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The Economic Value of High Performance Work Systems: An Oracle case study

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The Economic Value of High Performance Work Systems: An Oracle case study

By

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A research report submitted to the Faculty of Commerce Law and Management, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree of Master of Business Administration.

Johannesburg, 2012

ABSTRACT

High performance work systems (HPWS) has been recognised as a set of human resource (HR) practices such as selection, training, performance management, and compensation, which are designed to increase employee performance. Research has revealed that these practices have to be implemented in a "bundles" or "systems" approach, i.e. when implemented as a systems, only then will the combination constitute a high performance work system (Huselid 1995; MacDuffie 1995; Ichniowski and Shaw 1999; Ramsay, Scholarios and Harley 2000; Tsai 2006; Absar, Nimalathasan and Jilani 2010). A large number of qualitative statistical analyses have been conducted to prove the positive linear relationship between HPWS and organisational performance (Nadler and Gerstein 1992; Pfeffer 1994; Vandenberg, Richardson and Eastman 1999; Wood 1999; Ramsay et al. 2000; Murphy and Southey 2003; Paauwe 2004; Li-Yun, Aryee and Law 2007; Liu, Combs, Ketchen and Ireland 2007; Macky and Boxall 2007; Sun, Aryee and Law 2007; Yalabik, Chen, Lawler and Kim 2008). However, meagre research has been conducted to determine the actual economic value of the adoption and implementation of these HPWS practices (Li-Yun et al. 2007; Liu et al. 2007). The focus has simply been on the inference between HPWS and performance.

None of the research revealed any negative linear relationship; due to positive reporting bias (Farias and Varma 1998). The aim of this research was not to reveal that a consistent positive linear relationship existed. All results (positive and negative) were taken into consideration in analysing and reporting the final outcome, i.e. the true economic value of HPWS. The results did in fact reveal that negative linear relationships do exist.

Conventional literature clearly reveals that all of the HPWS research has been conducted outside the borders of South Africa. This research has been confined to a South African organisation, namely; Oracle

corporation, South Africa. Oracle specialises in the sales and support services of software and hardware applications. The research went beyond conventional studies that simply sought to statistically prove a positive linear relationship between HPWS and performance. A mixed method analysis was utilised where quantitative and qualitative analysis was conducted to incorporate both objective and subjective data from a sample size of 66 employees and 12 managers. This mixed method approach enhanced the validity of the research (Johnson and Onwuegbuzie 2004). The first analysis was to statistically confirm the effect (positive or negative) of each HPWS practice on sales (explicit sales targets) and non sales (HR process implementation) related employee/organisational performance. Thereafter, the effects were combined to give an overall effect of HPWS on performance. Finally, the statistical effects were transformed into rand value effects through the use of a statistical formula, i.e ΔU = rxySDyźs-[NaC/Ns] (Cascio and Boudreau 2008). These rand value effects were combined to ascertain the revenue generated by HPWS. From this revenue, all costs associated with the implementation of HPWS were subtracted, including tax deductions, to ascertain net revenue. The net revenue and costs were the used to calculate a return on investing in HPWS practices.

This research also validated some managerial scepticism, on whether funds allocated to HR practices are good investments (Liu et al. 2007). It highlights the fact that negative returns should not be clouded by objective scepticism. Subjective evaluation is important in ascertaining whether HPWS practices are implemented correctly. Hence, the research emphasised that process evaluation is a key component of the assessment of HPWS implementation.

DECLARATION

I, Eldrid Roy Opperman, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfillment of the requirements for the degree of Master of Business Administration in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

Eldrid Roy Opperman

Signed at ……

On the …….. day of …… 2012

DEDICATION

- To Jesus Christ, for affording me this opportunity.
- To my family, especially my Mom (Kassie Opperman) and Dad (Dennis Opperman), and friends who have supported me throughout this journey.
- To Ryan-Lee Opperman, for all your patience, compromise and sacrifice.

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Professor Gregory John Lee, who has supported, believed in, and encouraged me throughout this research project. Your intellect is phenomenal!

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CHAPTER 1: INTRODUCTION

1.1 Purpose of the study

Human resource (HR) practices have been in existence for a number of decades, and include practices such as employee selection, job rotation, training, performance management, work design and compensation, which are designed to increase the skills, incentives, knowledge and autonomy and ultimately performance of employees (Noe, Hollenback, Gerhart and Wright 2003). Research emerged combining these HR practices into "systems" or "bundles" as opposed to the implementation of individual practices, and thus identified this "bundles or systems" approach as High Performance Work Systems (HPWS) that consisted of new ways of organising work, rewarding performance and involving employees in decision making processes in the workplace (Huselid 1995).

The purpose of this study is to evaluate whether the implementation of HPWS practices within a sales and service organisation, namely; Oracle corporation, South Africa (a highly specialised information technology software and hardware applications organisation) does add economic value. An effective economic cost benefit analysis of the aforesaid HR practices, through the decision to use theoretic utility analysis methodology will be conducted to ascertain relative profitability (Cascio and Boudreau 2008). Figure 1 provides an illustration of the links between the HR practices, performance and economic value.

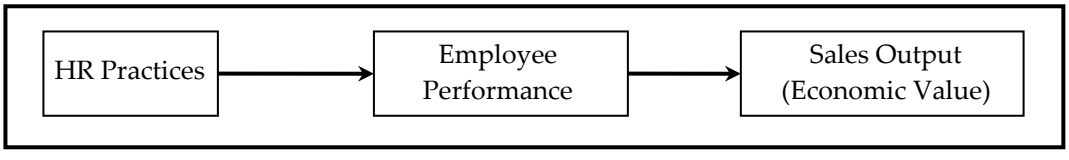


Figure 1: The proposed relationship between HRH practices, organisational commitment and service behaviour (Browning 2006)

1.2 Context of the study

The face of the contemporary economy is being changed by information technology (IT) (Rozanova 2010). Worldwide spending on IT increases 5 to 6% each year. Even during an economic crisis, IT spending was expected to grow 2.6% in 2009 (Rozanova 2010). Developing countries account for most of the growth and increase in the IT sector. Before the economic crisis, which emanated in early 2007, the IT sector demonstrated growth of approximately 9 to 10% per year, in comparison with 1% in developed countries (Rozanova 2010). As a result, information technology can be considered as one of the main driving forces of the market economy, making it possible to implement complex production solutions (Rozanova 2010). In an increasingly globalised economy, information technology is one of the key determinants of competitiveness and growth of organisations and countries (Laursen and Foss 2003). Firms are becoming more competitive on the basis of their knowledge, rather than on the basis of natural endowments or lower labour rates. Therefore, the evolution of the knowledge-based economy is expected to result in the increased demand for skilled labour.

Given the knowledge basis of the IT sector, the broader picture of the South African skills base becomes relevant. Research conducted by the Solidarity research institute (2008) has indicated that there existed a serious shortage of skills within the South African information and communication technology (ICT) sector (Calldo 2008). For example, at the time the research was conducted, ICT companies like the IQ Group, revealed that it had planned to import 150 software developers from India in order to meet contractual deadlines and mentor local recruits. In addition to this, Oracle also forecasted that by 2010 there would be a shortage of 14000 ICT specialists in the manufacturing sector alone; a

sector vital to economic growth. Another study commissioned by Cisco also revealed that by 2009 South Africa would have a 24% shortfall in the skills that are needed to develop, build and manage the IT systems needed to support economic growth (Calldo 2008). The skills shortage has lead to an emerging high demand and competition for talent and further leading to an interest in understanding the potential benefits of implementing HPWS practices as a means to maximise a firm's competitive advantage (Takeuchi, Chen and Lepak 2009). Generation 'Y' employees have different expectations and attitudes than previous generations in that they want flexibility, autonomy, high involvement and incentives (Qenani-Petrela, Schlosser and Pompa 2007). As a result, the implementation of HPWS practices appears to be the ideal context for ensuring and sustaining an organisational competitive advantage.

Having examined the global IT industry and wider SA ICT skills scenes, it is now useful to examine the specific local context of Oracle South Africa. Oracle South Africa is a subsidiary of Oracle. Oracle is an international sales and service organisation, specialising in the development of database technology and applications in enterprises. It is the world's leading supplier of information management software, and the world's second largest independent software company (Oracle 2010). The acquisition of Sun Microsystems in 2010 gave Oracle a leadership role in the hardware arena as well. Now, more than ever before, Oracle technology can be found in nearly every industry, and in the data centres of 100 of the Fortune Global 100 companies. Oracle is the first software company to develop and deploy 100% internet-enabled enterprise software across its entire product line; database, business applications, application development, and decision support tools.

Innovation is the engine of Oracle's success (Oracle 2010). The evolution of the knowledge, information, and digital era, has made human capital an important source of competitive advantage than ever before (Gardner and Yun 2010). Sales training and management/supervisory training are the programs most in demand (Paton 2007). Oracle functions in an increasingly dynamic and competitive environment. From a shareholder's perspective, this environment can be labelled as "highly reliable" due to the fact that an organisation's entire operating platform can be dependent on Oracle's products; especially now that Oracle has entered into the hardware market, and engineered to offer a complete software/hardware solution. Part of the vision is to provide customers with complete, open solutions integrated from the disk to applications software that meet customer business needs and solve their [the customers] business problems (Oracle 2010). Within the software application's industry, customer demands change regularly in order to accommodate the demands of their customers and the fierce competition from their competitors (Gardner and Yun 2010).

Within the confines of the market within which Oracle operates, there is a demand for highly specialised skills (Calldo 2008). The development of software applications is business or industry specific (Oracle 2010). Unlike the software packages that can be procured from Microsoft, there is no "one size fits all" approach in the software applications industry (RAAD 2009). Each application is designed to meet specific business or customer needs. For example, the application design for the mining industry would differ from that of the banking industry. Thus, development and sales of software applications requires a unique and highly specialised skill set (Calldo 2008). Developers need to understand the customers' business needs and challenges, and thereby offer the appropriate solutions.

Likewise, the sales employees need to understand what it is that the customer requires, before passing it on to the developers. 'Getting it wrong' at the onset can lead to catastrophic results, often resulting in substantial losses to the client and also damage to the reputation of the organisation. With this in mind, it can be seen that continuous training and up-skilling of employees is a pre-requisite for all Oracle employees. In addition to this, product selling predominantly takes place offsite, thereby demanding a context of flexible working conditions, autonomy and employee involvement – where bureaucracy is not the order of the day.

It might be argued that in this industry in order for specialised skilled and high complexity knowledge work to gain prominence, that in most instances these types of HR practices are desirable. However, the implementation of these practices is associated with increased expenditure (Cascio and Boudreau 2008). For example, costs associated with product knowledge, customer relationship management, and employee self development and discipline training. All too often many managers consider these HR practices as a financial outlay rather than an investment, i.e. direct investment in these practices do not reveal real time returns on the investment thereof (Liu et al. 2007). As a result of this management perception, an emerging contextual question still exists, namely; whether HR practices lead to financial gain? Within the context of the HR field, there is a constant call for HR practices to be financially relevant, but as a system, research on HPWSs has not adequately dealt with this link (Liu et al. 2007).

1.3 Problem statement

1.3.1 Main problem

The analysis of the economic value of HPWS by statistical assessment and inference associations between HPWS practices and sales performance of Oracle South Africa's sales staff and translating this into economic value.

1.3.2 Sub problem 1

Assess and infer the association between HR practices and employee performance among Oracle sales staff.

1.3.3 Sub problem 2

Assess and infer the association between Oracle sale staff and economic value, including cost integration.

1.4 Significance of the study

The study fills a gap in that there is currently no quantitative research undertaken to ascertain whether HPWS practices operating as a system or bundle does indeed lead to economic value-add in the sales and service industry. Research reveals that the implementation of HPWS practices are often expected to lead to improved financial performance, hence HPWSs have met with considerable success (Huselid 1995; MacDuffie 1995; Edwards and Wright 2001; Guthrie 2001; Godard 2004; Browning 2006; Combs, Yongmei, Hall and Ketchen 2006; Li-Yun et al. 2007; Liu et al. 2007; Browning, Edgar, Gray and Garrett 2009). However, a closer look at the impact thereof on specific key outcomes reveals that the results are mixed. For example, productivity has been reported to have improved in some cases, and declined in others, whereas behavioural and quality of work life performance indicators such as job satisfaction, have also shown mixed results (Farias and Varma 1998). Thus, little attention has been paid to the

analyses of the cost-benefit ratio of the implementation of HPWS practices. Other authors have argued that the returns from the implementation of HPWS practices may not be sufficient enough to sustain the practices (Applebaum and Batt 1994; Wagner 1994). In addition, research has also indicated that there appears to be positive reporting bias in the published work of HPWS (Farias and Varma 1998). Those HPWS practices that have resulted in modest success, negative results, or even failures, are likely to go unreported (Farias and Varma 1998).

