



**STRATEGIC HUMAN RESOURCE MANAGEMENT AND**

**ORGANISATIONAL PERFORMANCE:**

**A STUDY OF THE UNIVERSITY ADMINISTRATORS IN CYPRUS**

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**A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE  
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A handwritten signature in blue ink, appearing to be 'CH', written over a faint horizontal line.

*Date.....12/10/2013.....*

## DEDICATION

*To my parents Anastasis and Anna, my wife Panayiota and  
my twin boys Anastasis and Nicolas*

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I would like to thank my Director of Studies Prof. Les Worrall for all of his guidance and support throughout my doctoral research program. His advice, comments and feedback on my work helped me to complete this dissertation. Thank you for everything.

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**ABSTRACT****STRATEGIC HUMAN RESOURCE MANAGEMENT AND ORGANISATIONAL PERFORMANCE: A STUDY OF THE UNIVERSITY ADMINISTRATORS IN CYPRUS**

Nowadays, organisations are seeking to understand how one of the last truly competitive resources, their human resources, can be managed for competitive advantage (Allen and Wright, 2006). As Wright and McMahan (2011) state, today an organisation's human resources have become more important than ever to their success. Consequently, a better understanding is needed of the role of HRM in creating better organisational performance. Although, human resource management practices have continued to be the focus of strategic HRM research (Combs et al., 2006), human capital has received little attention (Takeuchi et al., 2007), and human resource behaviours have received even less (Sun et al., 2007).

This study theoretically develops and empirically tests a conceptual model that describes how the system of HRM practices is likely to have an impact on organisational performance. Drawing on the Resource Based View, the Behavioural Perspective and the Social Exchange Theory, the study provides a conceptual framework consisting of five constructs through which the underlying mechanisms linking the system of HRM practices and organisational performance are examined. It is proposed that HRM systems improve organisational performance by strengthening human capital and employee attitudes and behaviours (employee commitment). Primary data was collected from public and private universities in the Republic of Cyprus.

The empirical analysis investigates the interrelationships between multiple independent and dependent variables that exist in the relationship between the perceived system of HRM practices and organisational performance. The study also intends to test the Resource Based View (RBV) and Social Exchange Theory at the higher education sector, by examining the level of human capital and employee commitment as mediating mechanisms through which a system of HRM practices affects university performance. To analyse the data and test the proposed hypotheses, Multivariate Analysis of Variance (MANOVA) and Structural Equation Modelling (SEM) were employed. Goodness-of-fit measures were utilised to assess the structural fit of the overall model. As the aim of the study was to test and investigate the structural model that explains the relationship between the five constructs, standardised path coefficients and the significance of the hypothesised relationships were utilised to test the postulated hypotheses in a causal diagrammatic form.

The results of the analyses revealed that the perceived system of HRM practices has significant positive effects on both, the level of human capital and employee commitment. In addition, the analysis indicated that the level of human capital has significant positive effects on employee performance, while at the same time employee commitment has also significant positive effect on employee performance. Moreover, the impact of employee performance on organisational performance was found to be positive and statistically significant. The analysis also revealed that the perceived system of HRM practices has a significant positive and direct impact on organisational performance. Finally, the relationship between employee commitment and organisational performance is significant and direct. Interestingly, the model indicates no significant direct impact between the level of human capital and organisational performance.

The current research can be considered as pioneering in the area of strategic HRM in higher education, since it demonstrates that the simultaneous use of the Resource Based View and the Social Exchange Theory can provide empirical evidence for examining the mediating role of organisational resources (the level of human capital) and employee attitude and behaviour (employee commitment) as well as employee performance at university-level education. In addition, the results of this thesis contribute to the existing body of research and knowledge and provide recommendations regarding the role of the perceived system of HRM practices as an organisational mechanism that may help universities to configure valuable bundles of committed administrative employees who are equipped with high level of knowledge, skills and abilities (KSA's).

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## List of Abbreviations

ANOVA:	Analysis of Variance
AMOS:	Analysis of Moment Structures
AVE:	Average Variance Extracted
CFA:	Confirmatory Factor Analysis
CFI:	Comparative Fit Index
CMB:	Common Method Bias
CR:	Critical Ratio
CUT:	Cyprus University of Technology
Df:	Degrees of Freedom
EU:	European Union
EUC:	European University Cyprus
GDP:	Gross Domestic Product
GGEE:	General Government Expenditure on Education
HE:	Higher Education
HEFCE:	Higher Education Funding Council for England
HEI's:	Higher Education Institutions
HPWP:	High Performance Work Practices
HPWS:	High Performance Work System
HR:	Human Resources
HRM:	Human Resource Management
IC:	Interconstruct Correlation
KSA's:	Knowledge, Skills and Abilities
MANOVA:	Multivariate Analysis of Variance
MBO:	Management by Objectives
MLE:	Maximum Likelihood Estimation
OUC:	Open University of Cyprus
PCFI:	Parsimony Comparative Fit Index
RMSEA:	Root-Mean-Square Error of Approximation
PMS:	Performance Measurement System
RBV:	Resource Based View
ROA:	Return on Assets
ROE:	Return on Equity
SEM:	Structural Equation Modelling
SHRM:	Strategic Human Resource Management
SIC:	Squared Interconstruct Correlation
SPSS:	Statistical Products and Service Solutions
UCEA:	Universities and Colleges Employers Association
UCY:	University of Cyprus
UNIC:	University of Nicosia
VRIN:	Valuable, Rare, Inimitable and Non-substitutable
$\chi^2$ :	Chi-square

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# Chapter 1: Introduction

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## **CHAPTER 1: INTRODUCTION**

The aim of this chapter is to provide an introduction to the study. It includes four sections. The first section introduces the topic, presenting the research theoretical background including the research problem. The second section states the aim, research questions and hypotheses of the study. The third section provides an overview of the research and country context of the study. Finally, the fourth section supplies an overview of the overall structure of the thesis.

### **1.1 Research background – The Problem**

Organizations today are under intense pressure to continually improve their performance. The increasingly fast pace of environmental and organisational change, globalization, technical advances and deregulation are the main trends that account for these competitive pressures (Becker and Gerhart, 1996; Dessler, 2000; Wright and Haggerty, 2005). In addition, the current economic crisis “has made the life particularly difficult to those involved in crafting business strategy and make difficult decisions affecting all sizes of businesses and the people who work within them” (Worrall and Cooper, 2012: 8).

Until recently, natural resources, capital, and technology used to be the main factors that led one nation's firms to have strategic advantage over those in another nation. However, in modern times, human resources have become the most important resource. According to Allen and Wright (2006), businesses are seeking to understand how one of the last truly competitive resources, their human resources, can be managed for competitive advantage. With the dramatic changes in the economic environment and corporate strategy, the world of human resource

management (HRM) is changing more rapidly than ever before. Therefore, a better understanding is needed of the role of HRM in creating better organisational performance.

In recent years, academics and scholars have devoted a great deal of attention to examining the linkage between HRM practices and organisational performance. Based on current research evidence, it is becoming increasingly clear that the HRM system is one important component that can help an organisation become more effective and achieve competitive advantage (Becker and Huselid, 1998). According to Wiggins and Ruefli (2002), competitive advantage is a capability (or set of capabilities) or resource (or set of resources) that gives a firm an advantage over its competitors which leads to higher relative performance. The role of HRM in achieving competitive advantage through improving organisational performance is becoming increasingly important as the more traditional sources of competitive advantage become less important (Pfeffer, 1994). During the last two decades, there has been a growing academic and practitioner interest in Strategic HRM and its relationship with organisational performance.

Strategic HRM researchers have devoted considerable effort towards demonstrating that the ways people are managed, particularly through HRM practices, have strong empirical relationships with organisational performance (Delery and Doty, 1996; Huselid, 1995; MacDuffie, 1995). This has brought to the surface a variety of performance-enhancing HRM practices to improve competitiveness in the global marketplace (Delaney and Huselid, 1996). However, according to Bowen and Ostroff (2004), a pivotal issue remains unanswered: How does HRM contribute to firm performance? Currently, there is a lack of understanding of the processes and

mechanisms by which HRM directly and indirectly contributes to organisational performance and this thesis seeks to address this gap in our knowledge.

Most studies that have examined the contribution of human and organisational capital to firm performance have focused on the influence of specific human resource practices and/or the alignment of these practices with the firm's strategy (Delery and Doty, 1996). Huselid and Becker's (1998) work has demonstrated that a system of HRM best practices – a high performance work system (HPWS) – increases financial performance regardless of the firm's strategic goals. Other researchers (Delery and Doty, 1996) contend that the relationship between best practice and performance must be contingent on a fit of the practices within the HRM system as well as a fit with the firm's strategy. The overwhelming conclusion of these studies is that superior alignment improves performance (Hurwitz et al. 2002). However, Becker and Gerhard (1999: 779) indicate that “given the importance and complexity of the issue, this body of work is relatively small and most of the key questions are sorely in need of further attention”. Moreover, “the unknown reliability of measures of HRM, the paucity of studies with adequate research designs, and the inconsistent results both across and within studies is troublesome” (Wall and Wood, 2005: 453). Thus, strategic HRM and performance research suffers due to these methodological weaknesses.

In addition, studies have shown that the impact of HRM practices or systems on performance mainly depends on employees' perception and evaluation of these practices (Boxall and Purcell, 2008; Wright and Nishii, 2007), which implies that psychological mechanisms such as perception and employee reactions can be mediators of the HRM and performance relationship. Boxall and Purcell (2008) also emphasize the importance of the individual level in explaining the relationship between HRM

practices or systems and organisational performance. Therefore, not only HRM practices or systems should be aligned with the organisational level, but also the employee interests need to be aligned with the organisation. Integrating individual level mechanisms in the HRM and performance relationship can make a valuable contribution to strategic HRM (Wright and Boswell, 2002). However, employee interests and perceptions of the system of HRM practices are often ignored in HRM and performance models (Boxall and Purcell, 2008).

HRM practices or the HRM system communicate important goals and desired employee behaviours from the organisation to the employee (Guzzo and Noonan, 1994; Rousseau, 1995); these can be seen as “signals” and are interpreted as such by individual employees (Den Hartog et al., 2004: 563). The signals of the HRM system are, however, often not interpreted similarly or reacted to in a similar way by each individual because of differences in experience, values or preferences (Den Hartog et al., 2004). “All HRM practices communicate messages constantly and in unintended ways, and messages can be understood idiosyncratically, whereby two employees interpret the same practices differently” (Bowen and Ostroff, 2004: 206). On a practical/managerial level, these differences have important implications. It is imperative for a system of HRM practices to take into consideration employee reactions and interpretations, however at the same time these messages should be communicated and transfused to employees in an effective way, taking into consideration the idiosyncratic and individual personality characteristics and differences of employees.

In Wright and Nishii’s (2007) model, the effects of HRM practices on employee attitudes and behaviours occur via employee perceptions of HRM practices. Not the HRM practices as intended, but rather how employees experience HRM practices is

supposed to have a strong effect on employee outcomes. These perceptions might also affect employee performance (Den Hartog et al., 2004). Although perceived HRM practices are proposed to have a strong association with employee outcomes, not many researchers have actually tested this relationship. Instead, research has focused on the effects of actual HRM practices or systems on attitudes and behaviours or on the role of perceptions of a single specific practice rather than a combination of practices. To take into account these differences in interpretations of HRM practices, this study focuses on employee perceptions of the system of HRM practices.

A number of authors have conducted research analysing the effect of HRM practices or systems on organisational performance on a conceptual and empirical level. In analysing the impact, each of the linkage models complements the others by adding constructs, variables or relationships. Despite different approaches, most studies conclude that under specific conditions and in certain combinations, HRM has a positive effect on performance, even though the size of the effects has often been found to be relatively minor (Combs et al., 2006; Guest 2011; Jiang et al., 2012; Mayrhofer and Larsen 2006; Paauwe 2009). Yet, despite such evidence, the task of persuading employers of the wisdom of adopting such policies and practices appears to be as much of an uphill battle as ever (Storey 2007). Lengnick-Hall et al. (2009) argue that until the facilitating and enabling role of HRM is understood and links are made between HRM and organisational outcomes, HRM will continue to be seen as an administrative function vulnerable to financial constraints in difficult times.

The major debate in the area of HRM is how to explain the links between HRM practices/system and organisational performance. How HRM influences firm performance; how this process works; which HRM practices or systems are related to

organisational performance; and what are the major factors affecting the effectiveness of HRM in organisations; emerge as issues that need further attention. The “black box” of processes that occur between developing an HRM system and firm performance has still not been resolved (Boselie, Dietz and Boon, 2005). Researchers must develop a more specific theoretical story that describes specific mediating processes (Wright and Haggerty, 2003). This thesis addresses that challenge.

With major changes and challenges in the business environment, organisations are realizing the importance of human resources for achieving sustainable competitive advantage. This has given rise to the ideology that Human Resource Management needs to be aligned to the Strategic Management process of the organization. The integration of the two fields is labelled as Strategic Human Resource Management (SHRM). Management scholars have suggested that there is a need to explore the relationship between HRM and strategic management more extensively (Boxall and Purcell, 2003, 2008; Guest, 1991; Wright and Snell, 1998). The need to integrate HRM with the strategic management process led to the emergence of SHRM. The concept of SHRM became popular in the 1980s with the development of two models: the Michigan model and the Harvard model that proposed integrating strategy and HRM. Fombrun, Tichy and Devanna (1984) through their Michigan model emphasised the importance of designing HRM strategies to suit organisational strategy while Beer, Spector, Lawrence, Mills and Walton (1984) in their Harvard model, advocated the need for a more comprehensive and strategic perspective regarding HRM.

Several scholars (Dyer, 1985; Fombrun, et al., 1984; Schuler and Jackson, 1987) argue that the basic premise underlying SHRM is that organisations adopting a particular

strategy require HRM practices suiting that strategy. These scholars tend to emphasise its implementation role. On the other hand, several other scholars (Becker and Huselid, 2006; Combs et al., 2006) believe that in order for strategic HRM to be effective, human resource practices must be effectively integrated with all phases of the strategic planning process. Boxall and Purcell (2003: 41) state, “HRM should play a major role in improving the quality of strategic management”. Despite differences in definitions, most authors (Huselid, Jackson and Schuler, 1997; Wright, 1998) agree that the essence of the SHRM lies in gaining competitive advantage by managing human assets through an integrated, synergistic set of HRM practices that both complements and promotes the overall organisational strategy.

SHRM is largely concerned with “integration” and “adaptation”. For example, Storey, Wright and Ulrich (2009) suggest that an effective written and verbal communication policy is needed to clearly communicate critical messages for strategy implementation and success. In addition, the authors argue that to help shape a company’s culture that is consistent with the requirements of the external customers, the business strategy and the employees, the design and delivery of HRM practices that translate and enforce the culture into the right employee attitudes and behaviours are a necessity (Ulrich et al., 2007; Storey et al., 2009). The SHRM purpose is to ensure that HRM is fully integrated with strategy, that HRM policies are coherent and, that HRM practices are accepted by line managers (Schuler, 1992).

Despite the importance of SHRM, there is lack of literature in the Cyprus context. In Cyprus, research in HRM (Stavrou-Costea, 2002, 2005; Hoppas and Ellinas, 2004) has focused more on “traditional” HRM rather than on the interaction between HRM and strategy. The use of the term “traditional” is meant to indicate that the attention is

focused on administrative and operational issues rather than strategic issues. More recently, dramatic changes have been witnessed in terms of changing organisational mindsets and HRM practices in organisations in Cyprus. The accession of Cyprus in the European Union (2004) and the Eurozone (2008) has signalled a wave of deregulations and the abolishment of monopolies and oligopolies, which has resulted into a change and transformation of business practices and culture in Cyprus. These changes call for a better understanding of how organisational performance can improve. During the last decade, there has been a noticeable shift towards valuing HRM in Cyprus organizations as they want to become strategy driven (Stavrou-Costea, 2005; Hoppas and Ellinas, 2004). However, until today, there has been no research study in the area of SHRM or/and HRM and performance in the Cyprus context.

Higher education institutions, like any other organisations nowadays, are under increasing pressure to improve their competitiveness (Bui and Baruch, 2011). They exist in a rapidly changing environment and therefore university strategies must be conceived accordingly (Shattock, 2012). In addition, higher education institutions are faced with significant budget constraints as a result of the current economic crisis and from governmental and societal demands for accountability (Decramer, et al., 2012). Furthermore, European higher education institutions have been subjected to considerable reforms in response to societal developments of democratisation, decentralisation and budget constraints (Smeenk et al., 2009). Therefore, universities today are in need of management practices that will help them increase their effectiveness and efficiency and become more competitive. The role of HRM in increasing effectiveness and efficiency by improving employee performance and in

achieving competitive advantage by improving institutional performance is becoming progressively more important.

Accordingly, this research is a response to calls (eg. Boxall et al., 2011; Guest, 2011; Paauwe, 2009) for developing a conceptual model, on a theoretical and an empirical basis, that will examine the relationship between a system of HRM practices and organisational performance by taking into consideration mediating variables. The researcher was motivated by the fact that an empirical study of SHRM, and more specifically, an empirical study examining the relationship between the system of HRM practices and organisational performance, will help broaden our understanding of the concept and its practice. Thus, the objectives of the current thesis are to develop and empirically measure a conceptual framework in the Cyprus context. On the basis of an extensive literature review, five constructs of SHRM were identified and developed. The conceptual model was empirically tested in the Cyprus higher education system.

## **1.2 Aim, research questions, and hypotheses**

This study aims to enhance our understanding of the procedures for organising and evaluating human resource management practices in higher education institutions in Cyprus. It also attempts to assess the effectiveness that specific human resource management practices have on organisational performance. The study proposes a system of HRM practices which includes employee selection; employee training and development; performance management; compensation and incentives; and, employee involvement and participation.

The main argument of this research as informed by literature (eg. Appelbaum et al., 2000; Lepak et al., 2006), is that a consistent and coherent system of HRM practices can improve university performance by:

- a) Increasing administrative employee knowledge, skills and abilities (KSAs);
- b) Promoting positive attitudes and increasing administrative employee commitment;
- c) Providing administrative employees with expanded opportunities and responsibilities to fully utilise their KSA's and to exert their commitment.

The main advantage of the high performance work practices is that they create the conditions for administrative employees to have the skills they need, the opportunity to utilise those skills effectively, and the motivation and commitment to do so.

Nowadays, much of the debate about the contribution of HRM to organisational performance in the literature is evolving around “high performance work systems” (HPWS). The term has originated in the United States by the industrial relation researchers as a response to the decline of competitiveness in the manufacturing sector. Later, HPWS became part of a larger agenda concerned with “the human elements of competitive performance” in both manufacturing and services (Boxall, 2012: 171). HPWS focused on how workplace/systems changes could improve performance. However, a key premise set by the literature is that HPWS depend on positive responses by employee.

Based on the recent literature on SHRM, the resource-based view (RBV) and the behavioural perspective (Social Exchange Theory) and the major conceptual models on

HRM and performance (Purcell and Kinnie 2007; Wright and Nishii, 2006; Becker and Huselid, 1998; and Wright and McMahan, 1992), a conceptual framework and operational model were developed and are presented in Chapter 3. The integrated framework and operational model were developed in order to shed light on various sub-processes (i.e. mediating mechanisms such as employee perception of HRM practices, human capital and HR attitudes and behaviours such as employee commitment) through which a system of HRM practices impacts organisational performance.

Given the objective of the study, focusing on both, the resource-based view and the behavioural perspective (social exchange theory), this model provides a framework for understanding the potential firm performance implications of an organisation's human capital as well as the attitude and behaviour (commitment) of its employees. In addition, understanding the perceived role of a bundle of HRM practices (Wright and Nishii 2007) in these relationships is critical as the system of HRM practices is the primary way to influence the level of human capital that organisations possess and to aggregate employee attitudes and behaviours that are exhibited for organisations. Thus, the focus, in the model, is on the mediating role of employees and their reactions on the link between the system of HRM practices and organisational performance.

As stated previously, the aim of this thesis is to make a novel contribution to knowledge and practice concerning the relationship between the system of HRM practices and organisational performance by developing a better understanding of the role of various mediating variables. This aim can be translated into the following key research questions:

1. *Which are the processes/mechanisms through which a perceived system of HRM practices impacts organisational performance?*
2. *What are the mediating roles of human capital, employee attitude and behaviour (employee commitment) and employee performance on the relationship between a perceived system of HRM practices and organisational performance?*

The research questions of this thesis aim to investigate the causal relationship between the system of HRM practices, human capital, employee commitment and employee and organisational performance. The research questions are subsequently examined through the development of an operational framework that is the transformation of the research questions into hypotheses and the selection of the appropriate tools and techniques for their empirical examination. In the same vein, after the initial evaluation of the content validity of the research questions alongside with an examination of their soundness and tenability, a series of eight research hypotheses was developed through which the conceptual framework and operational model could be tested. The hypotheses are outlined in Chapter 3.

### **1.3 Research context**

The full membership of Cyprus in the European Union (EU) has signalled a need for organisations to recognize the critical importance of managing human resources as a strategic part of their operations. However, to date, the alleged advantageous outcomes of strategic HRM practices/systems have not been fully realized by Cypriot organisations (Hoppas and Ellinas, 2004; Stavrou-Costea, 2002, 2005). Organisations in Cyprus need to develop a better understanding of how they can utilise their human resources more effectively to become more competitive within the EU context (Stavrou-

Costea, 2002, 2005). It should be noted that the level of competitiveness of Cypriot firms is very low (72.6 % of the EU average/and ranking at 17 out of the 27 countries) when compared to other EU countries and firms (World Economic Forum, 2012). From a managerial perspective, there is a clear need to conduct studies within Cyprus business organisations to explore how productivity and organisational effectiveness can be improved and to develop an empirically supported understanding of the mechanisms by which HRM practices can be designed and implemented to support improved organisational performance in the Cyprus context.

An examination of the relevant literature reveals that very few studies have been conducted to investigate HRM in Cyprus. In addition, an extensive search of the literature exposes the absence of studies in the area of HRM and performance conducted on the island. Particularly, the area of higher education (University-level education) has been totally neglected. A review of the literature has also revealed that many of the studies on HRM and performance have been conducted in an Anglo-American context and often in manufacturing (Schneider et al., 2005). In this context, there is a clear lack of empirical research on the Cyprus' business environment and on the public and private higher education sectors. This thesis aims to fill this gap.

The current study involves institutions which provide university-level education in the Republic of Cyprus. The research sample consists of all administrative employees currently working at the following universities: namely, the University of Cyprus; the Cyprus University of Technology; the Open University of Cyprus; the University of Nicosia; and, the European University of Cyprus<sup>1</sup>.

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<sup>1</sup> Unfortunately, one university (Frederick University) has not endorsed this research study and thus it was not possible to obtain research data.

Higher education organisations operate within the service sector of the economy, an environment that is going through significant transformation following the accession of Cyprus to the EU, to the Eurozone and the recent economic challenges posed by the financial crisis and the collapse of the banking sector. As an immediate result of the current economic crisis, the government decreased the educational budget by 5% for year 2011 (Eurydice Report, 2012). The service sector is the backbone of the Cypriot economy, accounting almost 80 % of the Gross Domestic Product (GDP). At the same time, 76.9 % of the total employment population is employed in the service sector businesses (Cyprus Government, Department of Statistics, 2013).

Internationalisation, deregulation, increased competition and new forms of employment are among the changes that the service sector is currently experiencing. In addition, based on the Productivity Analysis Report (2013), the Education sector has been losing in competitiveness between 2005 and 2010 with the real unit labour cost increasing sharply relative to the Eurozone average, while the labour productivity of the sector remained stable during 2002 and 2010.

## **1.4 Structure of the Thesis**

The thesis is organised into the following six chapters:

### **Chapter One – Introduction**

This chapter provides an overview of the thesis in four sections. The first section supplies an introduction to the topic and presents the theoretical background including the research problem. The second section states the aim, research questions and hypotheses of the study. The third section provides an overview of the research and

country context of the study. Finally, the fourth section offers an overview of the overall structure of the thesis.

## **Chapter Two – Literature Review**

This chapter provides an extensive overview and discussion of the relevant literature. The theoretical foundation of this thesis is analysed and discussed. The chapter presents previous studies in the field of human resource management practices, human capital, employee commitment and employee and organisational performance. A detailed analysis of the strategic human resource management (SHRM) literature, the major SHRM approaches, the resource-based view, the behavioural perspective (including the social exchange theory), organisational performance, the higher education sector, the higher education in Cyprus and finally, the SHRM in Higher Education (university-level education) is presented.

## **Chapter Three - Development of Conceptual Model and Hypotheses**

Chapter three starts with an overview of the theoretical context in which the current research has been conducted. Then, the research hypotheses are developed and the theoretical / conceptual model of the study is presented.

## **Chapter Four - Research Methodology**

Supplying a detailed description and justification of the methodology that has been followed, this chapter presents an extensive investigation of the methodological issues concerning this study and the justification of the statistical methods and techniques used. The chapter sets out the methodological rationale and steps that needed to be followed in order to empirically examine the research questions and proposed hypotheses. It starts with the research paradigm of the thesis. The second section

identifies the research setting, which is university-level education in Cyprus. The third section presents the sample population and sampling frame, specifically all administrative employees in the University-level education in Cyprus. The fourth section describes the research design and procedures while the fifth explains the operationalisation of the construct and measurement. The following two sections examine the process for assessing the reliability and validity of the research instrument. The seventh section deals with the selection of data analysis techniques and describes the data analysis process.

### **Chapter Five – Empirical Analysis and Results**

In chapter five the analysis of the data is performed and the empirical results of this thesis are presented. First, the demographics of the study are presented, followed by the descriptive statistics. Then, multivariate analysis of variance (MANOVA) is presented. The next part depicts the examination of the relationship between the system of HRM practices and university performance via the application of structural equation modelling (SEM) - including the evaluation of multivariate normality of data, the measurement models evaluation and the assessment of common method bias. The last two parts include hypotheses testing and mediation analysis.

### **Chapter Six – Discussion and Conclusions**

The main purpose of this chapter is to summarise and further discuss the findings of the study in relation to literature and other similar studies. It also presents the contributions and limitations of the study. Finally, the chapter provides the main recommendations and conclusion of the thesis as well as directions for further future research.

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# Chapter 2 Literature Review

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## **2.1 Introduction**

This chapter provides an overview and synthesis of the key theories and themes of the current thesis: the strategic human resource management (SHRM), the major SHRM approaches (contingency, universalistic, configurational and contextual), the resource-based view, the behavioural perspective (the social exchange theory), organisational performance, the higher education sector (the university environment and the professional / administrative staff), the higher education in Cyprus and finally, the SHRM in Higher Education (university-level education).

## **2.2 Overview of Strategic Human Resource Management (SHRM)**

The idea that the human resources of a firm can play a strategic role in the success of an organisation has led to the formation of the field of research often referred to as strategic human resource management (SHRM) (Allen and Wright, 2006). This relatively young field represents an intersection of the strategic management and human resource management (HRM) literatures (Boxall, 1998; Boxall and Purcell, 2008). Wright and McMahan (1992) define strategic human resource management as “the pattern of planned human resource deployments and activities intended to enable the firm to achieve its goals” (1992: 298). However, the field of SHRM differs from traditional HRM research in two important ways. Firstly, SHRM focuses on organisational performance rather than individual performance; and secondly, it emphasises the role of HRM systems as solutions to business problems rather than individual HRM practices in isolation (Becker and Huselid, 2006).

The current thesis endorses the above features of SHRM by developing, theoretically and empirically, a conceptual model that examines the relationship between a system of HRM practices and organisational performance.

The concept of strategic human resource management has played a key role in management research and practice for the last three decades (Boxall and Purcell, 2011). SHRM generally focuses on how human resource management (HRM) can add strategic value and contributes to the organisation's success. According to SHRM, people are a key resource and a critical element in an organisation's performance. The main rationale for strategic HRM is that by integrating HRM with the organisation's strategy and by applying particular sets (systems) of human resource management practices, employees will be managed more effectively, individual and organisational performance will improve, and, consequently, success will follow (Holbeche 2001; Farnham 2010).

The relationship between strategic human resource management and organisational performance is based on the assumption that committed employees produce better results because they are more adaptable/flexible; they are willing to "go the extra mile" because they are more loyal to the organisation (Becker and Huselid, 2006; Storey 2007). At the same time, HRM is supposed to contribute to the creation of added value by ensuring that employees with the required competences and levels of motivation are available to the organisation and by stimulating enhanced employee performance. Therefore, as Storey (2007) states, it is assumed that human capability and commitment distinguish successful organisations from the rest.

Strategic management research received special attention particularly in terms of its relationship with the performance of the organisation and its role in decision-making (Grant, 2003). The literature distinguishes between two levels of strategic alignment: the alignment of an organisation's strategy to external environment (external alignment) and the alignment between the strategy and the organisation itself (internal alignment). The latter is concerned with internal variables such as organisational structure, management systems, organisational culture, leadership style and human resources (Boswell, et al., 2006; Khadem, 2008). Employee alignment is an important concept in the field of strategic management (Venkatraman and Camillus, 1984; O'Reilly et. al., 2010) because if employees clearly perceive what the strategy is and how they can contribute to its realisation, they will likely adopt the appropriate behaviours and take the right actions in line with the interests and needs of the organisation (Boswell et al., 2006; Beehr et. al., 2009). Gagnon, Jansen and Michael (2008) identified several antecedents to employee alignment, such as, the communication of objectives to employees, the commitment of employees to the organisation, and the acquisition of strategic knowledge by employees.

Strategic integration of HRM refers to the organisation's ability to integrate HRM into its strategic plans (vertical integration) and to ensure that the various aspects of HRM cohere (horizontal integration) (Schuler and Jackson, 1987; Boxall and Purcell, 2008; Beehr, et al., 2009; Armstrong, 2010). It is assumed that there is a close link between HRM, organisational strategies and the external environment. Therefore, in order to maximise the HRM contribution, HRM practices need to be coordinated and aligned (Delery 1998; Boxall and Purcell, 2008).

### **2.3 Major SHRM Approaches (Contingency, universalistic, configurational and contextual)**

The field of SHRM is characterised by its "significant diversity" (Boxall and Purcell, 2000), and lacks a central approach or common direction. The literature in SHRM takes a variety of perspectives to reveal and demonstrate the value of HRM to organisations. In general, the effectiveness of HRM on organisational performance can be explained and summarised along four lines: the universalistic, contingent, configurational and contextual modes (Jackson et al., 1989; Brewster, 1995, 1999; Delery and Doty, 1996; Alcazar et al., 2005). Research in SHRM has typically been targeted with establishing the preeminence of one perspective over another with little attention given to the potential complementary nature (Youndt et al., 1996) of the various SHRM models. However, it appears that expanding and linking its "competing" perspectives into one coherent body may best serve the field of SHRM (Becker and Gerhard, 1996; Guest, et al., 2000).

These four "modes of theorising" represent four different approaches to the same research question, each of them emphasising a specific dimension of the reality in SHRM (Alcazar et al., 2005). The contingency and configurational approaches both theorize that organisations will benefit from particular alignments or "fits" of HRM. The universalistic approach advocates that there is a single set of universally applicable HRM best practices which are linked to organisational advantage while the contextual approach maintains that, as social institutions, organisations need to integrate themselves into the social context they operate.

### **2.3.1 The Contingency Perspective**

A central idea of strategic human resource management is that there should be vertical linkage between HRM practices and processes and the organisational strategy of the firm. The strategic posture of the organisation will influence the style and approach of human resource activity. Strategies vary, and a number of researchers have investigated how HRM practices vary with differences in their strategic approach (Stiles and Kulvisaechna, 2004: 13). According to Miles and Snow (1984), Schuler and Jackson (1987), Youndt et al. (1996), HRM practices need to be aligned with the organisation's strategy to have their full effect on performance. While many researchers comment that HRM practices need to be aligned with an organisation's strategy, few discuss how this alignment can be achieved.

Baird and Meshoulam (1988), in an early SHRM theoretical piece, describe the need for organisations to "fit" their HRM practices internally and externally. Internal alignment is taken to simply indicate consistency among HRM practices. External fit is indicated by HRM practices matching the organisation's stage of development. "By understanding how an organisation changes as it grows, one can understand how HRM must change" (1988: 116). Therefore, the stage of development is linked to strategy (Wright and McMahan, 1992), and Bair and Meshoulam's requirement for external fit expresses the need for HRM to fit with organisational competitive strategy.

