insert | Export | Delete

30. To gauge your organisation's overall competitive strategy for remuneration, please indicate current 'total remuneration level' (base pay + performance pay + monetary benefits) relative to comparator organisations in your sector.

Please tick ONE box only per employee category. If you do not have that category of employee, please leave blank. Approximates are acceptable.

	Management & professional employees*	Other employees*	Do not collect this information
Within top 10% of sectoral comparators	☐	☐	☐
Within upper quartile (75th percentile) of sectoral comparators	☐	☐	☐
At or close to the relevant market median (that is, mid-point of sectoral range for group)	☐	☐	☐
Within lower quartile (25th percentile) of sectoral comparators	☐	☐	☐
Within bottom 10% of sectoral comparators	☐	☐	☐
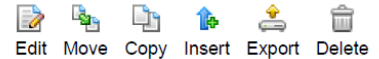
Conditions   There are no conditions. This item will always be displayed.

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*If there are different reward practices within each employee category across the organisation for which you are responding, please indicate the approach that applies to the greatest number of employees in the group.

Conditions   There are no conditions. This item will always be displayed.

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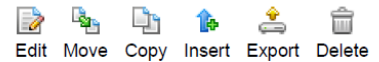
31. To gauge the overall degree of 'pay dispersion', please indicate the total annual earnings (base pay + performance pay) for the lowest paid, highest paid and median paid individual for each employee category.

If you do not have that category of employee, please leave blank. Approximates are acceptable.

	Management & professional employees' £	Other employees* £	Do not collect this information
Lowest total annual earnings			☐
Highest total annual earnings			☐
Median total annual earnings			☐
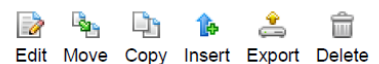
Conditions   There are no conditions. This item will always be displayed.

Edit   Move   Copy   Insert   Export   Delete

*If there are different reward practices within each employee category across the organisation for which you are

responding, please indicate the approach that applies to the greatest number of employees in the group.

Edit   Move   Copy   Insert   Export   Delete
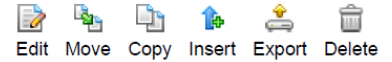
32. To gauge your organisation's level of pay transparency, please indicate the accuracy of each of the following statements regarding your organisation's approach to transparency/disclosure of pay policies and practices.
Please tick ONE box per statement.

For these items, transparency refers to the extent to which your organisation is prepared to disclose to its employees information about pay scales, the provision of benefits and allowances, grading systems, job evaluation, performance-related pay schemes and how different individuals or groups of employees are treated.

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
This organisation actively makes its pay policies and practices public with the intention that pay information is as transparent as possible.	○	○	○	○	○
This organisation allows its pay policies and practices to be disclosed to employees but does not actively promote disclosure.	○	○	○	○	○
This organisation prefers details about pay policies and practices to remain confidential but provides employees with relevant pay information when asked in specific circumstances.	○	○	○	○	○
This organisation believes that information about pay policies and practices should be a private matter between individual employees and the organisation but it will comply with requests for relevant pay information if required under legislation (eg in response to an equal pay questions form).	○	○	○	○	○

Page 20

Add Item   Conditions   Branching   Copy   Move   Delete

Branching rules:
If answer to "33. Does your organisation operate in the private sector?" is equal to "Yes" then go to Page 21
If answer to "33. Does your organisation operate in the private sector?" is equal to "No" then Complete Survey
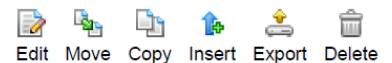
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* **33. Does your organisation operate in the private sector?**

○ Yes   ○ No

Add Item Conditions Branching Copy Move Delete

Edit Move Copy Insert Export Delete

34. As a private sector firm, please rate, as best you can, the level of importance that your organisation attaches to each of the following aspects of business strategy.

That is, how it prefers to compete in its chosen product/service market(s).

	Totally unimportant	Low importance	Moderately important	Very important	Crucial
Maintains a safe niche in a relatively stable product service domain	○	○	○	○	○
Offers a narrower set of products/services than its competitors	○	○	○	○	○
Achieves the best performance in a relatively narrow product/service market domain	○	○	○	○	○
Pays little attention to changes in the industry that are not directly relevant to the firm	○	○	○	○	○
Maintains a limited line of products/services	○	○	○	○	○
Leads in innovations in its industry	○	○	○	○	○
Operates in a broad products/service domain	○	○	○	○	○
Periodically redefines its products and services	○	○	○	○	○
Believes in being the 'first-in' the industry in development of new products	○	○	○	○	○
Accepts that not all efforts invested in developing new products will be profitable	○	○	○	○	○
Responds rapidly to early signs of opportunities in the environment	○	○	○	○	○
Its actions often lead to a new round of competitive activity in the industry	○	○	○	○	○
Reducing operating costs	○	○	○	○	○
Improving co-ordination with customers and suppliers	○	○	○	○	○
Reorganising the work process	○	○	○	○	○
Improving measures of performance	○	○	○	○	○
Tight control of overhead costs	○	○	○	○	○
Developing new products and services	○	○	○	○	○
Undertaking research and					

development	○	○	○	○	○
Total quality management	○	○	○	○	○
Developing new operating techniques	○	○	○	○	○
Providing speciality products/services	○	○	○	○	○
Producing products/services for high price market segments	○	○	○	○	○

Conditions
There are no conditions. This item will always be displayed.

Page 22 Add Item · Conditions · Branching · Copy · Move · Delete

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Section 8: HR outcomes

Conditions
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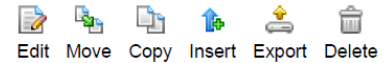
35. How would you rate the current general employee relations climate in your organisation?

○ Very good ○ Good ○ Somewhat strained ○ Very strained ○ Don't know

Conditions
There are no conditions. This item will always be displayed.

Edit · Move · Copy · Insert · Export · Delete
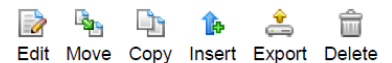
36. Compared with other establishments in the same sector of activity, how would you assess the labour productivity in your organisation?

○ Far better ○ Somewhat better ○ About average for industry ○ Below average ○ Don't know / comparison not possible

Conditions
There are no conditions. This item will always be displayed.

Edit · Move · Copy · Insert · Export · Delete
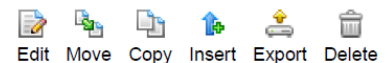
37. If you compare your organisation's labour productivity to the situation three years ago, has it…?

○ Increased considerably   ○ Increased slightly   ○ Remained about the same   ○ Decreased   ○ Don't know/comparison not possible

Conditions   There are no conditions. This item will always be displayed.

Edit   Move   Copy   Insert   Export   Delete

38. Please indicate to what extent your organisation has experienced the following in the last 12 months.

	To a great extent	To some extent	Not at all
High employee absenteeism rates	○	○	○
Difficulties attracting staff	○	○	○
Difficulties retaining staff	○	○	○
Discontentment related to pay levels or pay systems	○	○	○

Conditions   There are no conditions. This item will always be displayed.

Edit   Move   Copy   Insert   Export   Delete

Thank you for completing the survey. Please submit your responses.

Conditions   There are no conditions. This item will always be displayed.

Appendix C: Factor analysis subsidiary tests

Table C.1 Factor analysis correlation matrix

	Competitive business strategy items (Question 34)														
	6.	9.	10.	11.	12.	14.	15.	16.	18.	19.	20.	21.	22.	17.	13.
6. Leading innovations in industry	1.000	.731	.436	.460	.536	.263	.134	.125	.548	.569	.372	.501	.394	-.081	.059
9. Being first in industry to develop new products	.731	1.000	.529	.492	.603	.267	.151	.085	.681	.603	.368	.533	.443	.017	.089
10. Accepting not all product development will be profitable	.436	.529	1.000	.383	.454	.250	.178	.096	.450	.567	.291	.413	.356	-.097	.040
11. Responding rapidly to opportunities	.460	.492	.383	1.000	.632	.352	.258	.148	.309	.315	.270	.377	.250	.066	.097
12. Having actions lead to new round of competitive activity in industry	.536	.603	.454	.632	1.000	.269	.236	.125	.401	.455	.319	.462	.232	-.024	.099
14. Improving co-ordination with customers/suppliers	.263	.267	.250	.352	.269	1.000	.518	.526	.239	.210	.347	.432	.204	.284	.325
15. Reorganising the work process	.134	.151	.178	.258	.236	.518	1.000	.539	.180	.128	.285	.459	.159	.293	.337
16. Improving measures of performance	.125	.085	.096	.148	.125	.526	.539	1.000	.128	.172	.297	.356	.136	.286	.209
18. Developing new products and services	.548	.681	.450	.309	.401	.239	.180	.128	1.000	.656	.378	.523	.450	.129	.118
19. Undertaking research and development	.569	.603	.567	.315	.455	.210	.128	.172	.656	1.000	.468	.527	.466	-.020	.033
20. Total quality management	.372	.368	.291	.270	.319	.347	.285	.297	.378	.468	1.000	.542	.434	.067	.072
21. Developing new operating techniques	.501	.533	.413	.377	.462	.432	.459	.356	.523	.527	.542	1.000	.392	.087	.119
22. Providing speciality products/services	.394	.443	.356	.250	.232	.204	.159	.136	.450	.466	.434	.392	1.000	-.021	-.047
17. Tight control of overhead costs	-.081	.017	-.097	.066	-.024	.284	.293	.286	.129	-.020	.067	.087	-.021	1.000	.621
13. Reducing operating costs	.059	.089	.040	.097	.099	.325	.337	.209	.118	.033	.072	.119	-.047	.621	1.000

Table C.2 Factor analysis anti-image correlation matrix

	Competitive business strategy items (Question 34)														
	6.	9.	10.	11.	12.	14.	15.	16.	18.	19.	20.	21.	22.	17.	13.
6. Leading innovations in industry	**.896**	-.420	.073	-.120	-.059	-.043	.077	-.051	-.032	-.143	-.025	-.089	-.042	.193	-.106
9. Being first in industry to develop new products	-.420	**.878**	-.142	-.075	-.230	-.024	.070	.083	-.346	-.003	.038	-.083	-.110	-.058	.001
10. Accepting not all product development will be profitable	.073	-.142	**.906**	-.094	-.077	-.094	-.060	.052	-.016	-.306	.061	-.027	-.073	.169	-.066
11. Responding rapidly to opportunities	-.120	-.075	-.094	**.852**	-.443	-.167	-.062	.058	.062	.076	.001	.019	-.057	-.111	.089
12. Having actions lead to new round of competitive activity in industry	-.059	-.230	-.077	-.443	**.869**	.046	-.070	.013	.054	-.101	-.042	-.091	.145	.097	-.068
14. Improving co-ordination with customers/suppliers	-.043	-.024	-.094	-.167	.046	**.879**	-.167	-.318	.006	.084	-.101	-.091	-.014	-.042	-.142
15. Reorganising the work process	.077	.070	-.060	-.062	-.070	-.167	**.820**	-.325	-.026	.132	-.002	-.284	-.054	-.014	-.177
16. Improving measures of performance	-.051	.083	.052	.058	.013	-.318	-.325	**.784**	.067	-.120	-.068	-.063	.011	-.161	.107
18. Developing new products and services	-.032	-.346	-.016	.062	.054	.006	-.026	.067	**.888**	-.333	.021	-.133	-.108	-.170	.022
19. Undertaking research and development	-.143	-.003	-.306	.076	-.101	.084	.132	-.120	-.333	**.884**	-.178	-.102	-.108	.015	-.005
20. Total quality management	-.025	.038	.061	.001	-.042	-.101	-.002	-.068	.021	-.178	**.907**	-.257	-.225	-.008	.012
21. Developing new operating techniques	-.089	-.083	-.027	.019	-.091	-.091	-.284	-.063	-.133	-.102	-.257	**.924**	-.012	.013	.063
22. Providing speciality products/services	-.042	-.110	-.073	-.057	.145	-.014	-.054	.011	-.108	-.108	-.225	-.012	**.916**	-.005	.112
17. Tight control of overhead costs	.193	-.058	.169	-.111	.097	-.042	-.014	-.161	-.170	.015	-.008	.013	-.005	**.588**	-.576
13. Reducing operating costs	-.106	.001	-.066	.089	-.068	-.142	-.177	.107	.022	-.005	.012	.063	.112	-.576	**.620**

Note. bold type = KMO measures of sampling adequacy > 0.5

Table C.3 Factor analysis KMO measure of sampling adequacy and Bartlett's test of sphericity

Kaiser-Meyer-Olkin measure of sampling adequacy		.861
Bartlett's test of sphericity	Approx. Chi-Square	1748.323
	degrees of freedom	105
	Sig.	.000

Appendix D: Pay secrecy scale reliability tests

Table D.1 Scale reliability statistics for 4 items, Question 32

Reliability statistics

Cronbach's Alpha	Cronbach's Alpha based on standardised items	No. of items
.623	.624	4

Table D.2 Item-total statistics for 4 items, Question 32

Item-total statistics

	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Squared multiple correlation	Cronbach's alpha if item deleted
Q32 1 open	10.2757	6.953	.607	.380	.395
Q32 2 semi-open	10.7390	9.448	.183	.249	**.706**
Q32 3 semi-secret	10.5662	9.036	.266	.329	.646
Q32 4 secret	10.2206	6.719	.620	.421	.379

Note. bold type = Cronbach's Alpha > 0.7

Table D.3 Scale reliability statistics for 3 items, Question 32 (item 2 removed)

Reliability statistics

Cronbach's Alpha	Cronbach's Alpha based on standardised items	No. of items
.703	**.702**	3

Note. bold type = Cronbach's Alpha > 0.7

Appendix E: Research ethics approval

UNIVERSITY RESEARCH ETHICS REVIEW FORM

In the case of **postgraduate research student** projects (i.e. MRes, MA by Project/Dissertation, MPhil, PhD and DProf), this form should be completed by the student concerned in full consultation with their supervisor.

In the case of **staff** research projects, this form should be completed by the member of staff responsible for the research project (i.e. as Principal Investigator and/or grant-holder) in full consultation with any co-investigators, research students and research staff.

Further guidance on the University's Research Ethics Policy and Procedures, along with links to relevant research ethics materials and advice, can be found on the Research & Postgraduate Office Research Ethics webpage:

http://www.londonmet.ac.uk/research/the-research-and-postgraduate-office/current-students/research-ethics.cfm

This form requires the completion of the following three sections –

> **SECTION A: APPLICANT DETAILS**
> **SECTION B: THE PROJECT - ETHICAL ISSUES**
> **SECTION C: THE PROJECT - RISKS AND BENEFITS**

SECTION A: APPLICANT DETAILS

A1	Background information
	Research project title: Strategic pay: does it exist and does it impact HR outcomes?
	Date of submission for ethics approval: September 2014
	Proposed start date for project: January 2011
	Proposed end date for project: September 2015
	Ethics ID no: 17/14 * (to be completed by RERP)

A2	Applicant details, if for a research student project
	Name: Sarah Jones
	London Met Email address: SAJO503@my.londonmet.ac.uk or sarah.jones@beds.ac.uk (preferred)

A3	Principal Researcher/Lead Supervisor
	Member of staff at London Metropolitan University who is responsible for the proposed research project either as Principal Investigator/grant-holder or, in the case of postgraduate research student projects, as Lead Supervisor
	Name: Professor Stephen Perkins
	Job title: Dean of Faculty of Business and Law
	London Met Email address: s.perkins@londonmet.ac.uk

SECTION B: THE PROJECT - ETHICAL ISSUES

B1	**The Research Proposal**
	Please attach a brief summary of the research project including:
	- Background/rationale - Aims/objectives - Research methodology - Review of the key literature in this field & conceptual framework for study - References
	Please see attached summary.
B2	**Research Ethics**
	Please outline any ethical issues that might arise from this study and how they are to be addressed.
	NB all research projects have ethical considerations. Please complete this section as fully as possible using the following pointers for guidance.
	- Does the project involve potentially deceiving participants? **No** - Will you be requiring the disclosure of confidential or private information? **No** - Is the project likely to lead to the disclosure of illegal activity or incriminating information about participants? **No** - Does the project require a Criminal Records Bureau check for the researcher? **No** - Is the project likely to expose participants to distress of any nature? **No** - Will participants be rewarded for their involvement? **No** - Are there any potential conflicts of interest in this project? **No** - Any other potential concerns? **No**
	If you answered yes to any of the points above, please explain.
B3	Does the proposed research project involve:
	- The analysis of existing data, artefacts or performances that are **not** already in the public domain (i.e. that are published, freely available or available by subscription)? **Yes** - The production and/or analysis of physical data (including computer code, physical entities and/or chemical materials) that **might involve** potential risks to humans, the researcher(s) or the University? **No** - The direct or indirect collection of **new data** from humans or animals? **No**
	If you answered yes to any of the points above, please explain.
	The data that will be used for the research project has been collected by the Chartered Institute of Personnel and Development (CIPD) in collaboration with a research team which includes the research student and her Lead Supervisor, Professor Perkins.
	The CIPD undertakes an annual Reward Management Survey that is issued by email to selected members of CIPD to collect benchmarking data about pay and reward practices within UK organisations. Since 2011 the research team have been commissioned by CIPD to produce the Survey Report based on this data which is published annually by CIPD research.

B4	*It is now proposed to utilise this comprehensive dataset spanning 2011, 2012 and 2013 in order to meet the research objectives detailed in the attached summary.*
B5	Will the proposed research be conducted in any country outside the UK? **No** If so, are there independent research ethics regulations and procedures that either: • **Do not** recognise research ethics review approval from UK-based research ethics services? Yes/No and/or • Require **more** detailed applications for research ethics review than would ordinarily be conducted by the University's Research Ethics Review Panels and/or other UK-based research ethics services? Yes/No **If you answered yes to any of the points above, please explain.**
	Does the proposed research involve: • The collection and/or analysis of body tissues or fluids from humans or animals? **No** • The administration of any drug, food substance, placebo or invasive procedure to humans or animals? **No** • Any participants lacking capacity (as defined by the UK Mental Capacity Act 2005)? **No** • Relationships with any external statutory-, voluntary-, or commercial-sector organisation(s) that require(s) research ethics approval to be obtained from an external research ethics committee or the UK National Research Ethics Service (this includes research involving staff, clients, premises, facilities and data from the UK National Health Service, Social Care organisations and some other statutory public bodies within the UK)? **No** **If you answered yes to any of the points above, please contact your faculty's RERP chair for further guidance.**

SECTION C: THE PROJECT - RISKS AND BENEFITS

C1	**Risk Assessment**
	Please outline • the risks posed by this project to both researcher and research participants • the ways in which you intend to mitigate these risks • the benefits of this project to the applicant, participants and any others *The risks for both researcher and participants associated with this research project are minimal.* *The participants have had a totally free choice in terms of their participation. They were able choose to withdraw from participation at any point in the completion of the online survey. There was no individual personal data gathered in the survey data which only asked questions at an organisational level. Organisations are not*

> *identifiable from the data and all responses are completely anonymous. In addition, the majority of data collected is generally of low sensitivity i.e. it is not commercially or otherwise confidential information.*
>
> *The project has high impact potential in both academic and practitioner arenas. This is an under-researched area with a lack of solid theoretical and empirical studies and it is likely that there will be considerable interest in publications arising from the research which will benefit the student, supervisors and University. The close links with the CIPD also offer the potential for dissemination of results in the practitioner field. There are likely to be direct benefits for HR and management practice arising from the research findings in terms of enhancing understanding of pay and strategy and its role in organisational performance.*

Checklist to be completed by applicant prior to submission of the form

Section	*Completed*
Section A	X
Section B	X
Section C	X
Research Proposal attached	X

Please submit this *Form* as an email attachment to the Chair of your faculty's Research Ethics Review Panel (RERP)and copy in <u>all</u> of the staff and students who will be involved in the proposed research.

See: http://www.londonmet.ac.uk/research/the-research-and-postgraduate-office/current-students/research-ethics.cfm

<u>Please note</u> that research ethics approval can be granted for a maximum of 4 years or for the duration of the proposed research on the condition that:

- The researcher must inform their faculty's Research Ethics Review Panel (RERP) of any changes to the proposed research that may alter the answers given to the questions in this form or any related research ethics applications

- The researcher must apply for an extension to their ethics approval if the research project continues beyond 4 years.

Feedback from Ethics Panel

	Approved	*Feedback where further work required*
Section A	Yes	
Section B	Yes	
Section C	Yes	
Date of approval NB: Researcher to be notified of decision within <u>two </u>weeks of the submission of the application	Approved by Roger Bennett 17/09/14	

Appendix F: Linearity test results for logistic regression

Original alpha level ÷ number of comparisons = adjusted alpha level (Tabachnick and Fidell, 2014) $p < .05 \div 7 = .007143$

Table F.1 Linearity tests for logistic regression predicting likelihood of selection of pay practices based on size, sector, high-road strategy and low-road strategy

Independent variables	Pay practices (dependent variables)										
	Narrow-grading	Broadbanding	Job family	Pay spines	Indiv	JE	Market rates (determination)	Collective bargaining	Ability to pay (determination)	Indiv. Perf	Comp.
Sector (categorical)	.278	.443	.843	.074	.388	.991	.991	.001	.129	.415	.577
Size (categorical)	.462	.014	.958	.034	.396	.049	.049	.004	.001	.850	.223
High-road score (continuous)	.883	.450	.760	.269	.778	.634	.634	.162	.622	.032	.321
Low-road score (continuous)	.459	.253	.768	.173	.866	.446	.446	.220	.293	.411	.221
High-road score by LN High-road score	**.872**	**.540**	**.792**	**.212**	**.941**	**.825**	**.825**	**.196**	**.851**	**.030**	**.422**
Low-road score by LN Low-road score	**.475**	**.280**	**.786**	**.147**	**.885**	**.512**	**.512**	**.227**	**.353**	**.402**	**.228**
Constant	.440	.590	.561	.552	.935	.732	.732	.351	.407	.738	.543

Note. bold type = interaction terms with p values > .007143 signifying linearity between continuous independent variables and dependent variables.