Research reveals that there is a lack of consensus regarding the specific practices that need to be included in the configuration of a HPWS (Li-Yun et al. 2007). It has also been noted that, despite the service sector having emerged as one of the major contributors to gross domestic product (GDP) growth, most of the research has primarily been confined to the manufacturing sector and conclusions generalized to incorporate the service sector (Li-Yun et al. 2007).

This generalisation can lead to misleading results as marginal gains in sales in the IT service industry are substantial, especially in the business to business sector (Oracle 2010). For example, the development and implementation of a single software application often results in a substantial increase in profit margins, accompanied by ongoing revenue generation through licence renewals. As a result, the aim of this study is to ascertain whether the implementation of HPWS practices within Oracle South Africa will lead to increased software and hardware application sales, and thereby resulting in a sustainable competitive advantage and increased shareholder value, especially in a country [South Africa] weighed down by skills shortages and the current looming global recession (Calldo 2008).

1.5 Delimitations of the study

The study is confined to the following delimitations:

- The information technology (IT) sector.
- Data will be derived from a single organisation.
- A South African organisation specialising in the development of software applications, despite it being a subsidiary of an international organisation.
- The study will be confined to the sales staff only (subordinates and management).
- Sales employee remuneration is comprised of basic salary plus commission.

1.6 Definition of terms

Bundles are defined as individual HR practices that are grouped together in unison as a single system, contributing to the makeup of a HPWS (Ramsay 1991; Youndt, Snell, Dean and Lepak 1996).

Employee training is a set of practices that provide regular and up-to-date training to enhance employee job knowledge and skills for the employee's current role and for other potential roles within the organisation (Tsai 2006).

Performance appraisals are a series of discussions between a manager and an employee, whereby the employee's performance expectations are agreed upon and feedback provided by the manager on the employee's performance over a period of time (Tsai 2006).

Compensation is a set of practices, both financial and non-financial, that provide recognition for a job well done (Tsai 2006).

Recruitment and selection is a set of practices, including interviewing and testing, that ensures potential employees with the right attitude and skill are selected fairly and without discrimination (Tsai 2006).

Commitment refers to an employee's attachment, loyalty and identification with an organisation (Meyer and Allen 1984).

Participation refers to a set of practices that involves employees in the sharing of information and/or decision making (Cabrera, Cabrera and Ortega 2001).

1.7 Assumptions

The study will be confined to the following assumptions:

- That all employees interviewed, thoroughly understand the industry/sector within which they are currently employed.
- That all responses will not be influenced by subjective bias.
- Sample size will be sufficient.
- Inference that a correlation type link between a HPWS and sales performance indicates causation.
- Assumption that measures of HPWS are reliable and valid, although some will be formally tested.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This section aims to critically evaluate the theoretical view or belief that high performance HR practices result in high organisational performance and success. This will be done by defining important terms and analysing the linkages between strategic human resource management (SHRM), HR practices and high performance within organisations.

2.2 The evolution of HPWSs

HR practices have been around for millennia and include practices such as employee selection, job rotation, training, performance management, work design and compensation, that are designed to increase the skills incentives, knowledge and autonomy of employees (Noe 2006). Traditionally, organisations only focused on one or two isolated practices and did not associate these practices with providing any economic value to the organisation (Noe 2006). Unprecedented financial and organisational restructuring in the early 1990's together with downsizing, takeovers and buyouts were the result of globalisation and increased foreign competition (Gephart and Van Buren 1996). Shareholders were demanding greater value, customers were demanding higher quality products and services and technological advances in manufacturing, information systems were impacting on the roles of managers and employees and the structure of the organisation. In order to cope with these changes and achieve flexibility, organisations were forced to examine every aspect of how their work was done and implement work practices that would achieve and sustain a competitive advantage (Jarboe and Yudken 1997).

At about the same time, research emerged linking certain innovative HR practices with organisational outcomes (MacDuffie 1994; Huselid 1995). A number of advantages such as improved worker output and efficiency, reduced absenteeism and incidence of grievances, and higher quality and productivity were alleged to result from adopting these strategic approaches to HR management (Murphy and Southey 2003). These practices were seen as the best way to leverage the capabilities of workers to achieve operational gains in quality, production, as well as financial gains. It also offered organisations an alternative approach to downsizing and cost reduction in the midst of massive downsizing and plant closures (Murphy and Southey 2003). Nadler and Gernstein (1992) referred to this as a revolution in the American workplace. They attributed this to the organisations that were rushing to implement these new strategic forms of HR practices in an attempt to achieve higher levels of performance in the wake of these turbulent and changing environments.

2.3 Defining HPWS

The impact of SHRM on the success of organisations, in particular the "bottom line", has been a widely researched (Combs et al. 2006; Takeuchi et al. 2009; Absar et al. 2010). HR practices that SHRM theorists consider performance enhancing are known as high performance work practices (HPWP) (Huselid 1995). According to Gephart and Van Buren (1996) and Pfeffer and Veiga (1999) there is no single agreed upon definition of a HPWS. The definition is used interchangeably as "High Performance Work Practices", "High Commitment Management", "High Involvement Management" or "Flexible Working Systems." It is, therefore, pertinent for the purpose of this research to elaborate on these definitions in order to allow the reader to draw a clear distinction of the omnibus nature of the definition of HPWS.

Various theorists purports that 'organisational performance', which is the dependant variable of a HPWS, is incorrectly labelled as 'organisation effectiveness' (Edwards and Wright 2001; Paauwe 2004; Boxall and Macky 2009). They held that it is something that can be conceived in a number of ways, such as incorporating short and long run economic outcomes and wider notions of social legitimacy or corporate social responsibility. However, the primary purpose of HPWS are to enhance cost effectiveness, where, if the costs exceed the benefits then the adoption and implementation thereof will not be economically viable or rational for the organisation (Godard 2004). Nevertheless, most researchers have focused on the economic performance criteria (Godard 2004).

It should also be noted that the measurement of economic value is not a simple and straightforward task. The contradictory nature of research exemplifies this. A study by Huselid (1995) of 968 US publicly owned firms conceded a generalisation of findings across industries and organisations. This study lacked credibility in that it negated the diversity of business units, production systems and occupational groups that existed within these organisations. In contrast to Huselid's approach, other researchers adopted a less distal approach by measuring the link between HR practices and performance as closely as possible to the work outcomes that specific groups of employees can materially influence (Ichniowski, Shaw and Prennushi 1997; Ichniowski and Shaw 1999; Appelbaum, Bailey, Berg and Kalleberg 2000). These researchers conducted studies in the automobile, steel, clothing and electronics manufacturing industries at a plant level and on well defined groups of production workers.

Relative to these contrasting viewpoints is the fact that HPWS depend on positive responses from employees (Godard 2004; Delbridge 2007; Macky and Boxall 2007). It is held that workplace performance is

influenced by team and individual performance, which is a function of interactions between employee ability, discretionary effort and performance opportunities (Boxall and Macky 2009). Herein lies the question of whether the benefits to workers (e.g. in perceived autonomy skill development and wage increases) exceed their costs (e.g. in work stress and work-life balance), and thereby motivate individual employees to upskill themselves and seek to apply additional performance effort when opportunity presents itself. Thus, the assessment of HPWSs is dependent on the retrieval of both company and individual worker outcomes (Vandenberg et al. 1999; Appelbaum et al. 2000).

While the dependant variable of HPWS appears to be confusing, a further analysis of the independent variables is a necessity. Managerial practices that are deemed to constitute a HPWS are subject to a confusing array of definitions and assertions (Wood 1999). Becker and Gerhart (1996) illustrated the diversity in a table of five leading HPWS studies (see Appendix 1); all of which were conducted in the United States of America. Their study revealed that there was no one common practice and that there is at times disagreement as to whether a practice such as variable pay has a negative or positive effect on performance. Since the majority of studies on the effects of HPWS practices on organisational performance were conducted in the US, socio-cultural variations were not taken into account (Boxall and Macky 2009). For example, Huselid (1995) considered an employee grievance procedure as a high performance indicator in the US, whereas in the UK it is simply a legal requirement that is hardly a differentiator of organisational performance. Therefore, some practices considered as a high performance indicator in the one country may ordinarily be considered a legal requirement in another (Boxall and Purcell 2008).

Cultural assumptions are more challenging. Practices that work well in socialist countries may not be readily accepted in countries with individualistic and hierarchical organisational structures (Trompenaars and Hampden-Turner 1998). It is these contentious issues that spur debate on the concept of "best practices". Constructing the independent variables in HPWS without regard to a specific context is a fundamental error (Boxall and Macky 2009). Work systems and employment practices vary significantly across occupational, hierarchical, workplace, industry and societal contexts (Appleyard and Brown 2001; Lorenz and Valeyre 2005; Kalleberg, Marsden, Reynolds and Knoke 2006). Even if a set of context-delineated practices could be agreed upon, a data source that does not account for variations in *how* the same practices are implemented cannot be totally trustworthy (Purcell 1999). The implementation of various practices vary enormously (Boxall and Macky 2009). Organisations may implement specific practices that are geared toward enhancing performance, but these practices will not prove successful in a demoralised and dysfunctional environment. This in turn led to very different affects on employee trust, satisfaction, commitment and performance. Thus, there is a need to go beyond the simplistic construction of a set of practices and seek to identify the processes and mediating variables which such a set of practices is supposed to influence (Boxall and Macky 2009).

For the purpose of this study the synonym will be referred to as "high performance work systems (HPWS)." The reason herein is that two key issues emerged from existing studies of HPWS.

The first is the extent to which management practices work together as "systems" or "bundles" (Ramsay 1991; Youndt et al. 1996). "Systems" are said to be the appropriate unit of analysis for studying the link to performance, because they create the multiple, mutually reinforcing

conditions that support employee motivation and skill acquisition (MacDuffie 1994). Even if innovative HR practices generate skilled and motivated workers, the HR system must be integrated with the organisation's production strategy for discretionary effort to be appropriately channelled toward performance improvement. The concept of "systems" of HR practices is important in evaluating whether and how these conditions are met. It is the combination of practices in a "bundle", rather than individual practices, that shape the pattern if interactions between and among managers and employees (Cutcher-Gershenfeld 1991). Ichniowski et al (1997) and Applebaum et al (2000) supported this claim by arguing that productivity gains are greater when firms adopt systems of complimentary practices. Thus, research that focuses on the impact of individual HR practices on performance may lead to misleading results (Ichniowski and Shaw 1999). Furthermore, a "bundle" of interrelated overlapping HR practices provide several ways for employees to acquire skills, for example, off-the-job and on-the-job training, job rotation, problem-solving groups, and multiple incentives to boost motivation. These latter can be extrinsic rewards such as performance based pay and intrinsic rewards from participating in decision-making and good job design (Ramsay 1991).

The second issue has been those who have argued for a contingency approach as opposed to a universal approach in which specific "bundles" would vary by sector and business strategy (Ramsay 1991):

2.3.1 Universal approach to SHRM

Universalists concentrate on judging personnel management by the extent to which it fosters employee involvement and the human capital of the organisation based on the assumption that a synergistic set of practices that reverse key features of the past "command" Taylorist organisation is

the best way of managing employment (Wood 1999). Huselid (1995) takes a more universalistic view on HPWS; a 'one size fits all' view. He believes that there is a systematic link between the different practices and that they, quite safely, work together as a "system" or "bundle."

2.3.2 Contingency approach to SHRM

In contrast to the universal approach, contingency theorists believe that strategic fit; the integration of HR systems with the overall strategy of the organization, which is the additional criteria. It is aligned HR systems that will perform best (Wood 1999). The principle that HR systems should be designed in the light of the organisation's strategy means that they would be derived from the corporate strategy. HR planning should be downstream from the corporate strategy, yet incorporated into the mainstream of business planning.