The desirability of aligning HRM with the organisation's competitive strategy is directly presented by Lengnick-Hail and Lengnick-Hall (1988). They provide four reasons why such an alignment is desirable. They state that: (1) it provides a broader range of solutions for organisational problems; (2) it ensures human and other resources

are given consideration when setting goals; (3) it ensures some direct consideration of the people of the organisation; and, (4) it reduces the potential of resource underutilisation by directly incorporating the human resource system and the human capabilities of the firm in its strategy.

Wright and McMahan (1992) also advocate the role of fit. Their frequently cited definition of SHRM, "the pattern of planned human resource deployments and activities intended to enable an organisation to achieve its goals," is followed by "this definition highlights the two important dimensions which distinguish it from traditional HRM" (1992: 298). These two dimensions are a vertical and horizontal fit. Consistent with Baird and Meshoulam (1988), vertical fit is presented as the alignment of HRM with the "strategic management process" of the organization. Horizontal alignment is seen as practice of coordination or congruence (see also Huselid, 1995 and McDuffie, 1995).

While the two types of fit are presented as desirable, typically only one, the vertical, is emphasised in the discussion of the contingency perspective of SHRM. Youndt et al., (1996) define the contingency perspective as positing "that an organisation's strategic posture either augments or diminishes the impact of HR practices on performance" (1996:837). Similarly, Delery and Doty (1996) advocate that the contingency perspective requires that to support organisational effectiveness, HRM practices must be aligned with other elements of the organisation; however they only provide strategy as an example. Capitalising on the above ideas/theories, the current thesis attempts to fill these gaps by adding new constructs (perceived system of HRM practices) and

mediating variables (human capital, employee commitment and employee performance) in SHRM.

Holbeche (2001) states that the contingency perspective proposes that for any organisational strategy, there will be a matching HRM strategy and a corresponding “bundle” of HRM policies. Although there is still lack of evidence that this strategic integration will automatically lead to improved performance, a key research finding by Delaney and Huselid (1996) is that implemented HRM policies and practices depend on the context and need to be internally consistent and complementary in order to obtain the best effect (Holbeche, 2001).

Lepak and Snell (2002) identify four configurations of HRM practices: commitment, productivity, compliance and collaborative-based HRM systems that were used for different groups of employees within organisations depending on their relative strategic value. Although strategy has been the dominant contingency focus, other contextual variables such as industry sector (Datta, Guthrie and Wright, 2005) and technology (Snell and Dean, 1992) have been found to exert an important influence on the design and/or effectiveness of various HRM systems. Research on the perspective is generally supportive, but inconsistent, particularly in the determination of strategy and HRM practices integration.

Whereas vertical integration of strategic HRM emphasises the importance of HRM alignment with the strategy and its external context, horizontal integration underlines the fit between different HRM practices and the degrees to which practices support or contradict each other (Farnham, 2010). Internal fit implies the adoption of a holistic and

synergistic approach to the development of HRM practices. Horizontal integration also assumes an HRM fit to organisations' internal resources, both on the micro and macro levels (Armstrong, 2010). Horizontal integration or internal fit may be achieved through the use of shared processes such as competence management or performance management, which provide a common framework for different HRM practices (Armstrong, 2010). Strategic horizontal integration means not only coherence between HRM practices but also fit between internal resources and opportunities. Perhaps in frustration with the lack of clear progress within the contingency perspective, a rival perspective, the universalistic one, has emerged.

### **2.3.2 The Universalistic Perspective**

A second perspective in strategic human resource management is the idea of "best practice". This view emphasises the need for strong consistency among HRM practices in order to achieve effective performance.

The universalistic perspective states that some HRM practices "are always better than others and that all organisations should adopt these best practices" (Delery and Doty, 1996: 803). Further, Delery and Doty indicate that "universalistic arguments are the simplest form of theoretical statement in the SHRM literature because they imply that the relationship between a given independent variable and a dependent variable is universal across the population of organisations" (1996: 805). In the HRM field, two steps are required to develop universalistic predictions: to identify important strategic HRM practices and to present the arguments that relate the individual practices to organisational performance (Delery and Doty, 1996).

The universalistic perspective presents a very simple but extremely powerful model of SHRM; it has been said to be responsible for the field's rejuvenation and is presented as its future (McMahan et al., 1998). Delery and Doty (1996) state that these "strategic HRM practices" are ones that can either be theoretically or empirically related to overall firm performance. Their view that there is a "growing consensus" over what these practices are, indicates that there remains some level of disagreement over what is considered to be the set of practices which will universally lead to improved performance. This lack of agreement may be seen in the usage of various umbrella terms within the field's literature: the term's best practices, high involvement, high involvement work practices, high performance work practices, innovative HRM practices and participative management are used interchangeably but rarely defined with clarity. Although, there is a disagreement to precisely define a single set of best practices; this has not prevented the association of best practices to come to favourable outcomes as many studies have supported their deployment.

As mention earlier, according to the best practice of SHRM, all firms should adopt a number of human resource management (HRM) practices as a "bundle", assuming that the practices work in a mutually complementary manner. However, one of the problems with this model is that different scholars have nominated varying combinations of practices for inclusion in the bundle (Wood, 1999).

Huselid (1995), in his seminal work on "high involvement" HRM found organisational benefits associated with the deployment of HRM "best" practices, in a multi-industry study. He examined the use of thirteen practices within the areas of selection, performance appraisal, incentive compensation, job design, grievance procedures,

information sharing, attitude assessment, labour-management relations, intensity of recruiting, annual average training time and promotion methodology. Huselid concludes that organisations using high involvement HRM enjoy improved short and long-term financial performance. This outcome is driven by reductions in turnover and/or improvements in productivity, which he also associated with the deployment of high involvement work practices.

MacDuffie (1995) investigated the use of "innovative" or "high commitment" HRM practices in a worldwide sample of automobile assembly plants. Among the variables he examined were HRM policies aimed to promote motivation and commitment. The specific HRM practices examined concerned the hiring criteria used for three distinct groupings of employees, the extent that compensation was contingent on performance, status barriers between management and workers and the level of training provided to both new hires and existing employees. MacDuffie found that innovative HRM practices contribute to increased productivity and quality not independently but only when part of an internally consistent system. He also found that the benefit of innovative HRM systems is maximized when it is deployed in an environment of flexible production systems.

Delery and Doty (1996) present seven practices, which they deem will always be positively related to firm performance. These practices are internal career opportunities, formal training systems, appraisal measures, profit sharing, employment security, voice mechanisms and job definitions. In their study of organisations in the banking industry, they conclude that there is "strong support" for the universalistic perspective as they found that several of their "best practices" individually, as well as the set of seven

practices considered in its entirety, were positively related to firm return on equity (ROE) and return on assets (ROA).

Youndt, Snell, Dean and Lepak (1996), using a sample of ninety-seven metal working plants, examined the relationship between HRM practices, manufacturing strategy and perceptions of organisational performance. The HRM dimensions examined were staffing, training, performance appraisal and compensation. HRM survey responses were combined in an additive fashion into two HRM indices, (administrative and human capital enhancing), with the latter indicating high involvement HRM. Their results indicated a positive main effect of a human capital system on organisational performance. Further analysis, however, has shown an interaction between HRM and manufacturing strategy, indicating a significant relationship between high involvement HRM and a single manufacturing strategy (quality).

Huselid and Becker (1997) found that financial benefits were associated with the deployment of high involvement work practices. However, they also found that "context" fit increased the benefit of high involvement deployment. The latter finding suggests that the maximum benefit of high involvement work practices is possible only when these practices are deployed according to the principles of the contingency perspective. More specifically, the extent to which these practices have been implemented effectively, the fit among HRM practices, and the fit between those practices and the firm's strategic objectives offer more benefits of high involvement work practices (firm-specific "idiosyncratic" contingency - Huselid and Becker; 1996; Becker and Gerhart, 1996).

In a discussion of fit, Delery (1998) appears to lessen his support for the universalistic approach to SHRM. He presents, among other concerns, the likelihood that HRM practices may act in a synergistic manner, that HRM practices may have a direct or interactive effect on the people of the organisation and that the influence of HRM on organisational performance may be moderated by other factors. These suggestions are consistent with the contingency and configurational approaches to SHRM.

Gant, Ichniowski, and Shaw (2002) present a more complex rationale for the deployment of innovative HRM practices. They submit that differences in social capital, structure of interactions and information sharing practices of an organisation will determine the appropriateness of high involvement practices and that moving from one HRM system to another "would involve a disruptive overhaul in the entire network of interactions among workers at the plant" (2002: 298). They conclude that while firms implementing innovative HRM practices experience improved performance, their adoption has been limited, suggesting that these practices may be more appropriate for some settings than others.

Attempting to conceptualise and understand the specific mechanisms through which HRM practices influence performance, Theriou and Chatzoglou (2007) concluded that research has focused mainly on identifying best practices and has not shed any light on mediating factors and their relationships. The current thesis aims specifically to address this gap in the research by focusing more on the mediating / intervening factors through which HRM practices influence performance. Theriou and Chatzoglou (2007) support that inimitable resources, mainly invisible assets, are not directly developed by HRM practices. According to their research, implementing a specific set of HRM practices

mainly increases organisational commitment and motivation leading to increased willingness to work and to create, share and explore invisible assets. Therefore, they propose that HRM practices act as a trigger towards effective knowledge management and organisational learning processes within the organisations, which if combined, can lead to the creation of rare and inimitable organisational capabilities (see section 2.5 on RBV). Unique organisational capabilities are sources of sustainable competitive advantage and can enhance organisational performance (Eisenhardt and Martin, 2000; Ambrosini et al., 2008).

A survey conducted by Guest and Clinton (2007) amongst the HRM directors of sixty-three universities examined the associations between the application of high performance or high commitment HRM practices and a range of indicators of organisational performance. Unlike the majority of studies, including those aforementioned, this study showed no association between high performance HRM practices and the organisation's performance. Guest and Clinton (2007) consider various reasons for the absence of any association, mainly claiming that the university sector is considered distinctive due to its features related to the state of HRM (primarily administrative) in universities and the role of academic line managers.

Based on previous research and conflicting perspectives of the universalistic approach, McClean (2009) questions whether all employees should be managed with high commitment HRM practices, given the potential differential effect of each employee group's effort on firm performance. More specifically, focusing his research on the service industry, he hypothesised that within this sector, front-line employees are the direct representation of the company to the customers and surely their effort and

willingness to provide excellent service influences customer satisfaction and is a major part of competitive advantage. Consequently, in contrast with the universalistic approach, HRM practices do not influence all groups of employees in the same manner as far as the improvement of the organisation's performance is concerned.

According to McClean (2009), "the effort of employees who are more valuable to competitive advantage will impact firm performance more, resulting in a greater need to drive the extra-role behaviours of these employees through high commitment HRM practices". Results of the research found some truth to the universal application of high commitment HRM practices on the one hand, but on the other hand showed that the value of each employee group to competitive advantage moderated the impact of the HRM practices on firm performance.

Although support for the universalistic view exists, there are notable differences across studies as to what constitutes a "best" practice (Stiles and Kulvisaechna, 2004). Boxall and Purcell (2000), in their summary of the literature state "there is not much research that can be used to support a universalistic case for any of the lists of best practices currently advocated in the USA or elsewhere" (2000: 191). In support of Boxall and Purcell, Yongmei Liu, Hall and Ketchen (2006) claim that researchers have devoted significant empirical effort and a great volume of research has been carried out to understand the high performance work practices (HPWP) – organisational performance relationship and to provide support for the notion that they are positively related. However, varying sample characteristics, research designs, practices examined and performance measures used have led to variable and inconclusive findings, making the size of the effect of HPWP difficult to estimate. While the literature shows the

universalistic perspective has potential, this perspective is criticised because it fails to consider what other practices are in place and the context in which these practices are used; thus, it is fair to say it has yet to be universally accepted.

### **2.3.3 The Configurational Perspective**

A third strand of research has emphasised the patterns or configurations of HRM practices that predict superior performance when used in association with each other, or in association with the correct strategy, or both. In order to be effective, an organisation should develop an HRM system that achieves both horizontal and vertical fit. The configurational perspective adds a further dimension to the two previous perspectives by emphasising the importance of the internal aspects of the HRM function. This perspective views the HRM system as a multidimensional set of elements. Combined in different ways, these elements can form an infinite number of configurations from which researchers can pick out different ideal patterns to manage human resources effectively and efficiently (Alcazar et al., 2005). To achieve the strategic aims of organisations, HRM systems must be consistent with both environmental and organisational conditions, and more importantly, the elements of the system must be internally coherent and mutually supportive (Delery and Doty, 1996).

The configurational perspective contributes to the explanation of SHRM with a useful insight in the internal aspects of the function. As explained above, a key issue in the configurational perspective is the argument that a given HRM practice – regardless of its situational superiority – is unlikely to yield substantial benefits at the organisational level unless it is combined with other effective practices (Lepak and Shaw, 2007). In this sense, the HRM system is defined as a multidimensional set of elements that can be

combined in different ways to obtain an infinite number of possible configurations. From among them, researchers can extract management patterns that represent different ideal possibilities for managing human resources (Ketchen et al., 1993). Thus, the system must not only be consistent with the environment and organisational conditions but also internally coherent (Delery and Doty, 1996).

One of its main contributions relies on the assumption that the relationship between the configurational patterns and organisational performance is not linear, since the interdependence of practices multiplies (or divides) the combined effect. Thus, a configuration of a set of internally-aligned HRM practices will have a much greater ability to explain variation in organisational performance than single HRM practices taken in isolation (Delery, 1998). The configurational approach has been emerging in the organisation theory and strategic management literatures. Delery and Doty (1996) state that "configurational theories are concerned with how the pattern of multiple independent variables is related to a dependent variable rather than with how individual independent variables are related to the dependent variable" (1996: 804). The current thesis develops and empirically examines a conceptual model consisting of multiple independent variables that interact and/or influence each other. Delery and Doty (1996) further argued that "the configurational predictions are based on the assumption that implementing the employment systems will result in higher organisational performance" (1996: 811).

The configurational idea is that there will be effective combination of HRM practices that will be suited to different organisational strategies (Huselid and Becker, 1995). Delery and Doty (1996) describe three perspectives on HRM configurations. They state

that one HRM configurational perspective is that there are ideal patterns of HRM practices which may work equally well in similar conditions. A second configurational perspective is that identifiable ideal types of HRM systems will be associated with particular strategic profiles and that conformance to these types will lead to improved performance. A third configurational HRM perspective is that there are "an infinite number" of combinations of HRM practices which may lead to horizontal fit and that any one of these horizontal fit configurations when matched to organisational strategy will lead to enhanced organisational performance. However, they do not take into consideration other organisational systems and environmental characteristics. For example, a higher education institution has different (unique) decision-making processes and structures; and it operates in an environment (higher education sector) with specific characteristics and legal obligations. Thus, strategy is not the only function in this equation.

Delery and Doty state that the two former perspectives of the configurational approach and in particular the third perspective are similar to the traditional contingency perspective. They point out that the primary difference between the third perspective and the contingency perspective is that while the contingency perspective looks at individual practices, the configurational perspective looks at systems of practices.

#### **2.3.4 The Contextual Perspective**

The fourth perspective, the Contextual, introduces a descriptive and global explanation through a broader model. It seeks an overall understanding of what is contextually unique and why (Brewster, 1999). Attention is shifted to the relationship between the SHRM system and its context (Alcazar et al., 2005). Context, according to these

authors, is conditioned by the human resource management strategy. The value of strategies is assessed not only by their contributions to an organisation's performance, but also by how they influence other internal aspects within the organisation, such as HRM functions, and the external environment.

While the three previous perspectives share, in a broad sense, the same theoretical foundations, the contextual model has a different starting point. The contextual perspective proposes a reconsideration of the relationship between the strategic HRM system and its context (Brewster, 1999). Drawing on contingent studies, the contextual perspective re-analyses environmental influences by integrating human resource strategies into a social macrosystem which both influences and is influenced by managerial decisions (Brewster and Bournois 1991; Brewster, Hegewisch, and Lockart 1991; Brewster 1993, 1995, 1999). Therefore, strategies must be explained not only through their contribution to organisational performance but also through their influence on internal aspects of the firm (workforce satisfaction, turnover, conflicts, etc.) and their effects on the environment in which they are implemented.

This perspective introduces an important shift in the point of view, proposing a broader descriptive explanation of strategic HRM. It is an explicit aim of contextual authors to provide models applicable to any environment, encompassing the particularities of different industrial and geographical contexts (Brewster, 1999). Although it is nowadays applied to many different environments, it can be said that the contextual perspective was created to explain the distinctiveness of the European organisational context. This was one of the main objectives of the Price Waterhouse Cranfield Project, which was one of the main drivers of this approach in its first years of development.

The change proposed by the contextual perspective is basically around the reconsideration of three aspects: (1) the nature of human resources, (2) the level of analysis and (3) the actors involved in this function (Brewster 1999). The Contextual models propose an expansion of the concept of HRM to encompass factors that have been traditionally underestimated, such as a firm's relationships with public administration and unions, and other social and institutional determinants (Legge, 1989; Gaugler, 1988; Albert, 1989; Guest, 1990; Pieper, 1990; Bournois, 1991; Brewster and Bournois, 1991). In contrast to previous perspectives, these variables are considered part of the concept of strategic HRM, which, following authors such as Brewster (1999) must be considered a reality that exceeds the boundaries of the organisation. This reconsideration of the nature of HRM also influences the position of this function within the organisation. Following the conclusions of Brewster and Hoogendoorn (1992), Brewster and Soderstrom (1994) or Brewster, Larsen and Maryhofer (1997), it can be said that HRM is no longer an exclusive responsibility of personnel managers but also of other managers, especially line managers.

Considering this change in the nature of HRM, it is easy to understand that the contextual framework also proposes a change in the level of analysis. The contextual framework takes neither a sub-functional nor a systemic point of view, rather adopting the wider scope of the social environment in which HRM strategies are formulated and implemented. Therefore, it is possible to find many European contextual works (eg. Maryhofer et al., 1997; Storey, 1992) that try to analyse the influence of different national environments in the management of human resources (Brewster, 1999).

Under these new premises, it is also necessary to reconsider the range of stakeholders that take part in managerial decisions. The contextual perspective considers that many actors are involved in the formulation and implementation of human resource strategies. These

stakeholders are both internal and external to the organisation, so the degree to which they influence and are influenced by human resource policies must be considered (Tyson, 1997). Therefore, mutuality of interests is seen as a necessary requisite to assure the survival of the organisation in the long term (Brewster, 1995).

As aforementioned, the contextual perspective has been based on the assumption that contextual factors can contribute to a different set of HRM practices in Europe in contrast to those in the rest of the world as well as to a number of clusters of countries within Europe (Apospori et al., 2008). Although, the extant research does not provide a standard set of European clusters (Stavrou, et al. 2010), Apospori et al. (2008), Brewster et al. (2008), Brewster and Larsen (2000), and Nikandrou and Apospori (2003) distinguished between the northern European set of HRM practices and the southern set of HRM practices, with Cyprus being part of the southern cluster along with Bulgaria, Greece, Italy and Turkey (Apospori et al., 2008: 1193). Szamosi et al. (2010) emphasises the importance of country situation and focused their attention on bridging HRM practices within south-eastern Europe. Thus, understanding similarities and differences in HRM within Europe is an important earlier step in the process of examining the linkage between the system of HRM practices and organisational performance in the European context.

The value added by the contextual perspective lies in its analysis of the social dimensions of strategic HRM by taking into consideration contextual factors in terms of economic, political and cultural forces (Stavrou, et al., 2010; Brewster et al., 2004). The function is presented as an integral part of reality in which it is developed, as a contextual framework, and not just as a simple contingency variable. The manager's decision autonomy depends heavily on the social, cultural and institutional pressures under which

the strategic choices are taken, as well as on governmental and union policies. Based on this new way of understanding HRM, strategies contribute to a firm's success and survival not only by enhancing performance but also by helping to integrate and legitimise the organisation in the environment in which it operates.

## **2.4 Towards an integration of the perspectives/approaches**

Despite the evident differences between the universalistic, contingency, configurational and contextual perspectives, each approach complements the others by adding constructs, variables or relationships not considered before. The confluence of these four explanations makes models more complex and, thus, enriches our understanding of SHRM. This field of research, like all that have the human being as the central element of study, requires multidisciplinary, multi-paradigmatic and multidimensional analytical frameworks (Alcazar et al., 2005). Each of the four approaches emphasises different dimensions of SHRM without necessarily conflicting in content. As mentioned earlier, each approach complements the others by adding missing constructs, variables or linkages (Becker and Gerhart, 1996; Martin-Alcazar et al., 2005). This implies that a more complex model based on a combination of the main propositions might enable researchers and practitioners to have a better understanding of the strategic role of HRM in enhancing an organisation's performance.

As described, while some authors argue for the idea of external and internal fit, others posit an identifiable set of best practices for managing employees that have universal additive position effects on organisational performance (Stiles and Kulvisaechana, 2004: 15). The best fit versus best practice debate has yet to be resolved and the

continuing debate points to shortcomings in both perspectives. As already discussed, the fit perspective appears to have been applied too simplistically and has typically failed to consider strategy, internal alignment and other contextual factors appropriately or simultaneously.

Likewise, research in the best practice approach has characteristically been one-dimensional. Recent literature indicating that the benefit of "best practices" (as opposed to best fit) may be contingent on context, highlighting that more sophisticated research is needed to establish the best application of these practices to maximise organisational benefit. The literature appears to suggest that when context is further defined, the true benefit of HRM "best" practices may be observed. Some authors (eg. Becker and Gerhart, 1996; Guest et al., 2000; Youndt et al 1996) maintain that the two approaches are in fact complementary. Allen and Wright (2006) argue that the combination of both vertical and horizontal alignment was a significant step in explaining how HRM could contribute to the accomplishment of strategic goals.

The four perspectives together show a spectrum that encompasses all possible approaches (Alcazar et al., 2005). Despite the evident differences between the four perspectives, Alcazar et al., (2005), in their analysis, state that each perspective complements the others by adding constructs, variables or relationships not considered by others. By integrating their main propositions, a more complex/comprehensive model can be defined, enriching our understanding of the complex phenomenon of SHRM. For the purposes of the current thesis conceptual elements and propositions extracted from the above perspectives and the relevant literature were utilised. On this basis, the current research develops and empirically examines a comprehensive conceptual model that adds a new construct (perceived system of HRM practices) and

integrates mediating variables (human capital, employee commitment and employee performance) in a holistic framework which creates new path and causal relationships in SHRM. Having discussed the SHRM literature (including the four SHRM approaches), the two major theories upon which the current thesis is based (namely the resource based view and the behavioural perspective - the social exchange theory) are presented.

## **2.5. The Resource-Based View**

The resource-based view of the firm has become almost the universally embraced meta-theory among strategic HRM researchers, largely because of both its popularity in the broader strategic literature and its ability to articulate why HRM could be linked to the economic success of firms (Wright and Haggerty, 2003). Because the resource-based view proposes that firm competitive advantage comes from the internal resources that it processes (Wernerfelt, 1984; Barney, 1991), the RBV provides a legitimate foundation upon which HRM researchers can argue that the people and human resources of the firm do, in fact, contribute to firm-level performance and influence strategy formulation (Allen and Wright, 2006).

The issue of what contributes to competitive advantage has seen, within the strategy literature, a shift in emphasis away from a firm's external positioning in the industry and the relative balance of competitive forces, towards an acknowledgement that internal resources (both physical and intellectual) can be viewed as crucial to sustained effectiveness (Wright et. al. 2001; Allen and Wright, 2006). The work of Penrose (1959) represents the beginning of the resource-based view of the firm (RBV), as later articulated by Rumelt (1984), Barney (1991, 1996) and Dierickx and Cool (1989). The RBV establishes the importance for an organisation of building a valuable set of

resources and bundling them together in unique and dynamic ways to develop firm success (Stiles and Kulvisaechana, 2004; Ambrosini, 2007).

The resource-based view suggests that human resource systems contribute to sustained competitive advantage through facilitating development of competencies that are firm-specific, that produce complex social relationships, that are embedded in a firm's history and culture and that generate tacit organisational knowledge (Barney, 1992; Wright and McMahan, 1992). According to Barney (1991: 99), the framework of the resource-based view of sustaining competitive advantage "suggests that firms obtain sustainable competitive advantages by implementing strategies that exploit their internal strengths, through responding to environmental opportunities, while neutralising external threats and avoiding internal weakness." For competitive advantage to be gained, resources available to competing firms must be variable among competitors, and these resources are not easily obtainable. The heterogeneity of units as far as human resources are concerned contributes to competitive advantage (Barney, 1991). By investing in and implementing programs that develop and motivate people, organisations create their competitive advantage through people (Schuler and MacMillan, 1984; Ulrich, 1991; Wright and McMahan, 1992; Pfeffer, 1994).

Becker and Gerhart (1996) refer to the HRM system as the "invisible asset" that creates value when it is so embedded in the operational systems of an organisation that it enhances the firm's capabilities. Most important, the HRM system within a firm can generate competitive advantages that are difficult to imitate because the precise mechanisms by which firm-specific HRM systems generate value are difficult to replicate. "The resource-based view of competitive advantage differs from the traditional strategy paradigm in that the emphasis of the resource-based view of

competitive advantage is in the link between strategy and the internal resources of the firm" (Wright and McMahan, 1992: 300). This is seen as a critical linkage between the firm's strategy and its HRM strategy as Wright and McMahan show that firms can create distinctive, difficult to imitate competitive advantage from the way that they craft their HRM development strategies.

The RBV of competitive advantage makes two fundamental assumptions: first, resource heterogeneity, i.e., not all firms have access to or possess the same resources; and, second, resource immobility, i.e. some resources are harder to transfer or purchase from the market. According to the resource-based view of the organisation (Barney, 1991; Wernerfelt, 1984), "a firm is said to have a competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors and when these other firms are unable to duplicate the benefits of this strategy" (Barney, 1991: 102). However, Peteraf and Barney (2003) among others, point out that resources differ in their impact on the firm's ability to generate cost or differentiation advantages and hence performance.

Firm resources can be defined as "all assets, capabilities, organisational processes, company attributes, information, knowledge, etc. controlled by a firm that enable it to conceive of and implement strategies that improve its efficiency and effectiveness" (Barney, 1991: 101 citing Daft, 1983). Moreover, firm resources can be broadly classified into four categories: physical capital, organisational capital, social capital and human capital. Besides the traditional categories of firm resources mentioned, recent studies conducted include a fifth category: psychological capital (Luthans et al., 2007). Physical capital refers to assets that are tangible and include the physical technology used in a firm, its plant and equipment, its geographical location, and its access to raw

materials. Organisational capital is the intangible assets, including a firm's reporting structure, its formal and informal planning, controlling, and coordinating systems, as well as informal relations among groups within a firm and between a firm and those in its environment. The principal role of organisational capital is to link the resources of the organisation together into processes that create value for customers and a sustainable competitive advantage for the firm (Dess and Picken, 1999:11).

Social capital refers to the specific component of intangible assets that are based on ability and capability to build and maintain networks of good relationships (Nahapiet and Ghoshal, 1998) between the firm and other constituents such as stockholders, customers, other organisations and employees (Sullivan, 2002).

Human capital includes the training, experience, judgment, intelligence, relationships and insights of individual managers and workers in a firm (Barney, 1991). While all four resources have the potential for competitive advantage, firm resources must possess four attributes: value, rarity, inimitability and non-substitutability, to realise a sustained competitive advantage.

A firm resource adds value when it exploits opportunities and/or neutralises threats in a firm's environment (Lepak and Snell, 1999). It is considered rare when only a small number of current and potential competitors have it. A firm resource must be imperfectly imitable so as to prevent other firms from easily possessing these valuable and rare resources. Finally, a firm resource needs to be imperfectly substitutable in a way that other firms cannot use strategically equivalent resources to conceive of and implement certain strategies. As noted by Sullivan (2002), intellectual capital that includes organisational, social and human capital may provide sources of competitive

advantage. It is worth noting the distinction between human capital resources - not practices – that comprise the source of competitive advantage (Wright and Dunford, 2001). Thus, HRM systems themselves may lack the VRIN characteristics prescribed by the resource-based view to be strategically valuable, rather, the human resources selected, trained and developed, compensated and rewarded, and managed by such practices have more potential to serve as critical resources (Kraaijenbrink et al., 2010).

In addition, Barney (1991) points out, in particular, that human capital as a set has the potential for creating and maintaining competitive advantage because it is likely to depend on unique historical conditions, social complexity and causally ambiguity, which are three conditions that make resources relatively more inimitable. Although, there exists the possibility of technological or process substitutes for human capital (Bamberger and Meshulam, 2000), there are also limits to the extent to which human capital can be replaced.

Psychological capital is the individual motivational propensities that accrue through positive psychological constructs such as efficacy, optimism, hope and resilience (Luthans et al., 2007). According to Luthans (2007), positive psychological capital is achieved when the employee: has confidence to take on and put in the necessary effort to complete challenging tasks; makes positive attributions (optimism) about succeeding now and in the future; strives towards goals and where necessary redirects paths to achieve goals in order to succeed; and, when beset by problems and adversity, sustains activity and bounces back and even beyond to attain success (Luthans et al.2007: 3). Thus, the positive psychological capital has been argued to have a significantly positive relationship regarding performance and employee satisfaction.

Further, more recent studies shed light on new concepts and possible constructs of improved organisational performance. Investment in psychological capital, which includes hope, resilience, efficacy and optimism, is initially proven to relate positively to performance and satisfaction (Luthans et al., 2007: 568). Building the psychological contract with the employee empowers the organisation with more dynamic human capital in order to confront the constantly changing business environment, providing a significant advantage over counterparts with lower psychological capital. Birdi et al. (2008), in a study of the productivity of 308 companies over 22 years, where companies implemented over time seven different organisational practices, found performance benefits from empowerment and extensive training. This was achieved with the adoption of teamwork.

The main emphasis of the resource-based view of the firm (Barney, 1991) is on how the level of intellectual capital that firms possess or acquire can generate above average rent in terms of improved firm performance. Researchers adopting this perspective suggest that the level of intellectual capital, in general, and human capital, in particular, is directly influenced by HRM practices aimed toward selecting/recruiting and training/developing employees (Wright et. al., 2005). While the resource-based view of the firm has noted the importance of intellectual capital, the level of human capital is critical when applied to strategic HRM because human capital, which comprises employees' KSA's and their competencies, is a means by which strategic implementation is executed and performance results are achieved.

As MacDuffie (1995: 199) notes, "Innovative human resource practices are likely to contribute to improved economic performance only when three conditions are met: when employees possess knowledge and skills that managers lack; when employees are

motivated to apply this skill and knowledge through discretionary effort; and when the firm's business or production strategy can only be achieved when employees contribute such discretionary effort (Levine and Tyson 1990; Bailey 1992)". While this is not an issue with physical and, to a lesser extent, organisational capital, the actions or behaviours of employees are a critical issue for human capital (Coff, 1997) and, to a lesser extent, social capital because human capital by itself cannot influence firm performance unless employees are induced to perform or actually use their human capital to improve performance. Relevant to this, positive behaviour which will enable the employee to react in a more engaging manner can be of significant importance, influencing employee satisfaction, commitment and consequently organisational performance.

Although social capital may initially derive from the employees, through organisational learning the firm can acquire social capital by utilising tacit knowledge of the employees (Nonaka and Takeuchi, 1995). Therefore, in terms of strategic HRM, the most critical component of intellectual capital that a firm can impact may be the level of human capital that exists in the employees. Zhao, Guthrie and Liao (2009) argued that HRM practices can positively affect a firm's stock of human capital, yet it remains unclear how different HRM configurations would affect individual and collective knowledge, skills and abilities, respectively. In other words, even if organisational interventions enable or motivate individual efforts, how they affect collective efforts and vice versa remain ambiguous.

Based on the fact that organisational knowledge includes both the sum of knowledge its individual members possess and the collective knowledge held among its members, research concludes that managerial use of various HRM practices may have conflicting

effects on individual and collective knowledge, skills and abilities of the organisation. For example, “if an organisation overemphasises HRM practices that encourage individual motivation and knowledge, skills and abilities, it is likely to undermine the development of collective knowledge, skills and abilities and motivations. As a result, this may create destructive internal frictions and inefficiencies, and diminish the fundamental reason for the organisation to exist, i.e. collective synergy” (Zhao et. al., 2009).