Table F.2 Linearity tests for logistic regression predicting likelihood of selection of pay practices based on size, sector, high-road strategy and low-road strategy (continued)

Independent variables	Pay practices (dependent variables)											
	Skills	Service	Market rates	Employee value	Ability to pay (review)	Move MR	R&R	PRR	Combi	Piece rates	Commission	Merit pay
Sector (categorical)	.341	.953	.681	.140	.484	.165	.192	.003	.915	.755	.000	.502
Size (categorical)	.861	.992	.071	.243	.030	.065	.483	.016	.066	.772	.894	.115
High-road score (continuous)	.449	.023	.465	.323	.738	.867	.740	.694	.304	.109	.566	.291
Low-road score (continuous)	.072	.061	.902	.483	.124	.183	.360	.353	.550	.247	.220	.097
High-road score by LN High-road score	**.587**	**.034**	**.529**	**.367**	**.621**	**.710**	**.803**	**.833**	**.290**	**.131**	**.684**	**.374**
Low-road score by LN Low-road score	**.071**	**.055**	**.957**	**.496**	**.174**	**.222**	**.388**	**.372**	**.594**	**.249**	**.226**	**.100**
Constant	.206	.215	.954	.770	.148	.181	.532	.404	.292	.260	.580	.352

Note. bold type = interaction terms with *p* values > .007143 signifying linearity between continuous independent variables and dependent variables.

Table F.3 Linearity tests for logistic regression predicting likelihood of selection of pay practices based on size, sector, high-road strategy and low-road strategy (continued 2)

	Pay practices (dependent variables)										
Independent variables	Indiv bonus	Indiv. cash incentive	Gainsharing	Goal-sharing	Profit-sharing	Shares LTIs	Upper decile	Upper quartile	Median	Lower quartile	Lower decile
Sector (categorical)	.665	.008	.857	.203	.195	.079	.714	.055	.182	.182	.997
Size (categorical)	.121	.684	.848	.066	.769	.000	.732	.828	.631	.631	.508
High-road score (continuous)	.140	.306	.855	.828	.870	.415	.377	.644	.025	.025	.593
Low-road score (continuous)	.181	.277	.832	.355	.608	.171	.181	.997	.688	.688	.463
High-road score by LN High-road score	**.177**	**.294**	**.740**	**.859**	**.784**	**.352**	**.312**	**.537**	**.024**	**.024**	**.586**
Low-road score by LN Low-road score	**.187**	**.273**	**.838**	**.349**	**.633**	**.212**	**.176**	**.981**	**.714**	**.714**	**.462**
Constant	.590	.229	.708	.390	.723	.071	.176	.949	.564	.564	.978

Note. bold type = interaction terms with p values > .007143 signifying linearity between continuous independent variables and dependent variables.

Appendix G: Assumption tests for linear regression: pay dispersion by strategy, sector and size
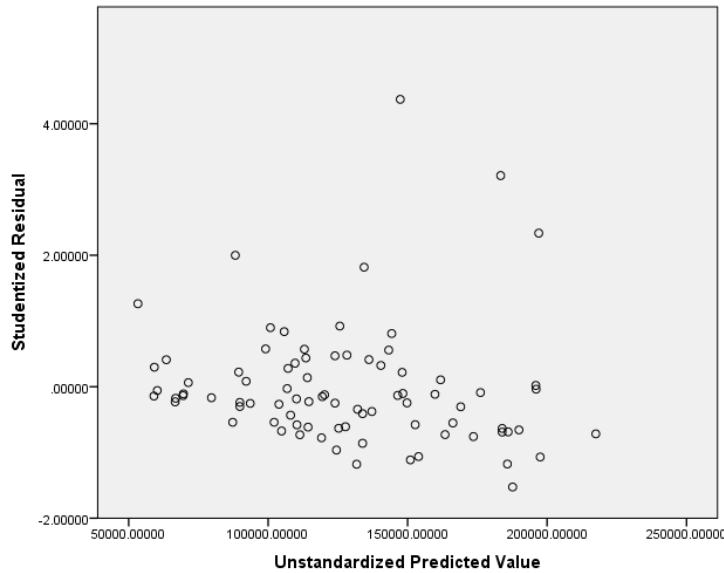
Figure G.1 Scatterplot of studentised residuals by unstudentised predicted values for pay dispersion and collective independent variables (non-transformed data)
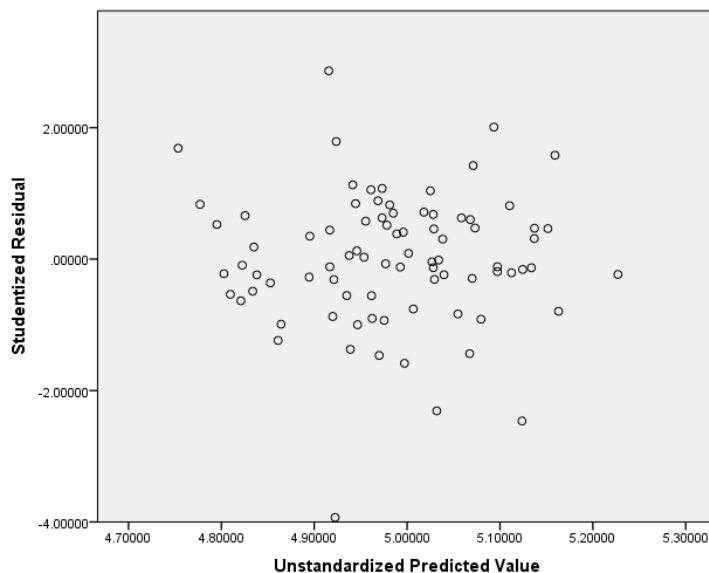
Figure G.2 Scatterplot of studentised residuals by unstudentised predicted values for pay dispersion and collective independent variables (logarithmically transformed data)
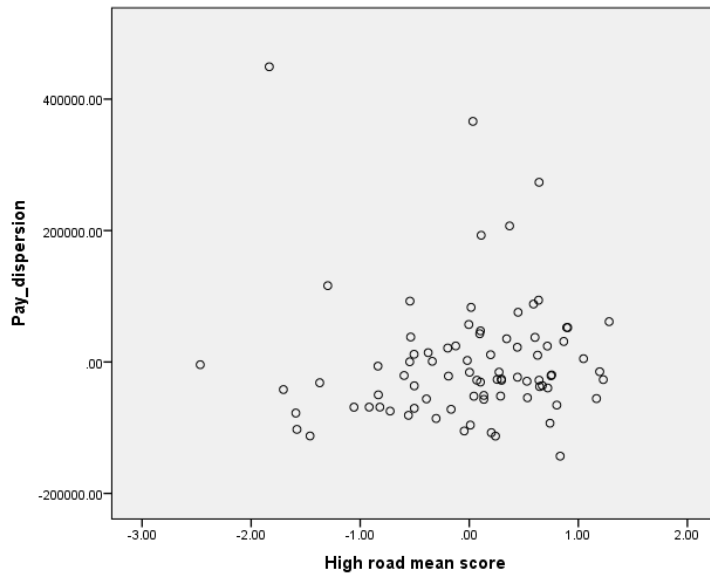
Figure G.3 Scatterplot of pay dispersion by high-road strategy score (non-transformed data)
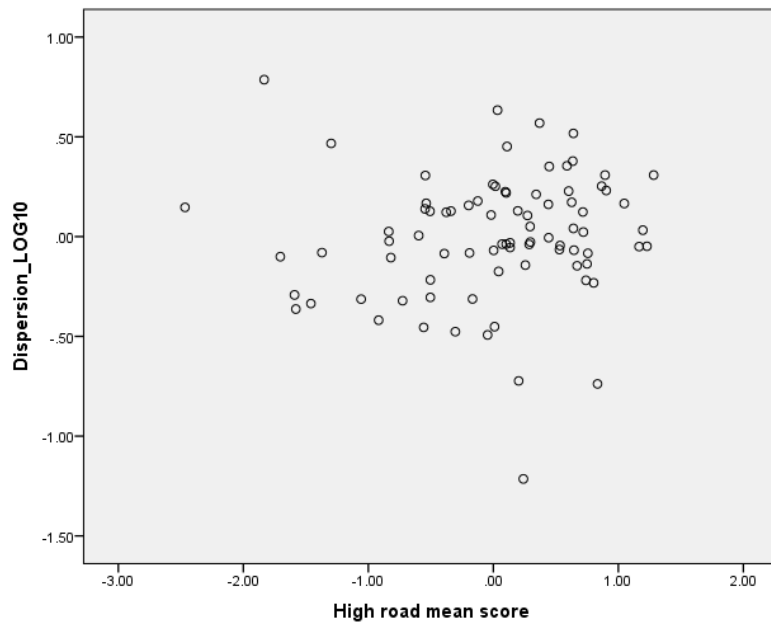
Figure G.4 Scatterplot of pay dispersion by high-road strategy score (logarithmically transformed data)
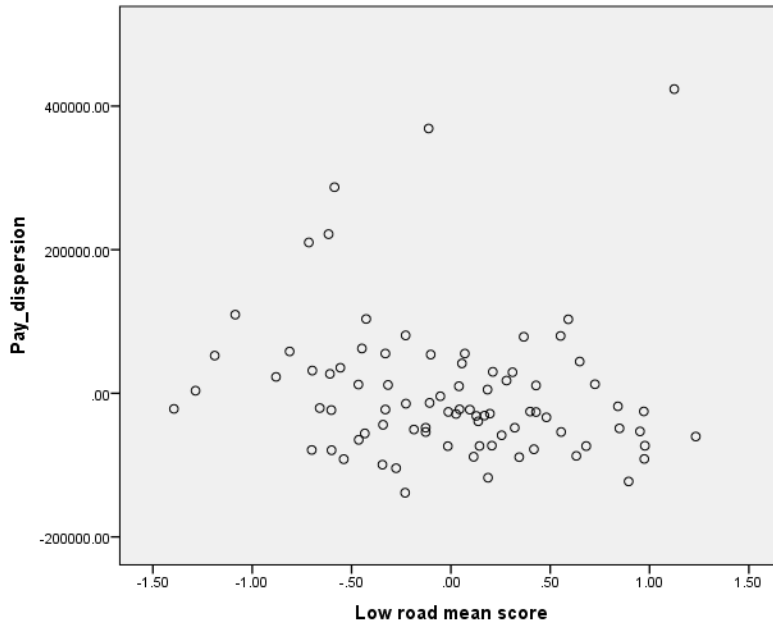
Figure G.5 Scatterplot of pay dispersion by low-road strategy score (non-transformed data)
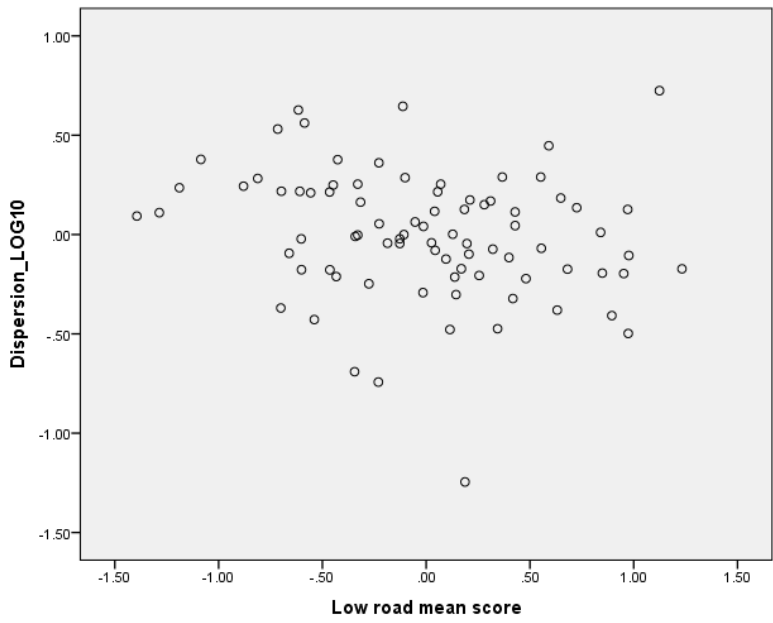
Figure G.6 Scatterplot of pay dispersion by low-road strategy score (logarithmically transformed data)
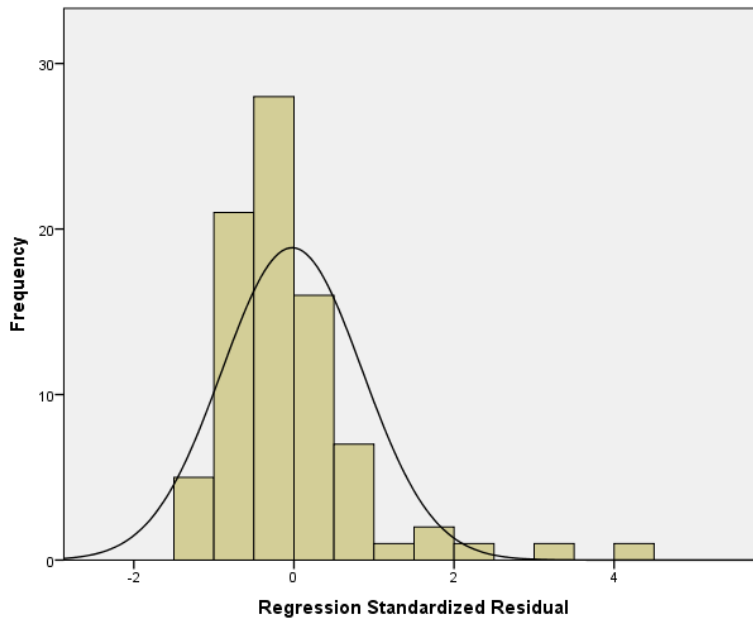
Figure G.7 Histogram - pay dispersion score (non-transformed data)
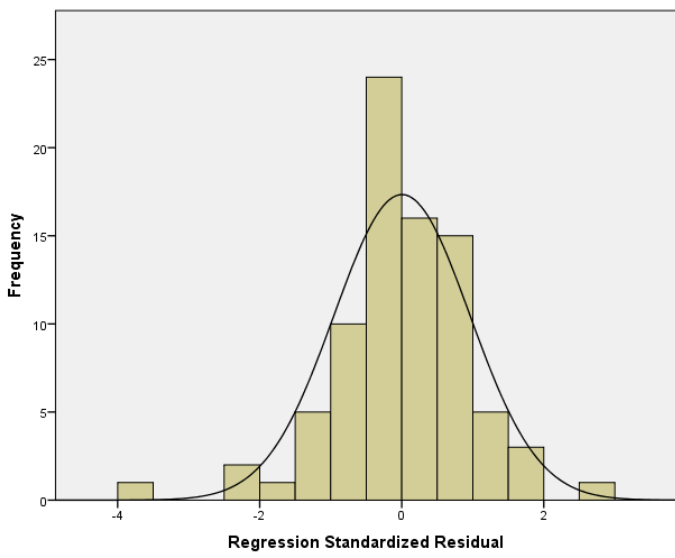
Figure G.8 Histogram - pay dispersion score (logarithmically transformed data)
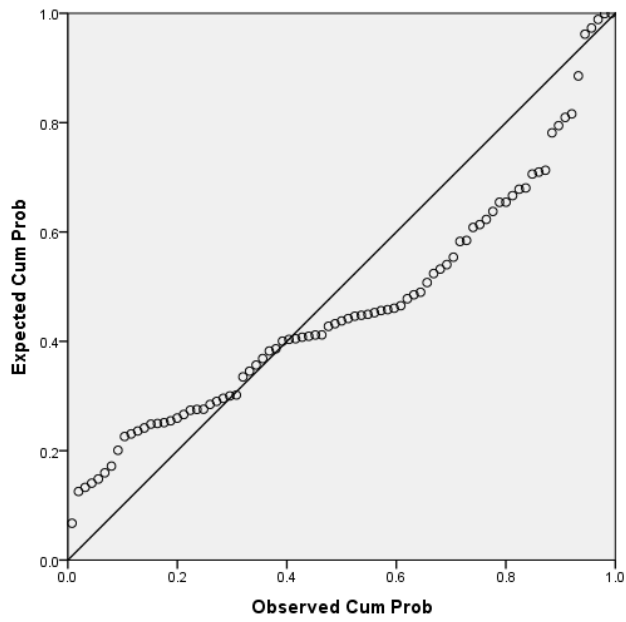
Figure G.9 Normal P-P plot for Pay dispersion score (non-transformed data)
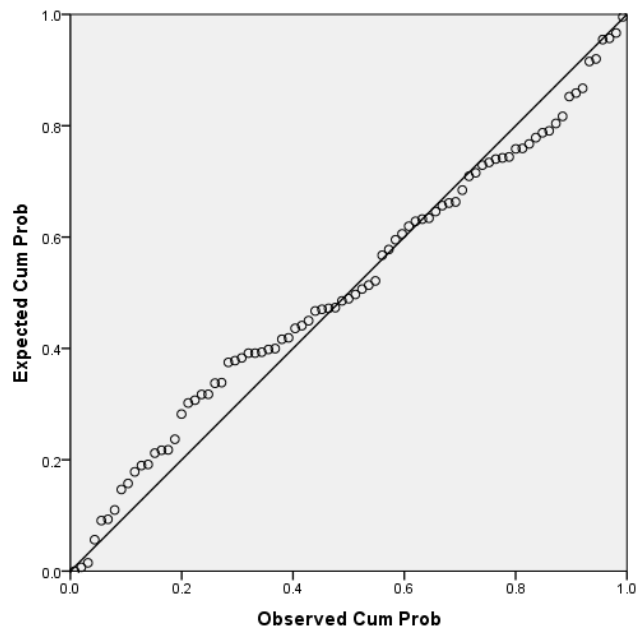
Figure G.10 Normal P-P plot for pay dispersion score (logarithmically transformed data)

Table G.1 Multiple regression analysis predicting pay dispersion based on size, sector, high-road strategy and low-road strategy (logarithmically transformed data)

	B	SE	*β*	95% C.I. for *B* coefficient	
				Lower	Upper
(Constant)	5.279	.278		4.725	5.833
Size	.167*	.073	.243	.022	.312
Sector	-.136	.080	-.183	-.296	.024
High-road strategy	.054	.049	.122	-.043	.151
Low-road strategy	-.125	.064	-.216	-.253	.003

Note. $* = p \leq .05$, $** = p \geq .005$, B = unstandardised regression coefficient (rounded to 2 decimal places), SE = standard error of regression coefficient, β = standardised coefficient, C.I. = confidence intervals.

Appendix H: Assumption tests for linear regression: pay secrecy by strategy, sector and size
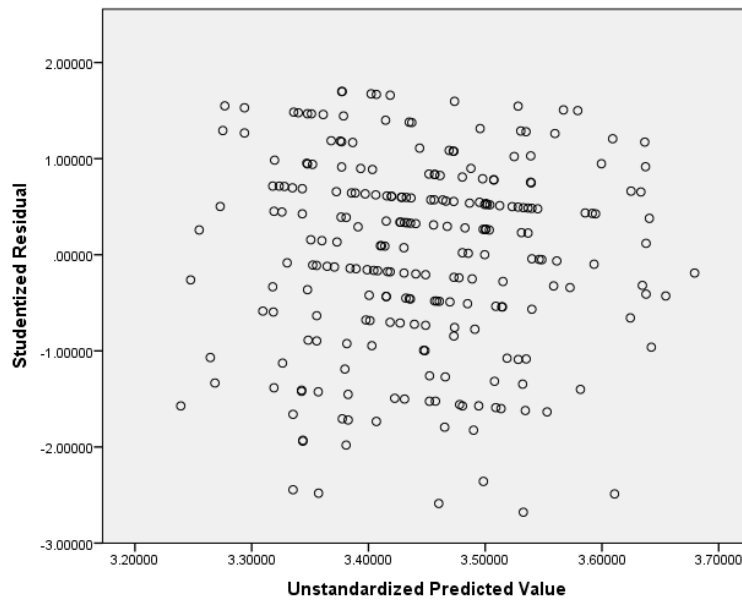
Figure H.1 Scatterplot of studentised residuals by unstudentised predicted values for pay secrecy and collective independent variables (non-transformed data)
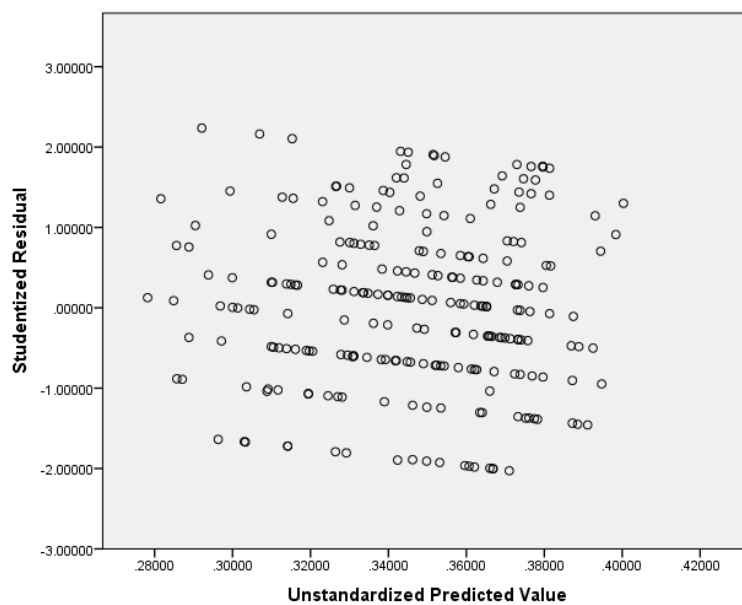
Figure H.2 Scatterplot of studentised residuals by unstudentised predicted values for pay secrecy and collective independent variables (logarithmically transformed data)