2.3.3 "Best practice"

The "best practice" approach is based on the belief that there is set of advanced HRM practices which would lead to better organisational performance. This approach could also be known as the Universalist approach (Huselid 1995). Pfeffer (1994) listed seven HR practices of successful organisations, namely; employment security, selective recruitment, self-managed teams, high compensation contingent on performance, training, reduction of status differentials and information sharing. It should however be noted that there are some challenges to the universal applicability of 'best practice' HRM. Marchington and Wilkinson (2005) suggest that a high performance approach to HRM is dependent on the ability of employers to take a long term perspective on the prospect of the future market. Boxall and Purcell (2007) agree that any list of best practices is unlikely to have a universal application because of the

influence of the organisational context. Furthermore, Becker and Gerhart (1996) criticised Pfeffer's "best practice" approach by remarking that organisational high performance work systems are highly idiosyncratic and must be carefully tailored to each organisation's individual situation to achieve optimum results. Purcell (1999) also found fault with this approach. He believed that that it is 'mechanistically' matching strategy with HRM policies and practices.

Unfortunately there has been no authoritative definition of "best practice" that has been agreed upon by practitioners and academics (Johnson 2000). This leads to a lack of conceptual clarity of the HRM best practice definition. However, there have been several definitions that have emerged that encompass many of the underlying factors of HRM best practice. Based on this premise, Johnson (2000), therefore defined "best practice" or what he referred to as "high performance work practices", as the HR methods and systems that have universal, additive and positive effects on organisational performance. His definition relates to the fact that the more best practices that are adopted and implemented, the more value each will add to the previous adoption, thus compounding the resulting performance of the organisation. Each of these practices must complement each other. If it does not, either could ultimately negate any advantage that could possibly result from its inception.

Mess (2004) highlighted fifteen best practices, which are briefly outlined below:

Employment security is formal policies and procedures such as formal contracts, non-redundancy clauses, equal employment opportunities and general measures that offer some degree of security (Purcell 1999).

Selective recruitment is the internal and external employment of the most suitable candidates (MacDuffie 1995; Pfeffer, Hatano and Santalainen 1995; Pfeffer and Veiga 1999).

Effective use of teams promote a shift from centralised to peer based control (Pfeffer and Veiga 1999).

Effective compensation strategies have been highlighted as a method to create high commitment (Ramsay et al. 2000; Tomer 2001). It is created through compensating employees in line with their superior performance; either through financial or non-financial means (Mess 2004).

Performance appraisals are sound ways to gauge organisational and employee performance (Delery and Doty 1996).

Training and development is one of the most credible methods for improving and developing organisational and employee performance (Pfeffer et al. 1995). It is achieved through the provision of, as well as the use of training and development opportunities. These can apply to work specific practices, thus improving the performance of the organisation, or simply to the development of the employee in non work related areas. The rationale behind this is that the employer shows commitment to the employee through the training and development initiative, thus reciprocating employee commitment (Pfeffer et al. 1995).

Reductions of "status" differences are methods used to create flatter organisational structures. In this way operational levels gain responsibility and accountability; the objective being increased commitment toward the organisation from employees (MacDuffie 1995). Incorporating this with flexible job descriptions increases the development of employees to take on new skills within different areas and ultimately minimising the potential for monotony of well defined repetitive job areas (MacDuffie 1995).

Information sharing and communication allow for a better understanding of each other's roles and responsibilities and the overarching corporate strategy, making the attainment of goals more feasible (MacDuffie 1995). Macduffie (1995) recognised that the reduction of status differences greatly enhance information sharing and communication.

Grievance procedures enhance employee commitment by ensuring that all matters are dealt with in a fair and equal manner through a formal set of procedures (Huselid 1995; Pfeffer and Veiga 1999).

Promotional criteria is an essential method for creating trust and commitment from the workforce (Huselid 1995).

Employee ownership holds that if employees owned part of the organisation, they will endeavour to ensure that it succeeds (Pfeffer et al. 1995).

Employee empowerment is a key practice that enables employee accountability and responsibility, thereby increasing employee commitment (Pfeffer et al. 1995).

Employee suggestions emphasise the necessity of upward communication flow. As employees are often in direct contact with the processes and customers, the organisation should accommodate their suggestions and foresight (MacDuffie 1995).

Job rotation aid the development of employees and the overall operation of the organisation through increased flexibility (MacDuffie 1994).

Employee progression is a practice that motivates employees to perform at their peak (Wood 1995). It allows employees to be rewarded for their efforts through career progression, remuneration and increased responsibilities.

Within this review, for the purpose of consistency and simplicity, "best practices" have been outlined to fit within the Universalistic model of HRM. The underlying assumption is that all organisations should adopt these practices in order to enhance performance (Delery and Doty 1996). This review concludes that the same set of "best practices" is applicable to any organisation and industry, and will ultimately work towards maximising organisational performance (Browning et al. 2009).

This review encompasses many of the elements of HRM "best practices" and endeavoured to show not only which practices are classified as "best practices", but also why they are important. The reciprocity of the practices reviewed above detail how they can be applied to an organisation with the intention of providing a practical perspective to a topic that has remained as an academic and theoretical option due to the controversy and arguments among prominent authors surrounding HRM and what can be classed as "best practice." There is still ongoing debate in terms of a single clarification of what can be classed as an HRM "best practice" (Mess 2004). However, as time passed researches concluded that "best practices" have the characteristics of being able to improve organisational performance, and more importantly, is generalizable (Gürbüz 2009). Its main objective is to improve and develop employees, both at an organisational and personal level, thereby improving organisational performance and ultimately providing a sustainable competitive advantage. Gürbüz (2009) further held that there were positive correlations between "best practices" and organisational performance in a variety of settings, such as in steel mills, automobile sector, manufacturing firms, service sector, larger companies, and publicly held firms in all major industries.

2.4 Reciprocity of HPWS practices

As previously mentioned, HPWS are about the implementation of "systems" or "bundles" of the abovementioned practices (Cutcher-Gershenfeld 1991; Ramsay 1991; Huselid 1995; Youndt et al. 1996). These practices include details about what they are and how they fit within the organisation. However, it is essential to outline the inextricable linkages between many of these practices as there can be an additive effect for the organisation if more than one best practice is implemented; in essence, providing a compounded competitive advantage within the business environment (Ichniowski et al. 1997; Appelbaum et al. 2000).

Mess (2004) provided the following analysis of five prominent HRM "best practices"; training and development, teams, employee selection, performance appraisal and communication selected from the above defined fifteen, with the aim of outlining their inextricable linkages. The objective is to show how they can be justified as a "best practice."

- Teams form an integral part of any organisation and they are linked through effective communication (Mess 2004). Communication is the means by which teams announce their progress or direction to subsequent other teams, management or the entire organisation to ensure that all employees are aware of what is going on. As many teams take ownership for their area of work, teams can be linked to empowerment of employees and/or teams. This, in turn, can be linked to effective communication, as employees must understand the strategy of the organisation in order to make effective decisions to improve organisational performance, and also communicate these decisions to management. For teams and employee empowerment to work effectively, training and development form an integral part. Training and development will ensure that employees have the requisite skills to make appropriate decisions and effectively work

together as a team. All of the abovementioned practices can be linked to flatter organisational structures as teams and employee empowerment negate the need for multiple hierarchy levels, with communication being more effective with fewer organisational levels

- There is also a strong link between individual performance evaluation and performance based pay (Mess 2004). Effective measurement of employee performance will ensure suitable remuneration. It is an effective way of generating employee commitment. This will in turn lead to continued employee performance improvement, as employees become aware that superior performance is rewarded
- Promotional opportunities and career ladders are additional linkages that can create overall employee commitment (Mess 2004). Employees who apply themselves to the organisation and show commitment will be reciprocated by the organisation in the form promotion opportunities. This is a reflection of the performance of employees. This is also linked to performance measurement of the organisation, which ensures that promotion and remuneration occur, and incorporate those employees who are most deserving
- Finally, a link exists between employee security, recruitment and grievance procedures (Mess 2004). If the selection strategy is sound, and enables the recruitment of the most suitable employee/s for the respective position/s, then the need to re-hire in the foreseeable future can be negated, thereby improving employee security. Grievance procedures can also be linked to employee security. Formal policies and procedures that guide and direct the organisation and employee/s through the process will result in increased employee security. The correct process will ensure that those involved are treated fairly and justly.

All of these linkages provide an additive effect that will enable an organisation to compete more effectively within the business arena (Mess 2004). It should be noted that the focus here is on the mediating links from management's intentions through to whatever notion of organisational performance is desired. The general principles that have developed in this stream of research are not only relevant to HPWSs, but can be applied to any orgainisational situation in which there is a need for an organisation's HR systems to perform effectively. Figure 2 illustrates the HRM process and its strategic links to HPWS.

The process of HRM has been found to be a chain of links in which *intended* HR practices lead to *actual* HR practices which lead to *perceived* HR practices and then to employee reactions, and finally to organisational performance (Purcell and Hutchinson 2007). This highlight the fact that if management wants to bring about meaningful changes it has to influence employee beliefs, attitudes and behaviours. Employee behaviours are critical to whether the desired organisational outcomes will be achieved, and is influenced by employee perceptions of, and their cognitive and affective responses to HR practices (Boxall and Purcell 2007). Research has, therefore, shown that major gaps exist between management intentions and perceived management actions which usually undermine employee trust and loyalty, and thus affect performance outcomes; both for the individual and the organisation (Boxall and Purcell 2007).

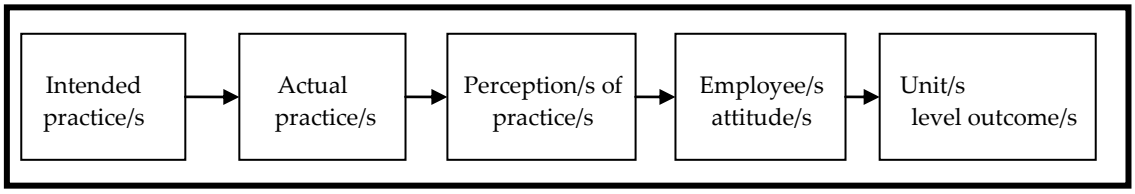


Figure 2: The HRM performance causal chain (Purcell and Hutchinson 2007)

2.5 HPWSs in the service sector

It has been noted that Oracle operate within the service sector (Oracle 2010). Most of the research conducted on HR management and organisational performance has been focused on the manufacturing sector, with the exception of Batt (1999, 2002), Banker et al. (1996) and Delery and Doty (1996). Services differ from goods in that they are intangible, it is produced and consumed simultaneously and involve the consumer in production and delivery thereof (Bowen and Schneider 1988). This blur the boundary between the two groups in that the simultaneous delivery and receipt of services brings employees and customers closer together (Parkington and Schneider 1979). The direct contact between the employee and customer in the service sector suggest that HR management has become more important in the service sector than in the manufacturing sector (Bartel 2004). Batt (2002) argued in favour of this finding in that study of telecommunications call centres. She held that high involvement work practices (HIWP) assist in developing employee firm-specific capital such as knowledge of the firm's products, customers and work processes. These knowledge enhancements enable employees in the service sector to interact more effectively with customers (Batt 2002).

Bartel (2004) held that organisations which compete in the sales and service industry often use a 'relationship management' strategy to build long term customer relationships through the provision of high-quality service. Heskett et al (1997) provided evidence in support of this claim through a study conducted on six organisations. The study found that organisations providing high-quality services have more satisfied and loyal customers. In addition to this they argued that satisfied customers lead to satisfied employees and vice-versa. They further found that organisations which deliver high, service quality exhibit satisfied

customers with a resultant growth in revenue. This is what they referred to as the 'service profit chain' (Heskett, Sasser and Schlesinger 1997). Hence, a key link in the 'service profit chain' is a HPWS (Batt 2002).

In the service sector, the relevant HPWS practices are expected to vary enormously (Boxall 2003). This is due to the fact that competitive segments within the service industries cover a huge range of business models. In the mass service industry, organisations compete through a 'cost' strategy, i.e. through the utilisation of low-skilled workers and labour-saving technology, while in the professional service industry organisations compete through esoteric knowledge, i.e. through the adoption of a 'differentiation' strategy (Boxall 2003).