In extension of the RBV, a new concept has emerged during the 1990s. Based on the existing theory of valuable, rare, difficult to imitate and imperfectly substitutable resources that give competitive advantage to the organisation and maximise its potential to over perform, the introduction of the dynamic capabilities has engaged researchers significantly (Ambrosini and Bowman, 2009). Based on the existing literature, some users of the RBV distinguish resources which are fully appropriable by the firm, such as physical capital or brand names, from fewer tangible assets, such as organisational routines and capabilities (Teece et. al., 1997).

According to Teece et al. (1990), it is not only the bundle of resources that matter but the mechanisms by which firms learn and accumulate new skills and capabilities, and the forces that limit the rate and direction of this process. They define dynamic capabilities as “the firm’s ability to integrate, build, and reconfigure internal and external competencies to address the rapidly changing environments”. To sustain competitive advantage, firms need to renew their stock of valuable resources as their external environment changes. Dynamic capabilities allow firms to effect those on-going changes (Ambrosini and Bowman, 2009) and their value is to maintain or enhance the firms’ sustainable advantage. Moreover, there is statistical evidence on the

relationship between specific firm-based resources and the subsequent development of dynamic capabilities (McKelvie and Davidsson, 2009).

The literature on dynamic capabilities gives special attention on the role of managers and their perceptions in relation to three central elements of RBV and resources: a) resource functionality, b) resource recombination and c) resource creation (Lockett, Thompson and Morgenstern, 2009). Managers have a firm-specific set of resources at their disposal and they have to search for the most profitable use. According to Lockett, Thompson and Morgenstern (2009), “a bundle of resources will have different values according to their usage across different markets. However, problems like lack of time, cognitive bias and poor understanding of the range of potential functions of the firms and competitors resources might hinder the possibility of maximising the functions of the available resources.” Resource recombination stands for the ability to recombine resources in a range of different ways to enable the production of new outputs for a firm (Lockett, Thompson and Morgenstern, 2009). Related to this arises the potential for collaborations that increases the number of possible recombinations of resources.

The third element of the RBV influenced by managers’ perceptions is resource creation. The basis for expansion depends on the excess capacity of the existing firm resource base and the firm’s activities over time that can lead to development.

In summary, the RBV, with its focus on the internal resources possessed by firm, has given the field a theoretical understanding of why human resource systems might lead to sustainable competitive advantage and provide the spark to generate empirical research in this vein (Guest, 2001; Paauwe and Boselie, 2005; Wright et. al., 2005). Consequently, many sub-fields have developed as areas of study, including knowledge

management, capabilities (bringing together bundles of resources) and dynamic capabilities (the ability to continuously adapt and reconfigure a resource and capability base) under the umbrella of RBV (Lockett, Thompson and Morgenstern, 2009). Further insights and empirical research needs to follow on firm resource heterogeneity and resource functionality and how they can be related to enhancing firm performance.

The emphasis on human capital characteristics that arise from the resource-based view of the firm is important, especially given that only a handful of research has specifically examined the linkages between human capital and firm performance (Hitt et al., 2001; Wright et al., 1995). Moreover, despite the growing use of the resource-based view of the firm as an underlying theoretical logic for strategic HRM, much of the empirical research has focused on the relationship between HRM practices and firm performance while ignoring human capital, thereby increasing the importance of examining this factor. Delery (1998: 290) explicitly acknowledged that "a firm does not gain a competitive advantage from HRM practices, per se, but from the human resources that the firm attracts and retains." Consequently, understanding the linkage between an HRM system and performance must explicitly consider the relationships among a bundle of HRM policies, level of human capital and performance.

## 2.6. The Behavioural View/Perspective

The most often cited perspective for explaining contingency relationships in strategic HRM is the behavioural perspective positing that different role behaviours are required for different types of strategies that firms pursue (Jackson et al., 1989; Schuler and Jackson, 1987). Any fit to firm strategy must first consider the kinds of employee behaviour required to successfully execute the strategy, and the kinds of skills necessary to exhibit those behaviours (Allen and Wright, 2006). Consequently, the success of these strategies is dependent, at least in part, on the ability of the firm to elicit these behaviours from its employees (Wright and Snell, 1998).

"The theory focuses on employee behaviour as the mediator between strategy and firm performance" (Wright and McMahan, 1992: 303) or "between HRM practices and sustainable competitive advantage" (McMahan et al., 1999: 106). Examples of employee behaviours may be displaying flexibility in performing in-role or extra-role tasks or being efficient in performing required tasks.

Literature on enhancing performance introduces the importance of learning organisations. Since HRM primarily deals with employees and their working environment, it is fair to say that HRM plays an important role in enhancing employees' learning behaviour. For Dertouzos et al. (1989) and Pettigrew and Whipp (1991), competitive advantage will result in organisations that develop HRM policies that promote continuous learning, teamwork, participation and flexibility: these are all attributes that clearly exist within the best HRM practices spectrum. The bottom line result of enhancing employee learning behaviour is becoming a learning organisation. The idea includes notions of adaptability, flexibility, avoidance of stability,

experimentation, rethinking means and ends, realisation of human potential for learning for strategic and personal development reasons (Theriou and Chatzoglou, 2007). It is clear that HRM has broadened its traditional role of managing people, into managing behaviours, relationships and organisational knowledge.

While useful in conceptualising the role of employee attitudes and behaviours, its sole emphasis on employee behaviours may be too simplistic as the behavioural perspective typically ignores the level of human capital. It is simplistic in that "it assumes that the [sole] purpose of various employment practices is to elicit and control employee attitudes and behaviours" (Wright and McMahan, 1992: 303) and it does not take into account the effect of the level of human capital that firms acquire and/or develop. To confound issues more, HRM practices, though not a good proxy measure for the concept of employee behaviours, are often used as such, with the assumption that the implementation of a policy automatically results in the desired employee attitudes and/or behaviours. However, there are other emerging contextual factors (Lepak and Shaw, 2007) that might influence behaviours that go beyond HRM practices. Without actually measuring these factors, one cannot be certain why HRM practices lead to certain employee behaviours.

### **2.6.1 The Social Exchange Theory**

When examining employee attitudes and behaviours and their effects on firm performance, social exchange theory is a critical perspective. Social exchange theory focuses on the motivational component of employee-organisation relationships and provides insights regarding the implications of the fit between the expected inducements and contributions provided in an employee-employer exchange (Tsui, Pearce, Porter

and Tripoli, 1997). Specifically, social exchange theorists (e.g., Gouldner, 1960) examine the exchanges that occur between employers and employees regarding perceptions of reciprocity at an individual level of analysis. The essence of social exchange theory is the notion of a norm of reciprocity that develops, which makes employees feel obligated to respond equitably to treatments from others (including one's employer). As Wayne, Shore, and Liden (1997: 83) note, "employees seek a balance in their exchange relationships with organizations by having attitudes and behaviours commensurate with the degree of employer commitment to them as individuals."

Though the exact focus of social exchange theorists varies, a common theme is that the perceived balance between organisational inducement and employee contributions has performance implications. For instance, Wayne et al. (1997) found that the use of HRM practices that were developmental in nature was positively related to perceived organisational support. Perceived organisational support, in turn, has been found to be positively associated with affective organisational commitment (Eisenberger, Fasolo, and Davis-LaMastro, 1990), constructive suggestions (Eisenberger et al., 1990) and citizenship behaviours (Wayne et al., 1997). In addition, perceived organisational support is negatively associated with absenteeism (Eisenberger et al., 1990) and turnover intentions (Guzzo, Noonan and Elron, 1994). Several variables including perceived organisational support, leader-member exchange (Liden, Sparrowe and Wayne, 1997; Wayne et al., 1997), organisational commitment (Shore and Wayne, 1993; Shore, Berksdale and Shore, 1995), and organisational citizenship behaviours (Masterson, Lewis, Goldman and Taylor, 2000), for example, have been used to capture the notion of social exchange.

Guest and his colleagues' work for the Institute of Personnel and Development (2000), surveying 610 organisations in the U.K., endorsed that there is a strong link between HRM and performance but that this link is indirect, through the apparent impact on employee commitment, quality and flexibility. In a major study carried out at Sheffield, Patterson and his colleagues (1997) identified a positive relationship between employee attitudes, organisational culture, HRM and company performance, concluding that employee commitment and a satisfied workforce are essential in improving performance (Stiles and Kulvisaechana, 2004: 16). Furthermore, Wen and Machold (2011) provided empirical evidences that flexibility at work and workplace training can improve (pay) satisfaction significantly.

Perceived organisational support reflects a social exchange model of HRM, according to Boselie, et al. (2005). HRM policies that ensure assumptions and attributions from employees that will enhance the organisational support are more likely to be appreciated and reciprocated in kind with extra effort on behalf of the employees. Snape and Redman (2010) support the view that HRM practices are significantly associated with perceived organisation support, suggesting that these kinds of practices are perceived by employees as demonstrating that the organisation is concerned about their welfare and that it values their contribution.

Researchers (eg. Paauwe, 2004; Nishi, Lepak and Schneider, 2008), in recent years have tried to focus on the evaluation of HRM through employee-centred approaches, both qualitative and quantitative. The adoption of new research agendas aimed at understanding the response of employees to the practice of the organisation's choices

concerning HRM practices and at introducing the employees as active players in the HRM processes and outcomes.

Special attention should be paid to employee perceptions of the motivations underlying HRM practices, since these can strongly influence attitudes and behaviours and ultimately their performance at work. Assumptions and variable interpretations of practices can be a source of negative and/or positive behaviours (Allen, Shore and Griffeth, 2003). The importance lies in the meaning that employees attach to HRM policies implemented at their workplace. Recent research supports that “the perceived reasons why management chooses a set of HRM practices are linked to employee satisfaction, commitment and on the job-behaviour. The implications of employee behaviour lie significantly in the individual attributions behind the purpose of the practices” (Nishi, et al., 2008).

What is extremely important is the conclusion that attributions made by employees about HRM practices matter as much as the practices themselves in affecting organisational performance (Nishi, et al., 2008). Moreover, the employee’s response to an HRM practice is dependent on the assessment of positive or negative implications that the HRM practice will have. Nishi et al. (2008) suggest that specially crafted employee surveys can be more revealing than management reports about the impact of HRM practices.

Findings of scholars reinforce the linkage between HRM practices and improved employee performance, which is also affected by employee perceptions. O’Donnell and Shields (2002) introduced a new aspect of employees’ perception and the effect on their behaviour and consequently, on their performance. According to relevant research (eg.

Bowen and Ostroff, 2004), employees' prior experience and expectations as well as their perceptions of organisational values, influence their reactions to HRM practices. Where incompatibility of HRM practices with organisational values is found, employees have negative reactions. Consequently, however well configured a best HRM practice is, if it is not tuned to the existing employee perceptions, it will fall short of succeeding after its implementation. The result of this study might explain also the failure of attempts to introduce various HRM systems or practices to public sector workplaces.

A relevant study conducted on employees in the retail industry (Nishi, Lepak and Schneider, 2008) revealed that employees' individual perceptions that HRM practices in the areas of staffing, training, benefits, pay and performance appraisal were motivated by management's concern about service quality and that employee well-being was positively associated with their attitudes. Organisational citizenship behaviours of helping co-workers and conscientiousness were some of the positive exhibited behaviours. However, attributions and subjective perceptions about cost reductions and employee exploitation were negatively associated with attitudes and behaviours.

Organisational citizenship behaviours and counterproductive work behaviour have been found to be strongly negatively related and can be considered opposites (Dalal et. al., 2009). Organisational citizenship can be defined as the employee behaviour that is at least somewhat volitional and that improves the functioning of an organisation (Organ and Pain, 1999), whereas counterproductive work behaviour is defined as willful employee behaviour that harms, or at least is intended to harm, the legitimate interests of an organisation (Sackett and DeVore, 2001; Spector, Fox, Penney, Bruursema, Goh and Kessler, 2006). Various dimensions of organisational citizenship behaviour are reviewed

in the relevant literature such as compliance and altruism (Organ et al., 2006), but it is acknowledged that such dimensions are conceptualised as consistent in their “helping” character. For example, compliance involves cooperative behaviours such as volunteering for tasks that go beyond the basic performance of job requirements. Altruism, on the other hand, refers to discretionary helping behaviours, such as assisting others with their work when they are overloaded or absent. The effects of exhibiting “helping” and citizenship behaviours can be seen at the individual or organisational level, by increasing group work effectiveness (Snape and Redman, 2010).

Dalal et al. (2009) claim that organisational citizenship and counterproductive work behaviours are moderated and exhibited according to employee perceptions on the implications of their behaviour in different domains. For example, if employees believe that behaviour directed to the organisation itself is more relevant to total job performance than the behaviour towards their co-workers, they may act accordingly. Further, the behaviour directed towards a supervisor can be perceived as relevant to total job performance because the supervisor is associated with the employing organisation.

A more recent study by Snape and Redman (2010) examines the relationship between HRM practices conceptualised at the workplace and individual employee attitudes and behaviour. They focus on two possible explanations of that relationship, namely, social exchange and job influence/employee discretion. Perceived job influence/discretion is defined as the amount of freedom of choice employees perceive that they have over important aspects of their work, such as the range of tasks undertaken, the pace of work, how the job is done, working hours, etc. (Snape and Redman, 2010). High level of

perceived job discretion is argued to enhance employee sense of responsibility for work outcomes and increases their willingness to go the “extra mile” to complete tasks.

Moreover, findings of academics (Liden and Wayne, 2000; Avolio et al., 2004) have shown that HRM practices are crucial as far as their role is concerned in enhancing employees’ sense of psychological empowerment. Self-confidence, motivation and organisational citizenship behaviour are possible attitudes and behaviours resulting from employee empowerment. However, extensive research is needed to examine in detail the causal links of these variables and the HRM and performance linkage (Boselie et al., 2005).

According to Clinton and Guest (2007), theory suggests that employee attitudes and behaviours act as mediational variables in the relationship between HRM and organisational performance (Patterson et al., 1997; Wright et al., 2005). As a mediator, employee attitudes are influenced by the experience of HRM policies and practices, and the subsequent positive change in attitudes leads to the improvement of individual and organisational performance. Research has demonstrated a relationship between positive work attitudes and business unit outcomes (Harter, Schmidt and Hayes, 2002).

In a recent study, Noe et al. (2010), drawing on the social exchange relationships developed between the employees and the organisation, studied how psychological engagement may lead to more favourable learner reactions and benefit them from learning interventions. In support, Kahn’s theory (1990) described three psychological conditions necessary to promote engagement: meaningfulness (the sense of receiving feedback in return for employees’ effort); safety (being able to freely express opinions without negative repercussions); and, lastly, the availability of individual physical,

cognitive and psychological resources to invest in their on-the-job efforts. Noe et al. (2010) utilised the learners' motivation and workplace learning in order to promote favorable psychological states of engagement and positive organisational performance.

Within an organisational setting, the employer and the employees can be considered parties to the social exchange relationships. First, assuming that the organisation initially acts in such a way to provide employees with something of social value such as providing job security or access to training programs, the employees, then, perceive that the organisation has provided something of social value to them. Only then will the employees feel indebted to reciprocate to the organisation with something of equal or greater value. Although Schuler and Jackson (1989) and other scholars in strategic HRM have not articulated the specific variables embedded within the behavioural perspective, those that have been used in previous studies in organisational behaviour research as representing the notion of social exchange include leader-member-exchange, organisational justice, perceived organisational support, psychological contract, organisational commitment, organisational citizenship or extra-role behaviours and task or in-role performance.

Of the social exchange variables used, organisational commitment, defined as "psychological attachment", the psychological bond linking the individual to the organisation (Chatman, 1986) or the identification of the employee with the goals and values of the organisation (Walton, 1985), represents an aspect of social exchange based on obligation arising from the feeling of appreciation for the actions provided by the organisation and the notion of reciprocity. Research into organisational commitment can be traced back over fifty years, particularly the exploration into the psychological state that connects employees to their organisation (Allen and Meyer, 1990). Much of this

investigation has focused on the relationship between commitment and performance (Allen and Meyer, 1996; Mathieu and Zajac, 1990; Wright and Bonnett, 2002; Grant, Dutton and Rosso, 2008). Organisational commitment has been found to be related to major work outcomes (Mathieu and Zajac, 1990). Wright, Gardner, Moynihan and Allen (2005) found that employee commitment and customer satisfaction mediated the relationship between HRM practices and profitability. However, despite knowledge that has been gained about organisational commitment, there is a need for further research on the exploration of commitment and its role in the link between human resource management and performance (Conway and Monks, 2009).

The behavioural perspective offers SHRM scholars an opportunity to explain how people contribute to specific organisational goals in specific contexts and, in turn, to identify human resource strategies that extend in new and important ways (Ericksen and Dyer, 2004). Moreover, the social exchange theory provides insights regarding the specific mediating factors that likely account for the relationship between HRM and performance.

## **2.7. Integrating the resource-based view and behavioural perspective**

The resource-based view has prompted recent work on how HRM practices contribute to firm performance by leveraging human capital, discretionary effort, and desired attitudes and behaviours (Bowen and Ostroff, 2004). The behavioural approach to SHRM is conceptually appealing. It suggests that the extent to which a human resource strategy contributes to organisational performance depends (i.e., is contingent) on its capacity to foster desired employee behaviours. Despite its appeal, the behavioural approach has only rarely been employed. Thus, an opportunity exists to develop SHRM models using a behavioural approach (Ericksen and Dyer, 2004).

While researchers have increasingly investigated the impact of HRM on economic success with the resource-based view of the firm (eg. Barney and Wright, 1998), and have developed more middle level theories regarding the processes through which HRM impacts firm performance (Boselie and Paauwe, 2000; Takeuchi et al., 2007), much work still needs to be done (Wright and Haggerty, 2005). As the discussion in the previous section suggests, there appears to be a disconnection in the understanding of the relationship between HRM, human capital and performance or/and HRM, employees' attitudes and behaviours and performance.

One of the reasons that this is the case may be due to the relative emphasis placed by the resource-based view of the firm on human capital and the emphasis placed on employee attitudes and behaviours by the behavioural perspective without considering these perspectives simultaneously. In both of these perspectives, employee behaviour is the key mechanism that promotes high performance as a result of HRM practices. Thus, by integrating both perspectives and simultaneously looking at human capital and employee attitudes and behaviours (commitment) as important components to firm performance, a better understanding of how HRM practices / systems lead to firm performance can be gained.

HRM practices / systems are deemed to contribute to the skill and knowledge base within the organisation, and employee willingness (work behaviour and attitudes) to deploy their learning to the benefit of the organisation (Wall and Wood, 2005: 430). For this reason, authors have used labels such as "human capital-enhancing" (Youndt et al., 1996), "high commitment" (Wood and Menezes, 1998) or "high involvement" (Guthrie, 2001; Vandenberg et al., 1999) to characterise the approach.

The HRM system impacts upon employee skills and motivation, which, in turn, results in creativity, productivity and discretionary behaviour. Employees' behaviour influences the firm's operating performance, which leads to profitability, growth and market value (Becker and Huselid, 1998; Wright and Haggerty, 2003; Wright et al., 2005). However, having a highly knowledgeable, skilled, and capable workforce is a necessary but not a maximally effective condition toward improving firm performance. In order for human capital to actually contribute to firm performance, necessary employee behaviours need to be mobilised. In other words, having competent human capital provides firms with the potential for improving firm performance whereas employee behaviours are a necessary catalyst for converting this potential into reality. HRM practices are the means by which human capital is maximised and positive employee behaviours are obtained.

Therefore, it is necessary to examine the relationships among the system of HRM practices, human capital, employee attitude and behaviour (commitment) employee performance and organisational performance from a holistic perspective, integrating all concepts.

Having discussed and explained the theoretical basis of the current research, the concept of organisational performance (a theoretically and empirically complex construct, especially for service sector organisations) is analysed below.

## 2.8. Organisational Performance

The concept of organisational performance is based upon the idea that an organisation is the voluntary association of productive assets, including human, physical and capital resources, for the purpose of achieving a shared purpose (Barney, 2002). Those providing the assets will only commit to the organisation as long as they are satisfied with the value they receive in exchange, relative to alternative uses of the assets. The essence of performance is the creation of value, and value creation is the essential overall performance criteria for any organisation. How that value is created is the essence of most empirical research. According to SHRM, people are a key resource and a critical element in an organisation's performance. The main rationale for strategic HRM is that by integrating HRM with the organisation's strategy and by applying particular systems of HRM practices, employees will be managed more effectively; individual and organisational performance will improve; and, therefore, success will follow (Holbeche, 2001; Farnham, 2010).

There are many indicators of organisational performance. Paauwe and Richardson (1997) distinguish between two kinds of outcomes of HRM policies: financial outcomes (such as output of the organisation; market share; profit; and, market value) and non-financial outcomes (such as absence; labour turnover; and employee motivation and satisfaction) (Guest, 1997; Delery and Shaw, 2001).

Financial indicators are mainly "hard" and clear; and perhaps this explains why most of the research on HRM and organisational performance is dominated by the economic/financial perspective (Boselie and Paauwe, 2000). Financial performance measures are often used or mentioned for determining the success of the organisation

(Becker and Gerhart, 1996; Wright, Gardner and Moynihan, 2002; Den Hartog et al, 2004). However, these “hard” numbers may be affected to a large extent by “soft” aspects (non-financial factors) such as the well-being of employees (Boselie and Paauwe, 2000). Social aspects (also non-financial factors) such as culture, working climate and quality of working life are considered to be of relevance to explaining success of the organisations (Bowen and Ostroff, 2004; Burton, Lauridsen and Obel, 2004).

As noted by Wright (1998), there seems to be a consensus within the realm of strategic HRM that maximising organisational performance, particularly financial performance, is the major goal to be achieved. This preference for financial measures of performance has been shown by Rogers and Wright (1998), who reviewed the literature and noted that out of 80 dependent variables included in the strategic HRM research, accounting measures such as return on assets, return on equity, profits and sales and market measures (such as stock price and Tobin's Q – market value<sup>2</sup>), were mostly used in more than half of the reviewed research. In addition, based on the overview by Boselie et al. (2005), financial measures were represented in half of the 104 articles included in their analysis. Profit was the most common followed by various measures of sales performance.

The dominance of the economic logic in measuring performance is criticised in recent literature (Janssens and Steyaert, 2009). Based on research conducted in HRM journals, it is argued that academics are not considering broader moral, social and political questions of HRM practice and policy and are focusing intently on narrow and

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<sup>2</sup> Tobin's Q is a market base measure of performance which seeks to estimate the relative importance of industry, focus, and share effects in determining firm performance and financial health (Wernerfelt and Montgomery, 1988).

managerialistic financial measures (Janssens and Steyaert, 2009). In their debate on the issue, Janssens and Steyaert (2009: 145) suggest taking the employee back into HRM research by “bringing employees back into the equation of HRM and performance” (Paauwe, 2008). Moreover, they propose that opportunities for further theoretical development will exist “if HRM devotes more attention to underlying conflicts at work, focuses more explicitly on the implications of new forms of work for employees without assuming a harmony of interests, and considers the broader political - economic forces influencing the way work is managed” (2009: 147). Moreover, they encourage scholars to incorporate the employees’ perspectives in their research by examining individual variables such as motivation, job satisfaction, and psychological contract.

In line with softer approaches to HRM, the issue of employee well-being has received some attention as an important outcome of HRM policies and practices that can influence employee performance. Research has found positive associations between HRM and employee well-being (Appelbaum et al., 2000; Guest, 1999). Clinton and Guest (2007) found that there exists a positive relationship between HRM and the well-being of employees. However, the relationship between HRM and employee well-being is not clear. According to Green (2004), some HRM approaches have led to a greater intensification of work, which then furthers the possibility of producing negative outcomes for employee well-being.

The performance outcome of HRM can be captured in a variety of ways according to Dyer and Reeves (1995). They distinguish between: financial outcomes (e.g., profits; sales; market share); organisational outcomes (e.g., output measures such as productivity; quality; efficiencies); HR-related outcomes (e.g., attitudinal and

behavioural impacts among employees, such as job satisfaction, affective commitment and intention to quit); and, employee outcomes (e.g. performance, absenteeism and turnover). In terms of selecting an effective and appropriate measure of performance, Becker and Gerhart (1996: 791) note that the “appropriate dependent variable will vary with the level of analysis”; for instance, at the business unit-level of analysis, perhaps the productivity of research and development personnel or their turnover rate may be more important for firms pursuing a differentiation strategy whereas the productivity of a firm's production staff may be more critical for firms following cost leadership strategy.

According to Bell (2009) “high commitment and high performance companies are able to deliver sustained performance because they have developed the following organisational pillars: performance alignment; psychological alignment; and, capacity for learning and change”. The fit of all systems, practices, people with organisational strategy, the emotional attachment of employees to achieve mission and values of the company and the desire among employees for continuous learning and change are the basic ingredients for high performance. Certain limitations apply to the implementation of the previously stated high performance three pillar model. Bell (2009) mentioned national culture and differences between countries, the value of individualism or group identity and the extent to which different cultures accept the reinforcing of power as examples of the issues limiting the implementation of the three pillars model.

Further, "the focus should be on variables that have inherent meaning for a particular context" (Becker and Gerhart, 1996: 791). For example, efficiency-based financial measures such as return on assets or return on equity may be more appropriate for firms pursuing cost leadership strategies in most of their business units whereas sales growth

or revenue growth may be more appropriate for firms pursuing product differentiation strategies for the majority of their business units. Thus, it may be more appropriate for strategic HRM research to include multiple indicators of firm performance and make differential predictions based on them.

Drawing from existing research, measures of performance can vary and should be selected because of their relevance and appropriateness to the sector or business under study or the strategic stance of the organisation concerned. Wright et al. (2003) provide as measures of performance workers' compensation, the quality of products, shrinkage, productivity, operating expenses and profitability.

Another important aspect in conceptualising performance is the source of data. The investment in the human capital of the organisation suggests that the employees are the intended targets and recipients of such investments. However, what has not been examined in the macro approach to studying HRM practices is the perspective of the employees who are the intended targets and recipients of the HRM practices. The source of input has typically been senior HR managers, who are likely to be responsible for the implementation of these programs. However, by only asking senior management about the programs that they are responsible for, they usually (and most of the times subconsciously) responded in a sense of what they initially intended to implement. In her study on HRM as a subunit, Tsui (1990) found that, compared to executives and managers, the employees gave the lowest rating to HRM effectiveness.

Huselid and Becker (1996) suggest that there is a difference between an espoused policy and the actual practice that employees experienced, and Becker and Gerhart (1996) argue that there is a difference between what the researches says that firms should do and what

firms actually do. Wright and Nishii (2004) also make a distinction between intended, actual and perceived HRM practices. Intended HRM practices are those practices that are developed, and intended to be implemented in the organisation. The actual HRM practices are the implemented HRM practices that are actually present in the organisation, and the perceived HRM practices reflect the perceptions of employees of the HRM practices. These perceptions might be leading determinants for employee performance (Guest, 1999; Den Hartog et al, 2004).

Most of the research on employees' attributions and attitudes has focused on the desired behavioural reactions to HRM practices and little attention has been paid to employee attributions with respect to the "why" of specific HRM practices (Nishii, Lepak and Schneider, 2008). According to Fiske and Taylor (1991), people can attach different meanings to social stimuli. The acknowledgment of the role of employee perceptions is essential in translating HRM practices into desired organisational outcomes. Based on this rationale the current thesis utilised the perceived system of HRM practices as its main independent variable.

Relevant research (Nishii, Lepak and Schneider, 2008) has shown that HR attributes may be divided in two categories: a) those that can relate positively to employee attitudes (HRM practices designed with the intention of enhancing service quality and employee well-being); and, b) those that can relate negatively to employee attitudes (designed to reduce costs and exploit employees). The results of the same research support the view that an identical set of HRM practices may not even exhibit similar effects within a single organisation, having in mind that individuals give a different meaning to HRM practices dependent on their immediate context. It is, therefore,

important to acknowledge that there is a difference between what is intended to be implemented and what actually takes place. Employee perceptions of practices may be different from what the organisation intends (Whitener, 2001). Employees' perceptions of HRM practices may also be significantly different from those of senior management and the HR professionals in the organisation. Therefore, in order to fully understand the impact HRM practices can have on both employee outcomes and organisational performance, it is important to study the employee, as these workers are the targeted recipients of the HRM practices.

To study the effect of HRM interventions, it is preferable to use outcome variables that are closely linked to these interventions, for example: attitudinal outcomes (e.g. employee satisfaction, motivation, commitment, trust), behavioural outcomes (e.g. employee turnover, absence), productivity (output per unit, effort), and quality of services or products (Paauwe and Boselie, 2005).

Moreover, Paauwe and Boselie (2005) state that a whole range of international companies more or less use the same HRM principles and practices; however, there is a need to look beyond practices such as staffing, performance appraisal and management of human resource planning. These are kinds of hygiene factors, which, if not delivered cost-effectively will lead to underperformance of the organisation. A real contribution to performance will only happen once HRM is approached from a more holistic and balanced perspective, including the value system of the organisation (organisational climate and culture). By adding the unique aspects of climate and culture, an alignment between individual values, corporate values and societal values could be realised. Moreover, as Paauwe and Boselie (2005: 80) claimed "this will be a unique blending for

each organisation, which is difficult to grasp by outsiders (including competitors) and thus contributes to sustained competitive advantage”.

In an attempt to contribute/add to the acceleration of the process of strategic dynamism of European universities, Bonaccorsi and Daraio (2007) debate the demanding challenge of representing the internal differentiation of systems in higher education institutions by using the appropriate quantitative indicators. According to their study, horizontal or vertical differentiation of higher education institutions requires the usage of different metrics of their performance. The framework of measuring performance adopted by Bonaccorsi and Daraiois includes a combination of quantitative indicators and qualitative data, the latter being considered difficult to collect. The framework itself includes measurement of: inputs (human resources, financial resources and the infrastructure), processes (organisation, decision making processes and strategy/profiling of the institution) and outputs (educational, research and third mission).

Given different conceptualisations of performance, the existence of multiple types of performance indicators, and the fact that it is difficult to choose the appropriate measures to evaluate performance (Venkatraman and Grant, 1986), it is important to clearly differentiate these outcomes and investigate the impact of human capital, employee attitudes and behaviours and HRM for multiple outcomes if we are to fully understand the HRM-firm performance relationship. The strategic HRM literature generally assumes that the effect of HRM practices progresses from more proximal HR-related outcomes to intermediate ones, and finally to distal financial and market outcomes. Therefore, the outcome measures can be ordered from proximal to distal (Dyer and Reeves, 1995; Yang and Konral, 2011) with employees as an anchor. Thus,

HR-related outcomes would be the most proximal factors leading to organisational outcomes. Organisational outcomes, in turn, may lead to financial, market or accounting outcomes (Becker and Huselid, 1998).

In the current thesis, the integration of the resource-based view and the behavioural perspective (and social exchange theory) makes it imperative that HR-related outcomes such as employee performance and productivity are examined as the more proximal outcomes to the level of human capital, and perceptions and reactions to the social exchange relationship. According to Paauwe and Boselie (2005) and Wright et al. (2003: 24) “the logical next step is to link these HR-related outcomes to organisational outcomes such as sales and profits or stock price”. Therefore, the proposed conceptual model progresses from the HR-related outcomes to the organisational outcomes as the most distal ones (taking in to consideration that financial or accounting outcomes are difficult or almost impossible to measure or obtain in institutions of higher education). In addition, as mentioned earlier, the current study utilises a novel approach in terms of the source of inputs (by the employees).

In the following sections, the theme of HRM and higher education is analysed and discussed. Specifically, the higher education sector, the roles of professional / administrative staff in universities, the higher education sector in Cyprus and SHRM in higher education (university-level education) are presented.

## **2.9. The Higher Education Sector**

### **2.9.1. The University Environment**

“Colleges and universities are complex institutions..... one source of that complexity is the reality that academic institutions are inhabited by people and are designed to foster human creativity and development, which means that the mysteries of the psyche, human groups, learning, personal and professional growth, and human relationships are central to the everyday work of academic administrators” (Bolman and Gallos, 2011, p.1). Thus, colleges and universities constitute a special type of organization; their complex mission, dynamic personnel structure and values require a distinct set of understanding and skills to lead and manage them well. Apart from the above, universities, being service organisations, have unique “customers” interactions and require distinctive production and delivery processes (Kotler and Armstrong, 2005).