Partial Regression Plot

Dependent Variable: Pay_secrecy_score
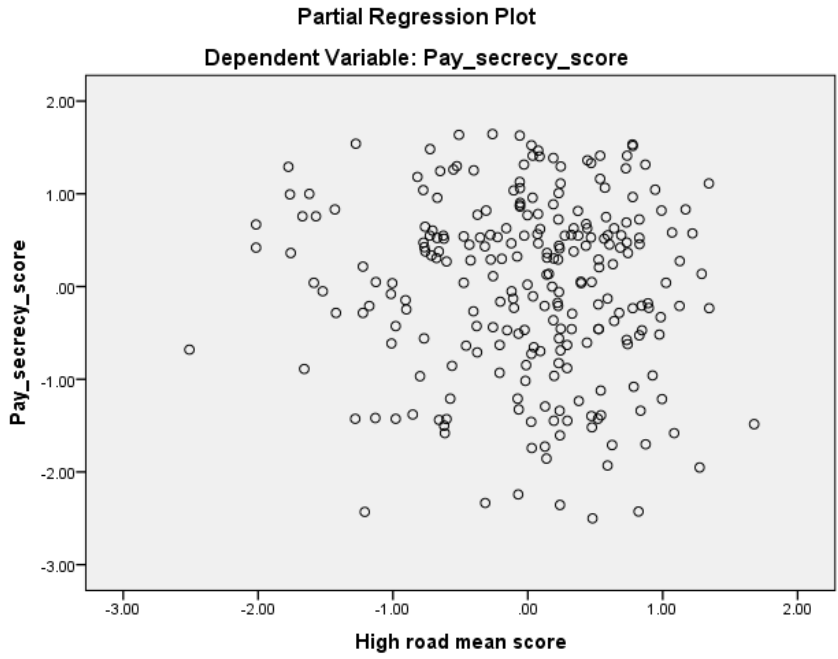
Figure H.3 Scatterplot pay secrecy by high-road strategy score (non-transformed data)

Partial Regression Plot

Dependent Variable: Secrecy_LOG10
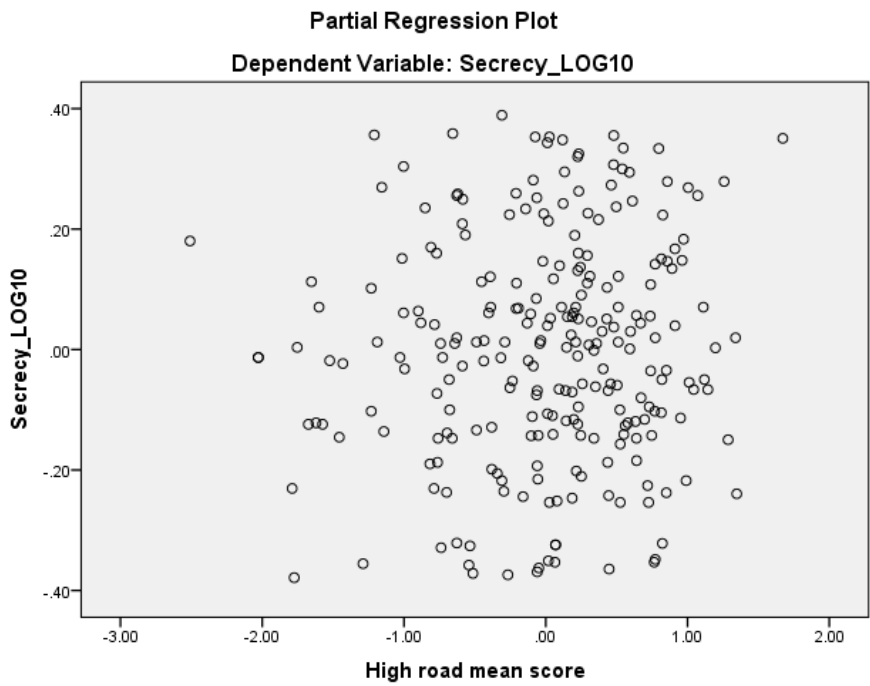
Figure H.4 Scatterplot pay secrecy by high-road strategy score (logarithmically transformed data)
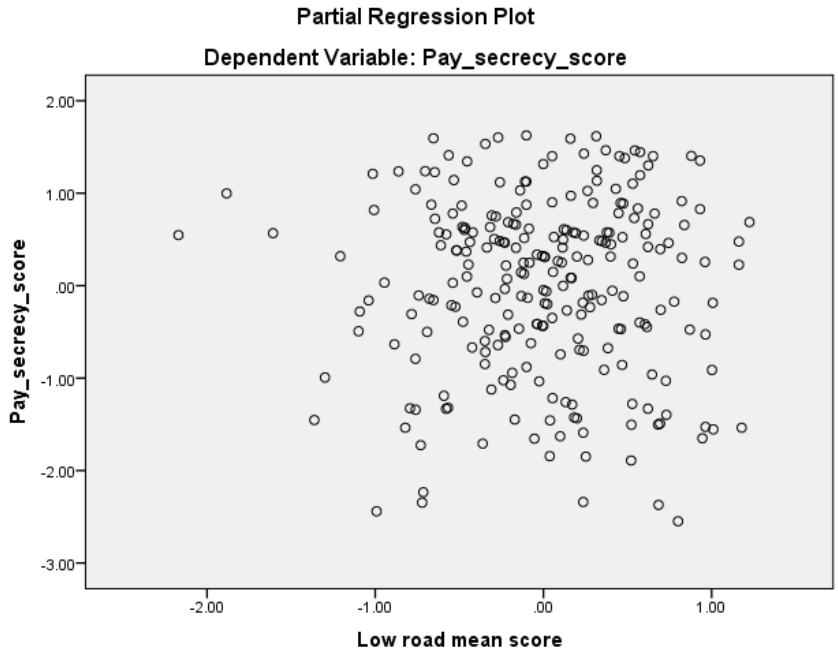
Figure H.5 Scatterplot of pay secrecy by low-road strategy score (non-transformed data)
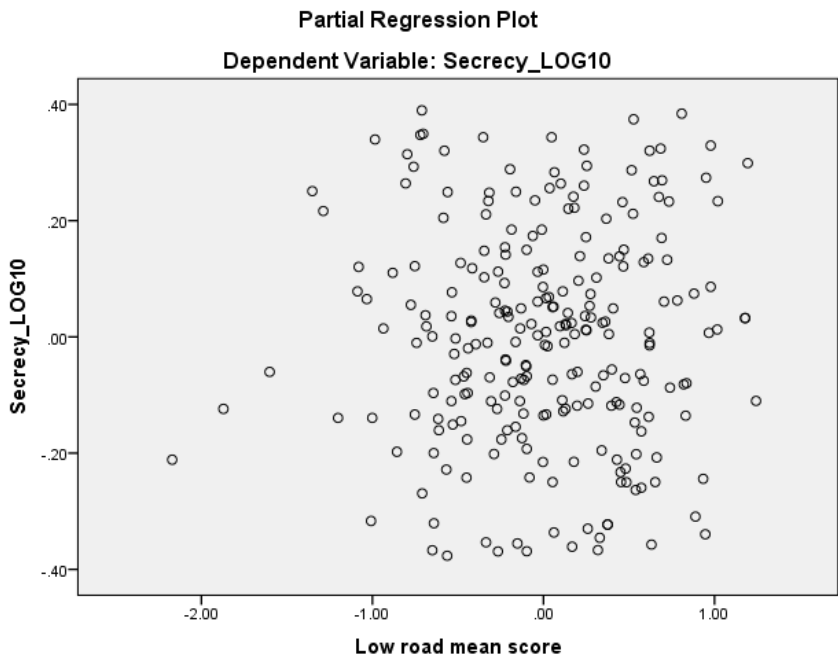
Figure H.6 Scatterplot of pay secrecy by low-road strategy score (logarithmically transformed data)

348
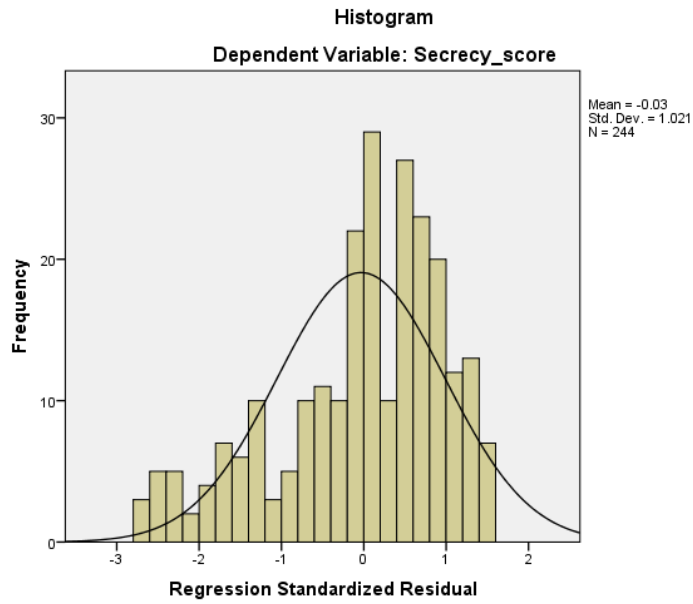
Figure H.7 Histogram pay secrecy score (non-transformed data)
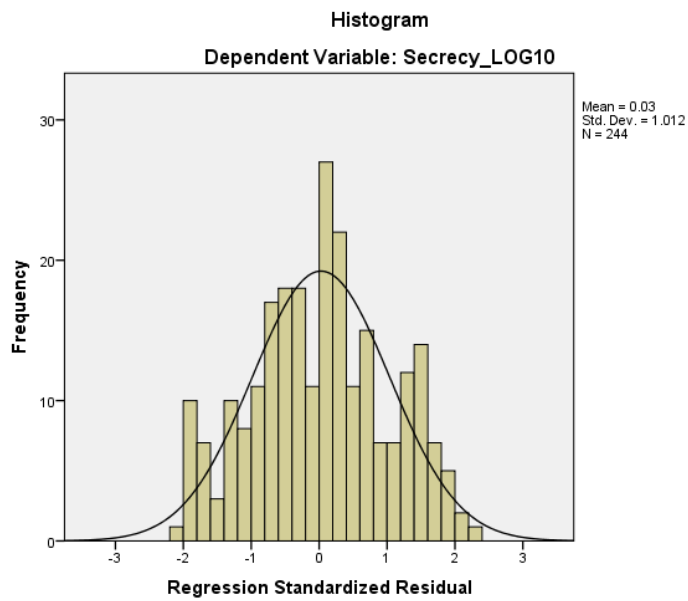
Figure H.8 Histogram pay secrecy score (logarithmically transformed data)

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Secrecy_score
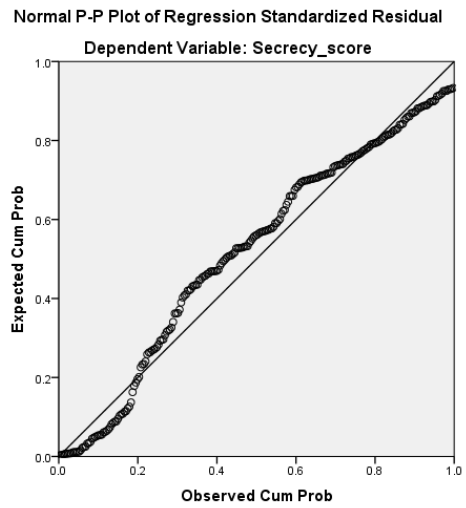
Figure H.9 Normal P-P plot for pay secrecy score (non-transformed data)

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Secrecy_LOG10
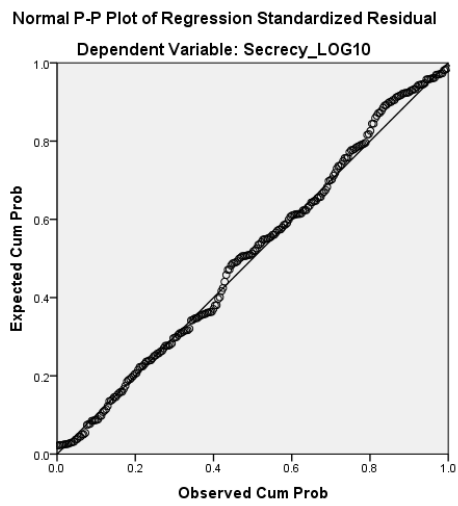
Figure H.10 Normal P-P plot for pay secrecy score (logarithmically transformed data)

Appendix I: Multicollinearity test results for logistic regression

Table I.1 Collinearity statistics, DV: Sector

	Collinearity statistics	
Dependent variable: Sector	Tolerance	VIF
High-road strategy score	.940	1.064
Low-road strategy score	.918	1.089
Size	.974	1.027

Table I.2 Collinearity statistics, DV: Size

	Collinearity statistics	
Dependent variable: Size	Tolerance	VIF
High-road strategy score	.914	1.094
Low-road strategy score	.919	1.088
Sector	.936	1.068

Table I.3 Collinearity statistics, DV: Low-road strategy score

Dependent variable: Low-road	Collinearity statistics	
strategy score	Tolerance	VIF
High-road strategy score	.957	1.045
Sector	.953	1.049
Size	.992	1.008

Table I.4 Collinearity statistics, DV: High-road strategy score

Dependent variable: High-road	Collinearity statistics	
strategy score	Tolerance	VIF
Sector	.960	1.041
Size	.972	1.029
Low-road strategy score	.941	1.062

Appendix J: EPV calculations for logistic regression analysis

Table J.1 Summary of EPV and minimum number of cases calculations for logistic regression analysis

Pay Practice (dependent variable)	No. of independent variables	Lowest no. of cases selected / not selected	Event per variable (EPV)
Broadbanding	4	72	18
Pay spines	4	33	8.25
Individual base pay	4	112	28
Narrow-grading	4	71	17.75
Job families	4	62	15.5
Job evaluation	4	91	22.75
Market rates (pay determination)	4	87	20.25
Collective bargaining	4	45	11.25
Ability to pay (pay determination)	4	122	30.5
Individual PRP	4	31	7.75*
Competency pay	4	121	30.25
Skills-based pay	4	123	30.75
Service-based pay	4	52	13
Market rates (progression)	4	91	22.75
Employee value / retention (progression)	4	103	25.75
Movement in market rates (pay review)	4	98	24.5
Ability to pay (pay review)	4	47	11.75
PRR schemes	4	62	15.5
Combination PRR schemes	4	92	23
Piece rates	4	4	1*
Sales commission	4	83	20.75
Merit pay	4	105	26.25
Individual bonus	4	120	30
Individual cash incentives	4	49	12.25
Gainsharing	4	32	8*
Goal-sharing	4	69	17.25
Profit-sharing	4	58	14.5

Pay Practice (dependent variable)	No. of independent variables	Lowest no. of cases selected / not selected	Event per variable (EPV)
Long-term incentives / share schemes	4	95	23.75
Upper decile pay positioning	4	28	7*
Upper quartile pay positioning	4	50	12.5
Median pay positioning	4	124	31
Lower quartile pay positioning	4	27	6.75*
Lower decile pay positioning	4	3	0.75*

Note. $* = EPV \leq 10$

Appendix K: Normality and outlier tests for paired-samples t-test (pay dispersion data)
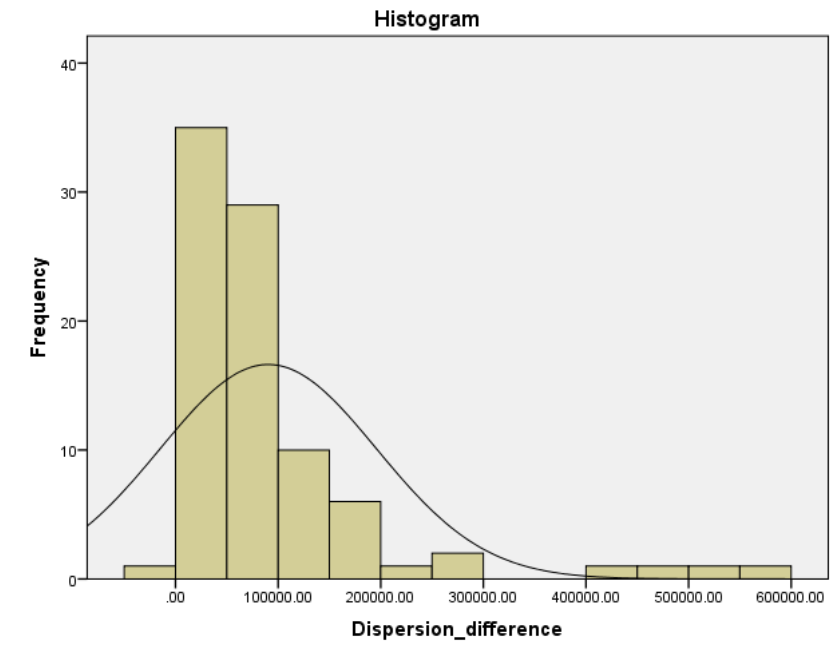
Figure K.1 Histogram of pay dispersion (non-transformed data)
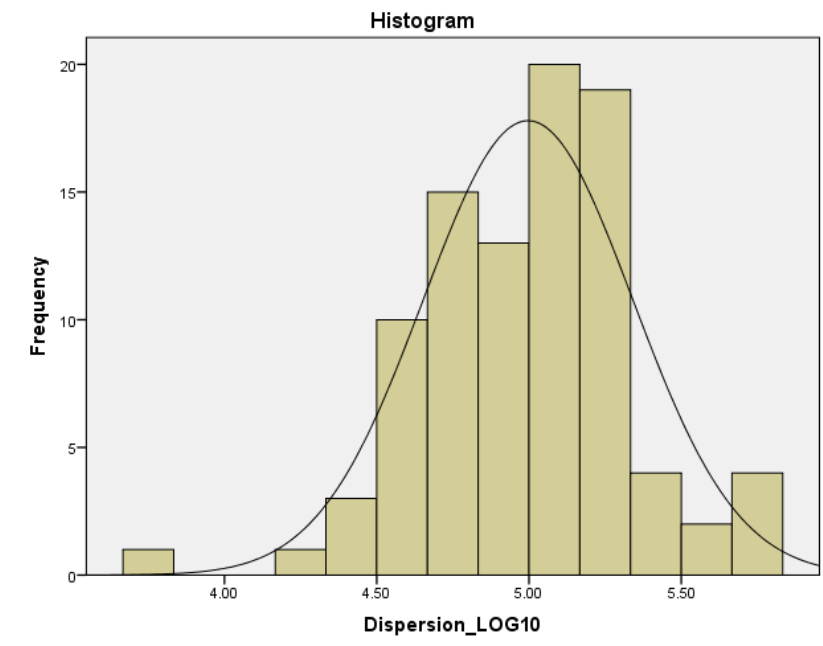
Figure K.2 Histogram of pay dispersion (logarithmically transformed data)
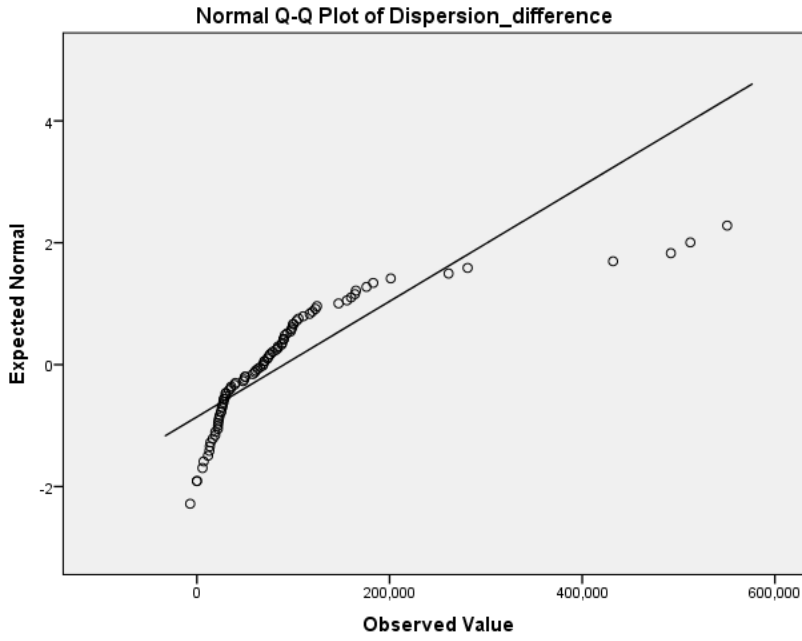
Figure K.3 Normal Q-Q plot of dispersion difference between management and other employees (non-transformed data)
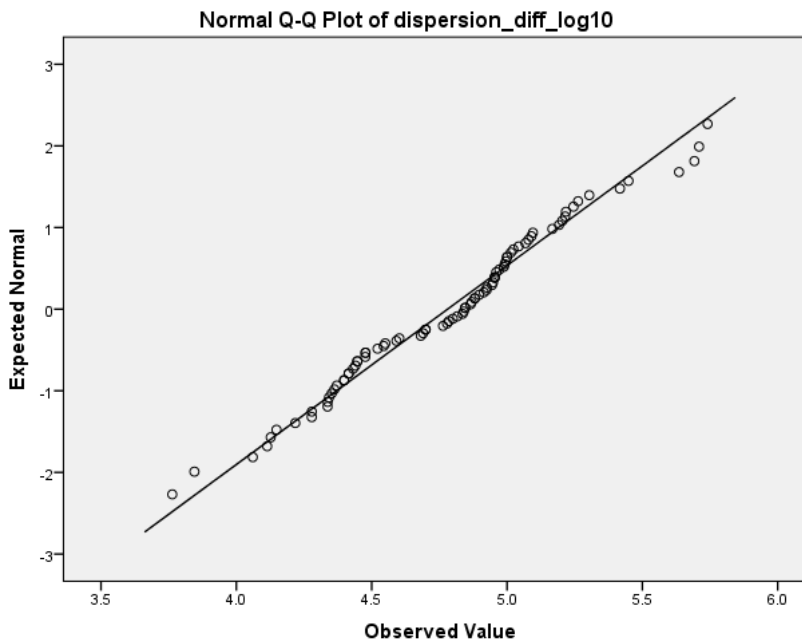
Figure K.4 Normal Q-Q plot of difference between management and other pay dispersion (logarithmic transformed data)
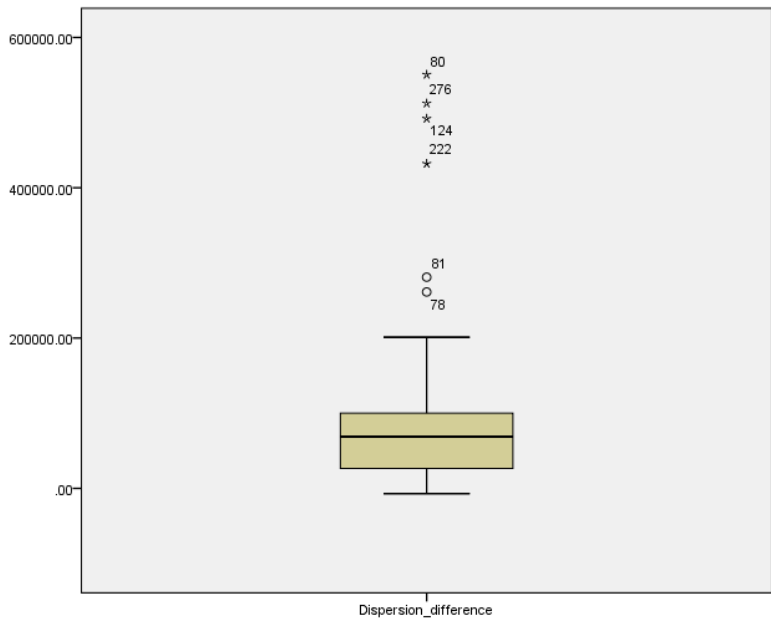
Figure K.5 Box plot for dispersion difference (non-transformed data)
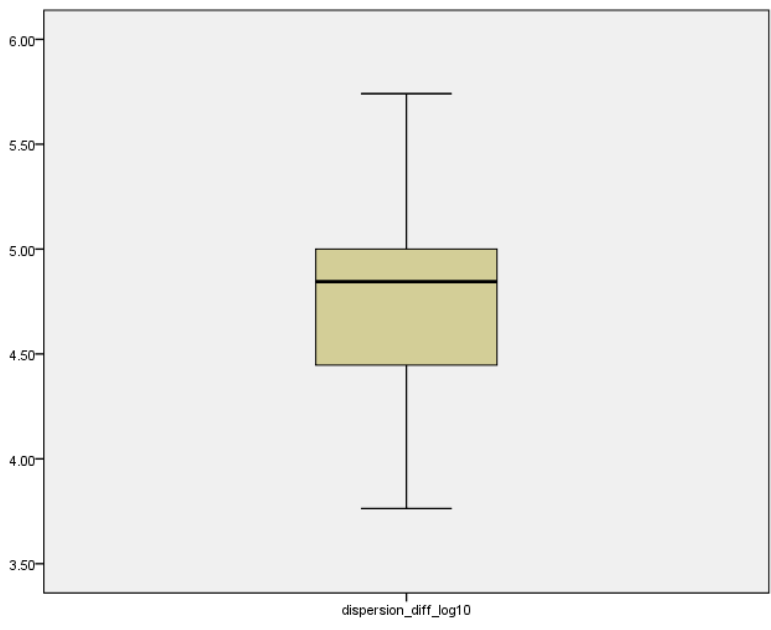
Figure K.6 Box plot for dispersion difference (logarithmically transformed data)