In the professional service sectors, management have implemented high levels of employee involvement because larger and more ambiguous tasks rely on discretionary judgment and the pooling of team knowledge (Boxall 2003). Between the extremities of mass and professionals service organisations are industries and market segments in which organisations compete through quality and cost. Herein exists the potential for more empowering forms of management that enhance customer satisfaction and retention (Batt 2002, 2007). Allowing for the implementation of HPWS practices would draw the obvious conclusion that organisations would display an observable retraction from the Taylorised or very narrowly conceived jobs (Wood and Wall 2007). However, the acid test of HPWS is not whether a particular practice is being implemented but whether employees experience a positive shift in their responsibilities and decision-making powers (Boxall and Macky 2009).

2.6 HPWS in the service sector: the South African context

Within this section specific reference is made to the South African service sector due to the fact that Oracle has been defined as a 'sales and service' organisation (Oracle 2010).

There is a trend in which global economies are moving away from primary industries such as mining and manufacturing to more tertiary and service oriented industries (Manzoni 2004). Manzoni (2004) held that the service industry has become the largest contributor to global gross domestic product. Resource and market seeking activities had been the primary drivers of foreign direct investment since the 1970s (Wöcke, Bendixen and Rijamampianina 2007). However, this trend has reversed as the value of services and intangible assets increased. This has now led multinational organisations to seek out more knowledge–based assets in the form of intellectual capital which in turn favours destinations with knowledge intensive assets or learning advantages (Wöcke et al. 2007). However, destinations that are perceived to be ideally service-oriented and knowledge-based present severe implementation challenges.

According to Gomez and Sanchez (2005), a country's institutional environment, its historical legacy and, in particular, its cultural platform has a significant influence in the way organisations are managed. In the context of South African based organisations, both national and international, management have to contend with the advancement in diversity as driven by regulation. The post apartheid era has given rise to an emerging black middle class with diverse demands. Hence, there is a need for management to develop competencies to manage high degrees of ambiguity and complexity brought about by the needs and perceptions of employees' interpretations of organisational HR practices (Browning 2006). Browning (2006) held that there was a need to understand why

employees' perceptions of HRM practices have an influence on their service behaviour. Schmit and Allscheid (1995) found support for a strong association between an employee's intention to serve (inherent in their behaviour) and their evaluations of the supporting HR policies and practices. However, the context within which the 'service' organisation operated needed to be taken into consideration (Browning 2006). South Africa, in particular, has been plagued by oppression and unfair work practices brought about by the apartheid regime (Agesa, Agesa and Bongani 2010). Hence, perceptions of workplace fairness, training to improve competencies, management support, empowerment, multi-skilling and efficient and effective performance appraisal processes are important HR criterion to enhance organisational performance within the South African context.

Frontline employees are critical to the success of service organisations, i.e. they are responsible for projecting an organisation's image and creating a satisfying customer experience (Browning 2006). Browning further held that the three HRM practices that had the most impact on service behaviour in developing countries are selection, training and performance appraisal. These competencies would provide an organisation with an added advantage when operating in a country with a diverse cultural platform coupled with socio-political and economic challenges (Wöcke et al. 2007).

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This section explains the methodological approach that was used to ascertain the economic value of HPWS. Permission for primary and

secondary data collection and interviews with various managers has been granted by the human resource HR) and financial director (FD) of Oracle corporation, South Africa.

3.2 Research methodology

The research methodology comprises a qualitative and quantitative analysis of the return on investment in HPWS practices; hence a mixed method approach. A mixed method approach to research has been defined as: *"The class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study"* (Johnson and Onwuegbuzie 2004: 17). Leedy (1993) held that the strength of a mixed method approach rests in one of the key objectives of methodical triangulation, i.e. combining the strengths of both approaches will offset the weaknesses of each. Hence, this research will be enhanced by a combined approach. It should however be noted that the bulk of the analysis will predominantly be quantitative. Primary and secondary data will be sourced from within the organisation.

Primary data will be collated through a structured questionnaire (using the Wits Business School Qualtrics Survey Software tool) and in-depth management interviews that will solicit employee and managerial opinions of the impact of HPWS practices on employee performance respectively.

Secondary data will be collated from the finance and human resource departments highlighting employee sales figures and performance appraisal data respectively.

It will be assumed that all responses are unbiased and honest.

3.3 Research design

In this study, interpretive phenomenology will be the primary methodology. Interpretive phenomenology seeks to understand, not to explain or to predict participants' worlds- their concerns, habits and practices as they show up in narratives where accounts are always contextualised (Creswell and Clark 2007). Interview transcripts and field notes will provide the primary qualitative data for this analysis.

3.4 Population and sample

3.4.1 Population

A population is defined as all the items of interest needed to conclude a decision or investigative outcome (Evans 2009). The population, for the purposes of this study, will encompass Oracle, South Africa's sales employees and the relative managers of these employees. The conservative population for this research will nevertheless be Oracle global/worldwide as the research can possibly be generalized to the broader group, in addition to the results of this research possibly being transferable to other IT organisations operating on the same platform as Oracle. For example, SAP sell and service very similar products to that of Oracle (RAAD 2009). The products are not identical, but the development and implementation thereof follows very similar patterns and processes, hence requiring a very similar context to that of Oracle. Guba and Lincoln (1981) defined 'transferability' as the extent to which research results can be applied to other settings or situations.

3.4.2 Sample and sampling method

The sample frame encompasses all Oracle, South Africa sales employees and the managers of the respective groups of employees, i.e. 230 sales employees and 12 managers respectively. Oracle provides the

appropriate context for this research in that it delivers a service to a diverse industry, i.e. ranging from mass production to professional sectors which encompass both the private and public sectors.

Oracle sales divisions are grouped into the following categories: 1) Communications, Utilities and Technology; 2) Manufacturing, Retail and Distribution; 3) Public Sector; 4) Financial Services; 5) Hardware.

A sample is a subset of a population seeking inference about the population (Evans 2009).

3.5 The research instrument/s

In this section secondary data will have a major influence on the outcome of the research due to the fact that the dependent variable is the sales figures that will be utilised to determine the economic value of HPWS; the 'ultimate' dependent variable.

Several approaches will be used to measure high performance within Oracle, South Africa. These are comprised of the analysis and monetary evaluation of primary and secondary data sources as illustrated in Figure 3 on the next page.

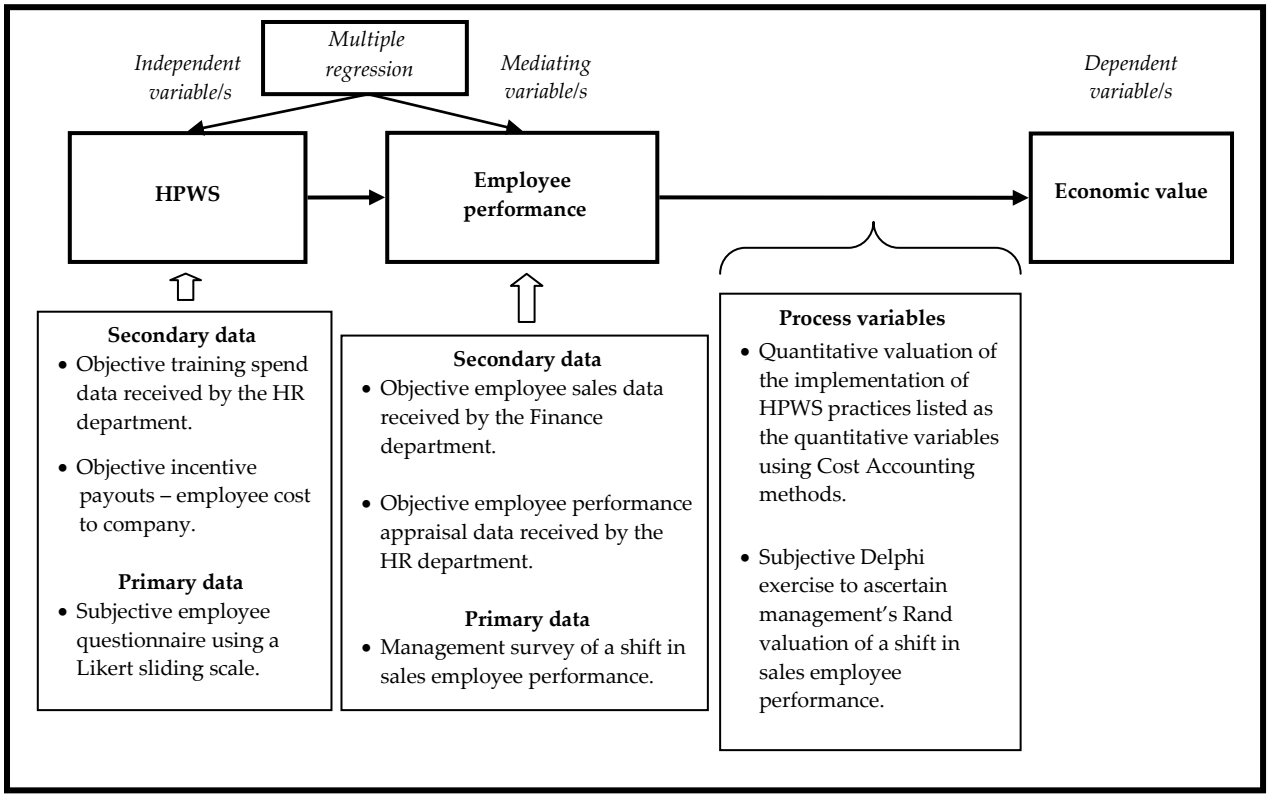


Figure 3: The relationship between HPWS practices and Economic value (Browning 2006)

3.5.1 Independent variable/s

The extent of the adoption and implementation HPWS practices within Oracle South Africa will be assessed through the analysis of the following primary and secondary data source variables.

3.5.1.1 Secondary data source/s

Objective training spend data will be supplied by the HR department. It is comprised of the direct Rand value costs associated with all employees' training. This will range from basic skills development to more enhanced specialised skills development.

Objective incentive payout data will be supplied by the finance department. It is comprised of the fixed (base salary) and variable (commission) Rand value of total employee compensation.

3.5.1.2 Primary data source/s

A *survey questionnaire* regarding the implementation of HPWS practices will be utilised to elicit information/data from the Oracle South Africa sales employees. It will consist of 40 close-ended questions covering items relative to HRM practices, i.e. staffing and recruitment, training and development, commitment, participation, teamwork, performance appraisal and remuneration. A Likert slider scale with a selected measurement scale of 0 – 100 will be utilised to measure options between two poles ranging from 1, "strongly disagree" to 5, "strongly agree". The scale will give continuous instead of ordinal data. The reason herein is the fact that attitudes and perceptions vary continuously rather than in discrete quanta (Stacey 2005). The questions will be sourced from four research journal articles which have highlighted those HPWS practices which have positive effects on employee and organisational performance. These are as follows:

- Nine questions addressing the *training* practice have been sourced from Sun et al. (2007) and Tsai (2006)
- Four questions addressing the *performance appraisal* practice have been sourced from Sun et al. (2006)
- Nine questions addressing the *compensation* practice have been sourced from Tsai (2006)
- Six questions addressing the *recruitment and selection* practices have been sourced from Tsai (2006)
- Nine questions addressing the *commitment* practice have been sourced from Green et al. (2006)
- Three questions addressing the *participation* practice have been selected from Coyle-Shapiro (1999).

The survey questionnaire will be utilised to ascertain the following subjective variables:

Employee training is a set of practices that provide regular and up-to-date training to enhance employee job knowledge and skills for the employee's current role and for other potential roles within the organisation (Tsai 2006)

Performance appraisals are a series of discussions between a manager and an employee, whereby the employees' performance expectations are agreed upon and feedback provided by the manager on the employees' performance over a period of time (Tsai 2006)

Compensation is a set of practices, both financial and non-financial, that provide recognition for a job well done (Tsai 2006)

Recruitment and selection is a set of practices, including interviewing and testing, that ensures potential employees with the right attitude and skill are selected fairly and without discrimination (Tsai 2006)

Commitment refers to an employee's attachment, loyalty and identification with an organisation (Meyer and Allen 1984)

Participation refers to a set of practices that involves employees in the sharing of information and/or decision making (Cabrera et al. 2001).

See Appendix 2 for the proposed online survey questionnaire.

3.5.2 Mediating variable/s

Employee performance within Oracle South Africa will be measured through the analysis of the following primary and secondary data source variables.

3.5.2.1 Secondary data source/s

Objective employee sales data will be supplied by the finance department. This will be operationalised as the basic earnings and

commission earned per employee per quarter in Rand value. The calculation herein is the ratio of target versus actual sales achieved per sales employee per quarter. The Oracle financial period is from June to May.