Higher education institutions, like any other organisation nowadays, are under increasing pressure to improve their competitiveness (Bui and Baruch, 2011). They exist in a rapidly changing environment and therefore university strategies must reflect the need to be able to adapt to constantly changing circumstances (Shattock, 2012). Major changes during the last decade, especially in European universities, have significantly altered and shaped the activities of higher education institutions. These changes have created pressures not only for changes in the internal structure of universities but also more general changes including a reassessment of the role of universities in the society (Deem, Hillyard, and Reed, 2007). As Smeenk et al. (2008) described, these changes have forced universities all over Europe to replace their “professional” strategies, structures and values with organisational characteristics that could be labelled as “private sector” features. Universities were led to embed in their

institutional strategies changes resulting from the globalisation of education, social demands, and a great number of international trends as well as European and national policies. Major reforms arose from the Bologna process in 2002, leading to concrete advances especially in the reform of Doctoral education and the European quality assurance framework. The success of national implementation of the Bologna process is being monitored and some changes seem to be slower to effect because they involve a range of conditions, often additional funding (Sursock and Smidt, 2010).

Ann Priest (2012) in her article “The challenge of managing a large university in conditions of uncertainty” states that “universities produce, teach and transfer knowledge and have a role in innovation. They are therefore crucial to their regions and to the national interest”. Nowadays, as she claims, “universities and all higher education providers are understood to be key to societal development and increasingly, under pressure to respond to public and governmental expectations”. These expectations impose demands upon universities to play a crucial role in “socio-economic success” and national economic growth (Clark, 2012). Moreover, Mulgan (2009) adds that today higher education has assumed an increased importance in relation to the emerging international significance of the knowledge economy and human capital development.

In addition, pressures on higher education to become more entrepreneurial in the broad sense have generated internal activities to increase self-funding and to increase levels of involvement in industrial and commercial activities (Shattock, 2010). Moreover, universities have been encouraged to introduce a more “market-based approach” into their management (Clark, 2012). With all these changes, universities in Europe are

being challenged to improve quality, efficiency and effectiveness and, at the same time, to become more transparent and accountable to government and the tax payer.

According to the report of the European Platform for Higher Education Modernisation (2009), the common thread of the recent developments in higher education is the growing recognition that higher education sectors are remarkably complex and not immune to market forces. Despite the considerable attention that has been paid to the effect of the changing environment on academic institutions, the development of new fields of activities within universities and increased competition, there has been less recognition of the implications for professional staff (Whitchurch, 2008).

Central administrative services have recently received increasing attention from practitioners and academics due to the challenging need to both manage scarce resources and provide high-quality services. During the last decade, there has been increasing pressure on higher education to use resources more effectively and efficiently, not only in teaching and research activities but also in support services. These services and their accountability have recently been acknowledged to be crucial both as a budget line and as a contributor to primary activities (Casu and Thanassoulis, 2006; Brown and Brignall, 2007).

Arena, Arnaboldi, Azzone and Carlucci (2009), in their study on the central administrative services of fifteen Italian universities, proposed a performance measurement system (PMS) for university support activities (the student support, research support, accounting, human resources, and logistics and procurement). They adopted a research approach as a consequence of the need to implement and test a performance measurement system (PMS) for university support activities. The results of

the study recommend that the central administrative service needs to promote accountability that endorses a participative approach, aimed at implementing and defining the significance of the measurement system for university members that includes the costs of services, the quality provided and the quality perceived.

Higher education system reforms in Europe have drawn attention to the issue of accountability and performance measurement. Although the importance of accountability is uncontested, the debate on the use, usefulness and possibility of measuring public-sector performance is still at the centre of research discussions (Arena, et al., 2009).

The current global economic downturn provides a further challenge, as resource constraints are likely to reduce opportunities for development, increase competition and create needs for cooperation between institutions and the individuals working for the universities. “Higher education systems worldwide are undergoing change, partly because of environmental pressures, and partly because of the aspirations and approaches of new generations of staff” (Gordon and Whitchurch, 2010). In a recent article, Shattock (2013) describes the changes in the government and management in British universities during the last decade. He attributes these changes mainly to the instability of the external environment and claims that they encouraged a greater centralisation of decision-making leading to less governance and more management. Further, the article identifies “a rise in ‘the executive’ at the expense of the traditional components of university governance, governing bodies, senates, academic boards and faculty boards, and a growing tendency to push academic participation to the periphery” (2013: 217). Similarly, Casu and Thanassoulis (2006) explained that changes in higher education “has created a similar situation to the one faced by UK NHS hospitals, where

managers have been recently brought in with the difficult task of managing medical activities” (2006: 420).

Thus, nowadays, highly qualified professional staff is needed in higher education to contribute in management and in diverse areas such as teaching and learning, information services, institutional research and development, enterprise and business partnerships and community partnership. In U.K. universities, the need for greater transparency and accountability in using public money has stressed the importance of administrative services and created the need for identifying cost-efficient practices in the delivery of good-quality central administration services (Casu and Thanassoulis, 2006). However, in spite of all these changes mentioned before, still, little attention is given to administrative staff both in practices and in academic research.

### **2.9.2. Professional /Administrative Staff in universities**

Professional (Administrative) staff, traditionally, has supported academic staff in performing their tasks and duties; however, nowadays, professional staff is, increasingly, involved in activities that in the past might have been regarded as the sole preserve of academic staff. This new practice has occurred due to rapidly changing environments within which universities are now operating. Casu and Thanassoulis (2006) emphasise that the emergence of new administrative roles witnessed in recent years make central administration “a dynamic management activity”, in which administrative staff collaborates closely with academic staff to achieve best practice and good quality services.

Activities that in the past had been performed by academics now have shifted to administrative staff. These activities include:

- Writing bids for funding, quality assurance submissions and tutorial handbooks.
- Speaking at outreach and induction events, conducting overseas recruitment visits and undertaking study skill sessions.
- Negotiating with business or regional partners.
- Being members of national bodies such as the Quality Assurance Agency.
- Moving into pro-vice-chancellor posts, for instance, with a portfolio such as quality, staffing or institutional development (Bacon, 2009).

These new duties require administrative staff to play a significant role in projects, such as student transitions, community partnership and professional development. As a result, administrative jobs are becoming more prominent within the university structure and universities are, now, looking for staff who are capable of moving across boundaries and understanding university as a whole. As Florida (2002) suggests, talented people seek to work and cluster in creative environments, and are increasingly selective about them; institutions are likely to find themselves competing for talent. Moreover, “administrators are increasingly seen as specialist staff that make decisions that influence the university’s direction and involve an understanding of the university’s markets, income streams and resource allocation processes, as well as its client base, including students, parents, employers, funding bodies and commercial partners” (Casu and Thanassoulis, 2006: 420).

The changing external and internal environments, as well as the changes in the job descriptions and the organisational charts of universities (Bacon, 2009), impacts not

only on formal contracts of employment, but also on what is known as the psychological contract, defined as “The perceptions of... two parties, employee and employer, of what their mutual obligations are towards each other” (Chartered Institute of Personnel and Development, 2009). In higher education, the changing psychological contract is leading to new forms of:

- Recognition and reward, for instance, the use of titles such as director of teaching and learning, and discretionary responsibility allowances at local (school or faculty) level, to provide recognition for people who may not be able to achieve immediate promotion.
- Role portfolios, incorporating activities that are adjacent to teaching and research such as widening participation, business partnership and community outreach.
- Career tracks, with the possibility of multi-choice career pathways (Strike, 2010).
- Professional development, for instance, mentoring, sabbaticals and tailored opportunities (Middlehurst, 2010).

The current economic crisis has brought budget constraints and threats to universities. An urgent need to balance the input or investments made and efficiency is a priority. In other words, ensuring a higher output per unit invested becomes increasingly important, and investments are preferably made where benefits are most promising. At the same time, however, education is a key part of the solution to the challenge posed by the crisis (European Commission, 2012).

Moreover, the current global economic downturn has caused some additional changes in employment forms and it will create more pressures on the workforce within universities, including part-time and fixed term labour, as institutions seek the flexibility to deal with increasingly uncertain levels of funding. This will, in turn, create a renewed focus by managers and those involved in professional development, on issues around

motivation, rewards and incentives and the means by which individual aspirations might be met. What seems clear is that financial levers for attracting and rewarding staff are likely to be increasingly scarce in the foreseeable future and that other aspects of the employment “package” will assume greater importance, for instance, opportunities for career development, conference attendance, secondments, coaching and mentoring, or responsibility at local level for, say, teaching and learning (Whitchurch, 2008).

As higher education institutions and their workforces have expanded and diversified to meet the demands of contemporary environments, boundaries are being breached between, for instance, functional areas, professional and academic activity and internal and external constituencies (Whitchurch, 2008). Professional staff work across and beyond boundaries; they are re-defining the nature of their work, and it may be that those institutions that are able to give recognition to more extended ways of working will be the most likely to maximise the contribution of their staff, and to achieve an effective accommodation with their current and future environments. However, while considerable attention has been paid to the impact of a changing policy environment on academic identities (Henkel, 2000; Becher and Trowler, 2001; Barnett and Coate, 2005), the implications for professional staff have been less clearly articulated. Moreover, Smeenk et al., (2008) stressed that empirical research into the development of the quality of university employee job performances is scarce. Therefore, there is a need to examine which factors affect the quality of job performance of university employees and their distinct characteristics in countries that are characterised by different levels of managerialism.

Another important issue that affects the nature of professional (administrative) staff work has to do with the relations between the administrative and academic staff. The changes of the nature of administrative staff work, as well as the changes in both the external and internal environments in the higher education sector, as previously explained, are eliminating the gap between the administrative and academic staff that used to exist in the past. Nowadays, as Handal (2008: 12) claims “The management of HEI’s has become a partnership between academic and professional managers, where the distinction between the two is decreasingly significant, particularly at the senior levels”. Moreover, Handal (2008) called this partnership “community of practice”, where professional managers and academics demonstrate mutual engagement, a “shared repertoire or resources and practice”. Along the same lines, Whitchurch (2008) called for a decrease in seeing “academic and management agendas as competing narratives”. She proposed that this can be achieved by focusing on the university values and mission and by promoting a commonality of purpose and status. Thus, higher education institutions must reduce the professional-academic divide in university management.

### **2.10. Higher Education in Cyprus**

The Cyprus higher education system aims to fulfil the local needs for higher education and to establish Cyprus as a regional educational and research centre. The accession of Cyprus in the European Union in May of 2004 has introduced reforms in the higher education system. Governmental policy concerning higher education issues is shaped by the European Higher Education Area as outlined by the Bologna Process and the primary responsibility for education is assigned to the Ministry of Education and Culture (Eurydice, 2010).

The Cyprus educational system consists of four stages including: pre-primary education, primary education, secondary education, and higher education. The historic background of higher education in Cyprus has, as an important milestone, the establishment of the Department of Higher and Tertiary Education by the Ministry of Education and Culture in 1984. During that time, the absence of relevant legislation on tertiary education created several problems and, at the same time, affected the level of educational services offered by higher education institutions.

The ad-hoc committee formed to establish the priorities of the draft law had to consider the already operating institutions in the field of higher education and make sure that reasonable, fair and practical solutions were sought to solve existing problems.

The legislative framework for higher education, which was established in 1996, included the following four basic provisions:

- The establishment of an Advisory Tertiary Education Committee, a consultative body to the Minister, with a wide composition of all social partners including employers, trade union organisations and students.
- The enforcement of a regulatory framework for the establishment and operation of public tertiary education institutions
- The enforcement of a regulatory framework for the establishment, operation and educational evaluation - accreditation of private tertiary education institutions, and
- The enforcement of a regulatory framework for issues related to the compliance of the existing tertiary education institutions with the provisions of the law.

Aiming to promote higher education development and expansion, particularly at the university level, a series of measures have been promoted by the Department of Higher and Tertiary Education during the last twenty years. As a result of the measures, six universities have been established in Cyprus (three public and three privately owned). According to the general educational orientation of secondary education of the Cypriot system, which prepares the students to have a deeper understanding of a subject and does not necessarily provide a labour market relevant qualification, almost 80% of Cypriot students go on to study at a higher level (Commission Staff Working Document, 2009). This is the main reason and the driving force that led to the rapid increase of the number of universities established in the island during the last decade.

The University of Cyprus (UCY) was the first public university established in 1989 in response to the growing intellectual needs of Cypriot people. Even though the University of Cyprus does not have a long history, it has gained international recognition in terms of its high level of teaching and also extensive research by the faculty members. Following the establishment of the first public university and, in combination with the Bologna aim for promotion of life-long learning, in 2002 the Open University of Cyprus (OUC) was legally founded. As the second state institution of Higher Education on the island, its “product proposition” is supplementary to the University of Cyprus and it is dedicated to lifelong learning and distance education, with a focus on delivering undergraduate and postgraduate programs of study to serve the needs of the wider community.

The most recent establishment of public university was in 2003, with the founding of the Cyprus University of Technology (CUT). The aspiration of the new public university, which admitted its first students in 2007, is to become a pioneering and

modern university able to offer a high level of education and research in leading branches of science and technology. The Cyprus University of Technology is oriented towards applied research and how research can support the state and society in general to confront problems in all relevant areas, especially those with a high impact on the economic, technical and scientific sectors.

Through its decision on September 12, 2007, the Council of Ministers allowed, for the first time, the establishment of private universities in Cyprus (Eurydice, 2010). The operation of the three private universities is regulated by law, and the universities can be either profit or non-profit organisations. The three private universities in Cyprus are: the European University Cyprus (EUC); the University of Nicosia (UNIC); and Frederick University Cyprus. A newly founded, Neapolis University was granted permission to admit its first students in the academic year 2010-11. The first three private universities have been operating since 2007 under an initial license after being upgraded to universities and having had their programs of study evaluated and approved by the Evaluation Committee of Private Universities (ECPU).

At the moment, there are twenty-four private institutions at non-university level which are privately owned and offer higher education diplomas. The registration of these institutions at the Ministry of Education and Culture does not, however, imply recognition of the degrees awarded.

As far as institutional autonomy is concerned, Cypriot public universities are not as autonomous as universities in other European countries e.g. United Kingdom, Sweden, etc. (Estermann and Nokkala, 2009). Recent research on a series of financial,

organisational, staffing and academic autonomy elements in public European universities shows that Cyprus universities have little autonomy on those elements due to the rigid legislative framework of educational institutions and their governance structures. Elements of the accredited universities were analysed and specific information about the Cypriot public universities autonomy performance was revealed.

Cypriot public universities are subject to various restrictions in terms of their academic structures and cannot freely determine them. Faculties are listed by name in the law. The decision making body follows a dual structure, which includes a council/board and a senate with some power of division between them. The members of the decision-making bodies include external members appointed by a higher national authority.

Another relevant issue to the organisational autonomy of higher education institutions is the set of procedures in place for the selection of the rector and his/her relation to the other governing bodies. In Cypriot public universities the rector, whose qualifications are stipulated in the law, is elected by a large selection body representing the different groups of the university community, with weighted votes. His/her role with regards to governing bodies of the institution is as a voting member or as the chairperson, reporting to the decision-making body and having responsibility for long-term strategic decisions.

The financial element of the universities' autonomy is strictly regulated for Cypriot universities, limiting their financial capacity and planning. Budget planning and needs determination is an annual process, and the negotiations directly with the relevant ministries are unlike the perceptible trend in Western Europe, for line-item budgets. Thus, extensive and periodic financial reporting to public authorities such as the funding Ministry of Education and Culture and/or Ministry of Finance, the Parliament and the

Public Audit Office, is requested to ensure the accountability and transparency of public funding usage.

A crucial issue concerning the financial autonomy of the universities in general and more specifically in Cyprus is their capacity to act as independent financial entities. Cypriot public universities are unable to keep any surplus from state funding, transferring funds from one year to another. The capacity of the universities to keep reserves is also regulated. Consequently, the ability of universities to use other sources of funding for their activities such as bank loans is allowed in Cyprus, but stringent restrictions apply as for their ability to raise money on the financial market.

Even though universities in Cyprus occupy publicly owned facilities, they are not free to decide on the investment of their real estate or the sale of assets. In general restrictions of this kind vary in Europe, but in the case of Cyprus it is simply not allowed by any means to sell assets of the university and especially buildings, which are of important financial value.

Acknowledging the difficulties arising from the different categories of staff and the strict legislative Cypriot framework regulating the capacity of universities to recruit their staff or negotiate employment terms, the analysis of the staffing autonomy reveals major restrictions in that area. Public universities are partially able to decide on recruitment practices but the number of posts in all staff categories is set at the national level and approved of as a line-item article of the universities' budgets. However, for private universities, the law provides for more flexibility in the selection, appointment and employment procedures and also the upgrading of its academics (Eurydice, 2010).

As far as academic recruitment is concerned, the appointments of senior staff and recruitment procedures have to be decided at a final stage at the university level. Employees of Cypriot state universities possess civil servant status which consequently means that HRM does not have any flexibility in terms of implementing procedures and practices autonomously. The regulating legislative framework of universities limits flexibility in terms of HRM due to the similarities it has with the public sector and civil servant status.

One of the most important factors of staffing autonomy is staff salaries and the ability of the university to negotiate their level. Certainly staffing autonomy should also be examined in relation to financial autonomy and capacity of the institution. It is obvious that due to budget restrictions and the limited financial autonomy that Cypriot state universities have, salaries are not negotiable between staff and employer. The overall salary cost is determined fully by the state, which adds proof to the aforementioned statement that there is a correlation between the form of received funding and determination of salary levels. Salaries of academic and university staff are pre-set for public universities and approved salary scales are used. Academic staff of public universities also receives other benefits approved by the University Council (Eurydice, 2010). For private universities, previous experience is taken into consideration when placing an individual on a particular salary scale.

It should be noted that staffing autonomy in Cypriot universities is limited and its major drawback is the inability of institutions to attract academic staff by designing specific incentives. At this point, it is important to mention the level of expenditure that the personnel compensation represents. According to a study, conducted in 2007, which gathered key data on European Higher Education (Eurydice and Eurostat, 2007), staff

costs accounted for over half of total expenditure on tertiary education in almost all European countries. More specifically, total personnel compensation percentage on total expenditure arrives at 52.9%, with other current expenditure percentage to 27.7% and capital expenditure to 19.4%. Generally though students per staff member ratio is estimated to 15.9, which is the European weighted average. As explained in Chapter One, in Cyprus, the increase in compensation is almost fully responsible for the loss of competitiveness of the education sector in relation to the corresponding sectors in Europe.

The last element of university autonomy analysed in the European research, conducted in 2009, was academic autonomy. Academic autonomy is defined as the ability of the institutions to determine their academic profile and their institutional strategy. Thus, the Bologna process has significantly influenced universities in Europe to reform and to enshrine the core elements of the declaration in their national legislation. Cyprus can freely decide the institutional strategy on the one hand, but state universities are engaged in resource negotiations to achieve strategies. Moreover, establishing new departments has to be approved by public authorities and the state sets specific student quotas.

In relation to university autonomy, another important issue is the evaluation of academic staff. Although, the evaluation of academic staff is crucial and affects university / organizational performance, no formal system of evaluation is in place for academic staff who work for the public universities in Cyprus. However, informal evaluation from students is implemented, which is not a legal requirement, for example at the University of Cyprus and the Open University of Cyprus. All evaluation methods of teaching staff

implemented are indirect and within the efforts of improving the quality of education provided by the universities (Eurydice, 2010).

Each year all public universities of Cyprus, as autonomous bodies, are required to submit to the Council of Ministers a self-evaluation report with respect to their work, activities, developments and policies implemented during the preceding year (Eurydice, 2010). All private universities have to establish and operate an Internal Evaluation Committee as a form of self-assessment and through this process; the committee submits suggestions for improvement and evaluates the standards of academic work (Eurydice, 2010).

The current challenges that Cypriot Higher Education faces as described in the Eurydice study (2010) can be summarized as follows:

- The on-going discussion for the preparation of a new unified law for Higher Education. A special committee composed of university professors and high ranking administrators was appointed by the Minister of Education in order to prepare the draft unified law to be discussed with the social partners.
- Expansion of universities with new undergraduate programs, schools and faculties, on-going registration of new programs of study offered at private institutions of higher education and strategic measures to gradually increase the number of students at public universities.
- Consideration of the operation of Cyprus Quality Assurance and Accreditation Agency in order to promote quality assurance and safeguard accountability of higher education institutions on the island. The new body is expected to absorb the functions of already existing bodies and carry out the evaluation of all public and private higher education institutions operating in Cyprus and

- The improvement of Cypriot universities performance based on measuring autonomy elements.

Although Cyprus was one of the EU countries with relatively high general government expenditure (GGE) on education, at 8% for the years 2004-2010 (along with Denmark and Sweden - Eurostat 2010, Government Finance Statistics), which can be seen as the commitment that a country makes to the development of skills and competences, the current economic crisis resulted in 5% decrease in the education budget (Eurydice Report, 2012). One area that has been more affected is the financing of human resources. In fact, one third of the European countries or regions report that the economic and financial crisis has had a direct impact on their teaching workforce (Eurydice, 2012).

In Cyprus, at the beginning of the crisis, no cuts were applied to salaries but they were not indexed in accordance with the cost of living allowance (COLA). Indeed their absolute values were maintained, but in practice the overall purchasing power declined. Later, as with many EU countries when “the effect of the economic downturn and the pressure on the public finances was much more pronounced and more countries were obliged to apply salary cuts for teachers and other public employees” (EACEA/Eurydice 2012), the Cyprus government applied major salary cuts to all employees including university academic and administrative staff. Moreover, in 2012, Cyprus reported additional decreases in the funding of available schemes for support of people in education.

Today, universities in Cyprus are asked to justify their activities, account for their use of resources and their performance to governmental bodies in terms of their efficiency and effectiveness. Therefore, emphasis should be given to the fact that the operation of the universities in Cyprus is heavily framed in the relevant laws with important disadvantages such as the limitation of organisational flexibility. Moreover, the current economic downturn has resulted in decreasing amounts of money that universities are receiving from government budgets. These facts impose certain challenges to university management and to HRM department at universities and justify, in general, the need for adopting strategic HRM at universities, and in particular, the need for adopting more sophisticated and comprehensive HRM practices and systems. Today, more than ever before, HRM should strive to fulfil its purpose to create value for the organisation (the university). It is important and necessary to recognise that people are an institution's competitive advantage and that human resource management must ensure that policies and practices, by which people are managed, are in place and that they are explained by the extent to which they enhance organisational performance.

### **2.11. Strategic Human Resources Management in Higher Education (university-level education)**

According to Pausits and Pellert (2007), universities are very specific organisations and are governed by a rigid regulatory framework due to their public sector status. Guest and Clinton (2007), supporting the special characteristics of such organisations, claim that public sector organisations possess distinctive features that make it more difficult to introduce strategic HRM and more difficult to achieve an impact on performance. The same study has shown that no evidence of a link between more advanced HRM practice and university performance was found, in contrast to other sectors.

Warner et.al (2003), in trying to contribute to a systematic analysis of the major areas of the management of colleges and universities and emphasise good practice, acknowledge that further and higher education is “people businesses”. In addition, they acknowledge the significant percentage of staff turnover reported and the percentage of money spent on staff in relation to total cost, which represented 58% to 70% on average.

One key characteristic of universities is the autonomy of the academic processes and the clear distinction of the academic and administrative processes and structures. At the same time, these processes and structures need to be aligned and cooperate in order to achieve the overall organisational objectives. The key reason why human resources management is still poorly established in higher education, a highly people-intensive sector, can be attributed to the above described peculiar nature of universities compared to other organisations. Beyond this, the organisational culture is considered to be a significant reason to explain the status quo of human resources management in universities today (Pausits and Peller, 2007).

The combination of the major challenges that universities are facing alongside their special organisational characteristics turns the focus in the consideration of a more “private sector way of organising”, which under previously specified circumstances seems to be more appropriate (Smeenk et al., 2008). Attention is given to the adoption of market-type mechanisms and modern types of governance (European Platform for Higher Education Modernisation Report, 2009). Priest (2012) emphasises the importance of balancing the managerial and business-focused culture in universities today. Gradually, the traditional focus of state control and academic governance should

be replaced by new types of governance emphasising accountability, quality assurance, responsiveness to society's needs and efficiency.

According to McCaffery (2004), universities can no longer be managed in the conventional way of the past and significant changes are needed in order to effectively respond to the “overload” of demands placed on them. The development of the capacity to steer themselves is considered a must. The strengthening of the steering core will enable them to act quickly, flexibly and consistently to the continuous environmental demands and at the same time reconcile new managerial values with traditional academic ones.

Managerialism is the trend to replace professional strategies, structures and values by organisational characteristics that can be stereotyped as “private sector” features. It can also be described as the wave of reform that has swept through European universities and other public organisations all over Europe and includes greater managerial power, structural reorganisation, more emphasis on marketing and business generation, performance-related pay and rationalisation and computerisation of administrative structures (Smeenk et al., 2008). The turn to managerialism is supported in policy related studies across European universities (File and Luijten-Lub, 2006). Its consequences, though, are a subject to discussion.

Some researchers support the view that managerialism improves efficiency, transparency and effectiveness that are thought to be positively related to job performance. File and Luijten-Lub (2006) argue that managerialism has broadened the range of strategic choices and possible activities to focus on. It has set more liberal

operating regulations, entailed greater financial autonomy and wider opportunities to risk-taking. However, others claim that employees, in order to achieve managerial goals, have become more involved in bureaucratic procedures and are required to spend more time on secondary activities. In other words, the opponents of managerialism argue that it has exactly the opposite results of its own intentions (Davies and Thomas, 2002; Bryson, 2004) and this is defined as the managerialism contradiction.

A possible way to reduce the managerialism contradiction and, consequently to increase the quality of performance in university education, could be the implementation of a coherent system of HRM practices. The system of HRM practices enables the implementation of specific, standardised / formal policies that improve efficiency and effectiveness; and at the same time, it provides opportunities for improvement and development of employees. So far, mainly, only individual HRM practices, such as personnel planning and recruitment, performance evaluation and employee development, are used in higher education.

Dowds (2010), in analysing the international experiences of HRM in higher education, considers performance management to be an important strategic issue internationally. Almost all interviewees in the research considered the implementation of a performance scheme to be a factor that would enhance performance within a strong framework for overall quality and standards. Performance management is significantly related to the managerialism concept developed in higher education institutes. The implementation of such schemes aims to evaluate performance through key performance indicators and strategically to link performance with other human resources systems (Decramer et al., 2012; Den Hartog et al., 2004). International trends show that Higher Education

Institutions gradually move to a norm of linking performance to pay schemes (Dowds, 2010). Similarly, McCaffery (2004) defines performance management as the method of connecting organisational objectives to the people who are there to carry them out.

In a study conducted amongst senior administrators in publicly funded higher education institutions with strategic responsibility for human resources (Dowds, 2010), performance management was perceived as an important common strategic issue, but significant differences were reported as far as the implemented approaches of performance management are concerned.

Middlehurst et.al (2003) emphasise the benefits of performance management in Higher Education. As in any other organisation, individual and group performance is linked to the success of the institution to deliver its mission and objectives. Moreover, high performance staff contributes to high quality services to internal and external customers by providing better educational services, high quality research and contribution to social activities. Most importantly performance management states a clear purpose and direction to employees, creates performance culture and builds up morale.

On a similar mode, Decramer et al. (2012) conducted a study on satisfaction with employee performance management systems in higher education. The results revealed that a high level of internally consistent employee performance management systems, more communication and tighter control are associated with high academic employee performance management satisfaction. Furthermore, they found that employee performance management satisfaction depends on tenure type, suggesting that a diversified employee performance management policy should be considered in universities.

However, performance management is considered challenging in its implementation due to the size and complexity in the organisation of different institutions, the variety of occupational categories and the nature of roles and tasks of the employees. Another important issue that significantly impacts the implementation of performance management is the culture of higher education institutions. The modernisation of the organisation of higher education institutions is rather a new concept and has formally entered the mainstream of discourse in only the last thirty years (Middlehurst et.al, 2003). Conflicting concepts and practices arising from the old traditional organisation of higher education institutions and the new “management” way of doing things has caused a less than enthusiastic greeting to performance management in higher education.

Shenstone (2009) identifies the emphasis within the Higher Education Institution sector on identifying and building on expertise found in other sectors in seeking to modernise the HRM function. Cross-sectoral expertise was one deciding factor in the appointment of HRM professionals during the period 2001 to 2008, where significant changes have taken place in the HRM function in higher education institutions in England.

A more recent study by Van den Brink et al. (2012) emphasises the importance of talent management, along with recruitment and selection, as key strategic HRM issues for universities. They claim that this is due to the fact that more and more universities operate in “a global, complex, dynamic and highly competitive environment”. They found that even though HRM managers formulate procedures and rules to be used for academic recruitment and selection by the decision-making academic committee members, their implementation seems to be a different matter. They claimed that this is due to the absence of professionalism and transparency and the lack of power base by

the HRM function. In addition, a study conducted by Smeenk et al. (2008), sheds light into the level of managerialism in different European universities and the specific HRM practices that help build organisational commitment and quality in job performance.

Related to the managerialism concept, the massive changes in higher education and especially in European universities have turned the interest of researchers also to institutional autonomy. Frans van Vught (2008) supports that many governments nowadays develop policies of less state control and more autonomy, hoping to enhance the contribution of higher education institutions to the “knowledge society”, based on the idea that our future prosperity and welfare is dependent to a large extent on our ability to create and apply knowledge. The study claims that the intention of governmental policies is to influence the behaviour of higher education institutions and their faculty and to offer a trade-off between autonomy and accountability on the one hand and more efficiency and responsiveness on the other.

As defined by Estermann and Nokkola (2009) institutional autonomy is the changing relations between the state and higher education institutions and the degree of control exerted by the state, depending on the national context and circumstances. The study identifies four major decision ability areas of universities on which institutional autonomy can be defined. The four areas are: organisation structures, financial issues, staffing and academic matters. The findings of the study show great operational variation between European universities and their autonomy based on the four areas discussed before, always in relation to the national educational legislative frameworks.

More specifically, human resources management and the autonomy exerted by the universities in staffing matters in particular can only be analysed in relation to an

institution's academic and financial autonomy. The capacity of an institution to freely recruit staff or negotiate terms of employment such as salaries is extended to its ability to have control over the financial aspects of staffing (number of vacancies/posts, salary levels, etc.). Public authorities' involvement in university staffing matters ranges from determining directly or indirectly the salaries to being the direct employer of university staff. Moreover, staffing procedures might be regulated by legislation and recruitment policies might have to be confirmed by higher level authorities. The immediate consequence of both is the inability of institutions to be flexible in a quickly changing and competitive recruitment environment (Estermann and Nokkola, 2009). In addition, as an important effect of the factors already touched on, universities have difficulty in competing in the higher education "reputation race", where they constantly try to hire the best possible faculty on the labour market (van Vught, 2008). Higher education institutions are intensively concerned with reputation issues and prestige and they compete for resources that might influence institutional reputation (Van Vught, 2008).

Human resources management in universities nowadays includes functions such as personnel planning and recruitment, performance review, retention and human resource development and pay-in other words, all administrative and coordinating tasks that refer to employees of the institution (Pausits and Pellert, 2007). As described by Guest and Clinton (2007), HRM has traditionally been a rather minor administrative activity. The weakness of the HRM function in universities was the reason for initiating action from the United Kingdom's government in 1999 (Guest and Clinton, 2007). The trade-off of the initiation was to significantly fund universities if they could demonstrate progress in the development of a HRM strategy in their core function areas. The evaluation of the project showed that good progress was made, especially in priority areas and the

development of the HRM strategy, at a time where in many other sectors HRM had practices and relevant strategies in place for several decades (Guest and Clinton, 2007).

According to File and Luijten-Lub (2006) in a study reflecting on higher education policy across Europe, personnel policy has grown in importance for the universities, even though civil service status remains the dominant mode of employment. At the same time staff mobility is mainly high because of the significant diversification of salaries across countries and universities and the barrier-free European labour market.