Table K.1 Paired-samples t-test statistics for management and other pay dispersion (logarithmically transformed data with outliers removed)

		Mean	N	Std. Deviation	Std. Error Mean
Paired-sample	Management dispersion	4.9148	82	.35831	.03886
	Other employee dispersion	4.2026	82	.52526	.05697

Note. N = number of cases

Table K.2 Paired-samples t-test results for management and other pay dispersion (logarithmically transformed data with outliers removed)

		Paired differences							
					95% Confidence Interval of the difference				Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	
Paired-sample	Management dispersion – Other employee dispersion	.71214	.45610	.04947	.61376	.81052	14.395	84	.000

Note. t = t-test statistic; df = degrees of freedom

Appendix L: Symmetricity assumption test for Wilcoxon-signed rank test

Related-Samples Wilcoxon Signed Rank Test
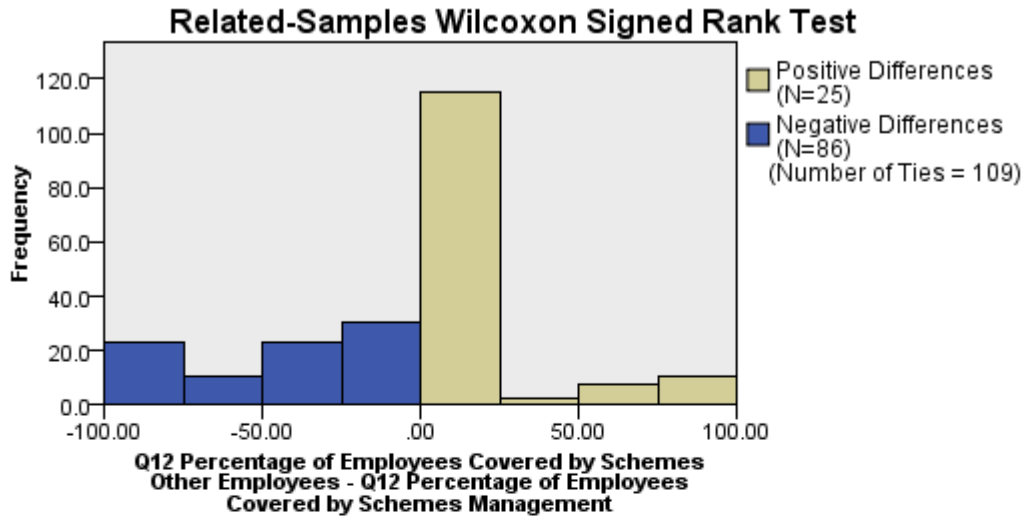
Total N	220
Test Statistic	1,537.000
Standard Error	339.617
Standardized Test Statistic	-4.626
Asymptotic Sig. (2-sided test)	.000

Figure L.1 Histogram of symmetricity for PRR scheme coverage – management and other employees