Objective employee performance data will be supplied by the HR department. Appraisal data will highlight the performance of individual employees as subjectively ranked by their respective managers. Performance appraisals relative to performance is ranked on a scale of 0 - 5, measuring options between two poles ranging from 0, "not applicable" to 5, "outstanding."

3.5.2.2 Primary data source/s

A subjective management survey will be conducted to ascertain a shift in employee performance. Managers will be asked to rate the performance of their direct reporting staff; the period being from employee inception to date. A Likert slider scale with a selected measurement scale of 0 – 5 will be utilised to measure options between two poles ranging from 0, "no change in performance" to 5, "substantial change in performance."

3.5.3 Process variables

The following process variables will be utilised to ascertain the economic Rand value of the adoption and implementation of a HPWS within Oracle South Africa.

A *Delphi* quantitative focus group interview will be utilised to ascertain the economic Rand value of varying performance among sales employees. This is a 'behavioural' method which combines judgments from knowledgeable people about differences in the value of different performance levels (Cascio and Boudreau 2008). A global estimation approach will be utilised whereby managers will be asked to estimate the

value of performance at the average, 85th and 15th percentile, of the performance distribution, and the difference between their estimates calculated (Cascio and Boudreau 2008).

Cost Accounting exercises will be conducted to ascertain the following variables:

Selection and screening costs encompass the Rand value per hour spent by managers conducting interviews in addition to the salary of the recruiters. No advertising and psychometric costs are associated with the recruitment process. Recruiters spend 80% on their time recruiting sales staff; the other 20% is utilised recruiting support staff such as HR, Finance, Facilities, Hardware Support, Marketing and Administration. They interview on average 6 applicants per position of which 3 are shortlisted. The average time spent per interview is 45 minutes. Managers thereafter also spend on average 45 minutes per interview of the 3 shortlisted applicants. Upon a final decision the process is then handed back to the recruiters who finalise the process of official appointment in conjunction with HR.

Sales commission is comprised of the ratio of target versus actual Rand value sales achieved per sales employee per quarter.

Participation costs refers to the average Rand value of time devoted by managers to providing support to assist employees to perform their jobs more effectively.

Performance appraisal costs refer to the average Rand value of time devoted by managers to the rating of employee performance.

Teamwork costs refer to the average Rand value of time managers devote to spending time in teamwork sessions as opposed to operating on an individual basis.

Training costs will be calculated as the Rand value costs associated with all direct and indirect training needed to enhance employee skill.

Customer relationship management costs refer to the Rand value of time devoted by management to customer interaction.

3.5.4 Dependent variable

The Brogden-Cronbach-Gleser model will be utilised to calculate the 'ultimate dependent variable', i.e. the economic value of a HPWS (Cascio and Boudreau 2008: 188). It is as follows:

$$\Delta U = r_{xy} SD_y \acute{z}_s - [N_a C / N_s]$$

where:

r_{xy} = correlation between HPWS and sales

$SD_y \acute{z}_s$ = standard deviation of the monetary value of a shift in employee performance

$[N_a C / N_s]$ = utility cost of the implementation of HPWS practices

3.6 Procedure for data collection

3.6.1 Objective secondary data

Permission for quantitative sales employee data collection and interviews with various managers has been granted by the HR and FD of the Oracle corporation, South Africa.

3.6.2 Questionnaire

A survey questionnaire, accompanied by a Wits Business School endorsed cover letter, will be sent via email to respondents within the organisation to elicit qualitative data using the Wits Business School Qualtrics Software Survey tool. It will be programmed to elicit responses on a fortnightly basis.

3.6.3 Delphi focus group/s interview

A focus group interview will be scheduled with the relevant departmental managers at the Oracle office in Woodmead, Johannesburg, South Africa. The facilitators for this process will be Professor Gregory Lee and the author. This session will last approximately 2 hours.

3.7 Data analysis and interpretation

3.7.1 Multiple regression

A multiple regression analysis will be utilised to link HPWS practices to employee performance, i.e. integrating the results of sub problem 1 and 2 to assess the economic value of the adoption and implementation of HPWS within Oracle South Africa. It is a useful tool to assess the degree of correlation and causality between the criterion and predictor scores (Cascio and Boudreau 2008). The results from the regression will be used to establish a link to the economic value of sales employee performance using the cost variable and the value of a shift in employee performance using the cost accounting method.

3.8 Limitations of the study

- The research will be confined to Oracle South Africa sales employees only. This may result in a lack of generalizability as the research results may not be extrapolated to smaller organisations operating on a similar platform – this research is focused on a large formal organisation.
- Responses to questionnaires are highly subjective.
- Online questionnaires will lead to limited interaction between the interviewer and the interviewee thereby negating the opportunity for those respondents failing to fully understand the purpose of the study. This may lead to biased responses based on emotional rather than objective feedback.

3.9 Validity

3.9.1 External validity

This study may have possible issues in according to global extrapolation as it will only be conducted in one organisation in South Africa. However, many of the HR practices within the IT service sector are highly generic albeit implementation variations relevant to the context and strategic alignment to the business process (Budhwar and Khatri 2001); hence extrapolation could be possible.

3.9.2 Internal validity

The variables within the survey are appropriate measures of what the study is intended to measure, i.e. the economic value of HPWS. The operational definitions, i.e. the HR practices, are the appropriate measures of what theorists have defined as the measures for HPWSs (Pfeffer 1994; Farias and Varma 1998; Ichniowski and Shaw 1999; Pfeffer and Veiga 1999; Appelbaum et al. 2000; Bartlett and Ghoshal 2002; Godard 2004; Mess 2004; Paton 2007; Cascio and Boudreau 2008).

3.10 Reliability

"Reliability is concerned with consistency" (Kalof, Dan and Dietz 2008: 156). Reliability for this research will be achieved through the solicitation of responses to multiple questions on the same subject matter, i.e. HPWS practices. This will be achieved through the process of interviews, questionnaires and the Delphi exercise that will be conducted. These multiple measures, as opposed to a single measure (questionnaire only), will be combined into a single measure that will make this research extremely reliable.

CHAPTER 4: RESULTS

The methodology employed is a multiple regression analysis, using all the independent variables (numeric and categorical) against the three dependent variables explained in the Methodology chapter in separate analysis, i.e. *average actual sales*, the *log of actual sales for 2011*, and the *log of the sales percentage (adjusted for inflation from 2009 to 2011)*. This comparison was analysed to confirm the impact of HPWS practices taking various scenarios into consideration, i.e. average vs. actual sales performance, inclusive of the adjustments for inflationary impact. Actual sales and the sales percentage dependant variables were log transformed to deal with significant outliers. The outliers were the result of a number of substantially larger than normal Rand value once-off licence sales. It was not desirable to delete these, instead logging acted to draw these outliers in. The small sample and relatively large variables list did leave one challenge of small degrees of freedom. Therefore, a process of best variable selection was necessary. The researcher used a process of standardized coefficient elimination, in conjunction with p-value score and residual plot assessment, in order to ascertain a parsimonious variable sub-set with highest adjusted R^2 in each of the six analyses.

4.1 Hierarchical regression

In this section the actual percentage impact of HPWS on sales performance was calculated.

The results of each dependent variable (including and excluding the HPWS practices) were analysed to determine the change in R^2, and to compare the various regression results of each. The variables and the associated results are outlined in Table 1 below.

Table 1: Effects of HPWS on sales performance

	Average actual sales (2009 – 2011)		Log (Actual sales 2011)		Log (Sales % adjusted for inflation)	
	β (excl. HPWS)	β (incl. HPWS)	β (excl. HPWS)	β (incl. HPWS)	β (excl. HPWS)	β (incl. HPWS)
Intercept	65742655	96620303	16.48***	14.92***	.67***	.38**
Gender			.22	.06		
Race			.58***	.41***	.32*	.18**
Education	.01	.14			.49	-.08*
Software exp.	.08	.12			.13	.04
Total experience			-.41**	-.34**	.35	-.22**
Tenure at Oracle	.33	.17	.23**	.17*		
Economic crisis (sales)	.13	.12	.40	.18	-.19	-.10
Economic crisis (customer)			-.27	-.12		
Training spend[a]		.59**		.15		.20**
Training hours[a]		-.4*				
Training		.04		-.04		-.07**
Appraisals		-.18		-.28		
Compensation		-.55***		-.26		-.26*
Selection and recruitment				.28		.14
Participation		.32*		.36**		.07
Commission[b]		-.18		.26*		.73***
R^2	.12	.52	.38	.71	.16	.83
Adjusted R^2	.10	.43	.31	.63	.09	.79
p	.03	.00	.00	.00	.07	.00
Δ R^2	.40***		.33***		67***	

Notes: *HPWS practices highlighted in grey, N = 66, β = standardised effect, *** = p < .01, ** = p < .05, * = p < .1, confidence intervals estimating using 'reflection' bootstrapping with 3,000 re-samples. Power is tested at α = 5%, [a] these variables have been log transformed, [b] rate of commission received vs. basic salary.*

The results indicate an improvement in each dependent variable R^2 and p-value when the HPWS practices are included. Improvement in the R^2 for each dependent variable (.40, .33 and .67) is statistically significant at the 99% confidence interval. Hence, these three scenario analyses confirm validity of the positive impact of HPWS regression models.

4.2 Correlation matrix: Dependent variables vs. Appraisals

Research has shown that appraisal data has a significant impact on employee performance (Schraeder, Becton and Portis 2007; Shrivastava and Purang 2011) as is indicated in the model (see Figure 3). Hence, it was important to determine which dependent variable correlated the highest with the appraisal scores. The appraisal regression itself was log transformed due to a number of significant outliers whereby logging acted to draw these outliers in; a possible indication of subjective bias or unusually high/low ratings for above/below target achievement brought about by substantial/meager Rand value licence purchases. The correlation result of .23 revealed that *Log (Actual sales 2011*) correlated the highest with the appraisal scores (see Table 2 below).

Table 2: Correlation matrix

	1.	**2.**	**3.**	**4.**
1. Average actual sales (2009 – 2011)	1.00			
2. Log (Actual sales for 2011)	.50	1.00		
3. Log (Sales % adjusted for inflation)	.15	.72	1.00	
4. Log (Appraisals) [2009 to 2011 current to best performance]	.12	.23	.15	1.00

Notes: *All correlations are statistically significant at the .05 level, Standardized Cronbachs Alpha = .65*

The result of the correlation matrix above indicated *Log (Actual sales 2011)* as the sole dependent variable to further determine the affect of HPWS on sales performance.

4.3 Linking HPWS to performance

In this section, the 'economic value' of HPWS was determined, i.e. the Rand value impact that HPWS has on the overall sales revenue of the organisation for the research period (2009 to 2011). A stepped approach was used as outlined in Figure 4 below.

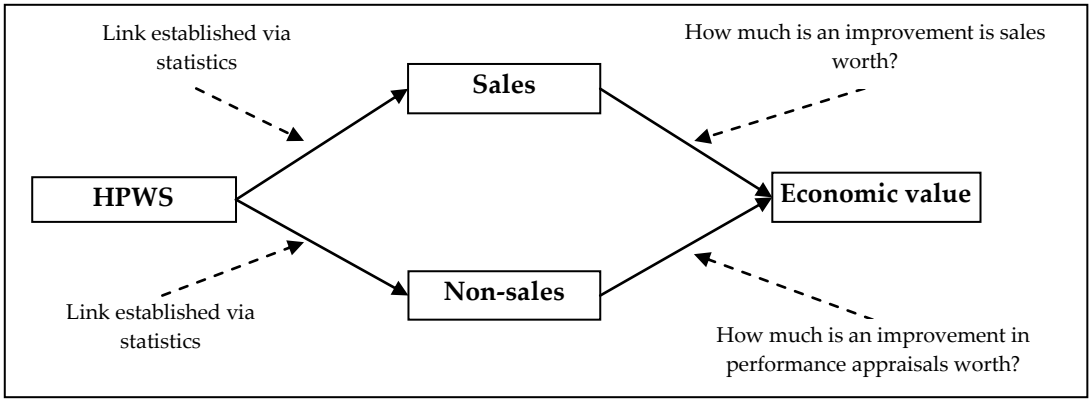


Figure 4: Link between HPWS, sales and non-sales related performance (Cascio and Boudreau 2008)

4.3.1 Linking HPWS to sales performance

Using multiple regression analysis, the raw change brought about by each HPWS practice on sales performance was calculated. These raw changes were then added to give a total percentage impact of HPWS on sales performance. The results have been interpreted as percentages due to the log transformation of the dependent variable, i.e. *Log (Actual sales 2011).* Table 3 below extrapolates the descriptive statistics of the multiple regression analysis. The inclusion of *Appraisals* as an independent variable removes the effect of appraisal scores and avoids double counting to ascertain the impact of HPWS on sales only. Hence, *Appraisals* was controlled for.