In a more recent study, Frans van Vugh (2009) stress the role that human resources need to play so that European universities can unleash their full potential, something that they have so far failed to do. Human resources should be strengthened both in numbers and in quality to improve institutional attractiveness and stimulate economic growth and social cohesion. Moreover, as Buck and Watson (2002) found, university's HRM strategies are significantly related with staff commitment, specifying that certain HRM practices can affect organisational commitment and potentially influence turnover.

Considering the importance of "autonomy" and concentrating on how it is used, Watson (2000) in Priest (2012) makes the point that where autonomy is at faculty or local level, it can restrict institutional freedom of actions. Therefore, he suggests that there should be a balance in merging the aspirations of individuals and departments with the needs of the university. Moreover, Dearlove (2002: 257) recommends that "academics – must be involved and prepared to lead, but they – must also work in partnership with administrators to achieve common goals and at the same time to promote a "shared vision", adding value to the university. As Taylor (2012) recommends, the fundamental

nature of higher education institutions and the unstable external environment entail that a degree of shared governance is necessary for the success of the modern university.

A substantially different case in terms of strategic orientation of HRM in universities is found in English HEI's. An extensive study commissioned to evaluate public policy impact in HRM has spurred on important improvements and transformations since 2001 (Shenstone, 2009). Initiated in 2001, the co-ordinated strategy effort pursued by the higher education public funding organisation (HEFCE) and Universities and Colleges Employers Association (UCEA) introduced system-wide improvements that were received positively by the sector (HEFCE, 2005). The key components of the strategy were: the Rewarding and Developing Staff Initiative and the National Framework Agreement. The success of the initiatives was due to the targeted funding for a specific motive: the modernization of the HRM function in HEI's.

The results identified by the implementation of the strategy demonstrated a favorable shift in attitudes towards the perceived status and purpose of people management within the institutional context. Moreover, there has been notable growth in status and visibility of HRM and people management issues within senior teams even though the strategic role and position of HRM remains variable across universities in England (Shenstone, 2009). "Although the volume of work remains primarily transactional, there has been recognition of the importance of, and a shift towards greater emphasis being placed on, the tactical and the strategic. The function has been reorganised and staff changes made to support this. After a difficult period of initial change, a more mature HRM function is beginning to emerge," says an HRM specialist of an English institution (Anonymous cited in Shenstone, 2009).

After an analysis of the current situation of Strategic HRM in universities, it is clear that it does not command a key role in the context of the overall institutional development. Furthermore, relevant research shows that even though universities have in place HRM administration procedures whose flexibility depends on the institution's autonomy, the absence of strategies and systems in managing the human resources is obvious in many institutions in Europe.

The increased professionalisation of HRM units in universities and the closer alignment with institutional management is a product of the last decade according to Daysh et. al., (2008) and at the same time he emphasises that even though the HRM in universities is improving its strategic influence, few HRM directors participate in senior management groups or report directly to the vice-chancellor. Even though a more strategic human resources approach in higher education is critical, it is still a relatively recent phenomenon (Daysh et al., 2008). Consistent with the same study, HRM was forced to change considerably its context in order to meet the challenges of the huge expansion of higher education worldwide and the diversity of the student base.

A new emerging theme concerning HRM in higher education is the development of the concept of "business partner". Dowds (2010) defines the "business partner" concept by describing the role of the HRM unit in injecting the HRM dimension into all business decision making. The new development wants the HRM personnel to enhance their capacity to think strategically and move away from a rule enforcement culture (Dowds, 2010). According to Dowds (2010), HRM personnel should act as change agents in the organisation, launching new style HRM units to analyse complex data and to perform job re-designs that fit the organisational strategies and developments. Interviews carried out for this study have shown that senior administrators of publicly funded higher

education institutions perceive that the implementation of an electronic Management Information System will facilitate the transformation of the HRM units becoming more strategically oriented and at the same time produce more sophisticated management information by automating processes currently occupying significant personnel time.

The development of HRM structures across different regions and countries is diverse, despite the similarities in trends and challenges in the higher education scene (Daysh et al., 2008). Their research conducted among Commonwealth Universities revealed the difference in structure and management of a wide range of HRM functions performed by universities.

In the constantly changing higher education environment, HRM is called to defend its strategic orientation. Major challenges arise from the current status quo of the HRM in universities in order to overcome its administrative nature and gain a more strategic role in the institutional development. The main issues that HRM in universities is called upon to answer are the development of a human resources strategy, adequate career path models, the implementation of human resources development, the development of leadership skills, the professionalisation of administrative functions, the professorial appointment procedures and the promoting of young researchers (Pausits and Pellert, 2007).

Moreover, HRM is facing another challenge in higher education management, namely “the multiple corporate systems set up” of universities (Priest, 2012). More specifically, the structural changes and the autonomous departmental decision-making led to multiple and diverse structures, creating a lack of centralised and connecting systems within the university; however, the trend of introducing processes and programs from

businesses into university management in order to hold a single decision-making and reporting system has been initiated. Such processes and programs include the use of formal planning and forecasting tools, reporting and monitoring instruments and formal business reviews including benchmarks against key performance indicators (Priest, 2012). Universities must use business-like processes and HRM systems to manage themselves. However, based on a study carried out with seventeen hundred university employees (Smeenk et al., 2008), it has been found that there are large differences and some similarities among countries regarding which human resource management (HRM) practices to use and their effect on the quality of employee job performance.

However, universities now more than ever before need to operate flexibly in a dynamic and often hostile external environment; a highly marketised and shifting environment where universities constantly need to improve their competitiveness in teaching, research and third-stream activity (Taylor, 2012). Middlehurst (2013) argues for a re-interpretation and strengthening of collegial forms of governance, using models and examples drawn from innovative private sector companies that can indicate useful directions for higher education institutions so that they are better fitted to meet 21st century challenges. Moreover, Middlehurst, adopting Gary Hamel's (2007, 2012) theory of innovative organisations that urged for inverting the management pyramid, from hierarchies of "command" to hierarchies of "influence", proposes that "re-invent management for the 21st century should be widely heard in higher education, not just in the U.K. but in other parts of Europe and across countries and regions that are modernising and reforming higher education" (2013: 291).

## **2.12. Conclusion**

With the objective of providing an overview and synthesis of the key theories and themes of the current thesis, this chapter presented a detailed analysis of the strategic human resource management (SHRM) literature, the major SHRM approaches, the resource-based view, the behavioural perspective (including the social exchange theory), organisational performance, the higher education sector, the higher education in Cyprus and finally, the SHRM in Higher Education (university-level education). In the next chapter, the key points of the literature review are linked together to develop the research conceptual model and the research hypotheses.

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## **Chapter 3: Development of Conceptual Model and Hypotheses**

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This chapter aims to provide a synthesis of the research themes that have been analysed and discussed in Chapter 2. In particular, the theoretical context in which the current research has been conducted is operationalised. At a next step, the research hypotheses are developed and the theoretical / conceptual model of the study is presented.

### **3.1. Introduction and Background of the Study**

“The economic and technological context has changed very significantly over the last thirty years and this has led to some key adaptations in HRM systems” (Boxall and Purcell, 2008: 224). Recent liberalisation of the economy and the opening up of the Cyprus market to global competition, due to its membership in the European Union, has forced Cypriot organisations toward serious reorganisation of their human resource management practices. There is a growing belief that if business organisations in Cyprus want to survive and increase their potential in the global economy, they need world-class human resource competencies and efficient processes for managing them (Costea, 2002; 2005).

Moreover, as a service sector economy, Cyprus is highly dependent upon its knowledge assets to create products and services that have value in the marketplace. Cypriot organisations must continuously renew their knowledge in order to be successful, especially now when operating in a rapidly changing environment. As a result, a great number of organisations are trying to design their HRM systems in such a way that will enable employees to exert their knowledge as well as develop the appropriate attitudes and behaviours to achieve a competitive edge; thereby improving the overall results of their organisations.

This study aims at enhancing our understanding of the procedures for organising and evaluating human resources management practices in Cyprus university-level education. It also attempts to assess the effectiveness that specific human resources management practices have on organisational performance.

Almost all studies on the relationship between HRM and organisational performance have focused on the manufacturing sector, despite the fact that most employees now work in the service sector (Bartel, 2004; Schneider et al., 2005). “The HRM environment can be an even more important determinant of productivity in the service sector than in the manufacturing sector, given the much larger share of total production costs accounted for by employment, and the much more extensive direct contact between employees and the customers, in services” (Bartel, 2004: 181). This study intends to extend the research of the effect of a set (system) of HRM practices on organisational performance in the service sector, and in particular in the Cyprus university-level education.

The performance outcomes of HRM can be taken in a variety of ways such as financial, organisational and employee-related outcomes. Until recently, financial measures have dominated the research conducted, but the distance between the financial measures and HRM interventions is argued to be too large (Paauwe, 2009). Thus, there is a need for performance indicators that are far more proximal in terms of what HRM practices can actually affect (KSA's, motivation, commitment) and behaviour (turnover, absence, performance), and subsequent changes in outcomes at the organisational level (productivity, quality of services, performance). Moreover, organisational performance depends on the actual implementation of strategic HRM. As several authors have noted, there is often a gap between the rhetoric of strategic HRM and the reality (Legge 2005;

Lengnick-Hall et al. 2009). There is a growing recognition that intended strategic HRM practices may be different from realised and perceived HRM practices.

It should be emphasised that traditional sources of performance - financial, strategic and technological capabilities - still provide competitive leverage but do so to a lesser degree now than in the past (Cascio, 2000; Coff, 1997; Becker and Gerhart, 1996; Pfeffer, 1994). One of the reasons for their decreasing significance is that technological, structural and other tangible organisational assets can be easily substituted and imitated. As a result, the role of human resources has increasingly been viewed as part of the organisational strategic resources with the potential for continuous business success (Pfeffer, 1998). Thus, HRM is becoming the central focus of the resource-based model because human assets are frequently hard to reproduce due to social complexity, asset specificity, rareness and causal ambiguity.

Simultaneously, in many parts of the world, the increasing emphasis on knowledge-based competitiveness in the current unstable environment has also accelerated the importance of human capital (Baron and Armstrong, 2007; CIPD, 2006). Developing employees who are knowledgeable or skilled in a particular field may constitute a potential source of competitive advantage and increased performance for organisations. The goal of HRM is to design and implement HRM practices in a way that leads to desired employee attitudes and performance (Nishii et al. 2008). Many studies have shown that the appropriate HRM practices can have a positive impact on organisational performance (Combs et al, 2006; Huselid, 1995; MacDuffie, 1995; Wright et al., 2005).

Prior research suggests that HRM systems as a resource can lead to competitive advantage (Wright, Dunford and Snell, 2001). A number of studies have demonstrated

relationships between different bundles of HRM practices or philosophies and firm performance (Wright et al., 2005). Although research supports the assertion that there is a relationship between HRM practices and firm outcomes, what continues to be missing from the SHRM literature is research aimed at explaining the processes by which systems of human resource practices affect organisational outcomes (Wright and Haggerty, 2005). This missing link between HRM practices and organisational performance has been called the “black box” problem of HRM (Gong et al., 2009; Purcell and Hutchinson, 2007; Boselie, et al., 2005; Wright and Gardner 2004; Purcell et al. 2003; Becker and Gerhart, 1996). The current study aims to empirically examine and address this research gap.

The question of how systems of HRM practices, particularly those of a strategic nature, affect organisational outcomes and firm performance, still remains unanswered. What chain links lead from HRM practices to whatever notion of organisational performance is desired? By further examining the impact of a more comprehensive system of HRM practices on employee outcomes (Boselie et al., 2005) as well as on human capital (Swart and Kinnie, 2003) and employee attitudes and behaviours (Gong et al., 2009; Schneider et al., 2003) as the mechanisms through which this process occurs, this study will contribute towards addressing the issues in the black box that exist in the SHRM literature. The above mechanism can be explained by two major organisational theories, the resource based view (RBV) and the behavioural perspective (the social exchange theory). The current thesis examines the impact of HRM on organisational performance by integrating these two theories and based on them, it investigates the role of the mediating variables.

### 3.2 The Resource Based View (RBV)

The theoretical basis and explanatory framework for linking HRM practices, human capital and firm performance is the resource-based view of the firm, which supports the development of a winning edge through investment in people (Boxall and Purcell, 2008). According to Barney (1991), firms develop sustained competitive advantage by creating value in a way that is rare and hard to imitate. In order for a firm's resources to provide a sustained competitive advantage, four criteria must exist; it must add value to the firm, be rare, be imperfectly imitable, and it cannot be substituted. SHRM theorists propose a resource-based argument that is centred on how HRM practices form a sustainable competitive advantage for organisations (Wright et al., 1994; Becker et al., 1997; Boselie et al., 2005).

They also argue that an HRM system is an "invisible asset" creating value as it is so embedded in the organization that it enhances the firm's capabilities. According to these theorists, an HRM system is path dependent in that policies and programs are developed over time and cannot be purchased "over the counter" by the competition, thus making it difficult to mimic (Becker and Gerhart, 1996). This view places emphasis on an organisation's internal resources (Barney, 1991) and its investment in human capital. It maintains that through progressive human resource practices, firm specific capabilities - core or distinctive competencies (Hamel and Prahalad, 1994) - are developed by building knowledge and assets, thereby creating and sustaining a competitive advantage (Colbert, 2004; Wright et al., 1995; Wright and McMahan, 1992).

By investing in and implementing programs that develop and motivate people, organisations create their competitive advantage through people (Colbert, 2004; Pfeffer,

1994; Wright and McMahan, 1992; Ulrich, 1991). Therefore, as Boxall and Purcell (2008) note, “under the RBV, the organisation’s distinctive HR advantage (HRA) is a combination of appropriately talented people (Human Capital Asset or HCA) and the way they work together (Organisational Process Advantage or OPA) which in mathematic notation can be presented as  $HRA = f(HCA, OPA)$ . Moreover, Lepak and Snell (2007) argue that organisations need a commitment-oriented HRM system for employees whose skills are critical to an organisation’s core or distinctive capabilities.

In line with the shift in the strategy literature, scholars in human resource management began to make arguments consistent with the RBV perspective. In his 1994 book, *Competitive Advantage through People*, Jeffrey Pfeffer argues that success in dynamic, hyper-competitive markets depends less on advantages associated with economies of scale, technology, patents, regulation and access to capital and more on innovation, speed and adaptability. Pfeffer further argues that these latter sources of competitive advantage are largely derived from firms’ employees and how they are managed. Based on these and similar arguments, Pfeffer (1994, 1998) and others (Becker, Huselid and Ulrich, 2001; O’Reilly and Pfeffer, 2000) strongly advocate that firms adopt a set of management practices collectively referred to as high performance or high involvement human resource systems. These arguments and associated research are a central part of the developing SHRM literature.

### **3.3 The Social Exchange Theory**

Any fit to firm strategy must first consider the kinds of employee behaviour required to successfully execute the strategy, and the types of skills necessary to exhibit those behaviours (Allen and Wright, 2006). SHRM theory is based, to a large extent, on the

assumption that certain organisational goals require certain employee behaviours and that certain human resource strategies produce those specific employee behaviours (Cappelli and Singh, 1992; Schuler and Jackson, 1987). Yet, the literature lacks detailed examples of such behavioural approaches (Ericksen and Dyer, 2005). Therefore, particularly vital for this study is the integration of the behavioural perspective, especially the social exchange theory, with the well-established resource-based view in explaining the relationship between the human resource practices (system) and organisational performance. The motivational processes of social exchange theory and the norm of reciprocity (Molm et al. 2007; Blau, 1964; Homans, 1961) may explain the relationships among human resource practices and employee outcomes (Wayne et al., 1997; Setton et al., 1996; Eisenberger et al., 1990).

A well-established stream of research rooted in social exchange theory has shown that employee commitment to the organisation derives from their perceptions of the employers' commitment to and support of them (Cropanzano and Mitchell, 2005; Hutchison and Garstka, 1996; Setton et al., 1996; Shore and Wayne, 1993; Eisenberger et al., 1990). More specifically, commitment reflects the psychological bond that ties the employee to the organisation (Meyer and Maltin, 2010; Meyer and Allen, 1991). The research suggests that employees interpret organisational actions such as human resource practices (Rhodes and Eisenberger, 2002; Wayne et al., 1997; Setton et al., 1996) and the trustworthiness of management (Aryee et al., 2002; Setton et al., 1996; Eisenberger et al., 1990) as indicative of the personified organisation's commitment to them. They reciprocate their commitment accordingly to these perceptions.

Huselid (1995) suggests that human resource practices can be grouped into two categories - those practices that improve employee skills and those that enhance

employee motivation. In a study of over 900 organisations in the United States, he validates these two categories and their effects. He found that skill-enhancing human resource activities includes selection and training activities and are associated with turnover and financial performance whereas motivation-enhancing activities include performance appraisal and compensation activities and are associated with measures of productivity.

### **3.4 Integrating the resource-based view and the behavioural perspective (social exchange theory)**

The following proposed research model draws from the work conducted in SHRM proposing that investment in human capital leads to competitive advantage, and integrates it with social exchange theory (employees' attitude and behaviour), which argues that if the employees perceive that the organisation has provided something of value to them, they are likely to feel obligated to reciprocate with behaviour benefiting the organisation (Ericksen and Dyer, 2005). I propose a system of HRM practices that is an investment in the human capital of the organisation; it is perceived by employees as providing material rewards and resources; and therefore, it results in a sense of obligation to reciprocate with attitudes and behaviours which benefit the organisation.

In line with previous studies (eg. Chang, 2005; Huselid, 1995; MacDuffie, 1995) that focus on what they stated as the (perceived) HRM practices, labelled as High Performance Work System (HPWS), High Involvement Work Practices (HIWP), High Commitment HR Practices (HCHRP) or Strategic Human Resource Practices (SHRP), this study focuses on the same practices, simply labelled as "HPWS".

Although the HPWS concept has gained incredible popularity both in research and practitioner communities, the exact configuration of practices (Arthur and Boyles, 2007; Evans and Davis, 2005) and the mechanisms through which HPWS increase performance (Boselie, Dietz and Boon, 2005; Guest, 2002) are still under discussion. While there is some disagreement as to the exact specification of the set of HRM practices comprising a high performance work system, there is a common theme in the literature.

Lepak and colleagues (2002) argue that business strategy and a firm's employee-oriented philosophy are the most proximal determinants of HRM decisions. What emerges is an emphasis on utilising a system of management practices providing employees the skills, information, motivation and attitude resulting in a work force which is a source of competitive advantage and increased firm-level performance outcomes including productivity and innovation (CIPD, 2006; Datta et al., 2005; Flood et al., 2004; Huselid, 1995; Guthrie, 2001; Appelbaum et al., 2000; MacDuffie, 1995). A growing body of empirical evidence (e.g., Datta et al., 2005; Guthrie, 2001; Huselid, 1995) suggests that using an HWPS can enhance organisational performance, with a particular emphasis on productivity.

Although there is little consensus on which practices should be included within the aforementioned HPWS, the researcher proposes the system of HRM practices that includes employee selection, employee training and development, performance management, compensation and incentives, and employee participation and involvement. In addition to meeting the criteria described earlier, these practices have been consistently found to be associated with firm outcomes and performance in the SHRM literature. These HRM practices are generally found in high performance work

environments (Macky and Boxall, 2007; Datta et al., 2005; Den Hartog and Verburg, 2004; Becker et al, 2001) and are included in Pfeffer's (1998) seven practices "for building profits by putting people first". In addition, these practices reflect a strategic focus and promote the organisation's commitment to its employees (Whitener, 2001).

The Pfeffer's (1998) seven practices of HRM are considered the most efficient ones and these constitute the basis of several research studies with an interest on the practices used for business effectiveness. Similarly, Datta et al. (2005) characterise HPWS as a set of "advanced" HRM practices that pursue sustainable competitive advantage by enhancing employees' skills, commitment, and productivity.

Several research projects have studied the impact that isolated practices can have on business performance and productivity, while others have investigated how these practices function when they are combined. Although individual HRM practices generate value, they are unlikely to generate competitive advantage as they are likely to be imitated (Barney and Wright, 1998). On the other hand, Combs et al. (2006), based on a meta-analysis, found that a system of HRM practices (HPWS) has stronger performance effects than individual HRM practices. Therefore, it is more useful to explore their overall effect of a system of HRM practices (HPWS) on organisational performance.

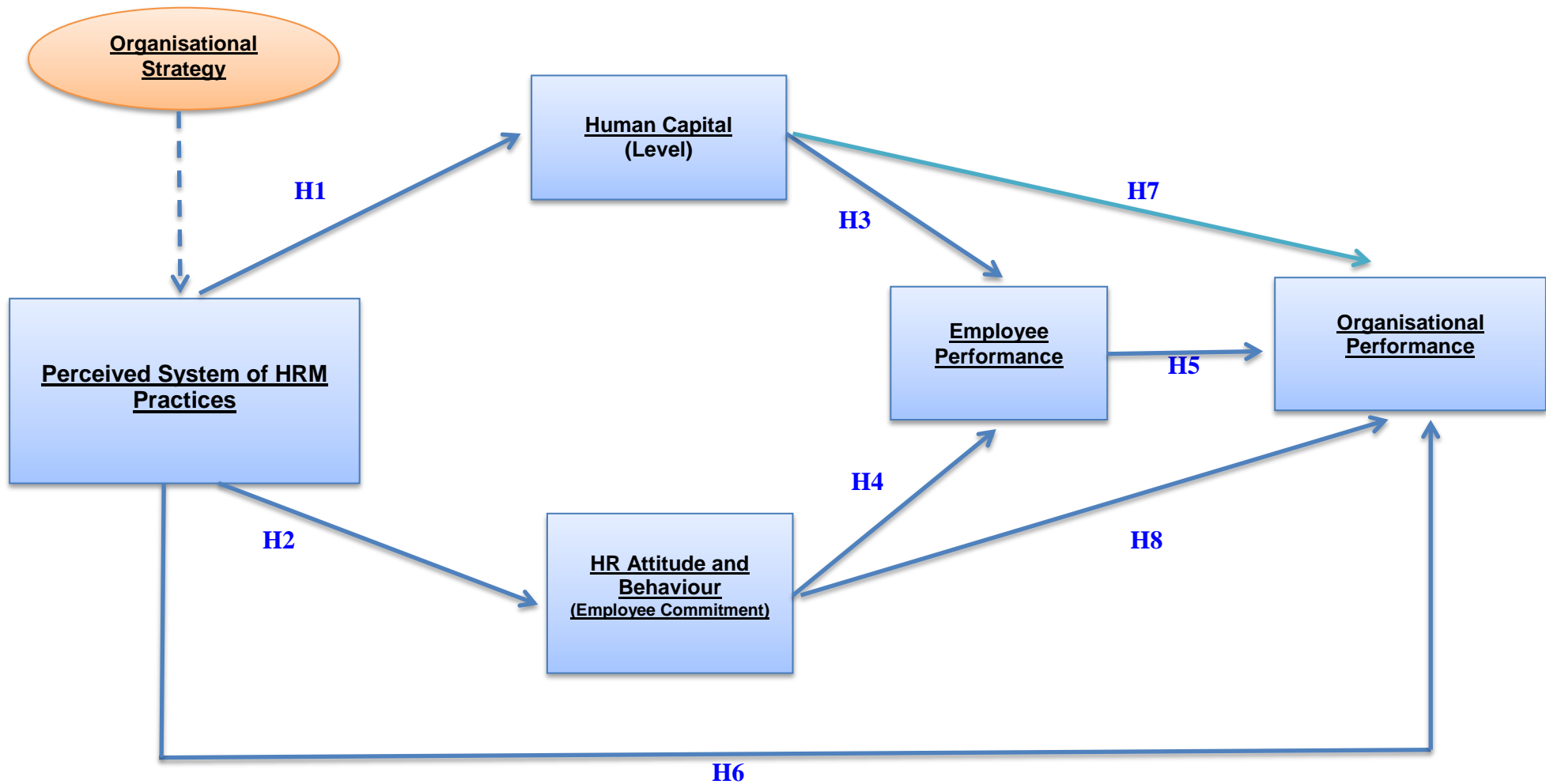
### **The Conceptual Model**

Based on the recent literature on SHRM, RBV and the behavioural perspective (social exchange theory), and the major conceptual models on HRM and performance (eg. Purcell and Kinnie 2007; Wright and Nishii, 2004; Becker and Huselid, 1998; Wright and McMahan, 1992), the proposed model (see Figure 3.1) provides an integrated framework that can shed light on the sub-processes (mediating mechanisms – employee perception of HRM practices, human capital and HR attitudes and behaviours (employee commitment) through which a system of HRM practices impacts organisational performance.

Given the objective of the study, focusing on both, the resource-based view and the behavioural perspective (social exchange theory), this model (see Figure 3.1) provides a framework for understanding the potential performance implications of an organisation's human capital as well as attitude and behaviour (employee commitment) of employees. In addition, understanding the perceived role of a bundle of HRM practices in these relationships is critical as the system of HRM practices is the primary way to influence the level of human capital that organisations possess and aggregate employee attitudes and behaviours that are exhibited for the organisations.

The model proposes that the perceived system of HRM practices positively influences the level of human capital and employees' commitment. The level of human capital and employees' commitment positively affect employee performance; and the overall effects of the perceived system of HRM practices operate through a path connecting human capital and employee commitment to employee performance and ultimately to organisational performance.

Related research by Lepak et al. (2006), Macky and Boxall (2007), Nishii et al. (2008), and Takeuchi et al. (2009) has emphasized the idea that the path through which a system of HRM practices impacts performance requires consideration of employee perceptions. Thus, the current thesis begins to address this relationship by assessing the effects of the perceived system of HRM practices and how through a path linking human capital, employee commitment and employee performance, ultimately impacts organisational performance.

*Figure 3.1: The Proposed Conceptual Model*

The proposed model as depicted in the above figure consists of five constructs. The main independent variable “Perceived System of HRM Practices”, the main dependent variable (Organisational Performance) and the mediating variables (HR Attitude and Behaviour - Commitment, Human Capital, Employee Performance). The discussion which follows presents the overall rationale behind the development of the model and the extraction of the research hypotheses. In addition, the interrelationships between the variables are also empirically discussed and addressed.

### **3.5 Hypotheses**

The following section will discuss the major parameters of the proposed conceptual model and the hypotheses derived from it. An “analytical approach” to HRM is adopted, as it has been proposed by Boxall (2012), Boxall and Purcell (2010), Fleetwood and Hesketh (2008) and Purcell and Wright (2007), that aims to build a rigorous understanding of what managers try to do in managing work and people, of what motivates their actions, of what affects their success, and of the implications for organisational stakeholders of their actions.

#### **3.5.1 The influence of employees’ perception on the relationship between the system of HRM practices and organisational performance**

The fit between the different HRM practices within the HRM system, by itself, might not be adequate in order to have positive effect on performance. Wright and Nishii (2007) point out that besides the intended HRM system, the actual and the perceived HRM system are also important for explaining performance effects of HRM. The intended HRM system is the HRM system as designed by the HRM policy makers, and the actual HRM system is the resulting HRM system after implementation. The perceived HRM system reflects employee perceptions of the HRM system, which

moves the process to the level of the individual (Wright and Nishii, 2007). Based on suggested research directions arguing to include employee perceptions (Boxall and Purcell, 2008; Wright and Nishii, 2007), the perceived system of HRM practices was included as the main independent construct in the research conceptual model in order to examine the relationship between the perceived system of HRM practices and human capital, employee attitude and behaviour (employee commitment) and organisational performance.

Research on human resource practices has been conducted primarily at the individual practice level in which HRM practices are studied in isolation and their impact limited to the individual outcomes such as employee attitudes and performance (Wright and Boswell, 2002). However, recently, there has been increasing attention to the impact of groups or bundles of practices and their relationship to firm level performance. These bundles or sets of practices, often referred to as high-commitment or high-performance work practices (Huselid, 1995), are generally thought to influence firm performance by enhancing employee commitment and motivation, by enhancing human capital in terms of employee knowledge, skills and abilities, and through behavioural outcomes such as information sharing and coordination (Ostroff and Bowen, 2000; Boxall and Purcell, 2003; Wright et al., 2001). Therefore, in the study of SHRM, HRM practices should be considered as a system (a bundle of practices) whose impact exceeds specific practices in isolation.

As Guzzo and Noonan (1994) argue, it is the collective interaction of HRM practices that affect employees and, ultimately, organisational performance. Unlocking the “black box” which explains HRM’s contribution to the firm’s sustained competitive advantage has been described as “the most pressing theoretic challenge facing SHRM” (Becker

and Huselid, 2006: 899). Moreover, the mechanisms between a system of HRM practices and organisational performance - employee knowledge, skills, and abilities, as well as employee attitudes and behaviours, despite their conceptual importance, have received relatively little empirical attention within SHRM research. Indeed, in a recent qualitative review of the extant literature on SHRM, only 20 out of the 105 studies reviewed investigated the influence of the practices on proximal (HR related) employee outcomes (Boselie et al., 2005).

Similarly, meta-analytic review of the literature demonstrates that only 23 out of the 165 effect sizes reported address these proximal employee outcomes (Herdman, 2007). When studied, they are often studied in isolation as dependent variables or individual mediators rather than within a more fully specified system of mediating mechanisms. This shortcoming has been noted in several reviews (e.g. Becker and Huselid, 2006; Guest, 1997; Wright et al., 2001, 2003) and has been the subject of recent theoretical developments (Bowen and Ostroff, 2004). Thus, the focus in my research is the need to more fully understand both, how the perceived system of HRM practices impacts human capital and employee attitude and behaviour and what the nature of their mediating role is.

Although scholars have converged in the belief that HRM practices are associated with organisational performance through their influence on the level of human capital and on employee attitudes and behaviours (CIPD, 2006; Lepak et al., 2004), recently, it was suggested that the causal chain may be more complex than it had been thought (Fleetwood and Hesketh, 2008; Bowen and Ostroff, 2004; Wright and Nishii, 2004). Nishii et al. (2008) suggest that employees' perceptions of HRM practices are likely to precede the employee attitude and behaviour links in the causal chain. The major

assumption of the latter is that employee perception of the HRM system refers to the belief of employees about the reasons management implements specific HRM practices.

Stiles, Gratton, and Truss (1997) note that HRM systems are practices that signal the intentions of the organisation towards the employees. The organisation's designed HRM system ideally reflects its strategy and context, and as organisations make choices about how to manage their employees, the system of HRM practices should convey information about the organisation to employees (Den Hartog et al., 2012). However, the designed HRM system may not positively affect employees as rhetoric about the desired HRM system and the reality of what is implemented may differ from each other (Legge, 2005). Thus, as Bowen and Ostroff (2004) note, the role of employee perception is significant in translating HRM practices into desired organisational performance. Furthermore, Nishii et al. (2008) note that it is reasonable to expect that in some cases, even if a firm's HRM practices appear to be internally consistent on paper, they may not be perceived or experienced as such by employees.

In line with social exchange theory, it is expected that HRM practices that are perceived as positive to employee well-being are likely to stimulate a felt obligation to reciprocate in positive and beneficial ways (Bower and Ostroff, 2004; Whitener, 2001; Ostroff and Bowen, 2000). Moreover, consistent with the resource-based theory, scholars have argued that when organisations adopt the HRM strategy in which employees are perceived as assets, required to produce high quality goods and services, large investments tend to be made in the long-term development of employee skills, and management focuses on motivating employees, placing the importance of employee welfare above revenues and profits (Macky and Boxall, 2007; Schuler and Jackson, 1987).

Moreover, Whitener (2001) referring to the importance of employee perceptions of HRM practices noted that employees may not always perceive the objective existence of certain practices as the organisation intends. For example, an organisation may encourage participation in decision-making, and may even have a formal mechanism for incorporating participation. However, if employees do not perceive that the organisation is open to receiving input and likely to act on it, they are unlikely to feel that the organisation truly offers participation. Similarly, most organisations probably believe their reward systems are relatively fair; nonetheless, many employees would not agree. Thus, perceptions of the extent to which the organization offers supportive HRM practices are likely to influence employee attitudinal and behavioural responses.