Appendix M: Linearity and homoscedasticity tests for simple regression and multiple hierarchical regression (HR outcomes data)
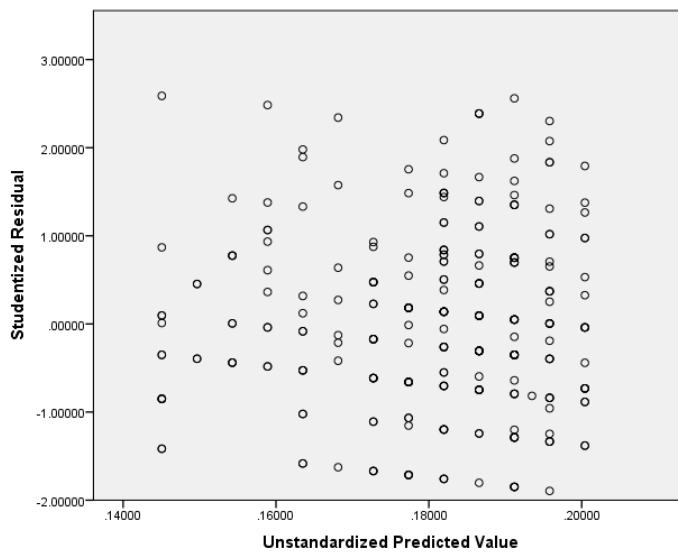
Figure M.1 Scatterplot of studentised residuals by unstudentised predicted values for HR outcomes and pay secrecy score (logarithmically transformed data)
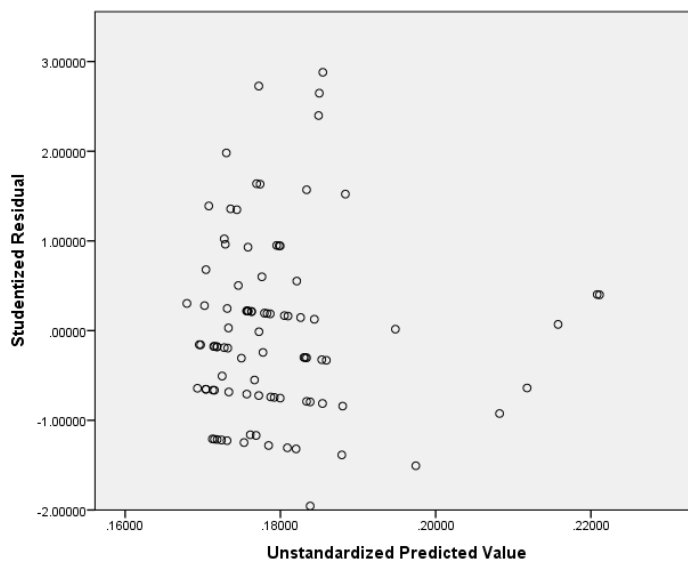
Figure M.2 Scatterplot of studentised residuals by unstudentised predicted values for HR outcomes and pay dispersion (logarithmically transformed data)
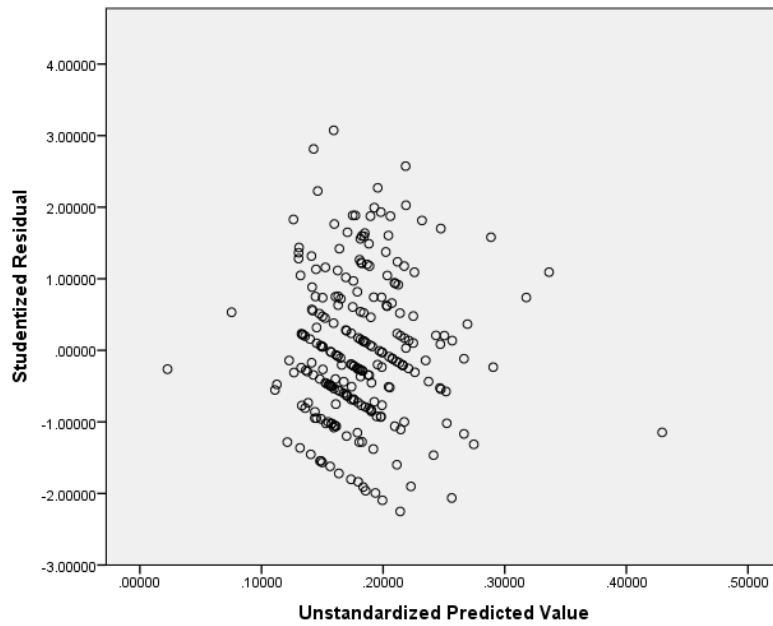
Figure M.3 Scatterplot of studentised residuals by unstudentised predicted values for HR outcomes and pay bundle 1 for knowledge-based employee, sector, size, high-road strategy score and low-road strategy score (logarithmically transformed data)
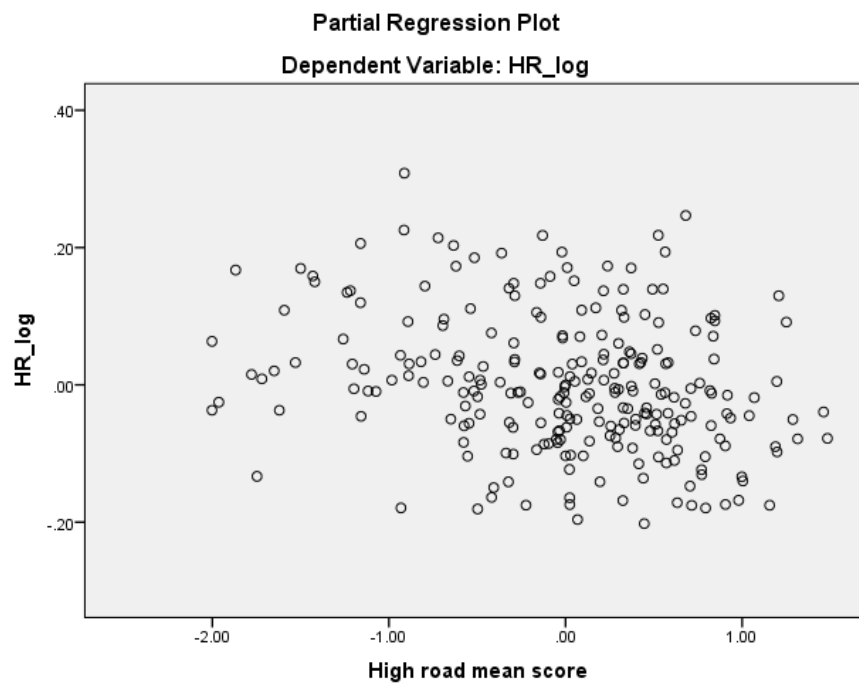
Figure M.4 Scatterplot of studentised residuals by unstudentised predicted values for HR outcomes and high-road strategy score (pay bundle 1 and knowledge-based employees) (logarithmically transformed data)
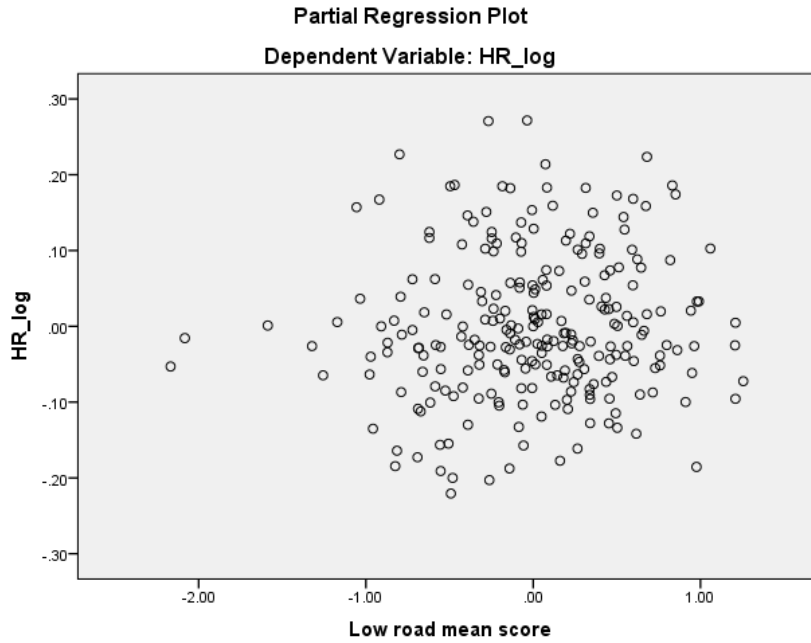
Figure M.5 Scatterplot of studentised residuals by unstudentised predicted values for HR outcomes and low-road strategy score (pay bundle 1 and knowledge-based employees) (logarithmically transformed data)
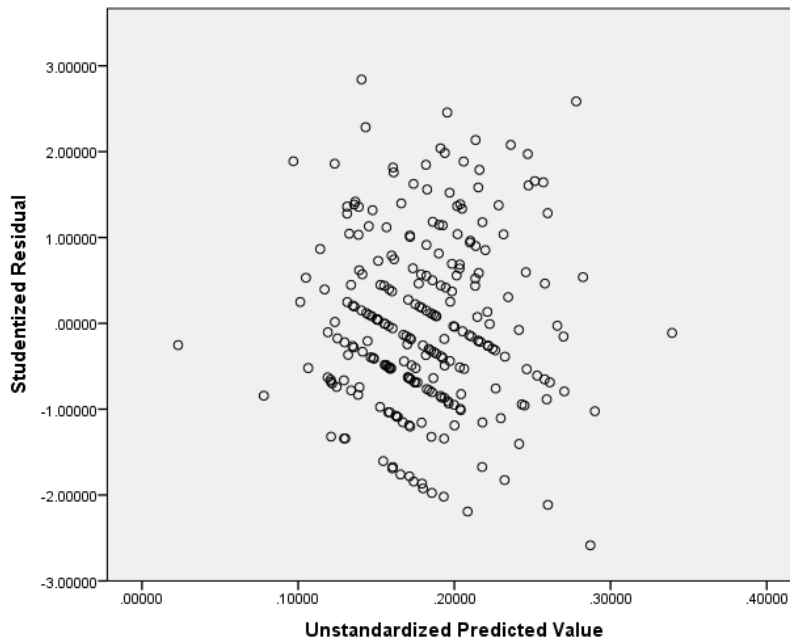
Figure M.6 Scatterplot of studentised residuals by unstudentised predicted values for HR outcomes and pay bundle 1 for job-based employee, sector, size, high-road strategy score and low-road strategy score (logarithmically transformed data)
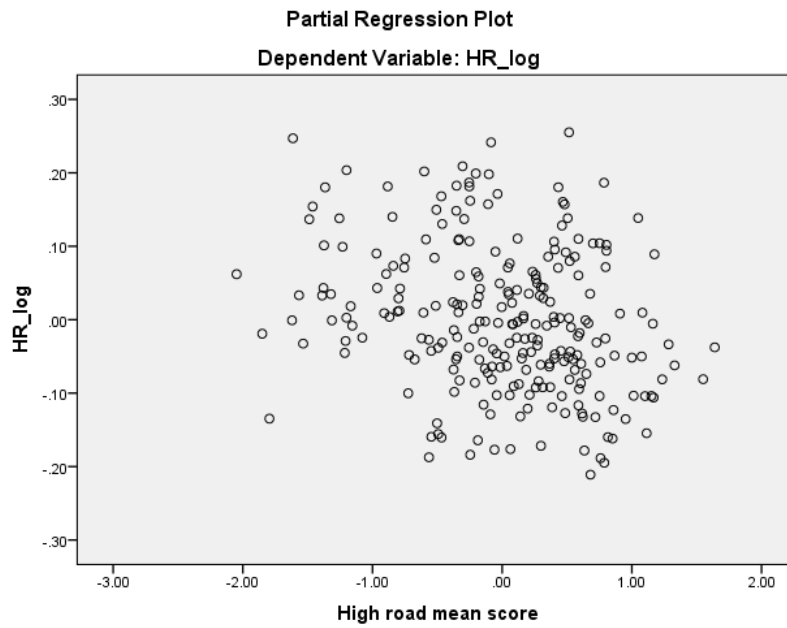
Figure M.7 Scatterplot of studentised residuals by unstudentised predicted values for HR outcomes and high-road strategy score (pay bundle 1 and job-based employees) (logarithmically transformed data)
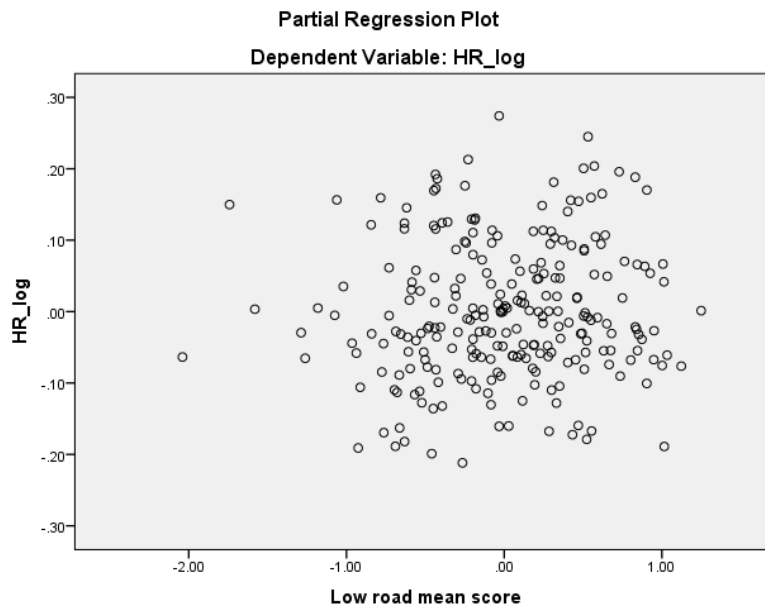
Figure M.8 Scatterplot of studentised residuals by unstudentised predicted values for HR outcomes and low-road strategy score (pay bundle 1 and job-based employees) (logarithmically transformed data)
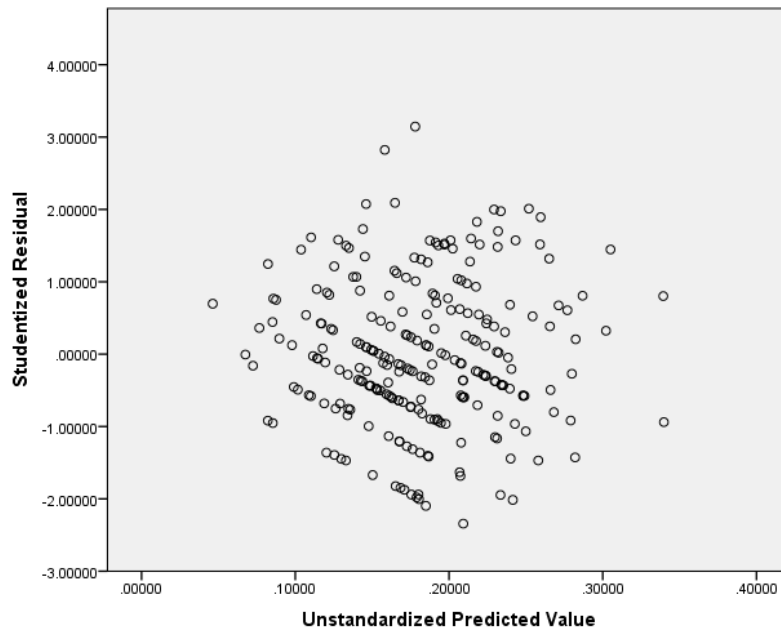
Figure M.9 Scatterplot of studentised residuals by unstudentised predicted values for HR outcomes and pay bundle 2 for knowledge-based employees, sector, size, high-road strategy score and low-road strategy score (logarithmically transformed data)
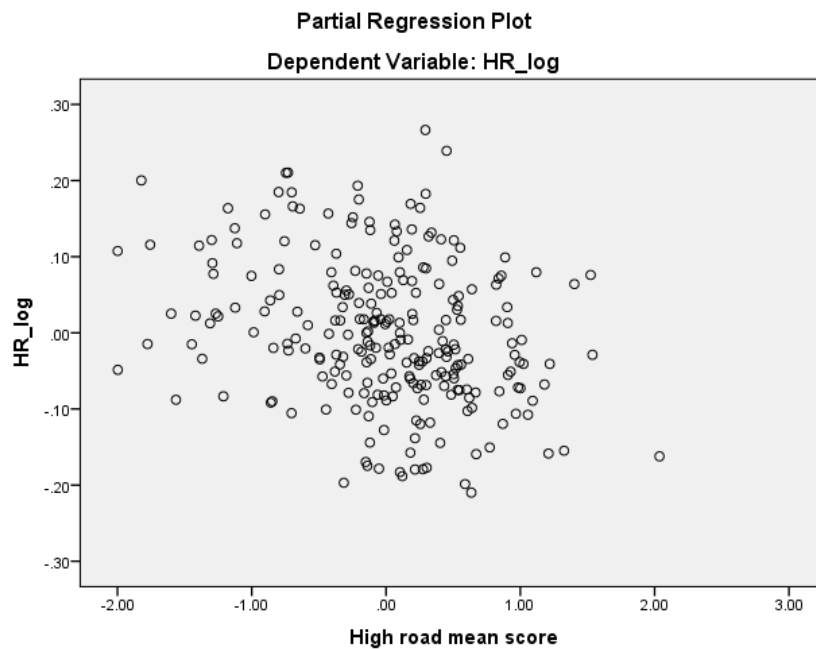
Figure M.10 Scatterplot of studentised residuals by unstudentised predicted values for HR outcomes and high-road strategy score (pay bundle 2 and knowledge-based employees) (logarithmically transformed data)
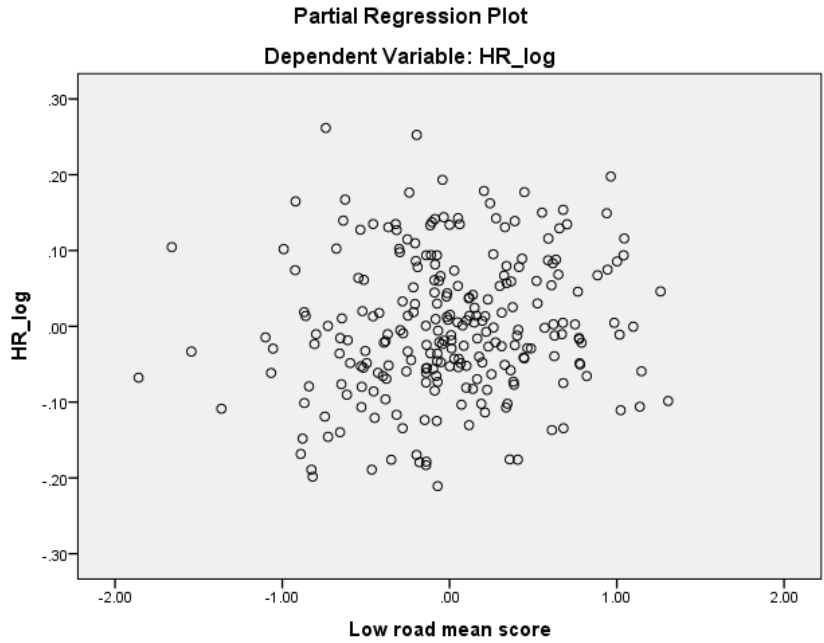
Figure M.11 Scatterplot of studentised residuals by unstudentised predicted values for HR outcomes and low-road strategy score (pay bundle 2 and knowledge-based employees) (logarithmically transformed data)
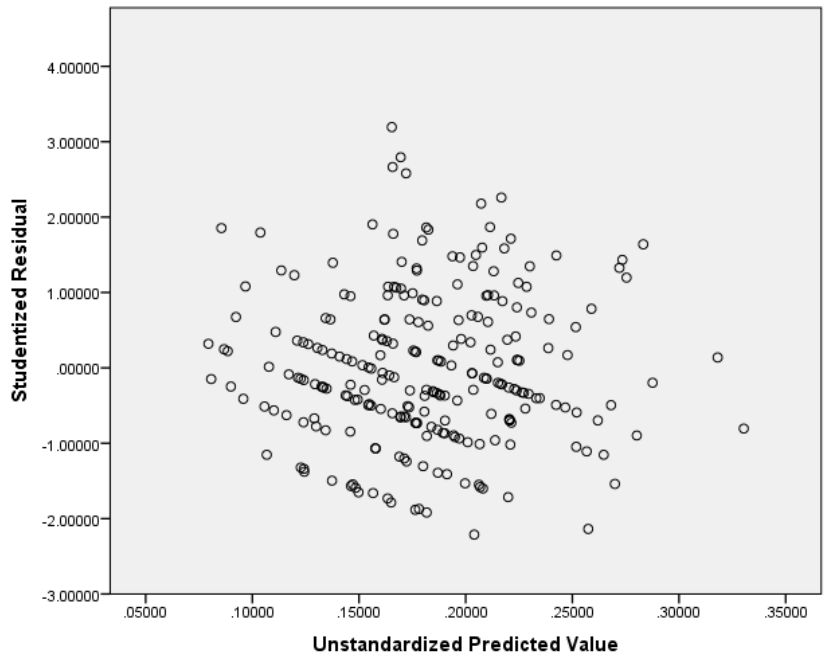
Figure M.12 Scatterplot of studentised residuals by unstudentised predicted values for HR outcomes and pay bundle 2 for job-based employees, sector, size, high-road strategy score and low-road strategy score (logarithmically transformed data)
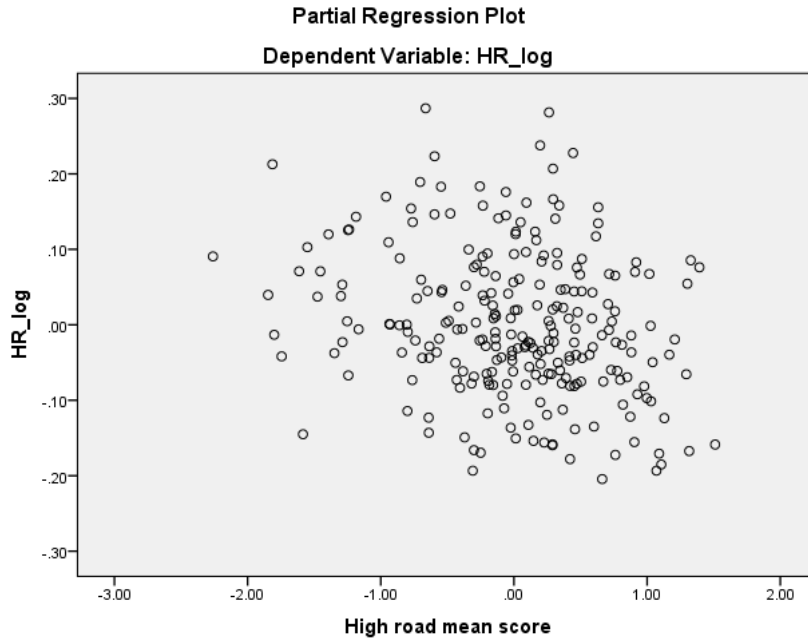
Figure M.13 Scatterplot of studentised residuals by unstudentised predicted values for HR outcomes and high-road strategy score (pay bundle 2 and job-based employees) (logarithmically transformed data)
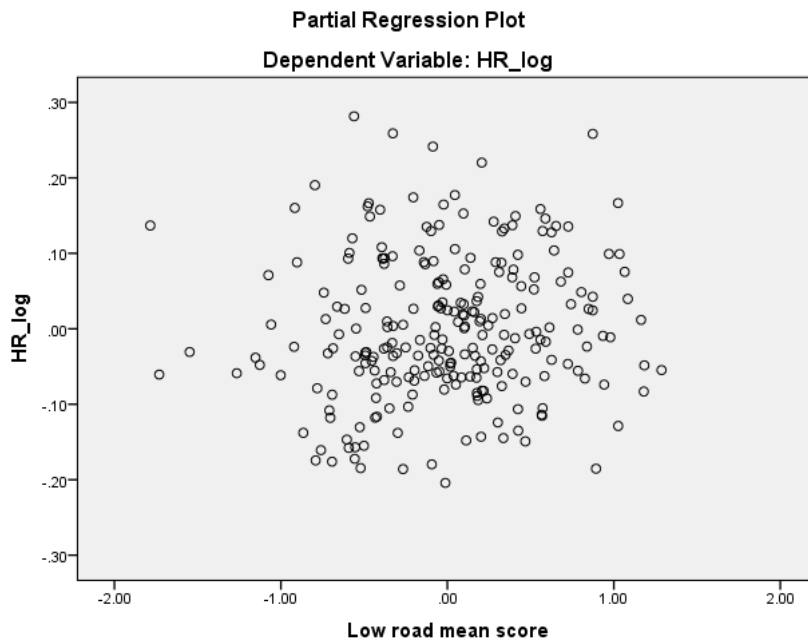
Figure M.14 Scatterplot of studentised residuals by unstudentised predicted values for HR outcomes and low-road strategy score (pay bundle 2 and job-based employees) (logarithmically transformed data)
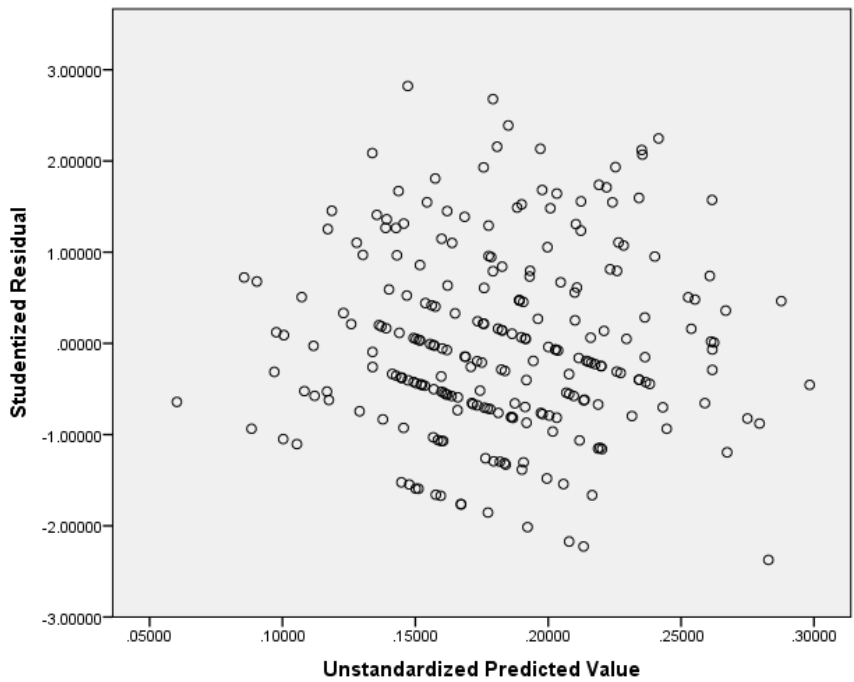
Figure M.15 Scatterplot of studentised residuals by unstudentised predicted values for HR outcomes and pay bundle 3 for knowledge-based employees, sector, size, high-road strategy score and low-road strategy score (logarithmically transformed data)
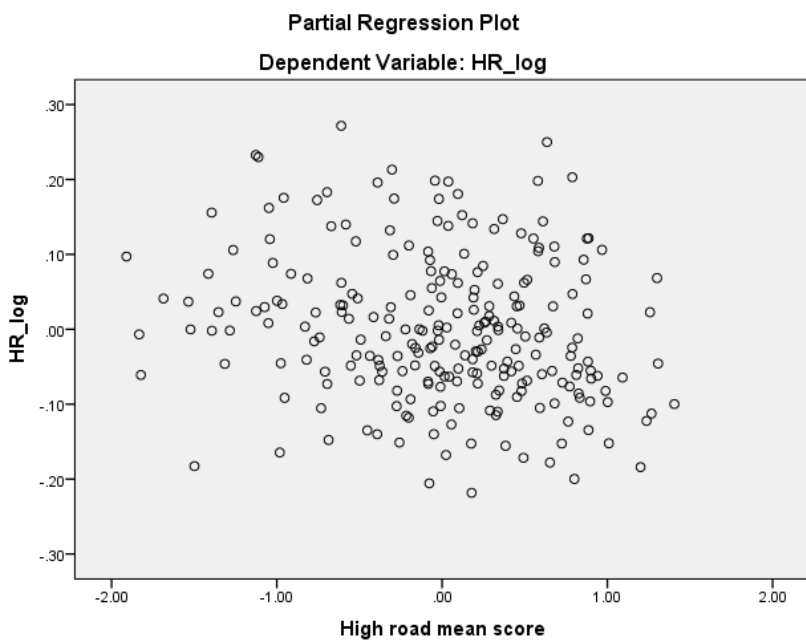
Figure M.16 Scatterplot of studentised residuals by unstudentised predicted values for HR outcomes and high-road strategy score (pay bundle 3 and knowledge-based employees) (logarithmically transformed data)
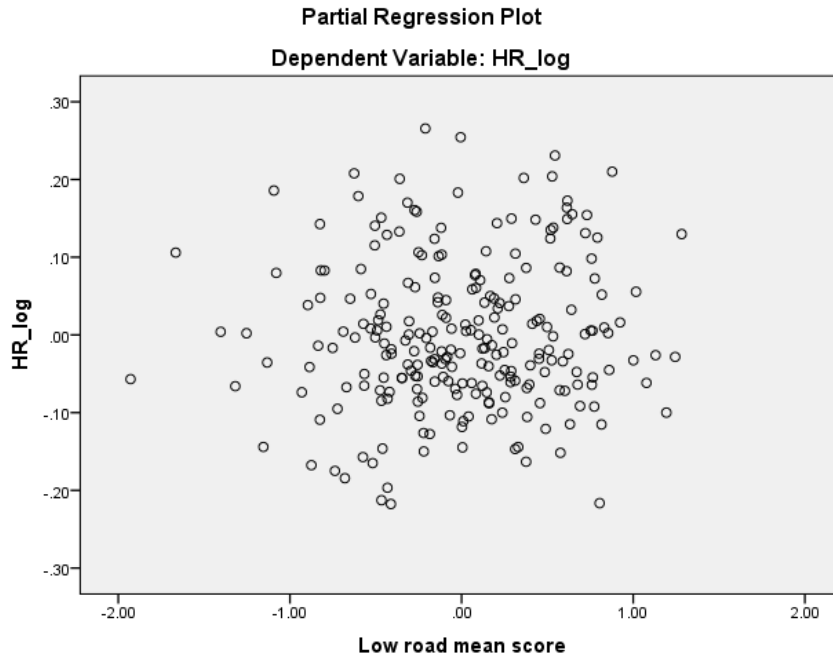
Figure M.17 Scatterplot of studentised residuals by unstudentised predicted values for HR outcomes and low-road strategy score (pay bundle 3 and knowledge-based employees) (logarithmically transformed data)
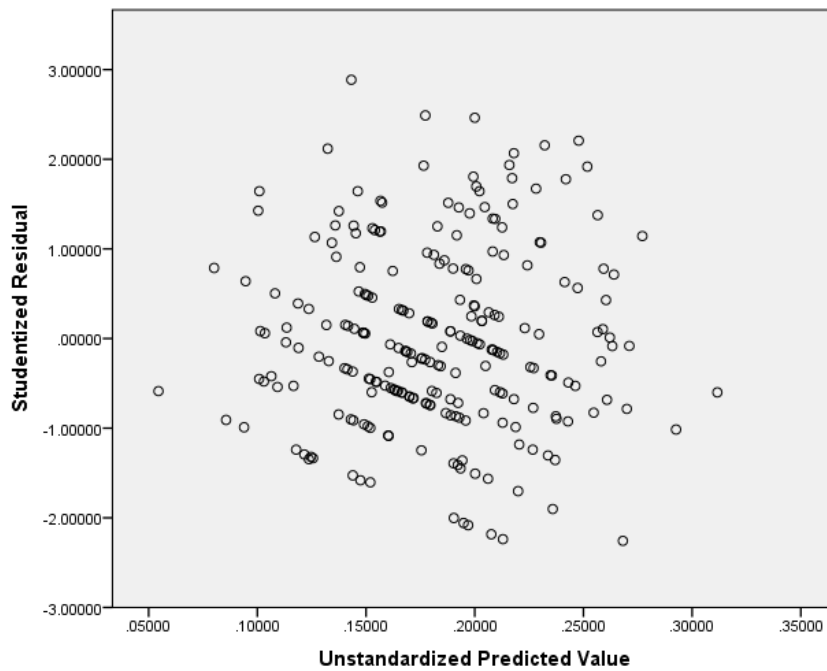
Figure M.18 Scatterplot of studentised residuals by unstudentised predicted values for HR outcomes and pay bundle 3 for job-based employees, sector, size, high-road strategy score and low-road strategy score (logarithmically transformed data)

367
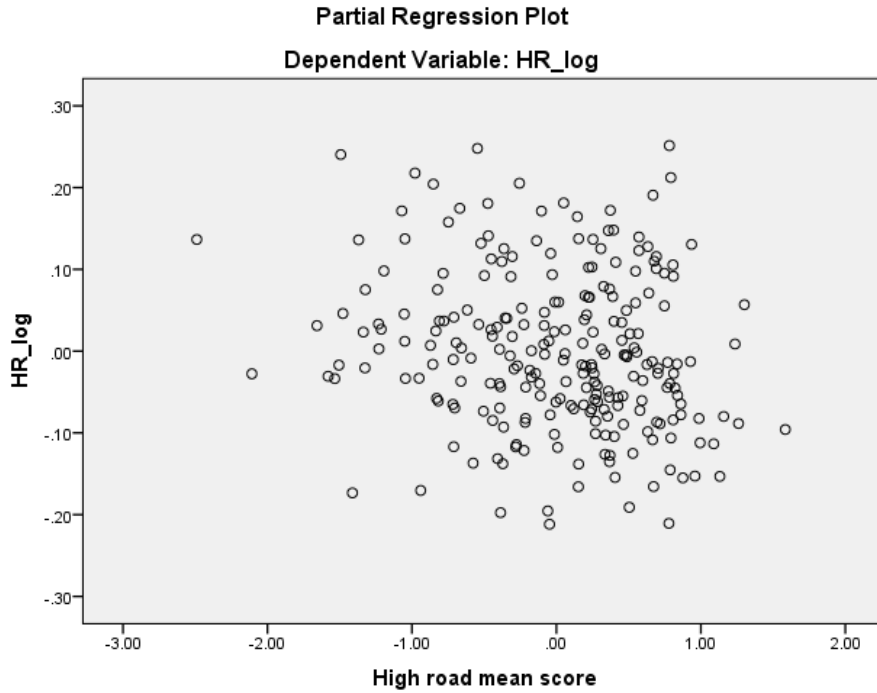
Figure M.19 Scatterplot of studentised residuals by unstudentised predicted values for HR outcomes and high-road strategy score (pay bundle 3 and job-based employees) (logarithmically transformed data)
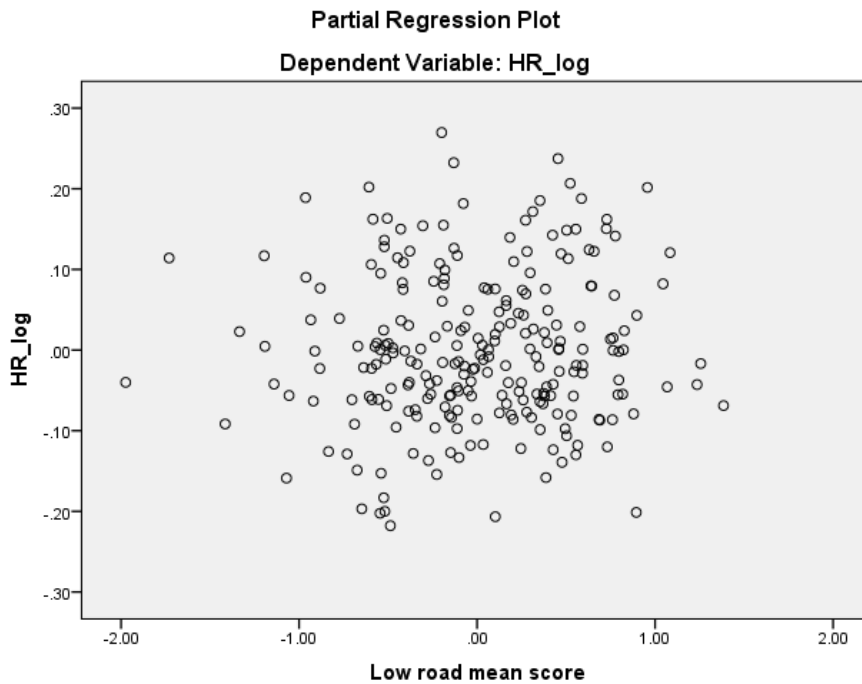
Figure M.20 Scatterplot of studentised residuals by unstudentised predicted values for HR outcomes and low-road strategy score (pay bundle 3 and job-based employees) (logarithmically transformed data)

Appendix N: Multicollinearity test results for hierarchical multiple regression

Table N.1 Collinearity statistics, DV: High-road strategy score

Dependent Variable: High-road mean score	Collinearity Statistics	
	Tolerance	VIF
Low-road mean score	1.000	1.000

Table N.2 Collinearity statistics, DV: Low-road strategy score

Dependent variable: Low-road mean score	Collinearity Statistics	
	Tolerance	VIF
High-road mean score	1.000	1.000