The regression coefficient, mean and minimum for each practice was used to determine the raw change of each practice. This was calculated by multiplying the regression coefficient by the difference between the mean and minimum. The raw changes were then added to equate to the total standardised effect size of HPWS on sales performance, i.e Δ Sales performance (310%).

- $\Delta_{Total\ Sales} = \Sigma B_i * (X_{1_ave} - X_{i_min})$

where:

B_i *is the vector of regression coefficients*

X_{1_ave} *is the vector of independent variable averages*

X_{i_min} *is the independent variable minima*

Table 3: Percentage impact of HPWS practices on sales performance [Log (Actual sales 2011)]

	B	Mean	Minimum	Raw change
Compensation	-.02*	45.64	4.25	-.83
Training spend[b]	.07*	8.44	0	.59
Commission	.44*	.75	.00	.33
Selection & Recruitment	.02*	51.91	8.33	.87
Training[c]	.03**	67.52	13	1.64
Participation	.00	53.57	3.22	.00
Teamwork	.01	73.43	24	.49
Δ Sales performance				3.10

Notes: *N = 66, B = standardised effect, *** = p < .01, ** = p < .05, * = p < .1, confidence intervals estimating using 'reflection' bootstrapping with 3,000 re-samples. Power is tested at α = 5%, [a] rate of commission received vs. basic salary, [b] these variables have been log transformed.*

4.3.2 Linking HPWS to non-sales performance

Using multiple regression analysis, the effect size (*d*) of each HPWS practice on the appraisal ratings (current to best performance) was calculated. Table 4 below extrapolates the regression slopes and effect size (*d*) of each HPWS practice on the appraisal ratings. *Log (Actual sales 2011)* was included as an independent variable, to ascertain the effect size (*d*) of HPWS on the appraisal process over and above sales (see Figure 4). The inclusion of *Log (Actual sales 2011)* as an independent variable removes the effect of sales and avoids double counting to ascertain the impact of HPWS on appraisal ratings only. Hence, *Log (Actual sales 2011)* was controlled for.

The regression coefficient, mean, minimum and standard deviation (SD) was used to determine the standardised effect (*d*) of each practice. This was done by calculating the raw change for each practice [$Bi*(X_{1_ave}-X_{i_min})$], and then dividing the raw change by the standard deviation (SD) of the appraisal ratings (current to best performance).

- ***Effect size (d) = Raw change / SD*** ***[Appraisals (current to best)]***

  where:

  Raw change = regression coefficient(mean-minimum)*

  Revenue = d * SDy

Table 4: Standardised effect of HPWS practices on non sales related performance

	B	Mean	Minimum	SD	Raw change	Effect size (d)
Compensation	-.01	45.3693	4.25	1.4	-.32	-.26
Training spend[a]	.07*	8.41	0	.49	.56	.46
Commission[b]	.13	.8	0	20.52	.10	.08
Selection & Recruitment	-.02	51.63	8.33	.49	-.68	-.56
Participation	.02	67.11	13	21.06	1.16	.96
Training	-.01	53.47	3.22	20.12	-.23	-.27
Teamwork	.01	72.81	24	1.45	.36	.30
SD [Appraisals (current to best)]				1.21		

Notes: *N = 66, B = standardised effect, *** = p < .01, ** = p < .05, * = p < .1, confidence intervals estimating using 'reflection' bootstrapping with 3,000 re-samples. Power is tested at α = 5%, [a] rate of commission received vs. basic salary, [b] these variables have been log transformed.*

4.4 Valuing performance effects of HPWS

In this section the revenue generated by sales and non-sales performance was calculated. The effect sizes of the sales and non-sales effects of HPWS that was calculated in sections 4.3.1 and 4.3.2 were used to transform the effect sizes into Rand values. The transformations of the sales effects were straightforward since a unit of sales is in actual fact revenue. However, the non-sales effects required a more intricate calculation due to the fact that it is harder to establish how much an improvement in performance appraisal is worth.

4.4.1 Valuing sales effects of HPWS (combined practice)

The sales revenue generated by the application of HPWS was calculated by transforming the raw change (Δ Sales performance = 3.10), highlighted in Table 3, into a Rand value. As actual sales for 2011 was log

transformed the shift equate to a percentage change. Average actual sales per employee for 2011 (secondary objective sales data = R15,335,878.00) was divided by the 310% shift in sales performance to give an amount less the impact of the HPWS variables, i.e. R4,951,895.78. The difference between the average actual sales and the shift in sales performance amounts equates to the Rand value that HPWS has added, i.e. R10,383,982.22. This amount was multiplied by the total number of sales employees (230), and equated to a total sum of R2,388,315,910.65. See calculation layout below

Note: Individual sales data was omitted from the calculations due to a non-disclosure agreement.

Average actual sales 2011 (post HPWS) = R15,335,878

Total sales (pre HPWS)

= Average actual sales 2011 (post HPWS) / Δ Sales performance

= R15,335,878.00 / 310%

= R4,951,895.78

Per employee sales difference added by HPWS

= Average actual sales 2011 (post HPWS) – Total sales (less the impact of HPWS)

= R15,338,878.00 – R4,951,895.78

= R10,383,982.22

Total sales impact of HPWS (including total utility costs)

*= Per employee sales difference added by HPWS * no. of sales employees*

= R10,383,982.22 230*

= R2,388,315,910.65

4.4.2 Valuing sales effects of HPWS (individual practice)

In this section, the individual HPWS practice Rand value effects on sales performance was calculated. In this case some of the practices had to be combined to determine a joint impact value. For example, the combination of the training process and training spend allude to 'training' as a single variable. The same applies to the combination of compensation and commission, which allude to 'performance pay', as well as participation and teamwork which allude to employee 'cross functional integration.' The Rand value effects were calculated by multiplying the average actual sales per employee for 2011 (secondary objective sales data = R15,335,878.00) by (1 + raw change per practice), and then subtracting this amount from the average actual sales per employee for 2011 (secondary objective sales data = R15,335,878.00). See Table 5 below.

- **Revenue (per practice) = $\bar{A}$_actual sales per employee (2011) - [$\bar{A}$_actual sales per employee (2011) / (1 + raw change)]**

Table 5 below highlights the individual practice revenue per employee.

Table 5: Revenue generated by HPWS practices on sales-related performance

HPWS practice	Raw change	Combined practice	Combined raw change	Sales pre HPWS	Revenue generated by HPWS
Training	.03	Training	2.23	R4,753,247.58	R10,582,630.42
Training spend[a]	.07				
Commission[b]	.44	Performance pay	-.5	R30,387,867.93	-R15,051,989.93
Compensation	-.02				
Participation	.00	Cross functional integration	.49	R10,262,917.75	R5,072,960.25
Teamwork	.01				
Selection & Recruitment	.02	Recruitment	.87	R8,193,993.37	R7,141,848.63

Notes: *[a] rate of commission received vs. basic salary, [b] these variables have been log transformed.*

4.4.3 Valuing non-sales effects of HPWS

The non-sales revenue generated by the application of HPWS was calculated by transforming the standardised effect size (*d*) of each HPWS practice highlighted in Table 4 into a Rand value. In this case, a Delphi analysis had to be conducted to determine an employee average worth to the organisation.

4.4.3.1 Valuing SDy (a one standard deviation shift in performance)

A Delphi exercise was conducted with six managers to ascertain the average 'Rand value' worth of a sales employee (see Appendix 3 for Delphi questionnaire). Managers were asked to rate the average employee "Rand value worth" at the 15th (low), 50th (average) and 85th (superior)

percentile. The ratings for each percentile in the third feedback session were averaged. A further average of the difference between the 15th – 50th and the 50th – 85th percentile (average of the third feedback session ratings) was calculated to give an employee worth average of R 5, 03 million.

- ***SDy*** *(round three)* **=** $\bar{A}$*_ [(85th – 50th percentile), (50th – 15th percentile)]*

4.4.3.2 Combining standardised effect size and SDy

The revenue generated by each practice, was calculated by multiplying the average actual sales **per employee (secondary objective sales data)** for 2011 (including the impact of the HPWS variables) by SD*y* of each practice (see Table 6 below).

- ***Revenue for each practice =*** $\bar{A}$*_actual sales (2011)* **/ *SD***

Table 6: Revenue generated by HPWS on non-sales related performance

HPWS practice	Raw change	Combined practice	Combined raw change	Revenue generated by HPWS
Training	-.32	**Training**	.24	R1,000,528.78
Training spend[a]	.56			
Commission[b]	.10	**Performance pay**	-.31	-R1,287,324.68
Compensation	-.32			
Participation	1.16	**Cross functional integration**	1.57	R6,523,026.62
Teamwork	.36			
Selection & Recruitment	.68	**Recruitment**	-.68	-R3,597,364.23

Notes: *[a] rate of commission received vs. basic salary, [b] these variables have been log transformed.*

4.5 Costing HPWS

In this section the cost of the implementation of the implementation of HPWS was calculated. This was necessary in order to give a true reflection of the net worth of HPWS per employee. Two approaches were used, i.e. the conservative versus the value based approach. It should be noted here that employees do not allocate time to the recruitment and appraisal process.

- $\bar{A}_$*cost per employee per annum* = $\bar{A}_$*actual training cost + average actual earnings (2011) + production loss cost*
- $\bar{A}_$*cost per manager per annum* = $\bar{A}_$*actual training cost + average actual earnings (2011) + production loss cost + appraisal cost + remuneration cost*

4.5.1 Conservative wage-base method

In this method the actual costs of HPWS implementation were calculated by subtracting from the revenue generated in sections 4.4.2 and 4.4.3.2., the actual cost of implementation. The costs were determined by first calculating the actual average earnings (basic plus commission) per employee and manager per annum; a conservative approach in that it does not take into account the 'true' employee worth to the organisation. This was then divided by the average total number of hours worked per annum (total number of hours worked per annum = 1600; 40 hours per week, excluding annual leave, weekends and public holidays) to give an employee and manager cost per hour. It was then ascertained via the cost accounting questionnaire (see Appendix 4) how much time (hours), on average, an employee and manager allocate to the implementation of HPWS. Finally, the allocated average hours were multiplied by the employee and manager average earnings per hour, less the tax rate, to give a total cost of the implementation of HPWS.

The total cost equated to R754, 897.12 per sales employee per annum, and R3,205,662.50 per manager per annum. The total sum for 230 employees and 12 managers equated to R173, 626,337.60 and R38, 467,950.00 respectively.

4.5.2 Value based method

This method follows the same approach as the conservative method, except for the fact that the actual, per hour cost (employee and manager) is transformed into an 'employee worth' hour cost and not an actual cost. This was accomplished by calculating the value of one standard deviation shift in employee worth through application of the Delphi exercise result conducted in section 4.4.3.1.

This calculation was repeatedly used to calculate the rand value worth of each employee, including managers. See calculation layout below using Microsoft Excel. The total cost equated to R3,296,036.19 per sales employee per annum, and R9,564,617.11 per manager per annum. The total sum for 230 employees and 12 managers equated to R758,088,323.70 and R114,775,405.30 respectively.

Note: Individual salary and appraisal rating data was omitted from the calculation due to a non-disclosure agreement.

$\bar{A}_{\text{performance rating}}\ [\bar{A}_{(1,\ 10)}] = 5.5$

$\text{Standard deviation } [STDEV_{(1,\ 10)}] = 3.03$

$Z\ Score = STANDARDISED_{(\text{employee rating, average rating, STDEV})}$

$\text{Employee worth} = Z\ score * SD_{\text{(employee worth)}} + \text{average employee worth}$

$\text{where: } SD = [(16 - 5.7) + (5.7 - 1.3)] / 2$

$\text{Employee worth per hour} = (\text{Employee worth} * 1000000) / 1600$

The value based method of costing HPWS is the preferred method in that the cost associated with an employee is not the actual cost incurred by the organisation (Cascio and Boudreau 2008). The cost incurred is the loss of profit that the organisation incurs when employees are not securing additional business, in addition to the actual cost (Cascio and Boudreau 2008). For example, if an employee is out of office due to training, there is the possibility that the employee might lose out on the opportunity of securing a licence during the said time, i.e. the opportunity cost foregone. Therefore, in calculating the total value of HPWS in the next section, the value based method of costing was used.