HRM practices induce intended cognitive responses from employees, with consequential effects on their behaviour and performance (Wright and Nishii, 2007; Bowen and Ostroff, 2004). Organisations adopt HRM systems that are most likely to increase the level of human capital and to guide employee attitudes and behaviours to align with business strategy (Jackson and Schuler, 1995). In order for HRM practices to exert their desired effect on employee attitudes and behaviours, they first have to be perceived and interpreted subjectively by employees in ways that will stimulate such attitudinal and behavioural reactions (Nishii et al. 2008; Bowen and Ostroff, 2004).

By integrating the behavioural perspective and the resource-based view, a mediating model is proposed in which the system of HRM practices is linked to organisational performance through human capital, employee commitment and employee performance in sequence.

In the field of strategic HRM, researchers have devoted attention to the effects of HRM practices or systems on organisational performance through the use of high commitment, high involvement, and high performance HRM practices (Huselid, 1995; Boselie, 2005). The contribution of such practices to the level of employee commitment and performance is, in turn, a key contributor to organisational performance (Ramsey et al., 2000: 503). As explained before (see Chapter 2), the organisation's HRM system ideally reflects the strategy and organisational context and communicates this context to employees. Differences in implementation and communication may lead to differences in the HRM system, as it gets to individual employees and personal experiences and preferences may also result in employees interpreting the same signal differently. Thus, employees may have different perceptions of HRM practices or system.

Research shows that (perceived) HRM practices or systems are major mechanisms through which employees come to understand the terms of their employment. HRM practices or systems make up a person's experience in an organisation, based on personal interpretations and social constructions (Rousseau and Greller, 1994). Thus, employees who have positive experiences with HRM practices or systems are more likely to have a positive perception about their fit with the organisation and their jobs. HRM may increase the level of employee positive perception about their organisation by consistently communicating values, characteristics, demands and expectations of the organisation to its employees. Therefore, the current study focuses on the perceived system of HRM practices and its influence on performance.

### **3.5.2 The influence of the perceived system of HRM practices on the level of human capital**

Strategic HRM researchers argue that it is important to examine the HRM practices as a coherent system since HRM practices complement each other (Boxall and Purcell, 2011; Guest et al., 2004). The overall proposition of the current study is inspired by SHRM literature indicating that a system is more than a single practice. Thus, the present study focuses on the perceived system of HRM practices.

According to the resource-based view, a firm represents a pool of resources and capabilities which, in turn, can be an important source of competitive advantage (Colbert, 2004; Grant, 1996; Barney, 1991; Wernerfelt, 1984). The potential for developing a competitive lead derives from a firm's ability to exploit the unique features of its collection of resources and capabilities. Human capital is the composition of employees' knowledge, skills, and abilities (Becker, 1993; Coff, 2002).

High Performance Work System (HPWS) refers to a collection of HRM practices aimed at obtaining and insuring a high level of competency or human capital for a firm's workforce as one of the primary objectives, on the one hand. On the other hand, its aims include coordinating and eliciting desired employee behaviours over time (Combs et al. 2006; Data, Guthrie and Wright, 2005; Wright, Dunford, and Snell, 2001) by that adding value to the organisation. Huselid (1995) examines high performance work systems (HPWS) and derives to the conclusion that there are two separate influences of HRM practices. These influences are defined when the HRM practices were included in the HPWS and factor analysed, extracting the following two factors:

- a.) HRM practices involving selection and training as "employee skills and organisation structures", emphasising human capital; and
- b.) HRM practices involving compensation, performance appraisal and employee involvement as "motivation" factors, focusing on employee behaviour.

Human capital, in particular, is directly influenced by HRM practices aimed toward selecting/recruiting and training/developing employees. The relationship between the HPWS and the level of human capital is rather straightforward (Wright and Snell, 1991). For example, research in the selection and staffing literature have long recognized that selection/staffing practices have an effect on the characteristics of the employees/managers selected for job positions (Guthrie and Olian, 2001). Similarly, Delaney and Huselid (1996), note that organisations could adopt different HRM practices that place emphasis on improving the quality of the individual hired or on raising the skills and abilities of the current employee, or both. The more rigorous and comprehensive recruitment and selection procedures are, the higher the level of knowledge, skills, and abilities for the recruited employees is likely to be as opposed to situations/environments where these HRM practices are not utilised.

Other research also demonstrates that comprehensive selection and training practices advanced employees' collective human capital (Cabelo-Medina et al., 2011; Yang and Lin, 2009). In addition, comprehensive, on-going training and development programs can increase and improve employee knowledge, skills and abilities. Furthermore, practices such as competitive compensation, extensive benefits and job security may help attract capable employees and retain them in organisations; and practices such as work teams, employee involvement and flexible job design may provide employees

with opportunities to share knowledge and to learn new skills (Jiang et al., 2012). There is, therefore, likely to be a positive relationship between High Performance Work System and the level of human capital. In addition, High Performance Work System usually entails compensation policies that lead the market, performance appraisal policies that are developmental and employee-motivating and involvement policies that may attract potential applicants with higher talents. Thus, it is predicted that:

**Hypothesis 1:** There is a positive relationship between the perceived system of HRM practices and the level of human capital.

### **3.5.3 The influence of the perceived system of HRM practices on human resource attitudes and behaviours (employee commitment)**

Many researchers propose that HRM practices or systems will affect employee and organisational performance through their impact on employee attitudes (e.g. Becker et al., 1997; Wright and Nishii, 2007; Wright and Boswell, 2002). Moreover, any fit to firm strategy must first consider the kinds of employee behaviour required to successfully execute the strategy, and the kinds of skills necessary to exhibit those behaviours (Allen and Wright, 2006). As the goal of the HRM system is to impact individual attitudes and behaviours required by the organisation, positive effects on attitudinal and behavioural outcomes are expected. In addition, the positive impact on individual attitudes and behaviours could enhance the collective unit and organisational performance (Nishii et al. 2008; Kinnie et al. 2005; Purcell et al, 2003). Therefore, the study focuses on the empirical examination of a system of perceived high performance HRM practices with the assumption that these HRM practices are positively associated with employee attitudes and behaviours.

According to the behavioural perspective, organizations use HRM practices to encourage productive behaviours from employees and thus to achieve desirable

operational and financial objectives (Becker and Huselid, 1998). While the behavioural perspective provides the general foundation to expect that employee attitudes and behaviours mediate the relationship between HRM practices and organisational (employee outcomes) performance, incorporating the social exchange perspective (Blau, 1964; Gouldner, 1960) supplies a compelling theoretical logic to further explicate the mediating mechanisms outlined by the behavioural perspective.

Social exchange theory posits that two individuals or parties often decide to enter exchange relationships when both perceive it beneficial to do so (Gouldner, 1960). Initially, parties to an exchange are cautious and conscious about this currency of exchange (be it monetary incentives or approval). The cautiousness and consciousness may decrease over time when each party finds the relationship satisfying and when trust develops between the parties, thereby increasing the value of contributions in terms of both acceptable alternatives and time between reciprocation. Typically, both parties strive for a fair exchange with equivalent contributions judged through time (Tsui et al., 1997). When one party goes beyond required obligations, the other party subsequently feels indebted to reciprocate in order to tilt the balance back into equilibrium.

This component of the exchange is known as the norm of reciprocity (Shore et al. 2004; Whitener, 2001; Homans, 1961). The essence of the theory is reciprocity: if the employer, through its HRM policies and practices, demonstrates to its employees benevolence and support – particularly if this is seen to be beyond the normal bounds of employment contracts – then its employees will work beyond their contractual obligations in response, by exhibiting discretionary work behaviour (Bennett and Stamper, 2001; Organ et al., 2006; Kehoe and Wright, 2010), including demonstrating more proactive effort and greater loyalty (Gould-Williams and Davies, 2005). Such

attitudinal and behavioural outcomes potentially might lead to superior performance levels.

In an organisational setting, one of the possible pairs of partners in social exchanges is the employees and the employing organisation. Within this potential partnership, employees as well as an employer can initiate the social exchange cycle. However, it is typically assumed that the organisation initiates the action through its HRM practices by providing employees with something valued; for example, job security, training programs, performance-based compensation, promotion opportunities, incentives and benefits and employee involvement policies. If employees perceive that the organisation has provided something of value, then employees are likely to feel obligated to reciprocate by providing the organisation with something of equal or greater value (CAHRS, 2011; Shore et al. 2004; Purcell et al, 2003; Boxall, 1998).

According to Meyer and Allen (1991, 1997) and Mayer (2002) employee commitment and loyalty are central features in the high performance workplace literature in which they are seen as mediating factors linking different types of human resource management and employment practices to enhanced performance. Employees show a high level of commitment to their organisation when, for example, it provides them with opportunities for growth or helps them to increase their skill and knowledge. The resulting affective commitment is the “... employee’s emotional attachment to, identification with and involvement in the organisation.... Employees with a strong affective commitment continue employment with the organisation because they want to do so” (Meyer and Allen, 1991: 67).

As mentioned, the HRM practices and systems are designed and implemented so as to motivate employees and equip them with the necessary knowledge and skills enabling them to give more to their organisations in terms of performance (e.g. effort, quality). It presumes that the organisation values and supports employees' contribution. The role that commitment plays in this process as a mediator between HRM practice and organisational performance may be crucial and can shed light into the "black box" of HRM (Conway and Monks, 2009). The possibility that commitment mediates the relationship between HRM practice and organisational performance is appealing to HRM researchers. Highly motivated and committed employees feel capable of taking on greater levels of "responsible autonomy" in their work and consequently can achieve higher levels of performance (Latham and Pinder, 2005). The system of HRM practices may be designed in such a way so as to promote employee commitment and, at the same time, create a norm of mutually beneficial reciprocity, although the balance of benefits attained may still disproportionately favour employers (Guest and Peccei, 2001).

Meyer et al. (2002) argue that strong affective commitment to an organisation arises because employees share values with both the organisation and its members, and it is therefore predicted to be positively associated with job performance. The relationship between employee effort and commitment is an interesting line of enquiry that concerns how the firm may influence the level of affective commitment via human resource management practices.

As explained above, a commonly known instrument in literature for influencing organisational commitment is the use of HRM practices (Becker and Gerhart, 1996; Pfeffer and Veiga, 1999). Conway and Monks (2009) identify the way in which HRM

practices can influence the development of organisational commitment. They support that employees' attitudes to HRM practices has a greater impact on affective commitment. Moreover, there is evidence to show that HRM practices influence the development of organisational commitment (Meyer and Smith, 2000; Guest, 2002; Grant et al., 2008; Conway and Monks, 2009). Thus, it is predicted that:

**Hypothesis 2:** There is a positive relationship between the perceived system of HRM practices and HR attitude and behaviour (employee commitment).

### **3.5.4 The influence of human capital on employees' performance**

There is a growing recognition of the need to consider how employee outcomes link to HPWS (Kehoe and Wright, 2010). Research suggests that HRM practices can have considerable impact on both individual and organisational performance (Rynes et al., 2002). Many studies (Chuang and Liao, 2010; Den Hartog and Verburg, 2004; Batt, 2002; Guthrie, 2001; Becker and Huselid, 1998; Guest, 1997; Huselid, 1995) have shown that a high performance system of HRM practices is directly and positively related to HR-related outcomes such as labour productivity, performance and turnover rates (Zacharatos et al., 2005; Way, 2002; Guthrie, 2001; Huselid, 1995; MacDuffie, 1995). The more employees perceive that they are viewed as assets by their organisations, the more they are likely to be willing, in turn, to give back to their organisations in the form of commitment to the firm (CAHRS, 2011; Gong et al., 2009; Eisenberger et al., 2002; Eisenberger et al., 1997).

Higher levels of human capital have the potential to provide a sustainable competitive advantage to firms because employees differ in their amount of knowledge, skills and abilities that they possess (Allen and Wright, 2007; Collins and Smith, 2006; Purcell et al., 2003; Boxall, 1996). For example, Collins and Smith (2006) have shown that the use

of systems of HRM practices intended to enhance employees' knowledge, skills and abilities is associated with better service performance. Along the same lines, Zacharatos et al., (2005) find an association between human capital and enhanced safety performance.

Further, Hitt et al. (2001) find a positive, curvilinear relationship between human capital and firm performance for professional service firms. More specifically, they argue that the relationship is curvilinear in the sense that early costs may exceed marginal productivity, but as human capital accumulates synergy productivity increases (that is, employee gains tacit knowledge and learns to apply both articulate and tacit knowledge by practice) and average costs decrease. (Morariu, 2011; Lane and Lubatkin, 1998).

These empirical studies have shown the relationship between human capital and firm performance to be positive. Moreover, Bettencourt, Gwinner, and Meuter (2001) find employee knowledge to be a significant predictor of service-oriented organisational citizenship behaviours. In particular, they argue that (procedural) knowledge enhances the repertoire that employees have developed in terms of useful ways of interacting with specific customer types. Furthermore, competitive advantage is obtained if a firm can harness and develop human resources that enable its employees to learn faster and apply learning more effectively than its rivals (Jackson et al., 2006; Purcell et al, 2003).

However, a system of HRM practices is not likely to influence these HR-related outcomes directly per se (Boselie et al., 2005; Becker and Gerhart, 1996). It is through increases in labour productivity and performance stemming from an increase in the level of human capital that enables firms to obtain the benefits of competence-enhancing

HRM practices embedded within HPWS (Yang and Lin, 2009; Collins and Smith, 2006; Den Hartog and Verburg, 2004; Pfeffer, 1998; Snell and Dean, 1992). Only through its influence on employees' level of knowledge, skills and abilities can the potential for increased performance gains be realised (Boxall and Purcell, 2008; Becker et al, 2001; MacDuffie 1995). Therefore, with high-quality human capital pools, organisations are more likely to achieve their goals such as high productivity, performance, quality and service. Current research supports the positive effect of human capital on performance (Crook et Al., 2011). Thus, it is predicted that:

**Hypothesis 3:** The level of human capital is significantly related to employees' performance.

### **3.5.5 The influence of HR attitudes and behaviours (employee commitment) on employees' performance**

A number of theories seek to explain both, which system of HRM practices produces high performance benefits from employees, and their attitudes and behaviours and how it does so (see Chuang and Liao, 2010; Boselie et al., 2005; Wood and Wall, 2005; Wright and Boswell, 2002; Guest, 1997). As mentioned above, nowadays, there is a growing recognition of the need to consider how employee outcomes link to HPWS (Kehoe and Wright, 2010) and research suggests that HRM practices can have considerable impact on both individual and organisational performance (Rynes et al., 2002). Most of the scholars who specify causal chain between HRM practices and organisational performance see employee attitudes and behaviours as the critical linking mechanism (Boxall and Purcell, 2008).

As Wayne, Shore, and Liden (1997: 83) note, "employees seek a balance in their exchange relationships with organisations by having attitudes and behaviours commensurate with the degree of employer commitment to them as individuals". There

are many studies (Kehoe and Wright, 2010; Wright and Nishii, 2004) that have examined the impact of employees' reactions to the organisation's social exchange relationship, especially with regard to behaviours that contribute indirectly to the organisation by maintaining its social and psychological environment. It is worth to restate at this point that organisations consist of patterned behaviours, and the behaviour of each individual is determined to a considerable extent by the requirements of the larger pattern (Kartz and Kahn, 1978).

Several terms have been used to describe such behaviours in the past, including organisational citizenship behaviour (Nishii et al. 2008; Ehrhart et al., 2006; Organ, Podsakoff and MacKenzie, 2005; Podsakoff et al, 2000, 1997; Organ, 1997; Wayne et al., 1997), psychological contract (Lambert, 2007; Sels et al., 2004; Guest, 2004, 1998; Shore et al. 2004; Lambert et al, 2003; Rousseau, 2001,1998,1995), perceived organisational support (Allen et al., 2003; Eisenberger et al., 2002; 1997, 1990, 1986; Shore and Wayne,1993), extra-role behaviour (Wright et al, 2003; Wright and George, 1993), discretionary behaviour (McDuffie, 1995; Bennett and Stamper, 2001; Organ et al., 2006;), commitment (Kehoe and Wright, 2010; Gong et al., 2009; Nishii et al. 2008; Guest 2007; Smeenk et al., 2006; Chew et al, 2005; Guest et al, 2000; Meyer and Allen, 1997; Becker et al., 1996), satisfaction (Harrison et al., 2006; Boxall et al. 2003; Koys, 2001; Guest et al., 2000; Rose 2000) trust (Tzafrir, 2005; Boselie and Paauwe, 2002; Aryee et al., 2002; Whitener et al., 1998), turnover intentions (De Cuyper and DeWitte, 2007; Batt et al., 2003, 2002; Guzzo, Noonan and Elron, 1994), high degree of autonomy (Kinnie et al., 2005), leaders-member exchange (Uhl-Bien, Graen and Scandura, 2000), motivation (Boselie and Paauwe, 2002), employee engagement (Saks, 2006; Macey and Schneider, 2008) and others.

Employees have coined these terms to describe what they think of the intentions and trustworthiness of management (Bowen and Ostroff, 2004); once conceptualized, it becomes an important mediator, or intervening variable, in the links between HRM and organisational performance.

There is an emerging body of evidence which supports that there is a sequence of interlinkages from HRM practices to aggregate employee attitudes and behaviours, extending to HR-related outcomes and, eventually, deriving to organisational performance. More specifically, Kehoe and Wright (2010: 8) emphasise that “employees who are committed to the organization are likely to be eager to contribute to the organisation’s goals and are more likely than others to extend their efforts beyond their required task performance to further the effectiveness of the organisation, even if they do not expect to be directly rewarded for this behaviour on the basis of formal HRM practices”. Affective commitment has been shown to be impacted upon by employees’ work and organisational experiences such as human resource practices and policies (Meyer et al., 2002). Moreover, a strong relationship between affective commitment and work outcomes, such as low absenteeism and organisational citizenship behaviours has been found (Meyer et al., 2002). Furthermore, affective commitment’s role as a key linking mechanism between high-performance HRM practices and higher level performance outcomes has been supported by previous research, indicating its established importance for the SHRM approach (Gong et al., 2009).

In the same vein, Wright, Gardner, Moynihan and Allen (2005) find that employee commitment and customer satisfaction mediate the relationship between HR practices and profitability. More recently, Gardner et al. (2011) and Kehoe and Wright (2010)

find that human resource practices are positively related to affective commitment. There is also evidence to suggest that organisational commitment influences organisational performance. Performance has been found to be enhanced where there are high levels of affective commitment (Allen and Smith, 1987; Meyer et al., 1989; Mathieu and Zajac, 1990; Allen and Meyer, 1996; Chen and Francesco, 2001). Considering these studies, it becomes clearer that the HRM-performance relationship may be linked through commitment, as has been suggested by a number of scholars (Meyer and Smith, 2000; Guest, 2002; Grant et al., 2008; Conway and Monks, 2009; Gong et al., 2009). A key aspect of this relationship may be the way in which employee perceptions of HRM influence the development of affective commitment.

These results suggest that aggregate employee attitudes and behaviours (employee commitment) mediate the relationship between HRM practices and outcomes. Extrapolating from this finding, it is expected that employees' perceptions regarding obligations, the result of social exchange relationships that the employees have with the organisation, are positively related to employees' performance. Therefore, it is predicted that:

**Hypothesis 4:** Employees' commitment is significantly related to employees' performance.

### **3.5.6 The effect of employees' performance on organisational performance**

Given different conceptualisations of performance and the existence of multiple types of performance indicators in the literature (e.g. Venkatraman and Grant, 1986), it is important to differentiate clearly between these outcomes; of further necessity is to investigate the impact of human capital, employee attitudes and behaviours, and HRM practices if we are fully to understand the HRM-firm performance relationship. Many researchers use financial performance measures as dependent variables in their research

(Boselie et al., 2005). However, since, performance is a multidimensional concept; it seems more relevant to use a variety of measures.

Drawing on Dyer and Reeves's (1995) work, researchers in strategic HRM have categorised organisational outcomes into three primary groups related to HRM: HR (employee) outcomes; operational outcomes; and, financial outcomes. HR (employee) outcomes refer to those most directly related to HRM in an organisation, such as employee skills and abilities, employee attitudes and behaviours, and turnover. Operational outcomes are those related to the goals of an organisational operation, including productivity, performance, product quality, quality of service and innovation. Financial outcomes reflect the fulfilment of the economic goals of organisations. Typical financial outcomes include sales growth, return on invested capital and return on assets (Jiang et al. 2010).

Example of research studies that use a variety of measures include Paauwe (2004), who presents a multidimensional perspective of performance, looking at performance from the perspective of different stakeholders of the organisation. Moreover, Boselie et al., (2005) make a distinction between types of performance based on the work of Dyer and Reeves (1995). More specifically, they have argued that the types of performance are based on the following distinctions:

- financial outcomes (covering accounting-based and market-based measures),
- organisational outcomes, (covering output-based measures (e.g. productivity, product- and service quality), and
- HR related outcomes (e.g. attitudinal and behavioural impacts among employees such as satisfaction, commitment, intention to quit and employee turnover.

Furthermore, Boxall and Purcell (2008) emphasize the importance of legitimacy and flexibility besides productive efficiency as performance goals for strategic HRM.

One important aspect of performance measures, as presented by Dyer and Reeves (1995), has to do with the sequence of performance outcomes. They recommend that performance outcomes can be ordered from proximal (HR related) to distal (financial related) with employees as anchors. Hence, HR (employee) outcomes would be the most proximal, which leads to organisational outcomes. Organisational outcomes, in turn, may lead to financial or accounting outcomes and ultimately, market measures (Jiang et al. 2010; Becker and Huselid, 1998). HRM practices are expected to first, influence HR (employee) outcomes (employee knowledge, skills, abilities and employee commitment) which are proximal and the least likely to be influenced by factors beyond HRM practices. HR (employee) outcomes, in turn, may mediate the influence of HRM practices on productivity, performance, quality, service, innovation and other operational outcomes, which further affect financial outcomes.

Although, researchers have neglected the position that employee outcomes should have had in the HRM-performance linkage (Purcell and Kinnie, 2007), the integration of the resource-based view and the behavioural perspective (and social exchange theory) makes it imperative that employee outcomes such as labour productivity, performance and the turnover rate, for example, be examined as the more proximal outcomes to the level of human capital, perceptions and reactions to the social exchange relationship. The logical next step is to link these employee outcomes to organisational outcomes such as sales and profits or stock price (Guest and Conway, 2011; Paauwe and Boselie, 2005; Wright et al., 2003).

Koys (2001) examined the relationship between HRM outcome (turnover rate) and business unit effectiveness in a panel design longitudinal study and found that HR outcomes precede business unit effectiveness. Other studies that incorporated financial performance (used interchangeably with firm or organisational performance) included different variables such as the percentage sales growth, ratio analysis, net income, etc.

In addition, HR (employee) outcomes are likely to mediate the relationship between the level of human capital and unit level performance (McMahan et al., 1999). For example, Hitt et al., (2001) find a positive relationship between the level of human capital and indicators of law firm performance. However, even when the firm initially recruits employees who possess high knowledge, skills and abilities (i.e., human capital), if many of them exit the company shortly afterward, it is not likely to influence firm performance in a positive manner. In addition, if employees are not motivated to use their skills, the level of task performance may only be minimally adequate, which does not justify the above-average market rate paid for these highly skilled employees. Thus, again, the performance of the unit may not improve simply by recruiting highly knowledgeable, skilled and capable individuals. Other studies have also shown that positive work attitudes (e.g., collective commitment) and positive perceptions of a work environment (e.g., perceived organisational support) mediate the relationships between high performance work systems and operational outcomes (Chuang and Liao, 2010; Sun et al., 2007).

Thus, HR (employee) outcomes, such as an increase in task performance levels, are expected to mediate the relationship between both the level of human capital and HR attitudes and behaviours (employee commitment) and organisational performance. Based on this finding and in conjunction with the conclusions derived from other studies

that found a relationship between aggregate employees outcomes (reactions) and unit effectiveness (Crook et al. 2011; Nishii et al., 2008; Organ, Podsakoff and MacKenzie, 2005; Schneider et. al., 2005; Koys, 2001; Mayer and Allen, 1997; George and Bettenhausen, 2000; Podsakoff and MacKenzie, 1994; Walz and Niehoff, 1996), it is expected that HR (employee) outcomes such as labour productivity and performance act as a mediator between aggregate employee reactions and unit or organisational performance. Therefore, it is predicted that:

**Hypothesis 5:** Employees' performance has a positive impact on organisational performance.

### **3.5.7. The direct relationship between the perceived system of HRM practices and organisational performance**

The systems of HRM practices are the most effective way to motivate employees to contribute discretionary effort for the good of the organisation (MacDuffie, 1995) and as Pfeffer (1998) argues, the employees might only be willing to contribute their specialised skills and knowledge when the organisation signals a similar level of commitment. Organisations can increase the extent to which employees are willing to contribute to the organisation, through the system of HRM practices which ties compensation and incentives to group and organisational performance, rewards for idea generation, internal opportunities and clear evaluation performance (Grimshaw and Rubery, 2007).

Tsui et al. (1997) find that employees are more willing to fully contribute to the organisation when it signals that it values its employees by investing in them in terms of compensation and growth opportunities. Thus, firms will more likely increase employee motivation and contribution when they employ high commitment HRM practices.

Compensation and reward systems have been found to be related to individual performance and motivation (Kavvas, 2006; Balkin and Gomez-Mejia, 1987). Researchers have argued that stock ownership is an effective tool for bringing employee motivation in line with goals of the firm, increasing their commitment to the organisation and encouraging employees to contribute discretionary knowledge, skills and abilities (KSA's) (Pfeffer, 1994; Stewart, 1997). Tying compensation to organisational performance will encourage employees to contribute discretionary behaviour (Cascio, 1992). Further, linking compensation to group goals or performance will encourage employees to work together and increase the likelihood of cooperation and the exchange of ideas (Lawler, Mohrman, and Ledford, 1995). Therefore, compensation will positively affect employees' motivation to contribute valuable KSA's when wages and incentives are attached to group and firm performance.

A number of studies (Kavaas, 2006; Guest, 2004; Shore and Barksdale, 1998) argue that the opportunity for advancement and growth are key factors that lead to employee motivation. Organisations are more likely to increase the motivation of key employees when they are aware of advancement opportunities, when there are clear career paths and opportunities and when current employees are given consideration over external candidates (Pfeffer, 1998). Employees will be more committed to the organisation when they feel that the organisation is living up to its side of the employment contract by being supportive of the employees' growth by providing internal opportunities (Tekleab et al., 2005; Tsui et al., 1997; Rousseau, 1995).

Concisely, organisations that perform well and have the financial capability can, first, increase their overall level of human capital through acquiring individuals from outside

the organisation and/or investing in the development of the overall level of human capital. In addition, they can impact employee attitudes and behaviours (increase employee level of commitment and motivation by fostering a willingness to contribute to the organisation) through monetary-based HRM practices. In the proposed model, the focus is on the mediating role of employees in the link between the system of HRM practices and organisational performance. However, the model does not exclude other paths through which the system of HRM practices can help increase organisational performance. Therefore, it is predicted that:

**Hypothesis 6:** The perceived system of HRM practices has a direct positive impact on organisational performance.

### **3.5.8. The direct relationship between the level of human capital and organisational performance**

Organisations use two major methods to increase their level of human capital. Usually, they use intensive and on-going training and development programs that can increase and improve employee knowledge, skills and abilities. The second method of building the overall level of human capital of a firm is by acquiring individuals from outside the organisation who have specialized knowledge and experiences.

Firms are more likely to build human capital when they effectively employ workforce planning approaches to identify the types of skills and experiences that are necessary for further knowledge building (Berman et al., 2002; Koch and McGrath, 1996). Effective planning includes the evaluation of current human capital, identification of gaps between current KSA's and future needs and the implementation of a strategy to acquire those KSA's (Jackson et al., 2006; Koch and McGrath, 1996).

As mentioned before, firms can significantly improve performance by acquiring new employees with diversified high skills and unique knowledge (Pfeffer, 1998). However, the market for knowledge workers (those individuals with college education and specialised work experience) is especially tight, creating intense competition between organisations looking for these types of employees (Munk, 1998) and, most of the time, it is very expensive to compete for those individuals who have high levels of skills and knowledge and strong bargaining power in any recruitment process. Therefore, organisations that offer significant resources for higher salaries and incentives to attract applicants will be more likely to attract these high-talent knowledge workers (Swart and Kinnie, 2003; Koch and McGrath, 1996). Candidates with specialized KSA's can demand a premium on the open market; as a result, organisations must pay starting salaries above those of their competitors to attract valuable human capital (Swart and Kinnie, 2003; Snell and Dean, 1992).

As previously explained, the proposed model focuses on the mediating role of employees in the link between the system of HRM practices and organisational performance. However, the model does not exclude other paths through which the system of HRM practices can help increase organisational performance. Consequently, a further hypothesis is that:

**Hypothesis 7:** The level of human capital has a direct positive impact on organisational performance.

### **3.5.9. The direct relationship between the HR attitudes and behaviours (employees' commitment) and organisational performance**

SHRM scholars have begun to differentiate HRM systems based on the underlying philosophy held by management (Lepak et.al, 2002). A philosophy aimed at maximising employee well-being has been differentiated from a philosophy aimed at

maximising employee efficiency (Nishii et al., 2008). However, the common theme in the literature is that increased firm-level performance outcome can be achieved if the emphasis is placed on utilising a system of HRM practices aiming at both employee well-being and employee efficiency, by providing them with skills, information, motivation and opportunity (CIPD, 2006; Datta et al., 2005; Flood et al., 2004; Guthrie, 2001; Appelbaum et al., 2000; Huselid, 1995; MacDuffie, 1995). Therefore, based on the notion of the reciprocity norm discussed above, when employees perceive the organisation as a valuable exchange partner and trust that the organisation will reciprocate, employees are more likely to exert extra effort that may be substantially more than their fair share, thus bringing them up to balance with what the organisation has already given them. In a sense, the employees proactively engage in social exchange to further develop the relationship with the organisation.

Employees with higher qualifications (i.e., who possess greater amount of knowledge, skills and abilities) can generally perform at a higher level than those without (Berman et al., 2002; Mohammed et al., 2002; LePine and Van Dyne, 2001). Consequently, if the highly-qualified employees are motivated to exert extra effort over and above their expected contribution, the increases in labour productivity that originate from the increase in the aggregate level of task performance may be substantially larger than those resulting at a low level from the low qualified ones. In addition, when these highly qualified employees are motivated and committed to help each other and/or voice innovative ways of organising and executing the tasks (Collins and Smith, 2006; LePine and Van Dyne, 2001), the performance benefits may be larger.

It follows that a higher-level employee perception of the social exchange relationship, a representative component of employee commitment and motivation, will have positive

performance outcomes. The interactive effect of ability, motivation and commitment on performance is relatively well established in the performance literature (Austin et al., 1991). Although the proposed model is based on the mediating role of employees in the link between the system of HRM practices and organisational performance, the model does not exclude other paths through which the system of HRM practices can help increase organisational performance. Therefore, it is predicted that:

**Hypothesis 8:** HR attitudes and behaviours (employees' commitment) has a direct positive impact on organisational performance.

### 3.6 Conclusion

The resource-based view has prompted recent work on how HRM practices contribute to firm performance by leveraging human capital, discretionary effort and desired attitudes and behaviours (Bowen and Ostroff, 2004; Colbert, 2004). The behavioural approach to SHRM is conceptually appealing. It suggests that the extent to which a human resource strategy contributes to organisational performance depends (i.e., is contingent) on its capacity to foster desired employee behaviours. Despite its appeal, the behavioural approach has rarely been employed. Thus, an opportunity exists to develop SHRM models using a behavioural approach (Ericksen and Dyer, 2005).

Organisations that want to enhance the quality of their HRM need to think carefully about the "black box" links between HRM and organisational performance (Boselie, Dietz and Boon, 2005). There is, still, a confusion among what is intended, what is enacted and what is perceived in HRM that lead to important employee behaviours and attitudes and thence to organisational outcomes (Boxall and Purcell, 2008; Wright and Nishii, 2006).

A key implication of my argument is that by enacting an HRM system (HPWS) that is a source of superior and hard-to-imitate value, organisations could develop an advantage over competitors. Based on the strategic HRM literature, there is an opportunity for viable firms to create a unique form of fit in HRM. This is obtained by tailoring and nurturing HRM systems which create “human resource advantage” (Boxall and Purcell, 2008) for the firm. Internal fit is seen as critical to a high quality performance in HRM (Kepes and Delery, 2007). The question evolves around to compelling issues: how to build and customise an appropriate HRM system and how to create a positively reinforcing mix of HRM system within a particular context. This thesis aims to answer the above question through the development and operationalisation of a conceptual and empirical framework within the university-level education in Cyprus.