Appendix O: Normality and outlier tests for linear regression (HR outcomes and HR log data)
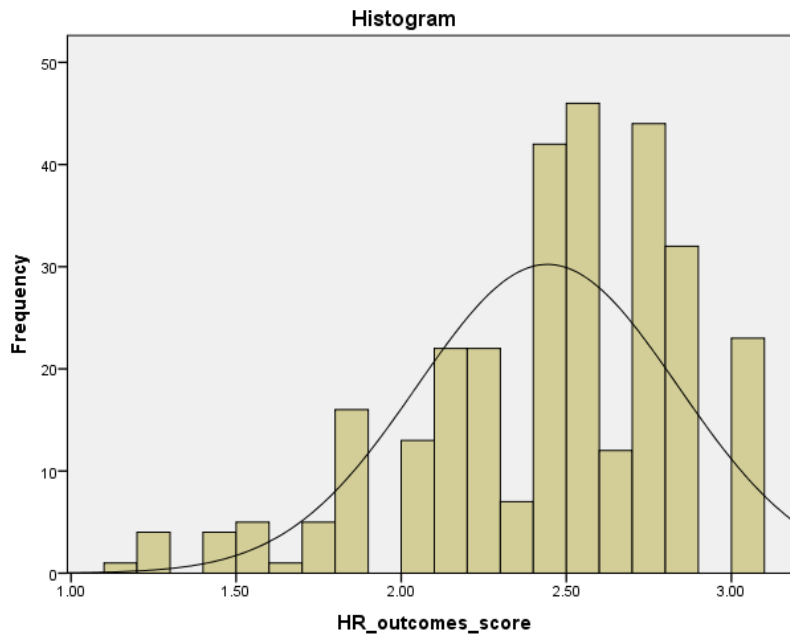
Figure O.1 Histogram of HR outcomes scale (non-transformed data)
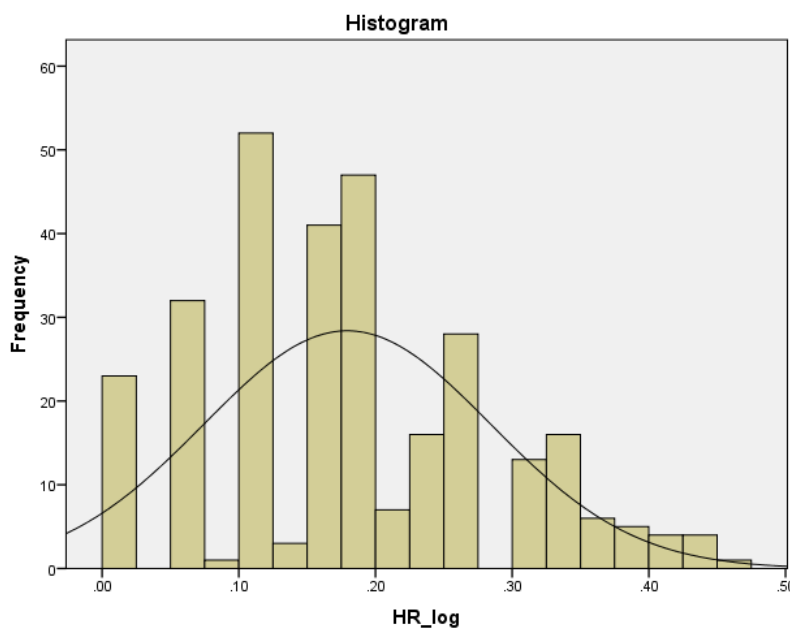
Figure O.2 Histogram of HR outcomes scale (logarithmically transformed data)
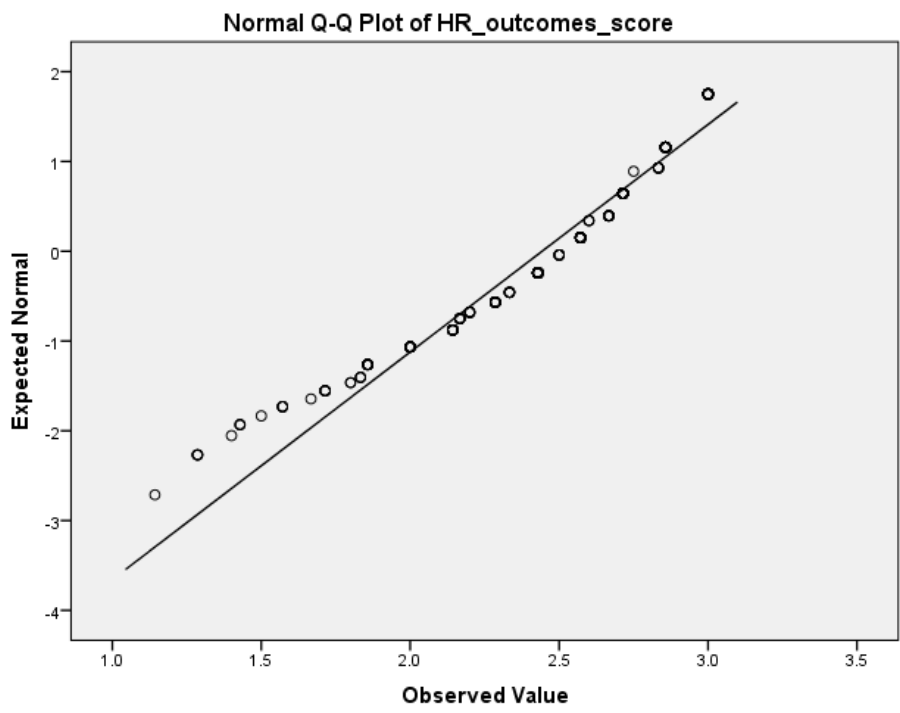
Figure O.3 Normal Q-Q plot of HR outcomes scale (non-transformed data)
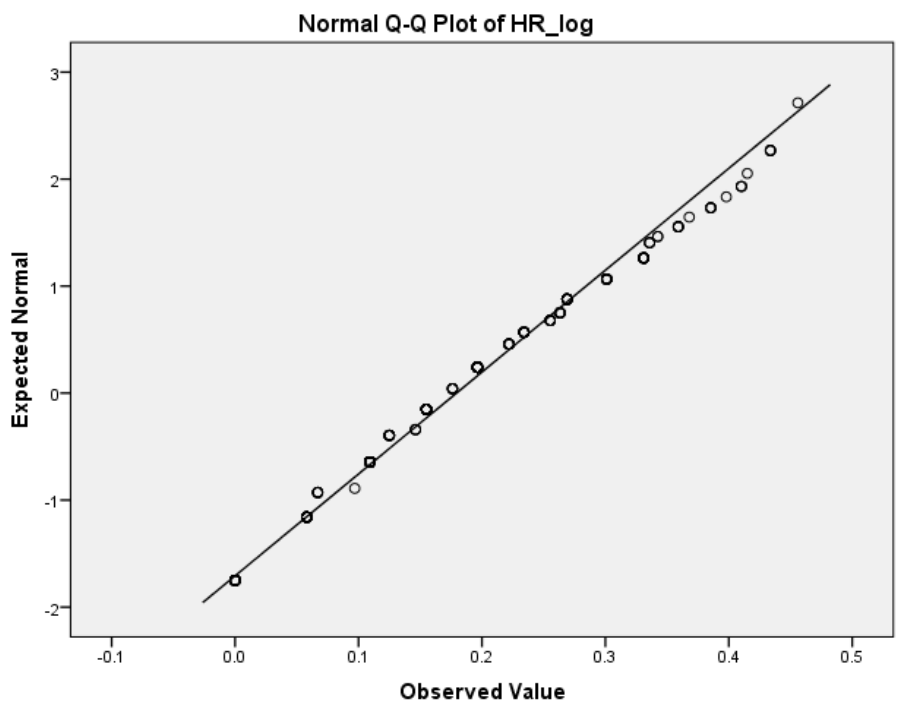
Figure O.4 Normal Q-Q plot of HR outcomes scale (logarithmically-transformed data)
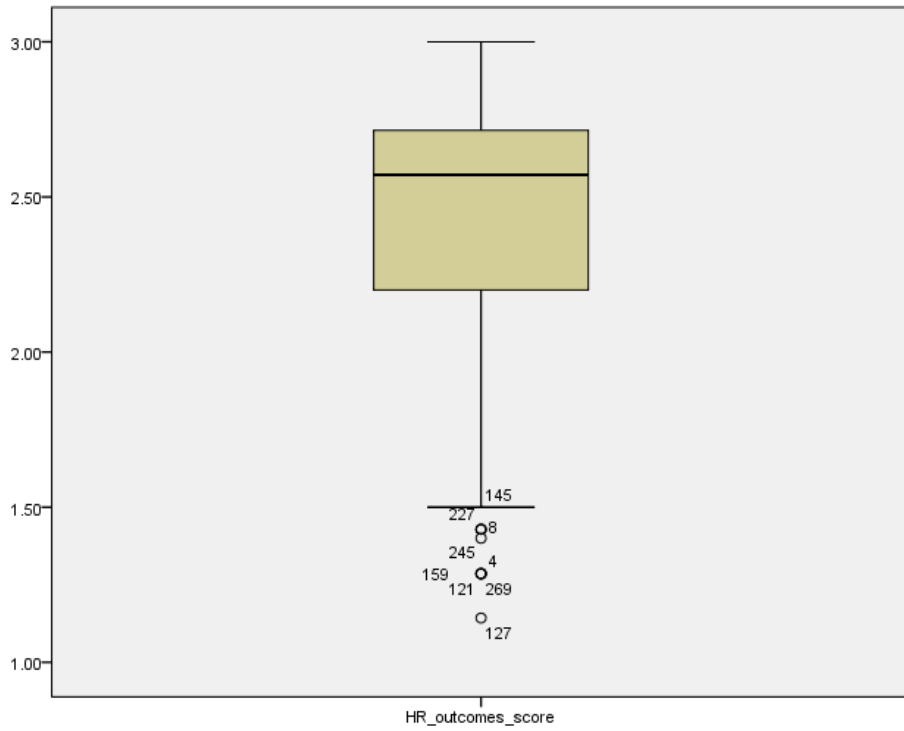
Figure O.5 Box plot for HR outcomes scale (non-transformed data)
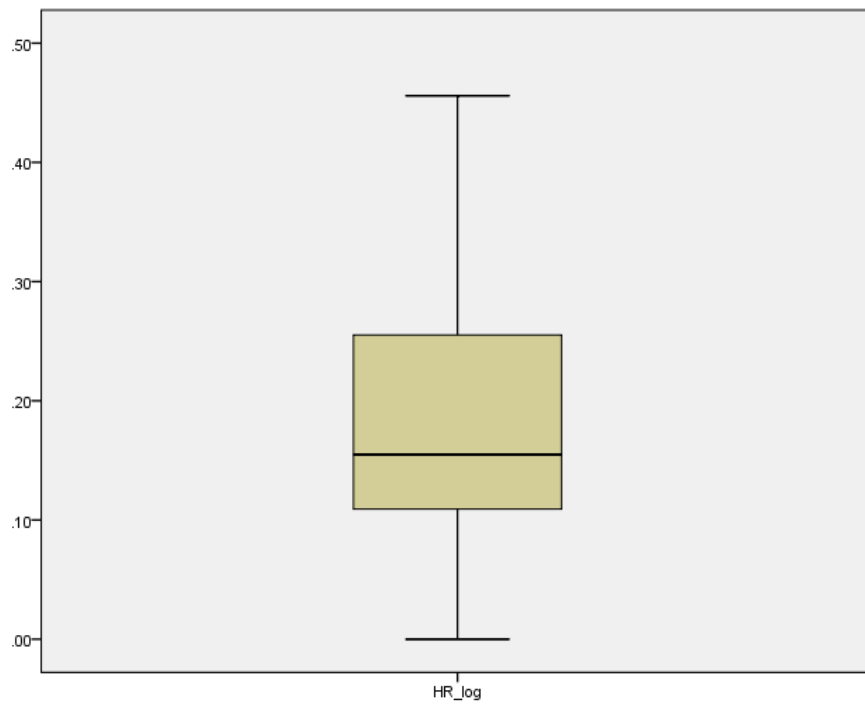
Figure O.6 Box plot for HR outcomes scale (logarithmically-transformed data)

Appendix P: Normality tests for linear regression analyses (HR log scale / pay practices)
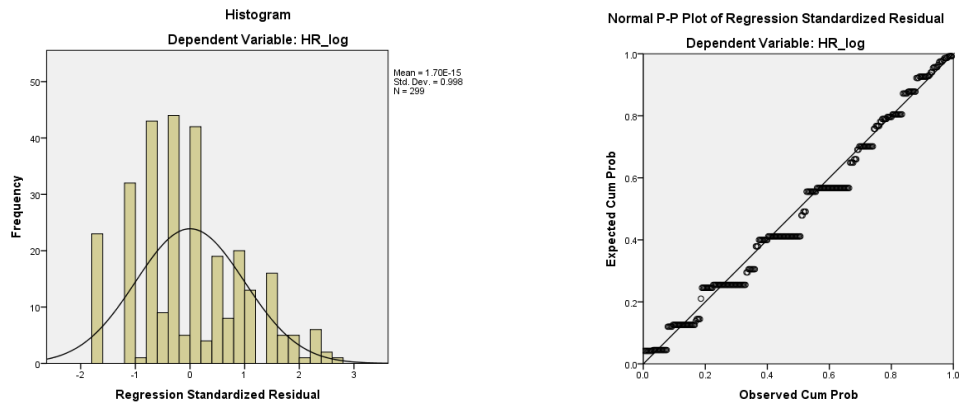
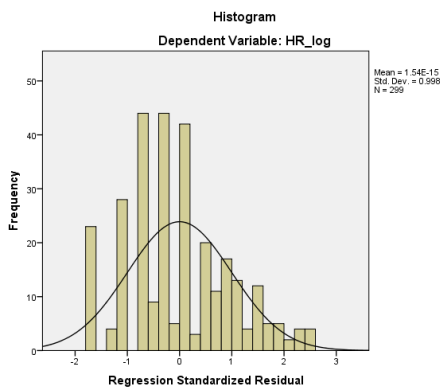*Figure P.1 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of narrow-grading*
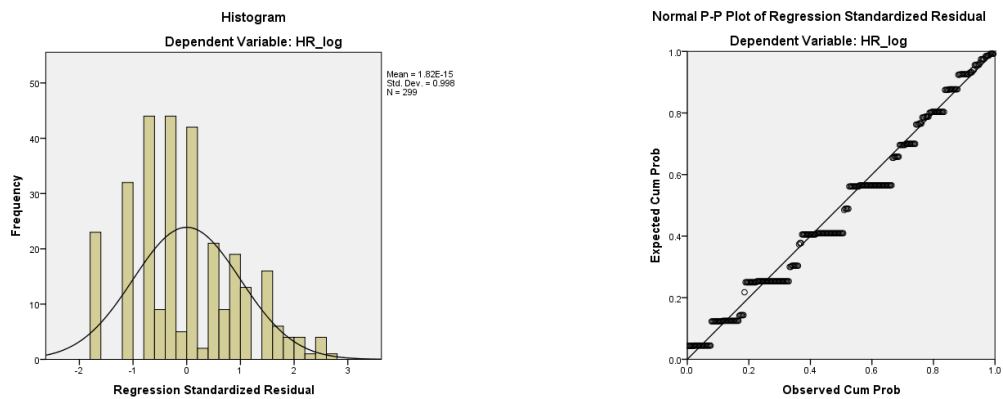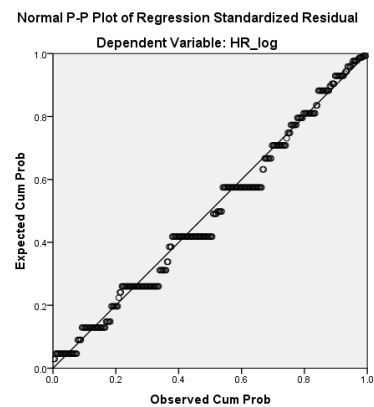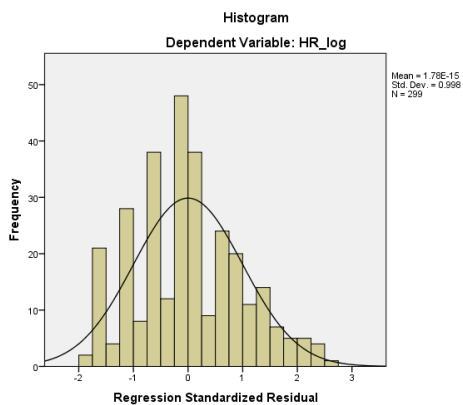

Figure P.2 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of broadbanding
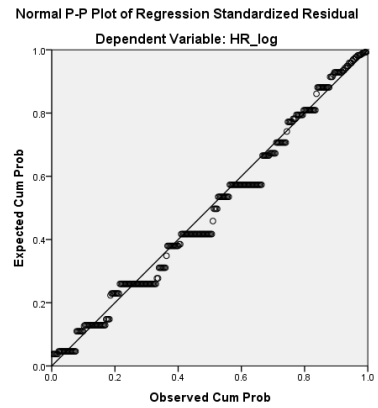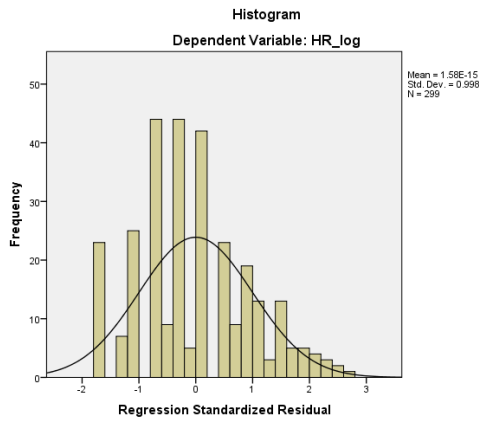
Figure P.3 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of job families
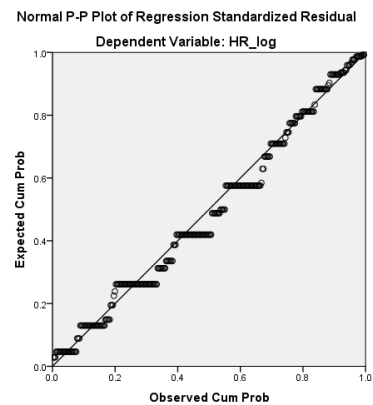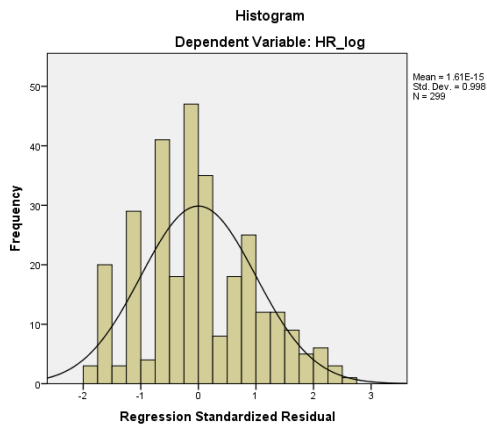
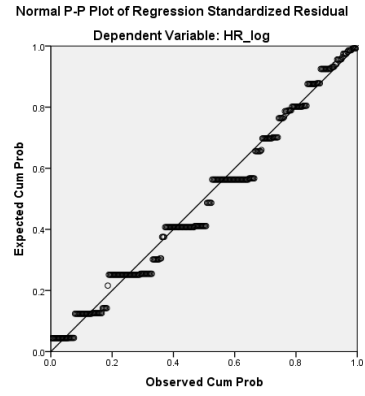*Figure P.4 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of pay spines*
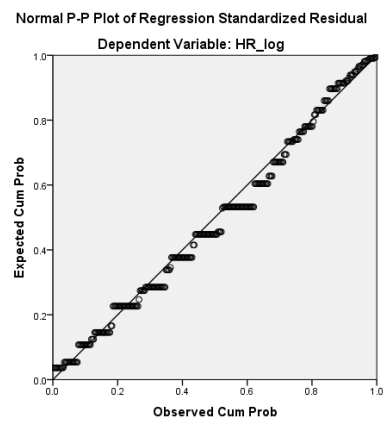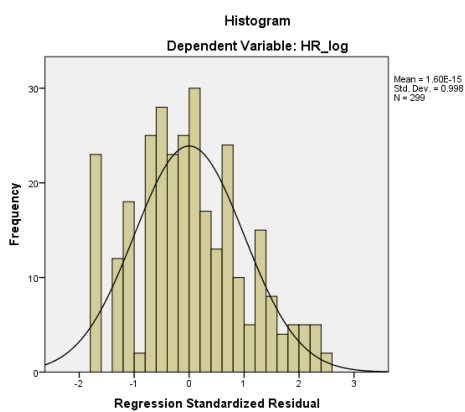
Figure P.5 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of individual base pay
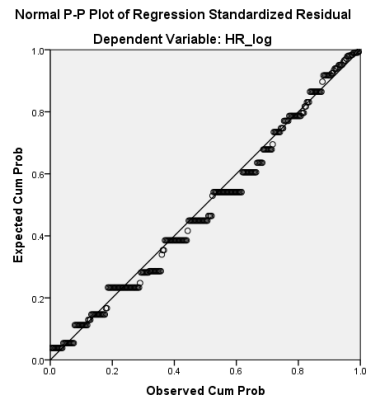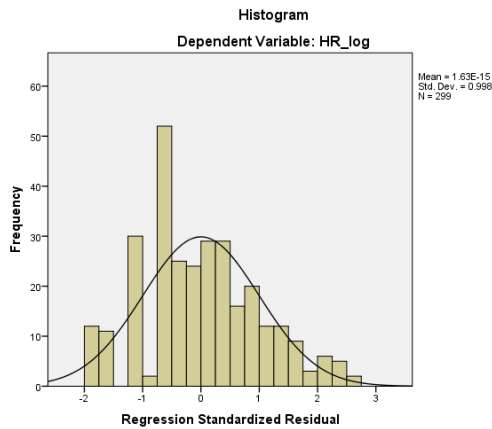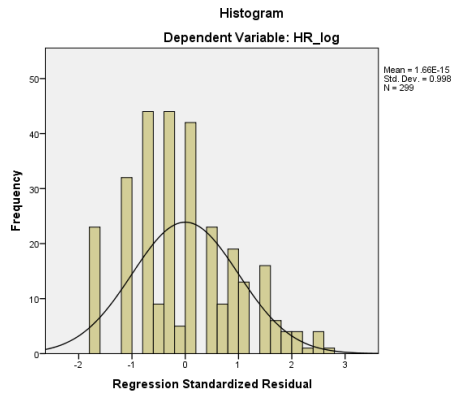
Figure P.6 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of job evaluation
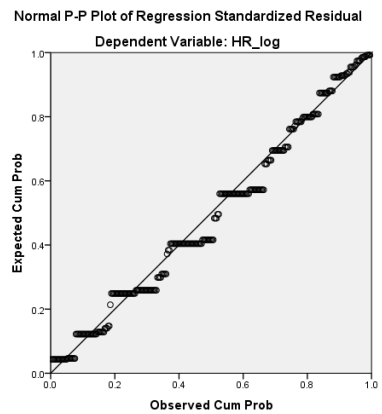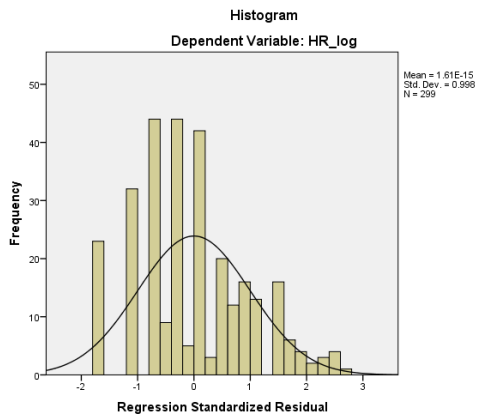
Figure P.7 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of market rates (pay determination)
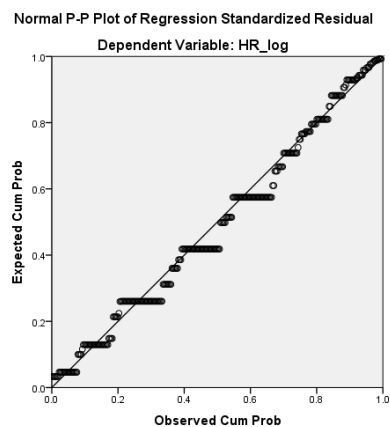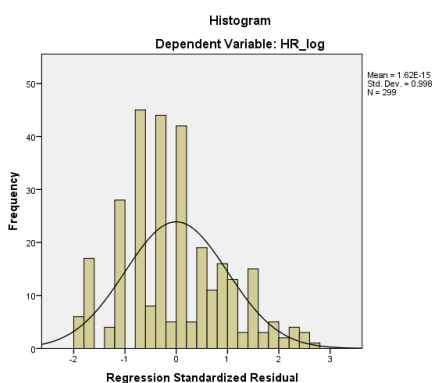
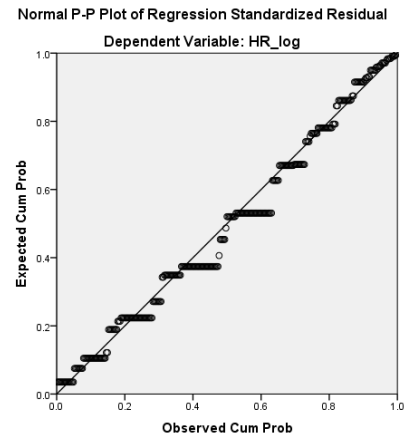*Figure P.8 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of collective bargaining*