4.6 Total HPWS valuation

In this section the total economic value of HPWS (sales and non related sales) was calculated. Total costs were subtracted from total revenue and provision made for tax deduction. The tax rate used was 25%. The average revenue generated and costs incurred (see section 4.4.2 and 4.4.3.2) per employee was multiplied by 242 (230 employees and 12 managers) to give a total revenue generated and cost incurred a return on investment was also calculated by dividing the total cost by the revenue generated. See calculation layout below.

	Sales valuation (230 employees and 12 managers)	Non sales valuation (230 employees and 12 managers)	Combined valuation
Training	R10,582,630.42 * 242	R1,000,528.78 * 242	R2,803,124,526.00
Performance pay	-R15,051,989.93* 242	-R1,287,324.68 * 242	-R3,954,114,136.00
Cross-functional integration	R5,072,960.25 * 242	R6,523,026.62 * 242	R2,806,228,823.00
Recruitment	R7,141,848.63 * 242	-R3,597,364.23 * 242	R857,765,224.80
Gross revenue			R2,513,004,438.00
less Cost (employee and manager)			R872,863,729.00
Taxable revenue			R1,640,140,709.00
less Tax (@ 25%) [Taxable revenue * (1-.25)]			R410,035,177.00
Net revenue			R1,230,105,532.00
ROI [(Net revenue / Cost)] * 100			141%

CHAPTER 5: DISCUSSION

This study fills the gap identified in Section 2 (Literature review), i.e. there has been meager quantitative research undertaken to ascertain whether HPWS practices operating as a system or 'bundle' do indeed lead to *economic value-add* in the sales and service industry (Heneman and Werner 2005; Combs et al. 2006; Kalleberg et al. 2006; Li-Yun et al. 2007; Liu et al. 2007). Research *purports* that HPWS practices are often *expected* to lead to improved financial results (Combs et al. 2006; Kalleberg et al. 2006; Liu et al. 2007). In addition, HPWS has primarily been confined to the manufacturing sector, and resultant conclusions of improved financial gain has been generalized to incorporate the service sector (Li-Yun et al. 2007). The aim of this research was not to confirm the extrapolation and/or generalisation of HPWS practices from one industry to another; the focus was on the financial impact thereof.

This research and analysis confirms that HPWS does enhance employee performance (Δ Sales performance = 310%), and in turn, economic value-add within Oracle, South Africa (economic value of HPWS = R1,230,105,532ĀĀ).

The research also confirms that Oracle has achieved the increased revenue through the adoption and implementation of HPWS practices, i.e. training, performance pay, employee cross-functional integration and recruitment. Worth mentioning was the fact that the research was conducted using data accumulated over a recessionary economic period (2009 to 2011), hence, further confirming that HPWS practices are of the utmost importance for organisational sustainability (Kalleberg et al. 2006).

Research has shown that the combination of HR practices into ''bundles" or "systems" will enhance organisational effectiveness, and hence performance (Huselid 1995; MacDuffie 1995; Youndt et al. 1996;

Ramsay et al. 2000). However, for the purposes of this research it was pertinent to provide a critical evaluation and analysis of each individual practice to clarify the individual impact thereof; as it pertains to the context of Oracle South Africa. It was also essential to outline the inextricable linkages between many of these practices as most of them have a reciprocal relationship and effect (Ichniowski and Shaw 1999; Appelbaum et al. 2000). The interpretations of the results are specific and applicable to the context of this research organisation and population. Hence, it should be noted that the interpretations cannot necessarily be extrapolated to other contexts.

The study commenced by conducting a regression analysis of the sales and non sales related effects of HPWS on performance, followed by a cost analysis to ascertain the net revenue thereof. The analysis of the effect of HPWS on the sales component (see Figure 4) was a straightforward approach as the objective sales data was easy to interpret and analyse. However, the non sales component was more intricate as it is often difficult to measure the effect of HPWS on subjective substance. Nevertheless, both components were included in the analysis to give an accurate indication of the HPWS effect. The non sales component referred to the appraisal process, which is one of the most critical HR practices by which supervisors and managers evaluate the performance of subordinates and, thereafter, make salary and promotion decisions, identify training and development needs and motivate employees (Shrivastava and Purang 2011) Hence, a correlation matrix between appraisals and the various forms of sales dependent variables was conducted. As identified in Section 4.2, all the dependent variables showed a significant correlation [SA_Ave = .12, Log (Actual sales 2011) =

.23 and Log (SP2011i) = .15], with Log (Actual sales 2011) having the strongest correlation with appraisals.

Performance appraisals constitute a fundamental part of organisational management (Kreitner and Mohapatra 2008). It effectively helps to reduce employee uncertainty by clearly defining employee goals and objectives, and clearly helps to identify and improve problem areas through manager-employee communication and feedback sessions (Thornby and White 2007). It also forms an effective conduit in identifying employee training needs (Broady-Preston and Steel 2002). However, it can also be detrimental to an organisation if the performance appraisal system does not fit the organisational context, i.e. culture and industry (Schraeder et al. 2007). Hence, it should be based on a pre-established set of criteria directly related to the employees' job assignment (Amsterdam, Johnson, Monrad and Tonnsen 2003). Milkovich and Newman (2005) held that performance measurement and management are the oil that lubricates the HR engine. Therefore performance can only be rewarded if it can be measured.

Relative to this research, the appraisal regression results have a negative regression coefficient of -.15 (see Table 3). Although this may appear to be uncharacteristic, it is related to the fact that the appraisal scores were measured on a management scoring scale of -5 "poor current performance" to 5 "best possible current performance." Thus, an employee that achieved a high appraisal score meant that they were really bad performers previously. However, those employees who achieved a low appraisal score meant that they were good performers previously and did not require a high rating; the survey results revealed that the majority of sales employees did achieve their sales targets over the three year

period (2009 to 2011), thus the regression results revealed that a high appraisal rating was uncommon.

Appraisals are directly linked to compensation as it forms the key indicator of employee performance and hence the compensation received (Sturman and Short 2000). Sales employee compensation within Oracle is predominantly based upon bonus salary, i.e. a monetary reward given to employees in addition to their fixed compensation (Milkovich and Newman 2005). This salary plan is ostensibly based on individual performance. However, bonus salary does not necessarily increase an employee's base salary, and is not permanent (Milkovich and Newman 2005). Nevertheless, bonus salary has been widely used in organisations to motivate employee performance (Joseph and Kalwani 1998; Sturman and Short 2000).

Bonus salary is attractive from the company's point of view because the one-time cash reward links salary to performance (Lawler and Lawlor 1981; Lowery, Petty and Thompson 1996) but does not necessarily increase fixed labour costs (Sturman and Short 2000). Because bonuses are one-time payments, they have less economic value than permanent raises (Park and Sturman 2009). In contrast, merit salary, which is a form of reward in which employees receive permanent salary increases, lead to a permanent increase in the employee's base salary (Heneman and Werner 2005). For example, the present value of a R1 increase (permanent increase) is greater than the present value of a R1 bonus (one-time increase). As a result, in terms of expectancy theory, merit salary has the potential for greater valence than other salary plans.

Despite the permanent benefits of merit salary, researchers have been concerned that organisations often fail to link merit salary to employees "true" performance because of measurement error associated with their

performance appraisal system (Schwab and Olson 1990; Campbell, Campbell and Chia 1998; Shrivastava and Purang 2011).

CHAPTER 6: CONCLUSION

In this section the descriptive statistics and 'employee worth' of each HPWS practice is discussed and the results interpreted; as outlined in Section 4.

6.1 Training effect

The effect of training on the sales related performance produced a raw change of 2.23 (223%) (see Table 5). This amounted to an increase in sales revenue of R10,582,630.42 per employee per annum. The effect of training on non sales related performance produced a standardized effect size (*d*) of .24 (24%) (see Table 6); an increase in sales revenue of R1,000,528.78 per employee per annum. The results indicate that training has a significant impact on sales related performance. It can be related to the fact that Oracle invests substantially in product and technology training, as opposed to non sales related training; for example, communications, customer relationship management, presentation skills, etc. Hence, the effect of training on non sales related performance is to a much lesser degree. Thus, it can be concluded that training is more directed towards increasing bottom line sales as opposed to enhancing non sales related performance, which entails enhancing customer relationship management, improving the quality of service delivery and customer loyalty, and most importantly customer satisfaction (Castellanos and Martin 2011).

6.2 Performance pay effect

The effect of performance pay on non sales related performance produced a raw change of -.31 (-31%) (see Table 5); i.e. a decrease in sales revenue of R1,287,324.68 per employee per annum. The effect of performance pay on sales related performance produced a standardized effect size (*d*) of -.5 (50%) (see Table 6); i.e. a decrease in sales revenue of

R15,051,989.93 per employee per annum. The decrease in sales performance was a possible indication of a lack of effort to increase sales when employees were overcompensated in their base salary (Shrivastava and Purang 2011). However, it cannot with confidence be validated that overcompensation, resulting in decreased motivation to sell, applies to all the sales employees within Oracle.

In contrast, the majority of sales employees did achieve their sales targets over the research period (2009 to 2011). Hence, the decrease in sales performance could also be attributed to the fact that the inappropriate compensation rate was applied. It is suffice to say that the appropriate commission rate is a key driver to improve sales performance (Park and Sturman 2009). An inappropriate rate would act as a de-motivating factor whereby some employees would make the assumption that only the organisation will be benefiting. Attractive and appropriate commission rates entice employees to sell more, thus giving a higher return on employee effort (Park and Sturman 2009). Expectancy theory can be used to devise effective compensation plans which take into account the different dimensions or tasks that comprise a sales employee's effort (Erevelles, Dutta and Galantine 2004; Brown, Evans, Mantrala and Challagalla 2005). As sales effort is often multidimensional and may involve aspects such as after-sale support and building customer relationships, effective compensation plans must also take into account the different dimensions or tasks that comprise a sales employee's effort (Erevelles et al. 2004; Brown et al. 2005). For example, if a sales employee's primary responsibility is developing or managing customer relationships or performing a role other than concluding a sale, rewards other than commission may be more important to motivate and retain such a person.

It is also important to note that within the software and hardware sales industry, customer purchasing power has a significant influence on perceived employee performance and in turn sales target achievement, i.e. an indirect determinant of employee performance (Viviers, Saayman and Muller 2005). The purchasing power of customers varies from industry to industry (for example, Communications, Utilities, Technology, Manufacturing, Retail, Distribution and Financial Services) and sector to sector (for example, State versus Public listed organisations), making some industries more attractive than others to serve (Viviers et al. 2005). Thus, the performance assessment should not solely be based on sales target achievement. It ignores other performance measures unrelated to sales.

The decrease in non sales related performance is an indication that the appraisal process in not a direct driver of sales. An appraisal process evaluates a sales employee's performance *post facto*. It is however, an important indication of employee's skill development needs (Sturman and Short 2000). Thus, an performance appraisal is an important indicator of an employees' future performance (Sturman and Short 2000).

6.3 Cross-functional integration effect

The effect of cross functional integration on non sales related performance produced a raw change of 1.57 (157%) (see Table 5); i.e. an increase in sales revenue of R5,523,026.62 per employee per annum. The effect of cross functional integration on sales related performance produced a standardized effect size (*d*) of .49 (49%) (see Table 6); i.e. an increase in sales revenue of R5,072,960.25 per employee per annum.

In the field of performance management, there seems to be an increasing movement from the "I" culture toward the "We" culture. Several reasons exist to explain this shift (reduction of middle management, global competition, mergers and acquisitions, changing work realities), but the

bottom line is, more and more people are working and learning together in teams, because teams leverage organizational strengths to offset new challenges (Gordon 2002).

According to Rawlings (2000), current business trends of globalization, accelerated growth, and reengineering are requiring more cross-functional collaboration and integrated strategies across organizations. Rawlings further contends that a new team paradigm is rising where teams at all levels are being asked to work together with more interdependence, with shared accountabilities outside their typical function, and with higher levels of trust and participation.