### **3.6.1 Summary of Hypotheses**

Following the development of a conceptual model, eight hypotheses have been developed for testing. These are set out below:

**Hypothesis 1:** There is a positive relationship between the perceived system of HRM practices and the level of human capital.

**Hypothesis 2:** There is a positive relationship between the perceived system of HRM practices and HR attitude and behaviour (employees' commitment).

**Hypothesis 3:** The level of human capital is significantly related to employees' performance.

**Hypothesis 4:** Employees' commitment is significantly related to employees' performance.

**Hypothesis 5:** Employees' performance has a positive impact on organisational performance.

**Hypothesis 6:** The perceived system of HRM practices has a direct positive impact on organisational performance.

**Hypothesis 7:** The level of human capital has a direct positive impact on organisational performance.

**Hypothesis 8:** HR attitude and behaviour (employees' commitment) has a direct positive impact on organizational performance.

Having developed a set of hypotheses for testing, the methodology used to operationalise the conceptual framework and to test the above hypotheses is set out in the next chapter.

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# **Chapter 4: Research Methodology**

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## 4.1. Introduction

In the previous chapters (see Chapters 2 and 3) the theoretical and conceptual foundation of this thesis were developed and discussed. Through a thorough and in depth process, a series of research questions and hypotheses were developed. The purpose of this chapter is to set out the methodological rationale and steps that needed to be followed in order to answer the research questions and empirically test the proposed hypotheses.

According to de Vaus (1991), social researchers usually try to answer two fundamental questions: *What* is going on? and *Why*? Indeed, it is central to social research to try answering both questions. Kerlinger states that a theory “is a set of interrelated constructs (concepts), definitions, and propositions that present a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting phenomena” (1973: 9). Finn et al. (2000) argue that research needs theory as a framework for analysis and interpretation, and theory needs research to constantly review/modify/challenge theoretical details. Tzeng and Jackson (1991) argue that a major function of scientific theory is to simplify complex phenomena and reduce the chaos of the real world to manageable and understandable pieces of information so that regularities among events are detectable and practical operations possible.

Following the above canons of social research and at the same time taking into consideration the main research problem of this thesis, it can be accepted that this thesis aims to investigate whether the perceived system of HRM practices impacts university performance and how this impact can be empirically measured and evaluated.

Research is defined as the systematic, controlled and critical investigation of propositions about the presumed relationship between different phenomena. Research without theory is simply collecting data about events. On the other hand, theory without research is empty speculation. It is widely accepted that theory and research must be connected to each other. Theory guides research, and research informs theory, tests or demonstrates the validity of theory (Nachmias and Nachmias, 1992; Johns and Lee-Ross, 1998; Finn, 2000). In this fashion, the current thesis utilises the “resource based view” and the “social exchange” theories in order to build a solid theoretical foundation, on which the research questions and hypotheses are developed.

To reiterate, the critical issue in this study is to examine the mediating mechanisms through which a system of HRM practices leads to increased performance through the level of human capital and employee attitude and behaviour. More specifically, the main emphasis of the research is to explain the relationships among the system of HRM practices, human capital, employee attitude and behaviour (employee commitment), employee performance, and organisational performance.

In this context, the current thesis develops and empirically tests a conceptual model linking the perceived system of HRM practices to organisational performance by exploring the mediating effects and causal relationships of other mediating variables. Moreover, it seeks to examine the relationships between the perceived system of HRM practices and perceptual measures of organisational performance, and to empirically capture the effect of synergies among HRM practices and the mediating variables on perceived organisational performance.

Through the quantification and empirical measurement of the perceived system of HRM practices and the effect of these practices on human capital and employee commitment, the study will ultimately delineate their impact on employee and organisational performance among administrative employees at the University-level education in the Republic of Cyprus.

## 4.2 Research Questions and Hypotheses

As postulated by Nachmias and Nachmias, a research problem “is an intellectual stimulus calling for an answer in the form of scientific inquiry” (1992: 51). In the same line, Kerlinger (1973, 1986) note that the adequate statement of the research problem/question is one of the most important parts of research.

As already stated the process that has been followed to develop the research questions and hypotheses of the current thesis was based on an in-depth and critical review of the literature which consequently has resulted into a solid conceptual basis. Furthermore, to enhance the face validity of the stated hypotheses, an exploratory study was utilised where Human Resource directors of all universities in Cyprus were interviewed. Several studies (Okoli and Pawlowski, 2004) support the utilisation of expert opinion (Delphi Approach) as a tool for assessing the conceptual foundation of a research study. As stated in Chapter Three, this thesis evolved around the following two main research questions:

1. *Which are the processes / mechanisms through which a perceived system of HRM practices impacts organisational performance?*
2. *What are the mediating roles of human capital, employee attitude and behavior (employee commitment), and employee performance on the*

*relationship between a perceived system of HRM practices and organisational performance?*

To allow a preliminary assessment of the soundness and tenability of the research questions, they were examined on the basis of three criteria (as stated by Kerlinger, 1973, 1986). The first criterion holds that the research questions should express a relation between two or more variables. The research questions of this thesis satisfy this criterion since they both aim to investigate the causal relationship between SHRM, human capital, employee commitment and employee and organisational performance. The second criterion was also satisfied, since it entailed the specification of the problem in question form. The third criterion demands the specification of the research question in a way so as to imply possibilities of empirical testing. As was already mentioned, the research framework of this thesis will utilise various types of empirical testing, something that satisfies the last criterion.

Following the initial evaluation of the content validity of the research questions and having examined their soundness and tenability, they were transformed in the following eight proposed research hypotheses that delimit the scope of the study.

**Hypothesis 1:** *There is a positive relationship between the perceived system of HRM practices and the level of human capital.*

**Hypothesis 2:** *There is a positive relationship between the perceived system of HRM practices and HR attitude and behaviour (employee commitment).*

**Hypothesis 3:** *The level of human capital is significantly positively related to employee performance.*

**Hypothesis 4:** *Employees' commitment is significantly positively related to employee performance.*

**Hypothesis 5:** *Employees' performance has a positive impact on organisational performance.*

**Hypothesis 6:** *The perceived system of HRM practices has a direct positive impact on organisational performance.*

**Hypothesis 7:** *The level of human capital has a direct positive impact on organisational performance.*

**Hypothesis 8:** *HR attitude and behaviour (employee commitment) has a direct positive impact on organisational performance.*

The utilisation of the literature as well as the initial evaluation of the research questions (through an exploratory phase – a Delphi Study) enabled the development of the research instrument to empirically test the above stated hypotheses. The critical approach that was adopted in Chapter Two while reviewing the literature has enabled the identification of the conceptual elements (variables) that were utilised in developing the initial questionnaire. At a next step, a pilot study was conducted to allow the purification and refinement of the questionnaire.

The methodology is described in the following nine sections of this chapter. The discussion starts with the research paradigm of the thesis. The second section identifies the research setting, that is, University-level education in the Republic of Cyprus. The third section is the data source, that is, all administrative employees in the University-level education in Cyprus. The fourth section describes the research design and procedures. The fifth section explains the operationalisation of the construct and measurement. The following two sections examine the process for assessing the reliability and validity of the research instrument. The eighth section deals with the selection of data analysis techniques and describes the data analysis process. The last section provides a conclusion of methodology for this study.

### 4.3 The Research Paradigm of the Current Thesis

Two broad philosophies/paradigms are dominant in business management and other social research: the positivist paradigm and the phenomenological paradigm. Paradigms are general philosophical assumptions (i.e. worldviews, beliefs) that define the nature of possible research and intervention and guide researchers (Punch, 1998, 2003). The positivist view (and in particular logical positivism) which is also referred as scientific approach stems from a philosophy of science also known as traditionalist, experimentalist, or empiricist (Hussey and Hussey, 1997).

On the other hand, Maylor and Blackmon (2005) among others relate phenomenology (also referred to as phenomenological (or idealist) school of thought) to the qualitative paradigm. This paradigm stems from a philosophy of social science known as constructivist, naturalistic, ethnographic, interpretative, subjectivist, post-positivist, or post-modern (Denzin and Lincoln, 1998). Newman (2003) suggests that this paradigm is based on a critical approach as it positions the researcher with a tradition of previous approaches to making and interpreting observations.

“The differences between the two approaches have been elucidated thoroughly in the literature of social science and organisational theory and are frequently explained in terms of the role of theory in the research process, the role taken by the researcher in relation to both her subject and environment, the reasoning process applied in drawing research conclusions and the nature and purpose of research objectives” (Brown and Brignall, 2007: 35).

In the methodology literature there are varying views as to the properties and characteristics of the two broad philosophies/paradigms. The positivist (quantitative) paradigm implies the need for an objectivist epistemology which implies that a researcher will be focusing on physical evidence (Creswell, 1998; Brewerton and Millward, 2001). In contrast, the phenomenological (qualitative) paradigm would posit that many realities exist or can be constructed (Guba and Lincoln, 1994; Gilbert, 2001). That is, the social world is essentially relativistic from an interpretative epistemological approach and it can only be understood from the point of view of the individuals who live and work in a particular setting (Creswell, 1998; Benton and Craib, 2001).

Both, proponents of the positivistic and phenomenological views need to incorporate reflexivity and understand the importance of subjectivity as a critical concept that invites them to consider the question of how and from where these meanings arise (Gilbert, 2001). Their main difference seems to be how they deal with the answers they obtain to the “how and from where these meanings arise”. Positivists will tend to compare their answers with those of other positivists in the same field so to establish if their respective answers are converging. It is only if this condition is satisfied for the answers to be admitted in research.

Phenomenologists on the other hand will maintain the value of their answers to the “how and from where these meanings arise” in the context within which they were obtained. Moreover, some phenomenologists argue that the positivist task “of checking for convergence in such answers” may be futile as the understanding of others is limited and filtered through a researcher’s own experiences. Thus, it can be inferred that neither positivists nor phenomenologists can be objective about the interpretations of each other

since there is an on-going controversy and perplexity which underlines their chosen approach and views to research.

As Brown and Brignall (2007: 36) state, there is “a long history of critical debate over the validity of both paradigms, their application and worth, in terms of their ability to generate understanding of the social system studied”. However, Despande (1983) and Tashakkori and Tedlie (1998) pointed out that a researcher should understand the advantages and disadvantages of both paradigms and their relative strengths and weaknesses. They have further suggested (ibid) that a mixture of methods across research paradigms enables the weaknesses of a methodological paradigm to be compensated by the strengths of the other and vice-versa. However, the mixed approach may not always be possible due to various constraints (e.g. time, financial resources, and scope of the study) and it may well end up containing the weaknesses of both paradigms. As a priori set of criteria cannot guarantee the success of a research study like all other studies, the research design choice will rest ultimately on the personal preferences of a researcher vis-à-vis the aims or context of the research study (Easterby-Smith et al., 2002).

Considering the above and having in mind the context and research scope of the current thesis, the positivist paradigm has been chosen. However, the researcher recognised the value of phenomenological approaches and techniques especially as tools for assessing the validity and tenability of the current thesis. For this reason, certain techniques have been adopted (in depth interviews) to safeguard the theoretical as well as methodological coherence of the study.

#### 4.4 The Research Setting

The full membership of the Republic of Cyprus in the EU has signalled a need for organisations to recognise the critical importance of managing human resources as a strategic part of their operations. However, to date, the alleged advantageous outcomes of strategic HRM practices/systems have not been fully realised by Cypriot organisations (Hoppas and Ellinas, 2004; Costea, 2002, 2005). Cyprus became a member of the European Union in 2004 and a member of the Eurozone in 2008. Since then, Cyprus has been repositioning some parts of its economy to focus more on the service sector. With a successful tradition as a centre for trade, shipping, banking and tourism, nowadays, Cyprus is looking to get into new areas of the service sector such as medical services, higher education services and energy services.

It should be emphasised that organisations in Cyprus, in light of the financial and social circumstances that are currently experienced, must develop a better understanding of how they can utilise their human resources more effectively in becoming more competitive within the EU context, taking into consideration the low levels of competitiveness of Cypriot firms (World Economic Forum, 2012).

A scan of the relevant literature reveals that very few studies have been conducted to investigate HRM in Cyprus and, based on an extensive search of the literature, there have been no studies in the area of HRM systems/practices and organisation performance conducted in Cyprus. In addition, the area of higher education (University-level education) has been neglected. A review of the literature has also revealed that many of the studies on HRM and performance have been conducted in an Anglo-American context and often in manufacturing.

The current study involves the institutions which are providing university-level education. The research sample consists of all administrative employees currently working at the universities, namely, University of Cyprus, the Cyprus University of Technology, the Open University of Cyprus, the University of Nicosia and the European University of Cyprus.

Despite the fact that the current study focuses at the university level sector, it is anticipated that both the conceptual as well as the methodological framework can be applied to other service sectors of the economy. Similarly, the practical implications that will derive from the analysis of the research data of the current thesis will be able to generalise to the service sector in Cyprus and the broader eastern Mediterranean region.

#### **4.5 Research Design and Procedures**

Oppenheim (1992: 6) defines research design as the basic plan or strategy of the research, and the logic/rationale behind it. The research design should inform how the sample will be drawn, what sub-groups the sample must contain, what comparisons will be made, whether control groups are needed, which variables need to be measured (when and at what intervals) and how these measures will be related to external events. Research designs are classified into: a) experimental (classic and quasi-experimental); and b) non-experimental (cross-sectional, longitudinal, case study and comparative). The former are based on experiments and are solely dependent on quantitative research methods; whereas, the latter were developed for research in social settings and comprises quantitative and/or qualitative research methods (Black, 1999; David and Sutton, 2004; Maylor and Blackmon, 2005). The main research designs are summarised in Table 4.1.

**Table 4.1: The main choices of research design**

<i>Purpose of the study</i>	<i>Type of investigation</i>	<i>Time horizon</i>	<i>Data collection methods</i>
Exploratory	Patterns, relationships, associations	Cross-sectional or social survey (carried out once, a snapshot of one period)  -or-  Longitudinal (repeated over one period)	For quantitative data: Experiments; field study; surveys (incl. online); content analysis; existing statistics  -and- For qualitative data: Case studies; ethnography; historical-comparative research
Descriptive	Detailed review and documentation of the situation		
Explanatory	Model design, development and testing		
Predictive	Forecast the outcomes of the situation		
Evaluative	Cause/effect, outcomes/results		

*Source:* Based on a synthesis of the extant literature: (Cooper and Schindler, 1998: 128-50; Newman, 2003: 20-40; Saunders at al., 2012: 162-169).

Based on the research questions and research hypotheses as well as on the research paradigm adopted for the purposes of the current study, it was considered appropriate to utilise a synthesis of methods and approaches from both, the qualitative and quantitative spectrum in order to address successfully the research questions and hypotheses. Thus, in the context of this thesis, both, qualitative and quantitative methods are considered to be complementary rather than competing approaches. As Finn (2000: 12) suggests “researchers should think beyond the myopic quantitative-qualitative divide when it comes to devising a suitable methodology for their research, and select methods – quantitative, qualitative or a combination of the two – that best satisfy the needs of specific research projects”.

To enable the successful integration, combination and application of the different research methods and techniques that will be utilised for the purposes of this thesis, a developmental multiple triangulation design was followed. Triangulation, according to Dreher and Hayes (1993), is the use of multiple concepts and methods to study a single

phenomenon. They further noted that triangulation “is not just a combination of methods but a back and forth movement between the quantitative and qualitative components throughout the research process” (1993: 217). In pure definitional terms triangulation implies that a single point is considered from three different and independent sources. The concept was derived from topography and was first used in the military and navigation sciences, but later was fruitfully adapted to social science inquiry. According to Decrop (1999) many authors defined triangulation as mixing qualitative and quantitative methods, advocating that both should be viewed as complementary instead of rival camps.

In modern social research, triangulation means looking at the same phenomenon, or research problem, from more than one source of data, method and theory. Likely, information coming from different angles can be used to corroborate, elaborate or illuminate the research problem. It also limits personal and methodological biases and enhances a study’s general applicability (Decrop, 1999). According to Decrop, by combining data sources, methods, investigators and theories, triangulation opens the way for richer and potentially more valid interpretations. The researcher, by employing triangulation, can also “guard against the accusation that the study’s findings are simply the artifact of a single method, a single data source, or a single investigator’s bias” (1999: 11).

By combining multiple theories, methods, and empirical materials, researchers can hope to overcome the weakness or intrinsic biases and the problems that come from single method, single-observer, and single-theory studies. Also a research strategy which integrates different methods is likely to produce better results in terms of quality and

scope and is often possible to come up with creative alternatives to traditional or more monolithic research approaches.

There are five basic types of triangulation:

- a. data triangulation, involving time, space, and persons;
- b. investigator triangulation, which consists of the use of multiple, rather than single observers;
- c. theory triangulation, which consists of using more than one theoretical scheme in the interpretation of the phenomenon;
- d. method triangulation, which involves using more than one method and may consist of within-method or between-method strategies.
- e. multiple triangulation, when the researcher combines in one investigation multiple observers, theoretical perspectives, sources of data, and methodologies.

The significance of developing a triangulation strategy for the purposes of this thesis lies in the lack of a theoretical model that incorporates both the resource based view and social exchange theory in explaining the complex phenomenon of HRM and organisational performance, including the mediating variables that affect the relationships with each other. Within this context, the above model is empirically tested at the university level education, an unexamined area in the extant literature.

The use of various methods/theories and data in research projects is not uncommon. As Brown and Brignall (2007: 35) claim, “the application of different theories and methodologies may create a wider set of plausible explanations for the phenomena observed”. Furthermore, they believe that “a more flexible approach to the use of theory in the research process may also possibly result in the development of richer theories,

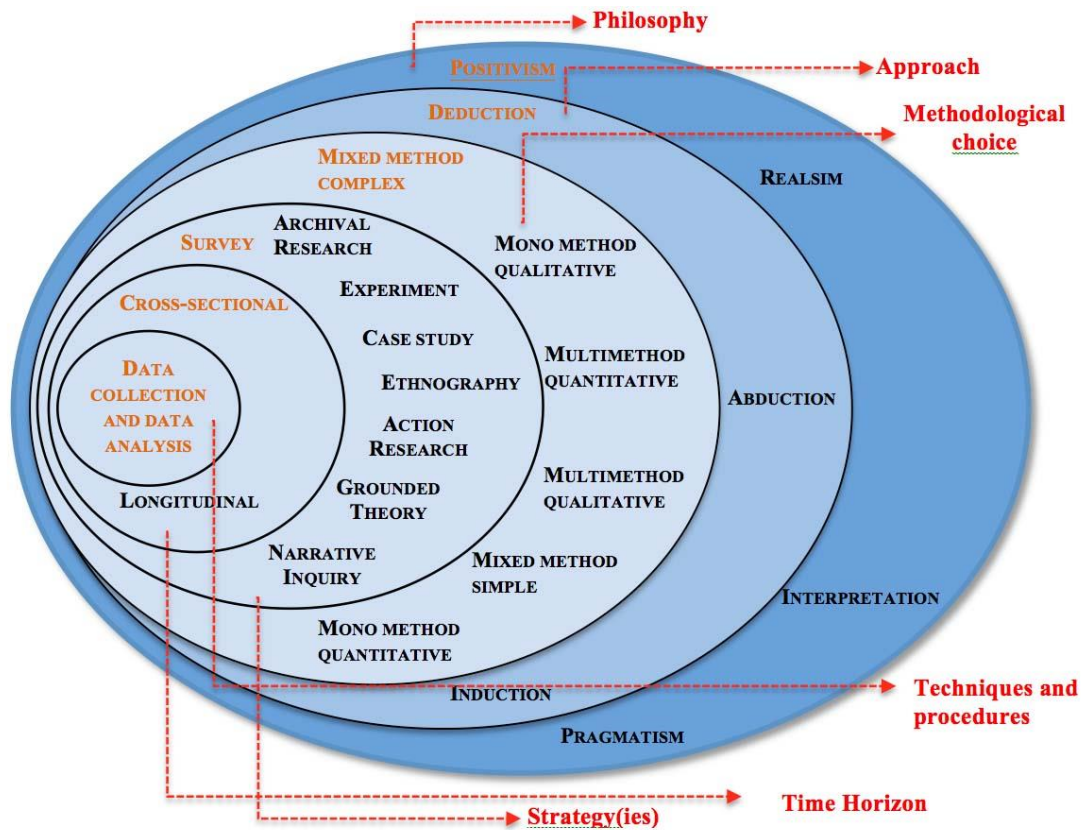
which are more closely related to the empirical reality being studied” (2007: 35). In addition, Decrop (1999: 154) has noted, since each method has its own limitations and biases, “the use of multiple methods paves the way for more credible and dependable information”.

Perry (1996) argues that in many theses several methodologies are used as a way of providing more perspectives of the phenomena being studied. These “secondary” role methodologies are used to help “formulate research issues or to slightly extend or generalise the findings of the main method” (1996: 11). Thus in this thesis, a dualistic triangulation strategy will be adopted: theory and method triangulation. More specifically, theory triangulation will be based on the integration of the resource based view and social exchange theories, while the method triangulation will allow the combination of qualitative techniques (in-depth interviews with experts) with quantitative techniques (descriptive analysis, multivariate analysis and SEM modelling).

It can be therefore inferred that the research design of this thesis is an amalgamation of exploration, explanation, and evaluation since they are all encompassed in varied degrees in the proposed empirical framework. To sum up, the current study utilised a dualistic triangulation strategy in a cross-sectional temporal framework.

The research “onion” proposed by Saunders et al. (2012), has been adopted and adapted for the purposes of this thesis (see figure 4.1). In a succinct manner, the research “onion” provides a vivid picture of the overall research philosophy and approach of the current thesis.

Figure 4.1: The research “Onion” adapted for the purposes of the current thesis<sup>3</sup>



Source: Saunders, Lewis and Thornhill, 2012: 128

### 4.5.1 Survey design

The survey design was initiated taking into consideration the following findings which have resulted from the literature:

- a. the lack of a common methodological consensus,
- b. the perplexity that surrounds the proposed research topic (Ferris et al. 1999; Boxall and Steeneveld, 1999) and
- c. “the unknown reliability of measures of HRM, the paucity of studies with adequate research designs, and the inconsistent results both across and within studies is troublesome” (Wall and Wood, 2005: 453).

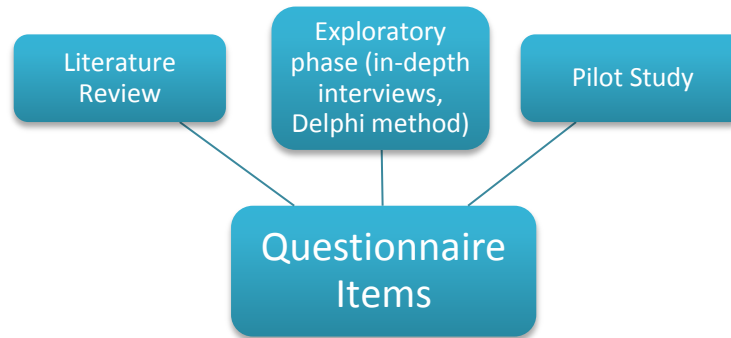
<sup>3</sup> Highlighted in orange colour is the research path of the current thesis.

Thus, a comprehensive and flexible methodological framework is needed in order to address successfully the aims and objectives put forward by the proposed thesis. As mentioned above, a dualistic triangulation design was utilised.

The design or construction of the primary data collection instrument (questionnaire in this case) in a research study should reflect the manner in which the study's key concepts/constructs are operationalised and measured (Babbie and Huitt, 1975; Oppenheim, 1992; Cooper and Schindler, 1998; Babbie, 2008). A questionnaire is a set of questions designed to generate the data necessary for accomplishing a research project's objectives (Parasuraman, 1986). Simply stated, it can be thought as a channel for collecting data from respondents. According to Finn et al. (2000) any questionnaire needs to be well laid out and presented. However, questionnaire design is frequently overlooked as an important aspect of the development of research instruments and as a potential source of independent effects on survey estimates (Sanchez, 1992). The quality of questionnaire design is generally recognised as an important factor for research instruments (Dilman, 1978). The procedures used to develop the questionnaire largely followed the guidelines recommended by Nunnally (1978), Churchill (1979), Nachmias and Nachmias (1992), and Nunnally and Bernstein (1994, 2007).

The questionnaire items for the final survey instrument used in this study were developed from three principal sources using the aforementioned procedure, and is summarised in the Figure 4.2 below.

*Figure 4.2: Generation of Questionnaire items.*



In the following sections the methodological decisions taken and procedures that were followed during the design and development of the questionnaire are discussed and explained.

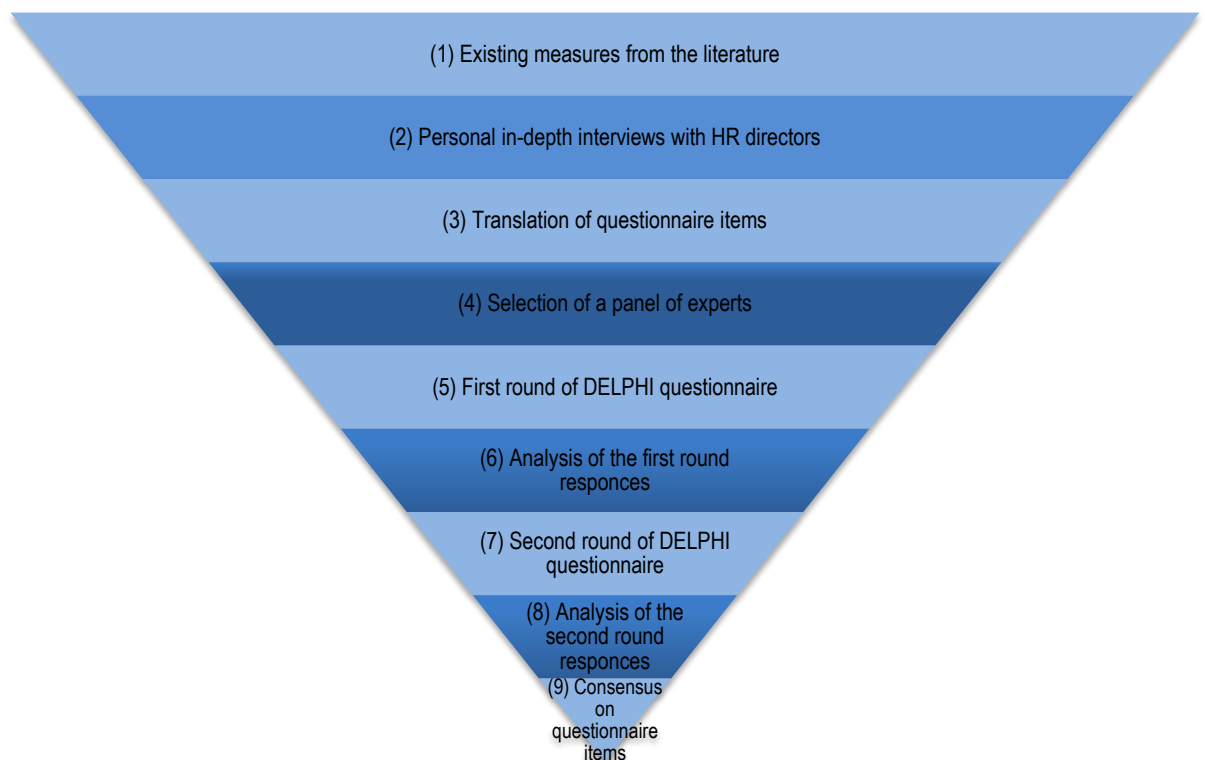
#### **4.5.1.1 Questionnaire design and development through DELPHI Approach and in-depth interviews**

As mentioned earlier (see section 4.2) the utilisation of expert opinions for the design and development of the survey instrument has enhanced the content validity of the questionnaire (Crano and Brewer, 1986; de Vaus, 1996; Nachmias and Nachmias, 1992).

The decision to utilise this approach, which is also known as Delphi Method, was based on the rationale that the combination of in-depth interviews with the HR directors of the universities, combined with elements that have resulted from the literature review and validated by experts (Delphi approach) is a sound and solid framework for the derivation of reliable and valid indicators.

The Delphi method was developed in the 1950's by the RAND Corporation and several studies (Strauss and Zeigler, 1975; Okoli and Pawlowski, 2004) support the utilisation of expert opinion (Delphi Approach) as a tool for assessing the conceptual foundation of a research study.

**Figure 4.3: The Delphi Approach**



In practical terms DELPHI can be described as an exercise in group communication among a panel of geographically dispersed experts (Alder and Ziglio, 1996). The technique allows the systematic activity of experts with a complex problem or task. In the process of applying the technique, a series of repeated rounds of questioning, including feedback of earlier-round responses, to take advantage of group input is taking place. The participants (who can also participate remotely) respond anonymously, preventing the identification the opinion of any specific individual. This

anonymity also provides the comfort of confidentiality; thus allowing panellists to freely express their opinions, and enabling previous responses to be revised in subsequent iterations. The application of DELPHI approach for the purposes of this thesis is graphically presented above in Figure 4.3.

Initially, the existing measures were determined from the review of the extant literature. At a next step (and within the framework of an exploratory approach) personal in-depth interviews were contacted with HR directors of the universities involved in the current study. The items were then translated in Greek (and back translated to ensure reliability – see below section 4.5.1.6). At a subsequent step a selection process of experts was initiated and first round of the DELPHI questionnaire was distributed. Following the receipt of the replies of experts, an analysis of the results (in the form of amending the questionnaire items) was performed. Steps five to eight were repeated again (two rounds) until a consensus was reached.

#### **4.5.1.2 Contents of the Questionnaire**

The key to minimise the disadvantage of the survey questionnaire lies in the construction of the questionnaire itself. According to Nachmias and Nachmias “a poorly developed questionnaire contains the seeds of the own destruction” (1992: 239). The questionnaire that was developed for the purposes of this thesis was intended to be straightforward and simple in order to increase the response rate, since it is obvious that the foundation of all questionnaires is the question.

The questions employed for the present survey were concerned with the attitudes and opinions of the respondents, on a subject familiar to them (the relationship between the system of HRM practices and organisational performance). On this basis, the questions

included in the survey instrument fell into the category of questions about subjective experiences. According to Frankfort-Nachmias and Nachmias (2007), subjective experience involves the respondent's beliefs, attitudes, perceptions and opinions.

Considerable attention was given to develop clear, unambiguous and useful questions. A fundamental precondition to achieve this objective was the wording of the questions. At all times, an attempt was made to make the questionnaire as user friendly as possible. In order to avoid problems that result from improper wording of questions the language that was used was simple, and jargon and technical terms were avoided (see Table 4.3). Particular attention was also given to avoid double-barrelled, leading and negative questions. By doing this, it was ensured that respondents were able to give answers without having the feeling that they were giving a wrong answer or a disapproved-of response.

#### **4.5.1.3 Structure and Format of Questions**

The next issue that was examined was the response format of the questions. According to Kinnear and Taylor (1997) the concern at this point is focused on the degree of structure that is imposed on the person's responses. There are two types of question structures that can be distinguished: open-ended questions and closed questions. For the questionnaire used in this study closed questions were used. For this method the respondents were offered a set of answers and were asked to select the one that most closely represented their views. The rationale behind the selection of close-ended questions to be used was that they were easy to answer, they required no writing from the respondent, and the analysis of the primary data using dedicated statistical software was made straightforward. As Nachmias and Nachmias support (1992: 244) the use of

close-ended questions is preferable as they tend to be answered more readily than open ended ones.

The decision as to the design of the questions was aided by the guidelines proposed by Trochim (2000), Frankfort-Nachmias and Nachmias (2007). Based on this the following considerations were taken into account:

*a. The objective of the questionnaire.*

The objective of the questionnaire was straightforward in that respondents were asked to express their perceptions of the impact of the system of HRM practices on human capital and employee commitment and the employee and organisational performance.

*b. The respondents' level of information about the topic of the question.*

Respondents were asked to rate a number of HRM practices with reference to their experience of them and to relate them to their perceived level of human capital, commitment and employee and organisational performance. The nature of administrative employees work made them familiar with the topic of the survey.