375
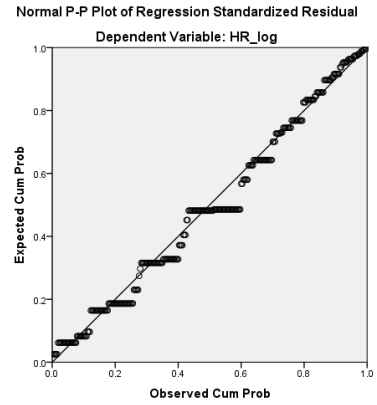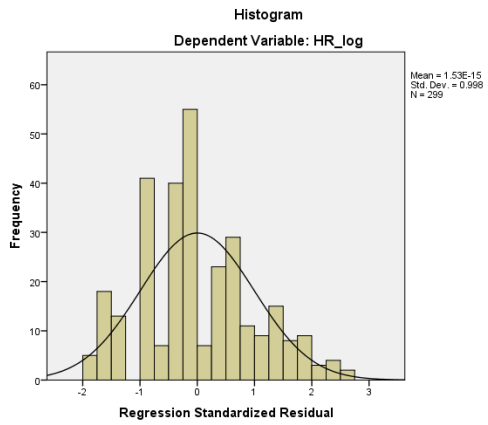
Figure P.9 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of ability to pay (pay determination)
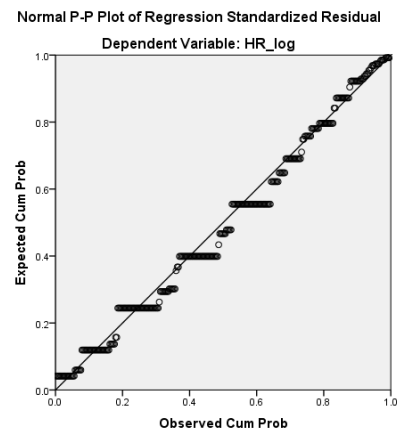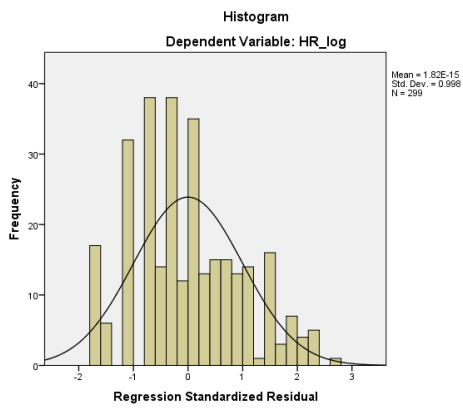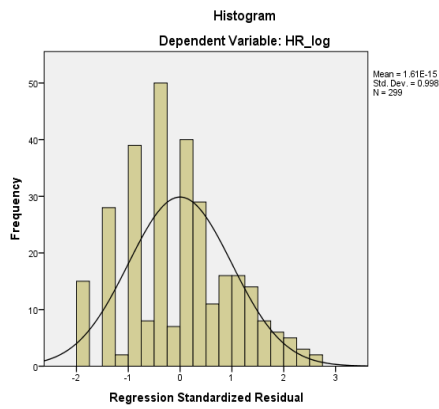

Figure P.10 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of individual performance-related pay
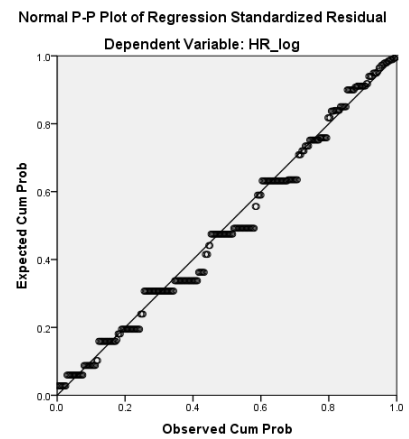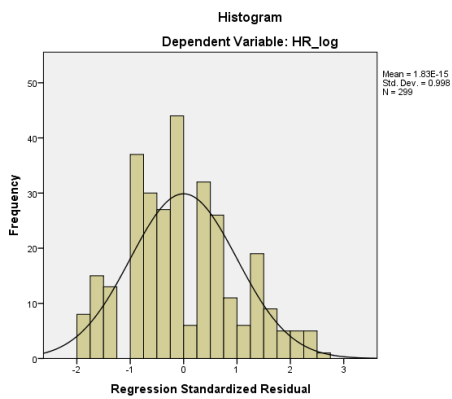
Figure P.11 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of competency pay
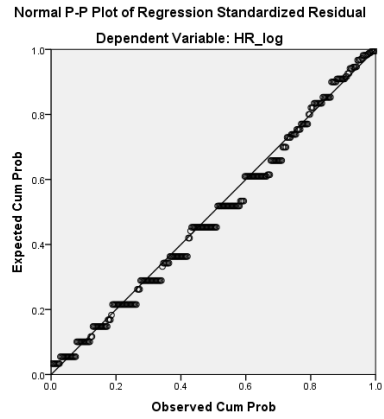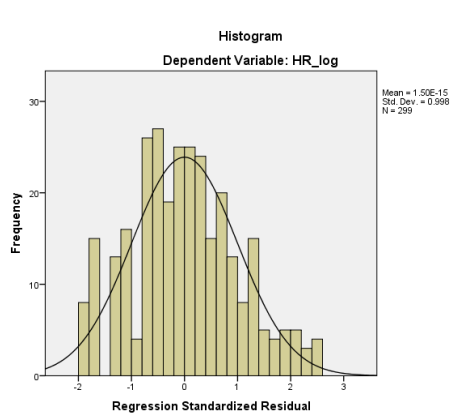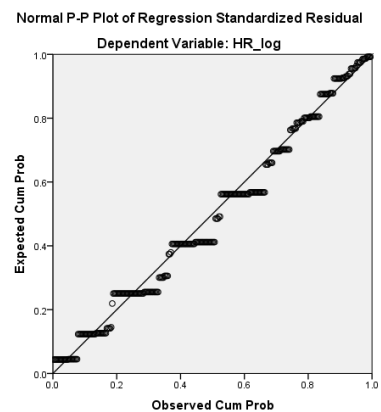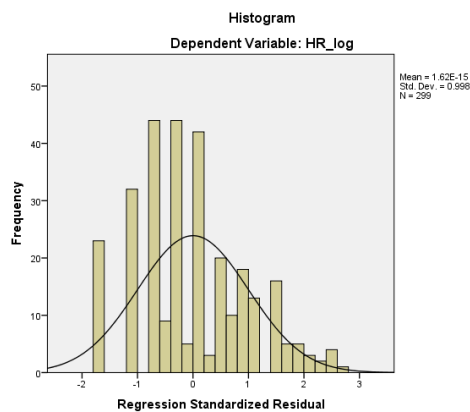
Figure P.12 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of skills-based pay
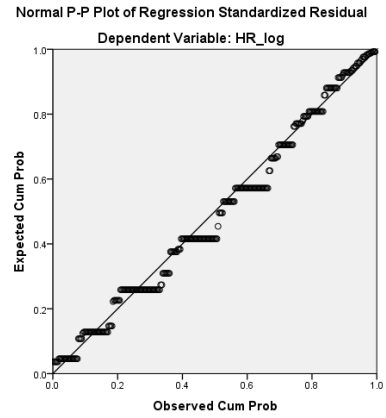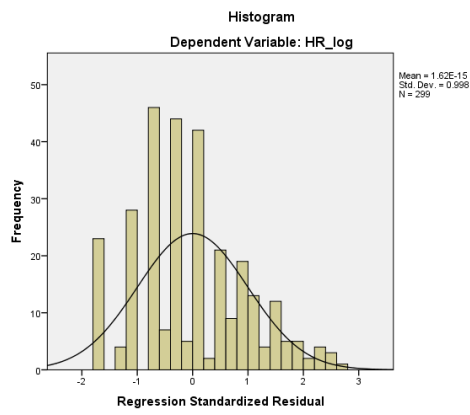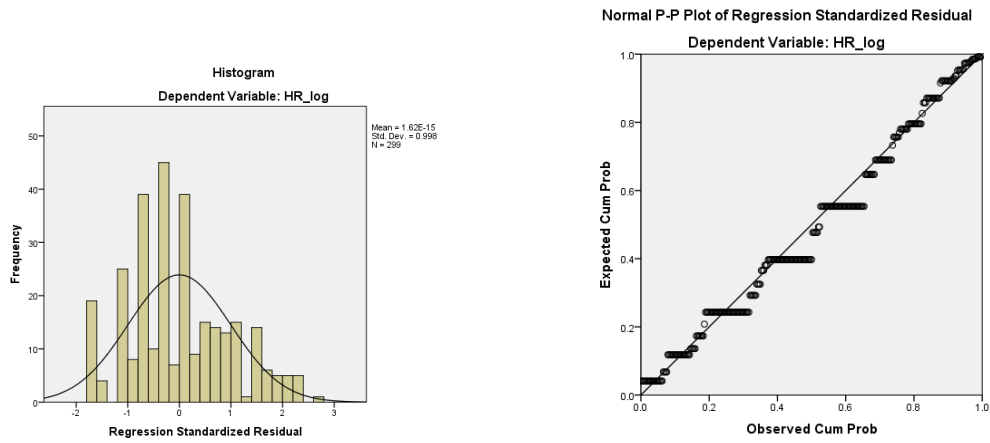

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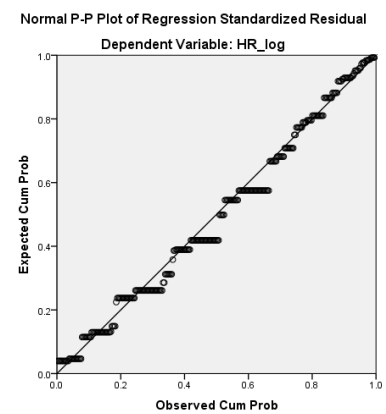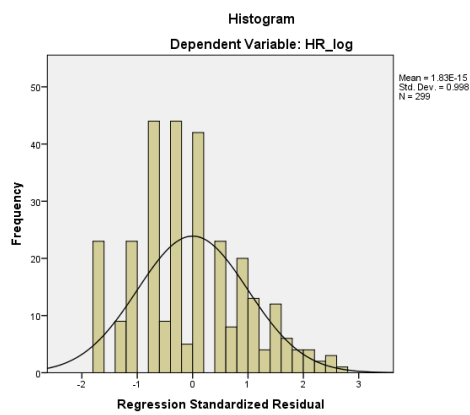
Figure P.14 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of market rates (pay progression)
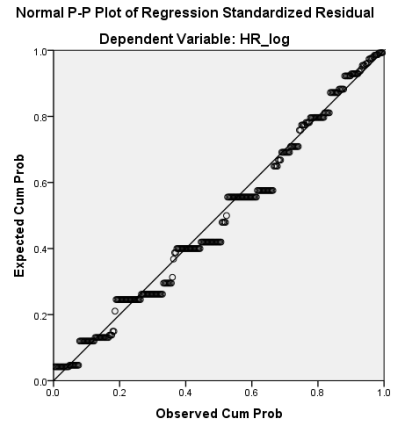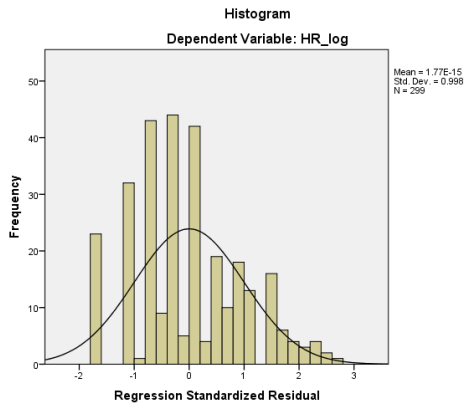
Figure P.15 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of employee value / retention (pay progression)
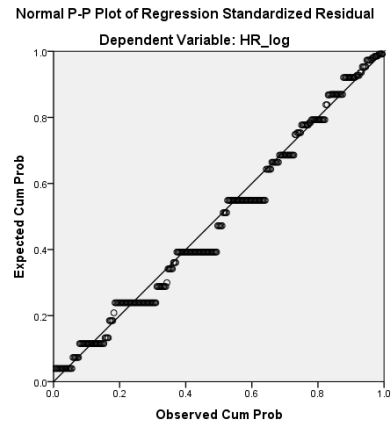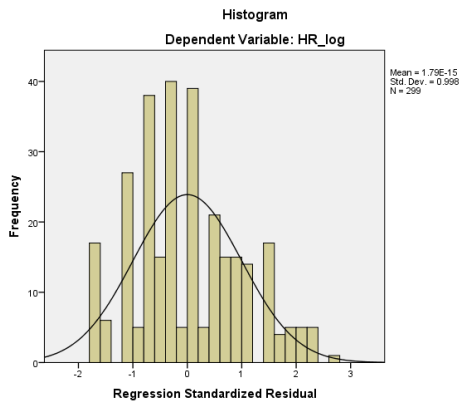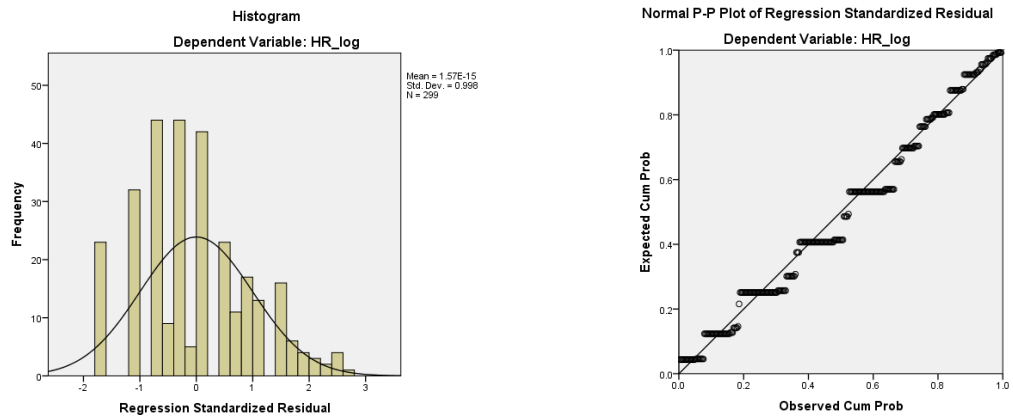