Within the context of the industry within which Oracle function, collaboration is fundamental. The developers produce the software and hardware applications, the pre-sales teams demonstrate the product to the customer, and sales teams conclude the sale. These teams have to collaborate to ensure that the needs of customers are appropriately and accurately met.

The sales revenue generated by HPWS on non sales and sales performance carry an almost equal weighting (R6,523,026.62 and R5,072,960.25 respectively). Hence it can be concluded that the appraisal process adopted and implemented by Oracle, South Africa places a significant emphasis of whether and how individuals collaborate as a team.

6.4 Recruitment effect

The effect of recruitment on non sales related performance produced a raw change of -.68 (-68%) (see Table 5); i.e. a decrease in sales revenue of R3,597,364.23 per employee per annum. The effect of recruitment on sales related performance produced a standardized effect size (*d*) of .87 (87%)

(see Table 6; i.e. an increase in sales revenue of R7,141,848.63 per employee per annum.

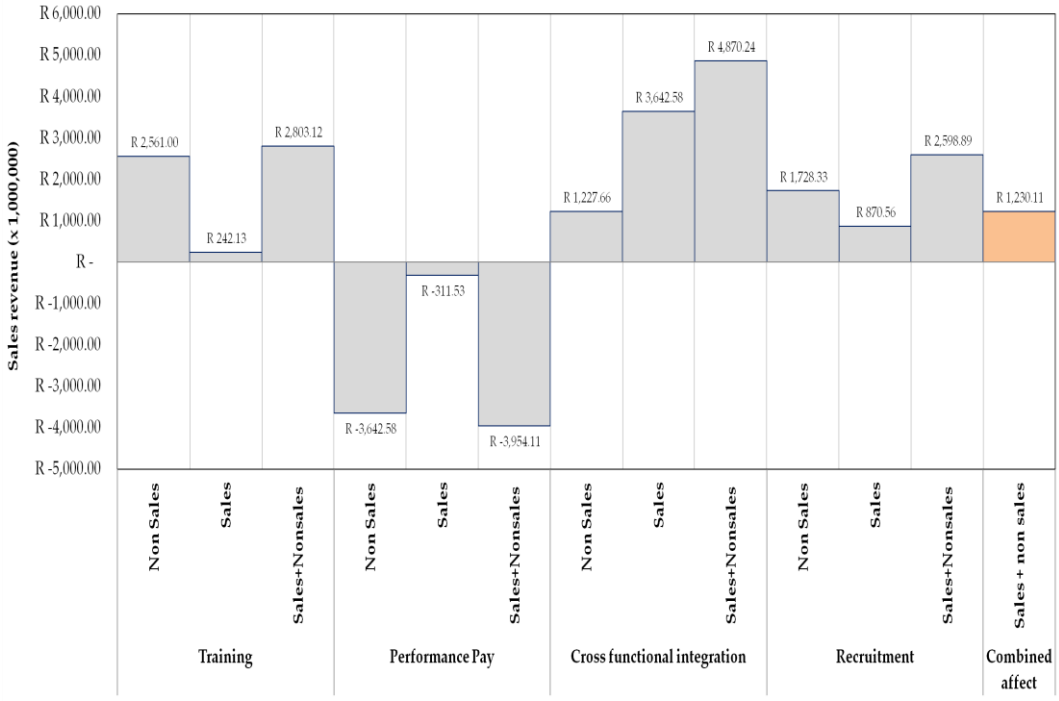
Recruitment and selection are some of the most critical human resources decisions an organisation can make (Sutherland and Jordaan 2004). Recruitment is the process of attracting and encouraging potential employees to apply for a position within an organisation, while selection is the process of making fair and relevant assessments of the strengths and weaknesses of applicants with the intention to hire them (Breaugh and Starke 2000; Boxall and Purcell 2003). Correct selection align the capabilities and inclinations of prospective applicants against the demands and rewards inherent in the organisation (Sutherland and Wocke 2011). Few organisations calculate the costs of selection errors (Carlson, Connerley and Mecham 2002). Schuler and Jackson (2005) held that selection errors lead to poor performance, which in turn lead to production losses. An added cost was the loss of customers due to their expectations not being met.

Within the context of Oracle's appraisal system, selection and recruitment does not form a fundamental part of the appraisal process, i.e. employees are not appraised based on whether they have been appropriately selected for their position within the organisation. However, inappropriate selection can lead to poor performance, hence a weak appraisal rating. The recruitment effect does have a significant impact on the sales related performance. It can be concluded that sufficient emphasis is being placed on any dysfunctional mismatch of organisational culture, values and industry specific criteria such as education and personal ambition.

6.5 Return on investment (ROI)

Despite performance pay having a negative effect on sales and non sales related performance, the combined valuation produced an after tax return on investment (ROI) of R1,230,105,532.00; equating to 141% (see Section 4.6). The revenue generated still proved to be a significant return on investing in HPWS. Hence, the results of this research are aligned to conventional theory, i.e. HPWS prove to be effective when the individual practices are implemented in "systems" or "bundles" (Huselid 1995; MacDuffie 1995; Youndt et al. 1996; Ramsay et al. 2000). Had management of this organisation solely focused on the effect of a single HPWS practice; in the context of this research; performance pay, the results would have appeared to be misconstrued as the effect of HPWS on sales alone was negative. However, the positive returns produced by the implementation of the remaining HPWS practices outweighed the negative sales outcome. Figure 5 below graphically illustrate the combined Rand value impact of each HPWS practice on sales in the context of this study.

Figure 5: Sales revenue generated by HPWS (Own source)



6.6 Suggestion for further research

This research has been confined to a single service and sales software organisation. Therefore the model cannot be extrapolated with confidence to a similar organisation, or an organisation operating in a different industry to yield similar results. Hence, it is proposed that the model with the associated data gathering techniques be applied to other organisations in similar and different industries to ascertain whether the model can be extrapolated. It therefore requires the collection and analysis of data from diverse industry contexts.

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Appendix 1: High Performance Work Practices, by Authors (Becker and Gerhart 1996)

Practice	Kochan and Osterman	Macduffie	Huselid	Cutcher-Gershenfeld	Arthur
Self-directed work teams	Yes	Yes		Yes	Yes
Job rotation	Yes	Yes			
Problem-solving groups/quality circles	Yes	Yes		Yes	Yes
TQM	Yes	Yes			
Suggestions received or implemented		Yes			
Hiring criteria (current job vs. learning)		Yes			
Contingent pay		Yes	Yes		Yes
Status barriers		Yes			
Initial weeks training for production, supervisory and engineering employees		Yes			
Hours per year after initial training		Yes	Yes		Yes
Information sharing			Yes		
Job analysis			Yes		
Recruitment from within vs. external to the organisation			Yes		
Attitude surveys			Yes		
Grievance procedure			Yes		
Employment tests			Yes		
Performance appraisal			Yes		
Promotion rules (merit, seniority, combination)			Yes		
Selection ratio			Yes		
Feedback on production goals				Yes	
Conflict resolution				Yes	Yes
Job design					Yes

Percentage of skilled workers in facility					Yes
Supervisor span of control					Yes
Social events					Yes
Average total labour cost					Yes
Benefits/total labour cost					Yes

Appendix 2: Survey Questionnaire

Constructs	Items	Scale	Research
Training	• Extensive training programs are provided for individuals in customer-contact or front-line jobs. • Employees in customer contact jobs receive regular training. • Formal training programs are implemented to teach new hires the skills they need to perform their jobs. • Formal training programs are offered to employees to increase their chances of promotability within the organisation. • I am given a real opportunity to improve my skills through training and educational programmes. • I am satisfied with the quality of training and development programmes available to me. • The organisation's training and development programmes largely address long-term objectives. • The training and development opportunities I have received enabled me to perform my job more effectively. • I am trained to perform other jobs in my department in order for me to help others.	Likert sliding scale: 0 - 100 (Strongly disagree <●> Strongly agree)	Sun et al. (2007) Tsai (2006)
Appraisals	• Performance is more often measured with objective quantifiable results. • Performance appraisals are based on objective quantifiable results. • Employee appraisals emphasise long-term and group-based achievement. • A performance appraisal allows me to know what is expected of me to do in my job.	Likert sliding scale: 0 - 100 (Strongly disagree <●> Strongly agree)	Sun et al. (2007)

Performance compensation	• There is a strong link between how well I perform my job and the likelihood of my receiving recognition and appraise. • There is a strong link between how well I perform my job and the likelihood of my receiving high performance appraisal ratings. • There is a strong link between how well I perform my job and the likelihood of me receiving an increase in salary. • There is a strong link between how well I perform my job and the likelihood of receiving a promotion. • I am satisfied with the amount of recognition I receive when I do a good job. • Generally, I feel that this organisation reward employees for a job well done. • The organisation's reward and incentive compensation scheme/package strongly emphasises employees' performance. • Salary increases are based on group performance rather than personal performance. • The compensation I receive for a job well done makes me want to work harder and serve the customer better.	Likert sliding scale: 0 - 100 (Strongly disagree <●> Strongly agree)	Tsai (2006)
Commitment	• I am willing to put in a great deal of effort beyond that which is normally expected in order to help this organisation to be successful. • I promote this organisation to my friends as a great organisation to work for. • I find that my values and that of the organisation are similar. • I am proud to tell others that I am part of this organisation. • I find that my values and that of the organisation are similar. • This organisation really inspires the very best in me in the way of job performance. • I am extremely glad that I chose this organisation to work for over others I was considering at the time I joined. • I really care about the fate of this organisation.	Likert sliding scale: 0 - 100 (Strongly disagree <●> Strongly agree)	Green et al. (2006)

	• For me, this is the best of all possible organisations for which to work.		
Participation	• I am encouraged and allowed to participate in important decision making. • I am encouraged and allowed to share my opinion when there is disagreement over a decision. • I am allowed to use my own judgment in problem solving.	Likert sliding scale: 0 - 100 (Strongly disagree <●> Strongly agree)	Coyle-Shapiro (1999)

Appendix 3: Delphi questionnaire

SURVEY TO CALCULATE RAND VALUE PERFORMANCE

Please think about the performance of your team members. In answering these questions, you would have to make some very difficult judgements – we realise they are difficult and that they are judgments or estimates. There is probably no way of absolute accuracy. Hence, your score/guess will be averaged with that of others to ensure that reasonable inaccuracies will not affect the decision you have made. Consider the quality and quantity of the output of the following:

- **Average performer**

Based on my experience, I estimate that the value to the company of the average sales performer is: R _____ per annum.

Please give a reason for the value chosen.

_____

_____

- **Low performer**

A low performing sales employee is one who is at the 15th percentile. That is, 85% of all sales employees perform better than the low-performing sales employees, and only 15 % perform the worst.

Based on my experience, I estimate the value to the company of a low performing sales employee is: R _____ per annum.

Please give a reason for the value chosen.

_____

_____

- **Superior performer**

A superior performing sales employee is one who is at the 85th percentile. That is, his/her performance is better than 85% of the total sales force, and only 15% perform better than superior.

Based on my experience, I estimate the value to the company of a superior performing sales employee is: R _____ per annum.

Please give a reason for the value chosen.

_____

_____

Appendix 4: Utility cost questionnaire

RECRUITMENT

How many interviews for new recruits do you conduct on average per month / annum.

How much time (in hours) on average do you devote per applicant?

PARTICIPATION

Inter-Group/LOB meetings: _____ hours per day / week / month

Direct Team meetings: _____ hours per day / week / month

Customer interaction meetings: _____ hours per day / week / month

TRAINING

How much time (in hours) on average do you devote to training/mentoring your direct reports? _____ hours per day / week / month.

APPRAISALS

How much time (in hours) on average do you devote to performance appraisals? _____ hours per day / week / month.

REMUNERATION

How much time (in hours) on average do you devote to direct report remuneration adjustments/analysis relative to performance? _____ hours per day / week / month.

COMMITMENT

How much time (in hours) on average do you devote to organisational value entrenchment? _____ hours per day / week / month.

TEAMWORK

How much time (in hours) on average do you devote to participating in teamwork practices? _____ hours per day / week / month.

TRAINING SPEND

Equate to the total secondary objective training spend data received by the Human Resource department.

PRODUCTION LOSS COST

Equate to the total amount of production loss time when employees are engaged in external training.

RECRUITERS COST

Equate to the total average time of the internal recruiter's annual cost.