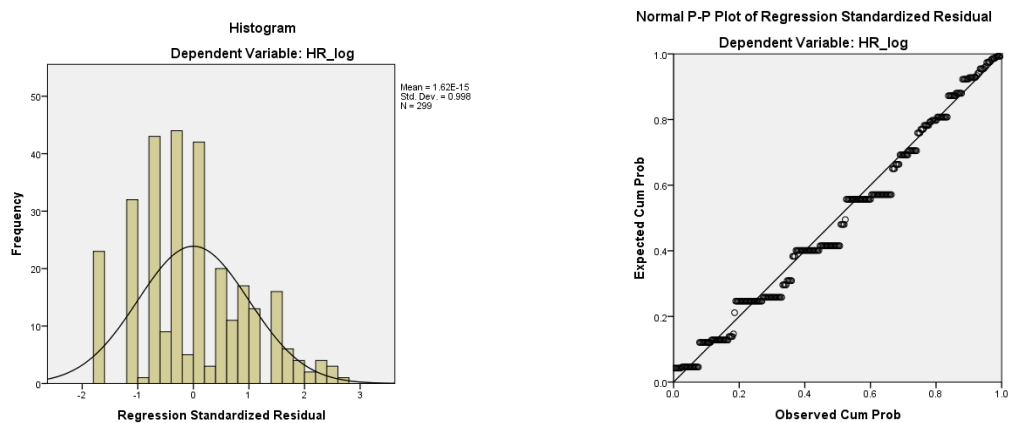*Figure P.16 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of ability to pay (pay review factor)*
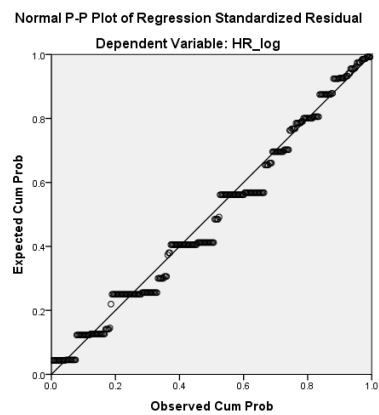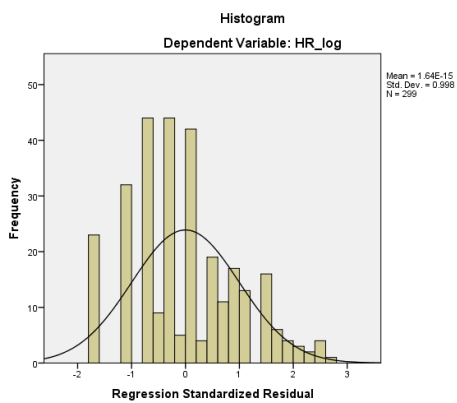
Figure P.17 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of movement in market rates (pay review factor)
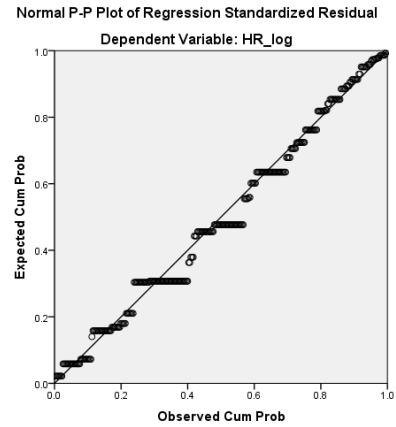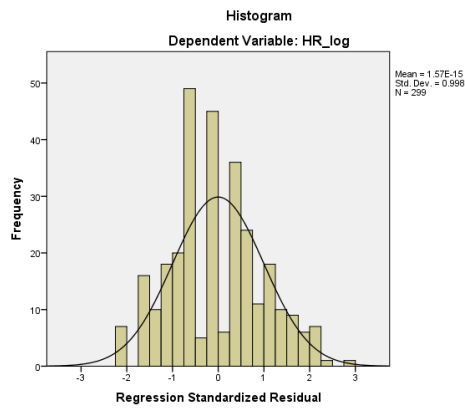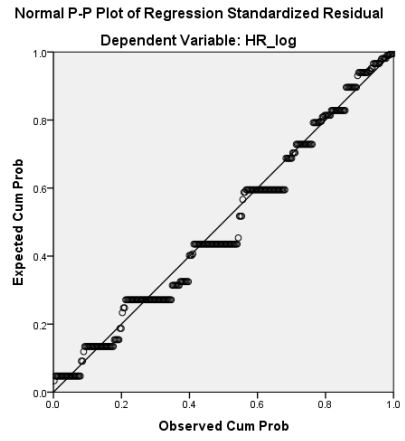
Figure P.18 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of recruitment and retention (pay review factor)
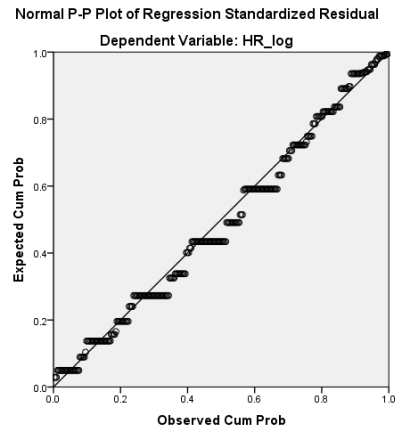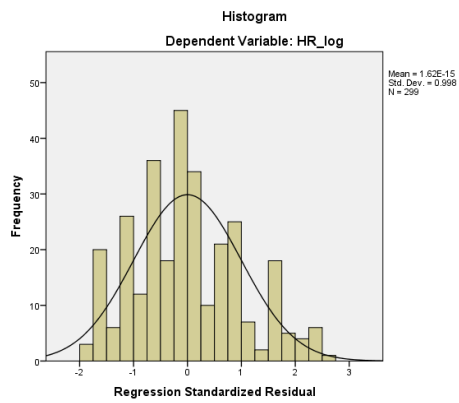
Figure P.19 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of performance-related reward schemes
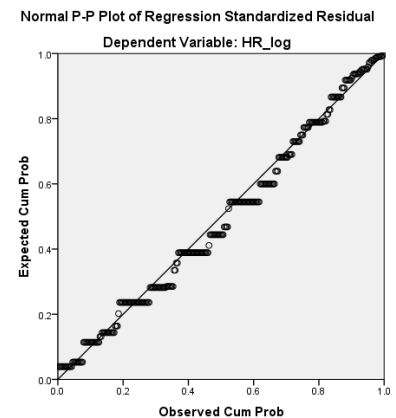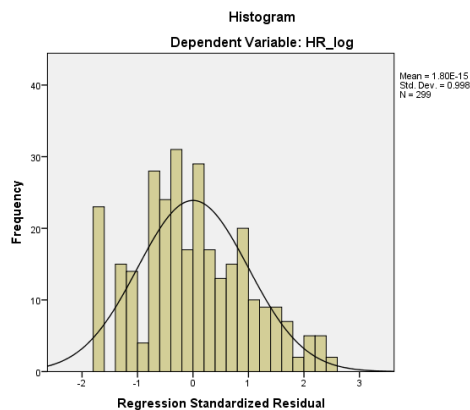
Figure P.20 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of combination performance-related reward schemes
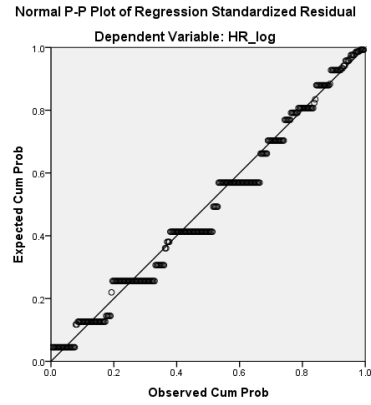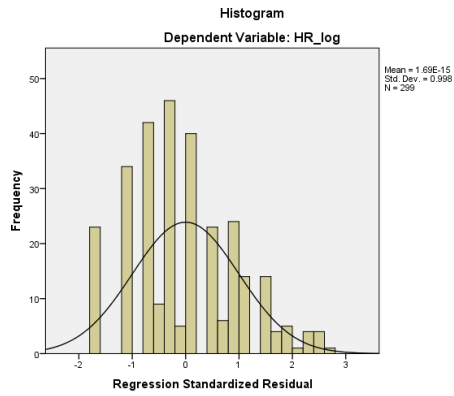
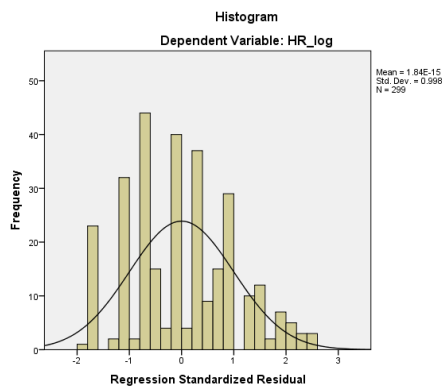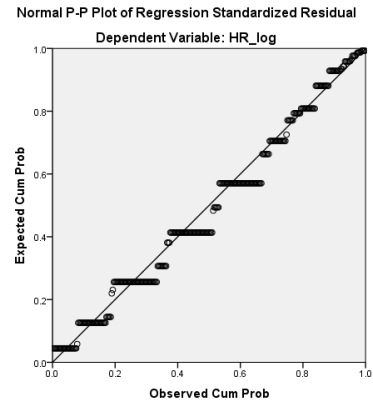*Figure P.21 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of piece rates*
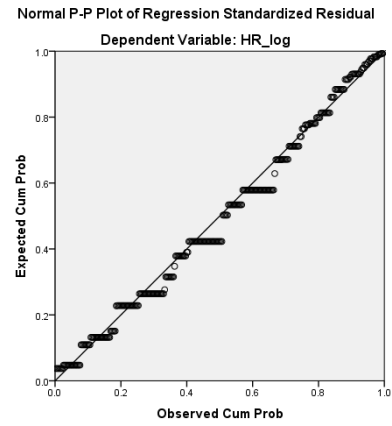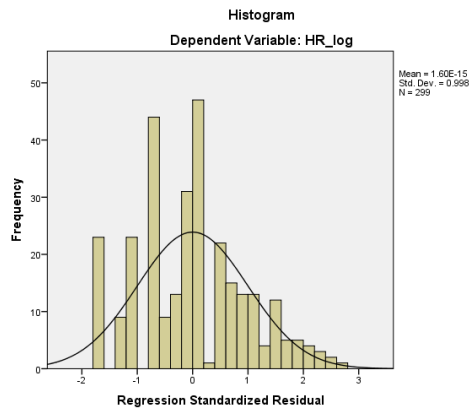
Figure P.22 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of sales commission
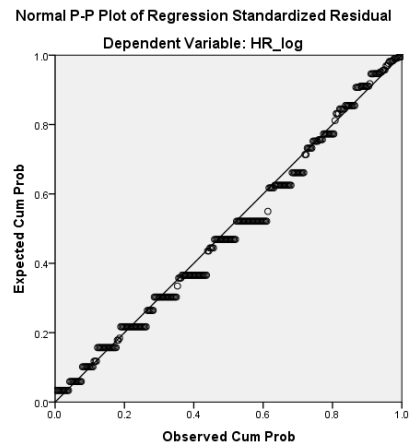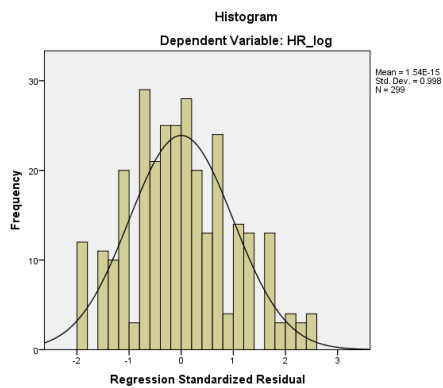
Figure P.23 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of merit pay
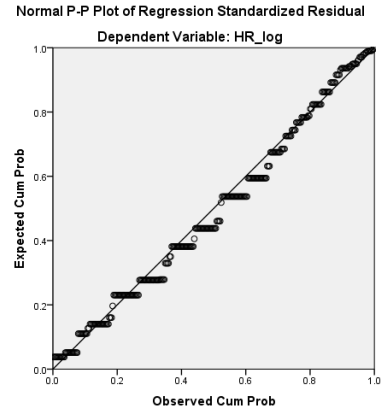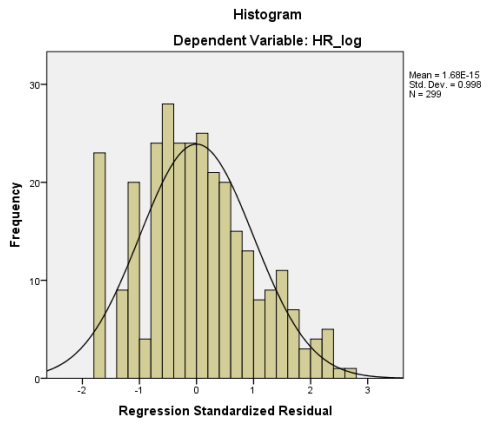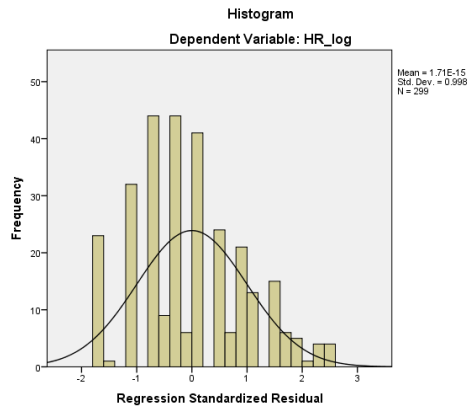
Figure P.24 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of individual bonus
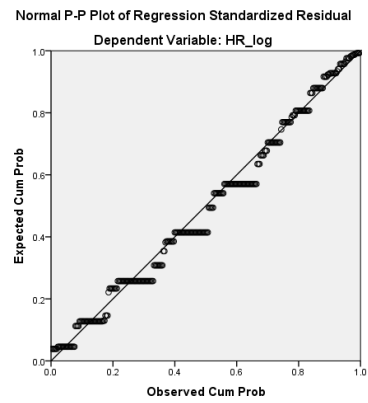
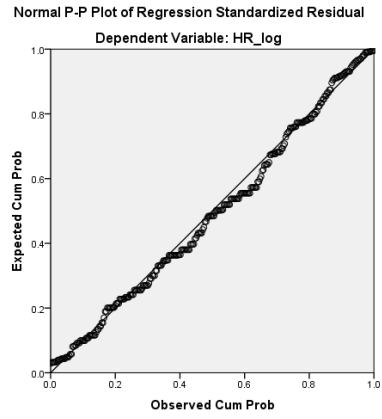*Figure P.25 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of individual cash incentives*

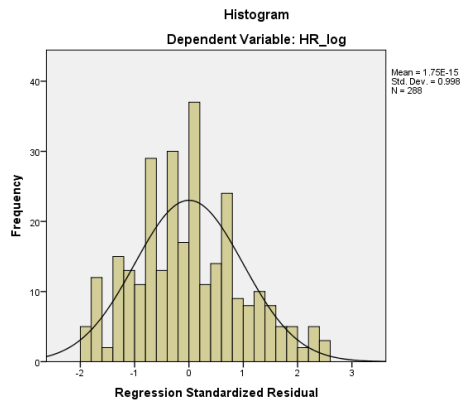*Figure P.26 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of gainsharing*

Figure P.27 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of goal-sharing

Figure P.28 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of profit-sharing

Figure P.29 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of shares / LTI schemes

Figure P.30 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of upper decile pay

Figure P.31 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of upper quartile pay

Figure P.32 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of median pay

383

Figure P.33 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of lower quartile pay

Figure P.34 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from selection of lower decile for pay positioning

Figure P.35 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from pay secrecy
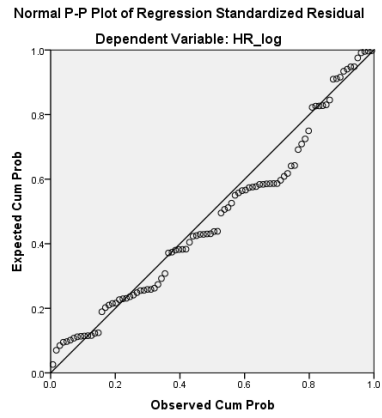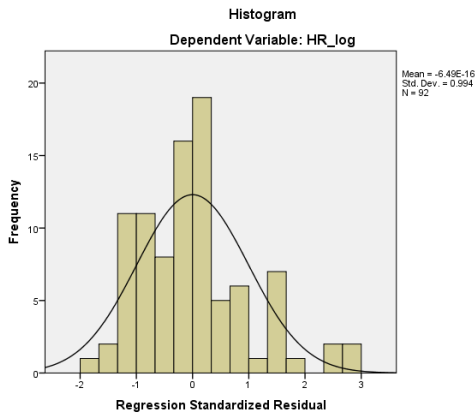
Figure P.36 Normality tests for regression predicting HR outcomes (logarithmically transformed data) from pay dispersion

Appendix Q: Normality tests for hierarchical multiple regression analyses (HR log scale / pay configurations)
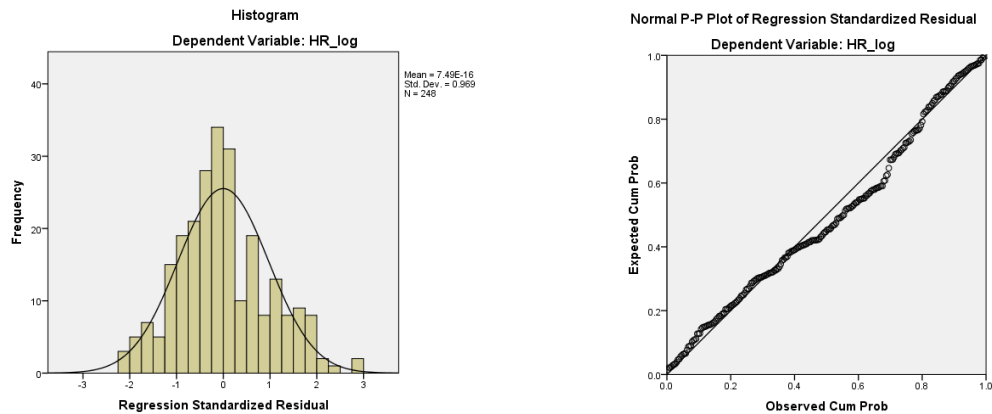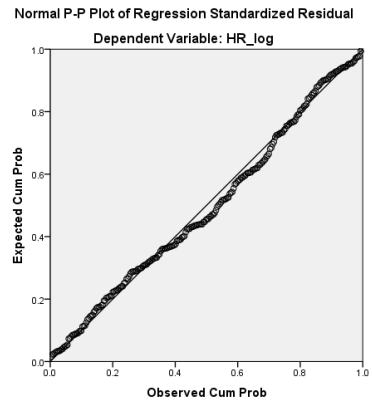

Figure Q.1 Normality tests for hierarchical multiple regression predicting HR outcomes (logarithmically transformed data) from pay bundle 1 for knowledge-based employees, sector, size, high-road strategy and low-road strategy
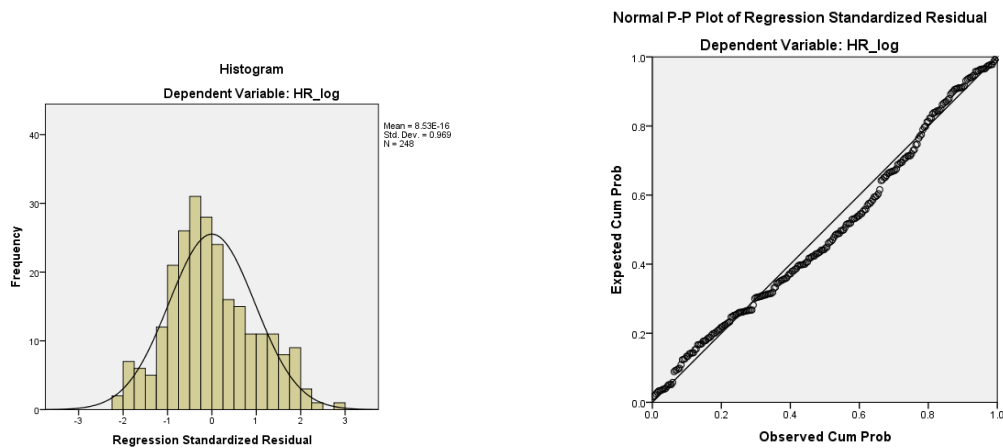
Figure Q.2 Normality tests for hierarchical multiple regression predicting HR outcomes (logarithmically transformed data) from pay bundle 1 for job- based employees, sector, size, high-road strategy and low-road strategy
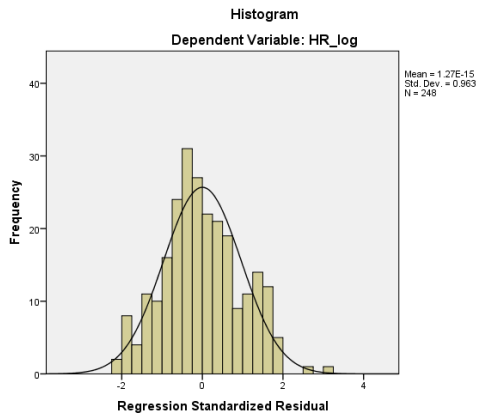
Figure Q.3 Normality tests for hierarchical multiple regression predicting HR outcomes (logarithmically transformed data) from pay bundle 2 for knowledge-based employees, sector, size, high-road strategy and low-road strategy
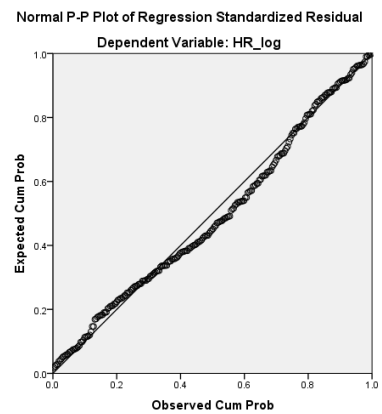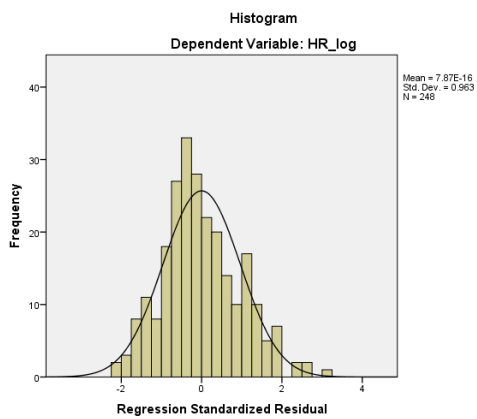

Figure Q.4 Normality tests for hierarchical multiple regression predicting HR outcomes (logarithmically transformed data) from pay bundle 2 for job-based employees, sector, size, high-road strategy and low-road strategy
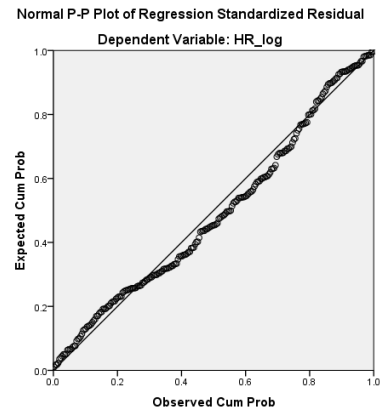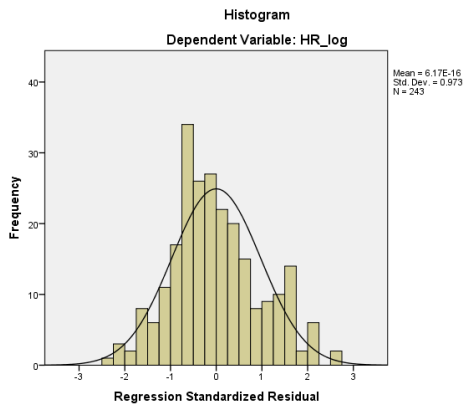
Figure Q.5 Normality tests for hierarchical multiple regression predicting HR outcomes (logarithmically transformed data) from pay bundle 3 for knowledge-based employees, sector, size, high-road strategy and low-road strategy
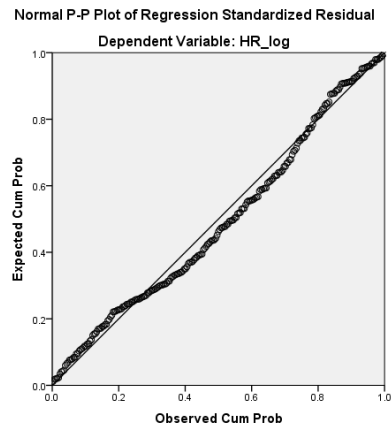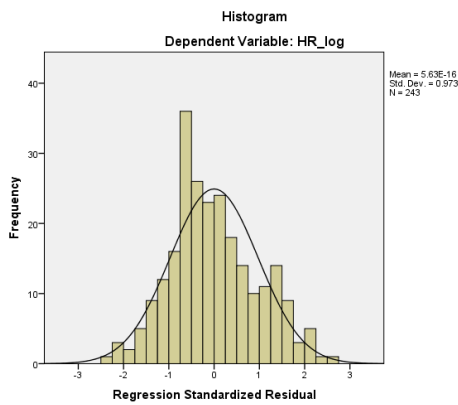

Figure Q.6 Normality tests for hierarchical multiple regression predicting HR outcomes (logarithmically transformed data) from pay bundle 3 for job-based employees, sector, size, high-road strategy and low-road strategy

388

Appendix R: Non-significant regression results for pay practices / HR outcomes

Table R.1 Summary of non-significant linear regression results predicting HR outcomes from pay practice selection

Pay practices (IVs)	HR outcomes (DV)			
	B	p	B^{log}	p
Narrow-grading	-.017	.741	.003	.820
Broadbanding	-.006	.908	.001	.937
Job families	-.051	.344	.010	.474
Pay spines	-.091	.176	.023	.193
Individual base pay	-.064	.167	.019	.118
Job evaluation	-.051	.283	-.017	.177
Market rates (determination)	.011	.826	-.003	.798
Collective bargaining	-.071	.236	.016	.319
Individual PRP	-.066	.321	.018	.305
Service-based pay	-.044	.449	.011	.484
Market rates (progression)	.041	.393	-.008	.530
Employee value / retention (review)	-.022	.632	.005	.666
Ability to pay (review)	-.115	.090	.032	.080
Movement in market rates (review)	-.001	.987	-.002	.886
Performance-related reward schemes	.094	.069	-.026	.054
Combination PRR schemes	.051	.291	-.015	.245
Piece rates	-.206	.172	.056	.165
Sales commission	-.050	.304	.012	.358
Individual bonus	.052	.254	-.015	.210
Individual cash incentives	-.033	.533	.008	.592
Gainsharing	-.091	.188	.022	.231
Goal-sharing	-.001	.978	-.001	.941
Shares / LTI schemes	.018	.704	-.002	.902
Upper decile pay	.084	.241	-.026	.183
Upper quartile pay	.000	.998	-.002	.899
Median pay	.001	.979	.004	.754
Pay dispersion	< .000	.305	< .000	.295

Note. B = unstandardised regression coefficient HR outcome score; B^{log} = unstandardised regression coefficient logarithmically transformed HR outcome score (HR log); p = p-value.