#### **4.5.1.4 Answering Procedures, Order of Questions and Rating Scale**

A well-structured questionnaire should also organise its questions in a sequence that matches the purpose of the study and the characteristics of its respondents (De Vaus, 1996; Newman, 2003). The questionnaire layout should be clearly stated with the use of transition statements between the sections. This transition helps respondents to avoid the interpretation of questions in the light of earlier ones and to proceed in a structured way in the various thematic addressed in the various sections of the questionnaire (Cooper and Schindler, 1998). The question-sequence should also aim at increasing the

interest of respondents to participate in the questionnaire completion process, improving the response rates. This study used the following guidelines concerning:

1. *Opening questions* should be interesting and easy to answer (Finn et al., 2000) and as Cooper and Schindler (1998: 342) suggest that questions which are of most interest, simple, general, and not controversial should be placed first; the best choice are questions of human-interest value. Such questions might contribute to concrete (actual) data to the major study objective, but their main task is to awake the interest and motivation of respondents to answer them.

2. *Sensitive information or threatening questions* about the personal background of respondents (e.g. demographic details), or for their organisations (e.g. firm financial details) should be made either later or at the end of the questionnaire. Otherwise, there is a risk to make respondents feel threatened, thus, diminishing their interest and willingness to continue participating in the questionnaire (Cooper and Schindler, 1998; Brewerton and Millward, 2001).

3. *Middle questions* should be about common topics. Such questions are specific and more difficult and require considerable thought and time on behalf of the respondents to gather information and answer them (Newman, 2003; Thomas et al., 2005). Even simple questions requiring considerable thought should be placed later in the questionnaire (Cooper and Schindler, 1998: 346). The researcher should attempt to make difficult questions as comprehensive as possible, so that the respondents are able to answer them (Babbie and Huitt, 1975). This can be achieved with the use of filter questions to ensure that respondents only answer questions that are related directly to them.

The introduction of different question formats can also be used to maintain the interest of the respondents throughout the questionnaire (De Vaus, 1996). However, filter questions should be used cautiously; e.g. no more than two to three in a questionnaire, given that respondents find skip questions rather annoying (Saunders et al., 2007).

The above guidelines gathered from the literature concerning the sequencing of the questions were implemented. Each part included questions that were strictly relevant and developed on the basis of the literature reviewed in Chapter Two.

Particular attention was also paid to the selection of scales for the current questionnaire, because as suggested by Kinnear and Taylor (1998), in measuring attitudes one must be sensitive to the scale level assumptions imposed on data analysis. The majority of the literature suggests that attitudes and perceptions are typically measured at the interval or ordinal level. For the purposes of this study two types of interval scales were used: a six-point (for the questions related to their self-assessment regarding the system of HRM practices, the level of human capital, the employee commitment and the employee performance) and a five point scale (only for measuring the organisational performance construct – the main dependent variable of the current study).

The rationale behind the use of two different scales is based on a priori assumption that respondents, when it comes to their own self-assessment are leaning in one direction (Friedman et al, 1981; Komorita, 1963; Friedman and Amoo, 1999). As suggested by Kulas et al. (2008: 258) “the use of the middle category as a dumping ground should be viewed as problematic beyond the ambiguity involved with the meaning of the response”. In addition, Garland (1991: 70) postulated that “respondents desire to please

the interviewer or appear helpful”. In these cases an unbalanced rating scale has to be adopted so as to minimise the distortion of the results obtained.

An additional reason for adopting an unbalanced scale was the fact that the researcher was known to a large number of the population (due to his past and current employment as well as professional memberships). The adoption of an unbalanced scale as well as the decision to maintain the anonymity of respondents (by avoiding the inclusion of any question and demographic characteristics that could potentially reveal the identity of respondents and their university) have actually eliminated any possible negative effects on the reliability and validity of the results.

In the current study, a multiple choice format was employed. For each item, the respondents were asked to pick one of the alternatives that were indicating the extent to which they agreed with the position espoused in the item. The response categories set for this study were as follows:

For Part A of the Questionnaire (ratings of the system of HRM practices, human capital, employee commitment and employee performance) the following scale was adopted:

1. Strongly Disagree
2. Disagree
3. Somewhat Disagree
4. Somewhat Agree
5. Agree
6. Strongly Agree

For Part B (rating of organisational performance) a five-point scale was also adopted, but with different verbal labels. These were as follows:

1. Much Worse
2. Worse
3. The same
4. Better
5. Much Better

The questions were further organized using the matrix questions methodology, where a large set of rating questions have the same response categories. Several factors, both methodological and conceptual suggested the suitability of the interval scale for the purposes of this study. First, interval scales providing interval data which in turn enable the application of more advanced statistical techniques. Furthermore as Aaker et al. (2001) have suggested, in behavioural and attitudinal research projects interval scales are considered to be the best measurements. Some statistical techniques, for example confirmatory factor analysis and SEM, assume that the data to be analysed have to be at least interval scales.

An additional reason for the adoption of interval scales was the sensitivity of the scale. Zikmund (1997) suggests that in the cases where the attitudes and opinions of a set of respondents are surveyed, concerning a proposed change of a construct or system, the sensitivity of the scale plays a pivotal role in measuring correctly the opinions of the research sample. Sensitivity refers to “an instrument’s ability to accurately measure variability in stimuli or responses” (Zikmund, 1997: 338). In more simple terms the

sensitivity of an attitude scale is the extent to which it is capable of discriminating between respondents with different attitudes. The use of dichotomous response categories such as “agree” or “disagree” does not reflect precisely the subtle attitude changes. Therefore, the use of a sensitive measure with numerous categories offered more choices for respondents to express their attitudes and simultaneously increase the sensitivity of the scale.

A study by Garland (1998) provides some evidence that social desirability bias, arising from respondents’ desires to please the interviewer or appear helpful, or not be seen to give what they perceive to be a socially unacceptable answer, can be minimised by eliminating the mid-point from interval scales. This suggestion was adopted for the purposes of the current thesis and for this reason mid-points were not used. The exception was in Part B (organisational performance) of the questionnaire where a mid-point was used. The decision to have a mid-point is not a deviation from the above decision since the respondents were asked to compare the performance of their university to that of other universities (hence it could be possible to have the same performance).

Bending (1954) investigated how the reliability and validity of a survey is affected by the number of alternatives of an interval-type scale. The result of that study suggests that both reliability and validity are independent of the number of scale points used for interval-type items. This finding is important for this thesis, since it provides a relative assurance that the adoption of a six-point scale for the final questionnaire, over a seven-point scale adopted in the pilot study, will not have any effect on the reliability and

validity of the survey. As Churchill and Iacobucci (2005) noted, shorter and simpler items are generally clearer and easier to respond to reliably.

#### **4.5.1.5 Questionnaire Length, Layout, and Format**

There is some evidence that shorter questionnaires achieve higher response rates and more validity than longer ones; aiding thus, the collection of more data of better quality from more respondents (Punch, 2003 in Thomas et al., 2005: 274). For instance, Borg and Gall (1989) analysed 98 questionnaire studies and reported that on average, each additional page of a questionnaire reduced the return response rate by 0.5%. Remenyi et al. (1998: 156) suggest that “questionnaires should not be too lengthy and preferably should not take more than 20 minutes to complete”. In more recent years Saunders et al. (2012: 446) have suggested that “a length between four and eight A4 pages” is acceptable for organizational self-administered questionnaires. Nevertheless, the effects of length itself upon response rates are not easy to be identified, since these are interrelated to the topic, respondent characteristics, questionnaire layout and question format of a study (Bryman and Bell, 2003; Newman, 2003).

The literature also contains guidelines about the layout, presentation, and appearance of questionnaires in order to improve response rates (Babbie and Huitt, 1975; Oppenheim, 1992; Dillman, 2000; Newman, 2003; Thomas et al., 2005). The key ones are summarised below:

- keep instructions and questions together;
- instructions need to be in different style (e.g. fonts-sizes, print sizes, bold, colour) from questions but these should be used consistently. “Novelty” fonts should be

avoided and fonts point-size should be 10-12 for ease of readability (Brewerton and Millward, 2001: 107);

- clear and easy to follow instructions should guide the respondents on how to complete their answers (e.g. is it one, or the best one, or more than one answer that is requested) as well as routing or skip-to-instructions (e.g. If NO, please go to Q10);
- avoid cramping questions together (reducing margins) and placing questions close to each other to save space, because, there is a high risk that some questions may be omitted/or skipped by respondents; and
- at the end, close the questionnaire with a “thank you for your participation” statement; leaving the respondents with positive feelings about the questionnaire and a sense that their contribution is appreciated.

Failure to follow the above guidelines can create confusion to respondents and serious loss of data, thus, lowering response rates and validity (Oppenheim, 1992; Newman, 2003). Hence the above guidelines were followed in the design of the questionnaire used in this study.

#### **4.5.1.6 Questionnaire Translation**

The questionnaire of this study was initially developed in English and then translated into Greek so as to assist and motivate the respondents to answer and return the questionnaires. In order to enhance reliability and validity, it was ensured that every question and statement included in the questionnaire was translated effectively from one language into another. The researcher’s familiarity of the university-level education also proved of benefit in developing equivalent constructs and measurements (Kearney et al.,

2009) as determined by the questionnaire lexicon equivalence and the “etic” approach (Coviello and Jones, 2004). In particular, to promote lexical or functional equivalence of the items (questions and statements) included in the questionnaire, the back translation technique was employed as suggested by Usunier (1998) and Newman (2003). A third party (HRM scholar from Cyprus University of Technology) provided reassurance of the consistency of the questionnaire with Greek HRM terminology, while for the covering letter the translation ensured consistency with Greek literature and language terminology.

The back translation with lexicon equivalence as the desired standard also facilitated conceptual equivalence, in addition to retention of meaning with the local culture and language. The translated documents were subsequently checked and amended by a third party (HRM faculty member) who is versed in the study’s subject matter. The amendments were primarily concerned with terminology and correspondence of the Greek HRM terminology with the international literature taking also into consideration the cultural setting and context of higher education in Cyprus.

#### **4.5.2 Population and Sample design**

The sample design adopted for the purposes of the current study had as its main objective to have the ability to provide a holistic and representative sample of the University-level education. The target population for the study consists of all administrative employees in the university-level education in Cyprus, at all ranks and different job titles. The rationale behind this decision was that the performance of different tasks at various levels ensures the robustness of the results regarding their applicability to different service jobs and tasks.

Administrative employees were asked to complete the survey that measured their perception on their University system of HRM practices, the level of their university human capital, their commitment towards their university, their perceived performance, and finally their perception on their university overall performance in comparison to the other universities in Cyprus. In addition, they were asked to provide basic organisational and demographic information for themselves and their university.

The survey was distributed to all 750 administrative staff of the universities. From the questionnaires distributed, a total of 334 completed questionnaires were returned. Of these, 321 were deemed appropriate for analysis, giving an effective response rate of 43 percent.

### **4.5.3 Survey Administration and Data Collection**

Initially, the study utilised an exploratory qualitative study with the use of personal in-depth interviews with the HRM directors of all universities operating in Cyprus (N=5). The interviews assisted the development of the initial version of the research instrument by supplementing the findings of the literature review. Furthermore, the interviews allowed for the validation of the questionnaire items ensuring face/content validity.

The questionnaire design, sampling and administration are three interlinked and interdependent issues. The administration of the questionnaire plays a significant role for the designation of the quality of the sample, the determination of the type of questions to be asked, and the design and layout of the questionnaire. Furthermore, the response rate of a particular survey is a result of the combined effects of the research

theme, the nature of the sample, the length of the questionnaire and the care taken in implementing a particular survey.

The two main methods for administering cross-sectional surveys are administered and self-administered questionnaires. The former can involve structured (face-to-face or over the telephone) interviews; whereas the latter can involve postal, email, hand-delivery, as well as on-line or web-based questionnaires (Maylor and Blackmon, 2005). Each of these choices has well documented advantages and disadvantages (Remenyi et al., 1998; Saunders et al., 2007).

Non-response bias (or non-response error) occurs when there is a failure to obtain information from elements of the population that are selected and designated for the sample (Cooper and Schindler, 2010). According to Williams (1978) sample members may become non-respondents because they either refuse to respond, or lack the ability to respond, or are inaccessible to the researcher. Non-response is a problem because it raises doubts whether those that did not respond were in some way different from those that did respond (Churchill and Iacobucci, 2005; Tashakkori and Teddlie, 1998).

Fortunately there are methods for identifying the effects of non-response bias so that the survey findings are thereafter adjusted (e.g. by replacing each non-respondent with a matched member of the population). Even if such methods are applicable most of them usually involve additional data collection through interviewing, and in general place additional demands on the resources of the researcher that can hardly be met. Thus, as “an ounce of prevention is worth a pound of cure” it was decided not only to combat non-response bias through the research design as elaborated in the so far sections of this chapter but also during its implementation.

To that effect, the methodology literature (Armstrong and Overton, 1977; De Vaus, 1996; Finn et al., 2000; Dillman, 2000) was reviewed for implementation advice that could prevent non-response bias. A follow-up program (or successive waves) to stimulate the response rates was followed.

In addition, *Covering letter* (see Appendix 3) in an official letterhead paper endorsed by the Wolverhampton University Business School was attached to the questionnaire. Anonymity and confidentiality of the respondents were ensured. Moreover, *notification* which refers to the explanation of the purpose of the study to respondents via mail (Saunders et al., 2007) was also used with the support of the HRM directors of the Universities.

For the purposes of this thesis, a self-administered online questionnaire was developed. In the last decade the use of internet based surveys has grown to a phenomenal rate (Evans and Mathur, 2005; Dillman, 2007; Babbie, 2012).

This decision was based on the following advantages of the specific approach over other methods for collecting quantitative data:

- 1) superiority over postal surveys in terms of response speed and cost efficiency;
- 2) More efficient in cost, time and energy of the researcher when large numbers of respondents are to be reached. It would have been prohibitively expensive and time consuming to conduct structured personal interviews with all respondents, if the targeted population of 750 administrative employees was to be surveyed;
- 3) A very effective method for obtaining information by literate or educated targeted population with guaranteed access to a computer terminal, such as the

- respondents used in this study;
- 4) Ensure anonymity and minimise interviewer effects on respondents; especially when sensitive data are concerned;
  - 5) Offers privacy to respondents and time to think at their convenience and respond accurately (Sekaran, 2003) which was also necessary in this study as some historical data were also being asked for.

Despite of the advantages of the chosen method, there are always limitations to survey research in any mode. Although online surveys demonstrate a number of positive qualities, they are characterized by a number of potential problematic and controversial aspects. Dillman (2012) discuss four sources of survey error: (1) sampling error; (2) coverage error; (3) measurement error; and, (4) non-response error. Additional sources of error specific to e-mail/online surveys include: (a) response rate; (b) technical problems; and, (c) generalisability issues with populations that have internet usage problems. For the current study sampling and coverage errors do not pose any particular problems, since the whole population of administrative staff of universities was selected. Measurement error was tackled through the testing of questionnaire reliability and validity (see sections 4.7 and 4.8) while nonresponse error was minimised through the care and detailed that was given throughout the questionnaire development and administration processes.

With regards to the additional sources of error (specifically for online/email surveys) the response error – or coverage error – was minimised since the whole population of potential respondents was selected. Coverage error (Dillman, 2012) is the result of not allowing all members of the survey population to have an equal chance of being

samples for participation in the survey. Coverage error is of little concern if researchers have access to complete address listings of their population of interest (Dillman, 2012), as it happened in this study.

The “technical problems” error usually results from technical faults and programming mistakes of the online survey. For the current study, the questionnaire was developed as a standalone application using an experienced web-developer and has gone into various rounds of testing and refinement. The utilisation of ready-made freeware applications was avoided since they are sometimes confusing and can create negative reactions among respondents (due, for example, to the adverts and commercials used).

Even though in the literature the main disadvantage of using online survey is the generally low response in relation to the other methods of data collection (Dillman, 2012), for this thesis this was not a limitation due its population characteristics and study setting. To elaborate further, the main shortcoming of online surveys is the non-representativeness of the sample due to the inability of elements of the sample (potential respondents) to have access to the online survey. The general characteristics (working conditions, salary scales, benefits, HRM policies) of the population of respondents relevant to this thesis were known to the researcher and the HR directors had a professional relationship with him. In addition they all had online access and an established email address (which was also known to the researcher from the respective HRM department of each university). As postulated, individuals who use computers and the internet regularly may be more likely to respond to email surveys than postal surveys (Dillman, 2012; Saunders, 2012).

In addition, the HR directors of all universities formally endorsed the current study following a formal letter by the researcher. As a result, the email requesting the sample elements to answer the questionnaire was accompanied with a formal letter by their respective HR director of their institution. For both mail and online surveys, pre-notification has demonstrated an increase in response speed (Dillman, 2012).

#### **4.5.4 The Pilot Study**

An important stage in the survey process is piloting the survey instrument so as to ensure that respondents understand the questions and provide appropriate responses. The pilot study involves more than simply asking the respondents to complete questionnaires. What is necessary is to identify whether they understood the questions and whether the respondents interpreted the questions in a manner in line with the intended purpose. As Finn et al. (2000: 102) have noted “the results of pre-testing can be annoying, but can make the difference between an instrument yielding data or not, or giving meaningful or useless data”. Thus, the purpose of the pilot study was to minimize the “inferential gap” between the indicators and the constructs used in this study, and secondly, and most importantly, to ensure that the key concept of system of HRM practices was correctly measured by the selected indicators.

The pilot study was viewed as a tool for selecting the appropriate HRM practices and indicators that comprise the perceived system of HRM practices to be included in the survey instrument and, at the same time, to identify any other variables that were not identified through the literature review process. Parasuraman (1986) suggests that the composition of the pilot study sample should be similar to the one which will ultimately be included in the study and that the pre-test sample size is a subjective decision that

depends on a variety of factors such as how confident the researcher is, the soundness of the questionnaire and the time and money available.

Boyd, Westfall and Stasch (1989) note that the number of pilot questionnaires should be around twenty. These conditions were satisfied in the current study since the survey instrument was piloted with five administrative employees in each university. However, pretesting need not be limited to such respondents. Other individuals capable of providing valuable insights include the researcher's colleagues as well as potential users of the data to be gathered. This condition was also satisfied in the current study since the survey instrument was also piloted with two HRM faculty members and three practitioners. The piloting of the initial set of questions with knowledgeable and expert personnel can be extremely valuable, since they are likely to look at the questions more critically than the typical survey respondent. In fact, a worthwhile approach is to first obtain feedback from such expert respondents and modify the questionnaire draft as necessary before piloting it with survey respondents.

The evaluation of the individual questionnaire items was examined against three criteria as defined by de Vaus (2001). These were meaning, redundancy and scalability.

a.) *Meaning*: The individual questionnaire items were examined to ensure that respondents understood the intended meaning of the question. It was revealed that the respondents were familiar with the terms used since the non-response rate was very low. The results also confirmed the decision to use the administrative staff of the universities as the sampling population for the purposes of this survey.

- b.) *Redundancy*: The questionnaire items for this study were designed to measure the relationship between the system of HRM practices and organisational performance. Following the suggestion of de Vaus (2001) if two items are correlated over 0.8, then one of them has to be dropped. To enable this, item to item correlations for the 52 indicators were calculated. The results indicate that none of the items had a correlation over 0.8.
- c.) *Scalability*: If a set of questions is designed to form an index it must be ensured that they actually do so. According to de Vaus (2001) there is no point including items in the final questionnaire which do not belong to the index for which they were developed. The results of the pilot study indicated that all items listed in the questionnaire received scores of less than “6” (average=3.05). The total reliability of the measurement instrument gauged by Cronbach alpha via SPSS Reliability analysis was 0.90, indicating good internal consistency (Hair et al. 1998).

The results of the pilot study led to substantial changes to the contents and structure of the questionnaire. However, this was expected considering the fact that this was the first attempt to measure the relationship between the system of HRM practices and organisational performance in the context of university level education not only in Cyprus but world-wide. In the absence of an established, valid and reliable index, the process of pre-testing, piloting and modifying/adjusting the index was inevitable and essential.

From the comments received, it was decided to include an introductory note at the beginning of the questionnaire explaining its scope and purpose and the use of attractive formatting/graphic devices so as to increase the friendliness and visual attractiveness of

the questionnaire. In addition the initial questionnaire utilised a seven-point interval scale. Following the pilot study, a six-point scale was utilised with the elimination of the mid-point. This decision was also supported by the relevant literature.

#### **4.5.5 A Note on Research Ethics**

The current study has endorsed and followed with great care and attention all the ethical guidelines and ethical scrutiny procedures described in the “Code of Good Research Practice” of the University of Wolverhampton.

At the initial stages of this thesis the proposed research topic was approved (by the Research Committee of Management Research Centre, University of Wolverhampton) and cleared of any ethical concerns since it was considered unlikely to generate data of an intrusive nature in that the primary evidence to be collected will be attitudinal measures and harder metric information about organisational performance.

In addition to the internal code and guidelines, the code of ethics, as practiced and followed by the academic and scholarly community, was examined by reviewing the relevant literature on research ethics in social sciences (Bryman, 2012; Babbie, 2010).

In the relevant literature, the initial attempts to develop codes of research ethics in the field of social sciences have surfaced the 1960s (Kimmel, 2007). In the context of social and behavioural sciences, ethics refer to the rules that define the rights and responsibilities of social and behavioral scientists in their relationships with research subjects, clients, employers, and each other (Chalk et al., 1980). Kimmel (2007: 52) further suggested that codes of ethics must not be seen as guarantees for the protection of research subjects and research integrity but “might instead be regarded as workable

frameworks providing researchers with guidance in order to analyse the issues relevant to their investigations”.

The relevant literature is particularly concerned with two major ethical considerations in field studies: the privacy rights of subjects and the informed consent of research subjects who participate in the research.

Within this context and framework, the current thesis has paid particular emphasis and attention to guarantee the anonymity of the research subjects and the protection of their personal information. In addition, prior to conducting the respondents, an approval was granted by the universities. In addition, the researcher and the universities involved have not exerted in any way any sort of pressure to influence/convince employees to participate in the field study.

A particularity of the current thesis is the fact that an online questionnaire was used. Despite the fact that ethical concerns of online research are not widely addressed in the literature, the current study has deemed necessary to take this issue into consideration. As postulated by Birnbaum (2004) the increase of the use of online surveys for research purposes has created new ethical dilemmas which require a different and more enlightened approach on research ethics by the researchers. Furthermore, Nosek, Banaji, and Greenwald (2002) identified three key differences between Internet research and standard field research: (1) the physical absence of a researcher, (2) the questionable adequacy of informed consent and debriefing procedures, and (3) the potential loss of participant anonymity or confidentiality.

For the current thesis, the absence of an investigator has reduced the possibility for bias and coercion and this has been considered as an advantage of the research approach that was employed. With regard to the issue of informed consent, the current study has decided to respect the internal administrative procedures and regulations of each university and contact the respondents through them. This explains the difficulty that the researcher had to deal with at the survey implementation stage when one institution refused the participation of its administrative employees. Finally, anonymity and confidentiality were ensured by developing the survey instrument internally through the use of the secure information and technology infrastructure of the researcher's university.

#### **4.6 Construct operationalisation and measurement**

The conceptual model developed in Chapter Three depicted the main constructs involved in the conceptual relationships explored in this study.

Before proceeding to the operationalisation of the research questions, these were examined against a number of criteria, as these have been proposed by Saunders and Lewis (2012). In particular, a researcher has to ensure that the research questions are: transparent, specific, interconnected, answerable and measurable. The preceding discussion in Chapters 3 and 4 provides a clear confirmation that the above criteria have been met.

The operationalisation of these constructs was informed by the literature reviewed in the previous chapters. The majority of the construct items used were derived from the in-depth review and analysis of the relevant literature or were extracted from empirically validated research instruments. The variables in the research model of the current

study are classified into independent, mediating, dependent, and control variables. The main dependent variable is organisational performance and the key independent variable is the system of HRM practices (employee selection, employee training and development, performance management, compensation and incentives, and employee participation and involvement). Mediating variables are the level of human capital, employee commitment, and employee performance. Control variables are current position, gender, level of education, and years of experience. This research examines a "two-stage" model, where the dependent variable from the first stage is an independent variable in the subsequent stage.

Obviously, the difficulties in obtaining primary data on independent measures of university performance informed the operationalisation of the constructs proposed in the current thesis. Other solutions adopted by some studies involved the use of available secondary data as the main source of independent performance measures. However, such secondary data were not available for the targeted population due to legal and intra-organisational restrictions. Thus the aforementioned operationalisation was considered to be optimal for the following reasons:

- First, similar operationalisation has been used successfully by empirical studies in Strategic Human Resource Management (SHRM).
- Second, empirical studies of organisational performance in higher education recommended that self-reported performance measures are necessary to be used when the targeted population includes employees.
- Third, given the fact that the target population originated from both public and private universities (with almost similar representation in the overall

population), the above operationalisation aimed to reduce the number of missing data on performance.

- Finally, the respondents were asked about their university's performance (for the last three years) in comparison to other universities in Cyprus in order to reduce possible bias and endanger the reliability of responses from any perceptions/assessments that could be generated from any temporal fluctuations of organisational performance.

As discussed in the following chapter, the operationalisation strategy adopted for the purposes of this thesis has provided a reasonable payoff in terms of missing data, scale reliability for the self-reported measures and validity. Finally, it should be made explicit that the choice to operationalise the aforementioned aspects of the constructs should not be taken to suggest that in the literature other measures do not exist, or that they are perhaps less important. It is just that this research attempts to make a first step in establishing empirically valid and reliable constructs aimed at evaluating the relationship between the systems of HRM practices and organisational performance in university settings. This should allow, at a subsequent stage, their comparison to other findings reported in the literature, which inevitably will lead to the delineation of areas that may require further research.

As mentioned above, to maximise the content/face validity of the questionnaire, the majority of the items were obtained from existing measurement instruments in the SHRM, human capital, commitment, and performance literature. In addition, through the exploratory phase (in depth interviews) - as well as through the piloting of the initial survey instrument - additional items were developed as necessary. A research parameter

that was also considered in this study was to adapt the items of the constructs to the cultural context and setting within which the study is conducted. Therefore, as a result of the piloting phase minor modifications were made to some items. More specifically, the items under the job security practice were excluded from the questionnaire since at the university level employment is permanent. In addition, double-barrelled questions as well as items where the choice of wording could exert some bias to the respondents were reworded.

Table 4.2 provides a detailed account of the questionnaire item derivation process. The items are classified according to three primary sources (as these were included in the methodology): the review of the relevant literature, in-depth interviews with HR directors and the utilization of the DELPHI study results.

The constructs developed for the purposes of this thesis are discussed and explained in the following sections.

**Table 4.2: Derivation of the questionnaire items**

Literature	In-depth interviews	DELPHI	
✓	*	*	Employee selection is taken very seriously by this University
✓			Employee selection emphasises promotion from within
✓			Employee selection places priority on the candidate's potential to learn
	*		Employee selection emphasises capacity to perform well right away
✓			Employees in this university have clear career paths
✓	*	*	Employees in this university will normally go through training programs every year
✓	*	*	Training programs strive to develop university-specific skills/knowledge
✓			The training programs emphasise on-the-job experiences
✓			Training uses outside instruction (seminars, conferences, etc.)
✓	*	*	Training programs in this University have improved the effectiveness of employees
✓			Performance appraisal is based on objective, quantifiable results
✓			Performance appraisals include management by objective with mutual goal setting
✓			Performance appraisals include developmental feedback
✓	*	*	Performance appraisals emphasise development of abilities / skills
✓	*		Performance appraisal emphasises the output of the team
✓	*	*	This university compensations package includes high wages
✓	*	*	This university incentive system is tied to skill-based rewards
✓			This university incentive system has a group-based component
	*	*	This university incentive system values seniority
✓			Compensation and incentives are contingent on performance
✓	*	*	This university's compensation package is competitive to that of other Universities in Cyprus
✓			Employees in this university are empowered to make decisions consistent with their status
✓			Employees in this university are often asked by their supervisor to participate in decision-making
✓	*	*	Employees are encouraged to suggest improvements in the way things are done
✓			Senior management is communicating effectively with employees in this university
✓	*	*	Employees are encouraged to bring up ideas to help accomplish their department's / university's goals
✓			The employees working in this university are highly skilled
✓	*	*	The employees working in this university are considered the best in university education in Cyprus
✓	*	*	The employees working in the university are encouraged to be creative
✓			The employees working in the university are experts in their particular jobs and functions
✓			I am committed to this university
✓			I would be happy to spend the rest of my career with this university
✓	*		I really care about the future of this university
✓	*	*	I am willing to go beyond of what my job requires in order to help this university succeed
✓			I talk about this university to my friends as an ideal working place
✓			I find my values and the university's values very similar
✓			I am proud to tell others that I am a part of this university
✓			I really feel as if this organisation's problems are my own
✓	*	*	Our employees' performance / productivity is higher than those of other universities in Cyprus
✓	*	*	Our employees perform / produce in an efficient manner
✓	*	*	Our employees' productive power is higher than those of other universities in Cyprus
✓			Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - performance
✓	*	*	quality of services and programs (service quality)
✓	*	*	development of new services and programs
✓			ability to attract essential employees
✓			ability to retain essential employees
✓			satisfaction of customers or clients
✓			relations between management and other employees
✓			relations among employees in general
✓			Profitability (if applicable)
✓	*	*	Rate of innovation
✓	*	*	Level of Productivity

✓ Primary source (Adopted without any modification from existing scales/literature)

\* Modified question from interviews and/or Delphi method

### 4.6.1 The Perceived System of HRM Practices Construct

In HRM and performance research, there has been little consistency in selecting HRM practices to be combined in an HRM system. Therefore, the list of perceived HRM items was checked for coverage of the mostly used high performance work practices/high commitment practices using a review of HRM and performance studies by Boselie et al (2005). Due to the fact that the HRM practices which should be included in high performance HRM systems vary, the perceived system of HRM practices was measured using twenty items (the initial construct consisted of twenty-nine items). The items for consideration were derived from studies conducted by Lepak and Snell (2002); Macky and Boxall, (2007); Boselie (2010); and Kehoe and Wright (2010). According to Kehoe and Wright (2010), all practices included in a high performance HRM system focus on promoting employee ability, motivation, commitment and opportunity. Thus, five HRM practices - reflecting the high-performance approach – that make up the system of HRM practices were used in the current study.

These practices are widely recognised for enhancing skills and abilities, increasing motivation and commitment, and providing opportunities to participate and contribute (McDuffie, 1995; Batt, 2002). These are the most widely used practices in studies on the link between HRM practices and employee/organisational outcomes (Boselie, 2010), and are used by universities in Cyprus. In particular, the practices included in the study were employee selection, employee training and development, performance management, compensation and incentives, and employee involvement and participation.

The items selected for the perceived system of HRM practices construct are deemed most appropriate for the Cypriot University-level education. As supported from the relevant literature (see section 3.5.3) these items are part of the high performance work system with which employees are familiar as they are practiced by universities in Cyprus. The interviews with HRM directors and the pilot-testing supported these items. As Wright and Boswell (2004) note in their review, these core HRM practices are likely to affect performance. The twenty items were measured using a six-point interval scale ranging from “strongly disagree” (1) to “strongly agree” (6). Cronbach’s alpha for the measures of the five HRM practices ranged between 0.75 and 0.94.

**Employee Selection practice** was measured with four items asking employees to assess the quality of the employee selection practices in their university. Respondents indicated their perceptions for this practice from "1 = strongly disagree" to "6 = strongly agree." An example item for employee assessment of the selection practice of their university is: “Employee selection is taken very seriously by this University”. Cronbach's alpha estimate for internal reliability was 0.94.

**Employee Training and Development practice** was measured with three items asking employees to assess the training and development practice in their university. Respondents indicated their perception for this practice from "1 = strongly disagree" to "6 = strongly agree." An example of item asking employees to assess the training and development practice of their university is: “Training programs strive to develop university-specific skills/knowledge”. Cronbach's alpha estimate for internal reliability was 0.75.

**Performance Management practice** was measured with five items asking employees to assess the performance management practice in their university. Respondents indicated their perception for this practice from "1 = strongly disagree" to "6 = strongly agree." An example of item asking employees to assess the performance management practice of their university is: "Performance appraisals include management by objective with mutual goal setting". Cronbach's alpha estimate for internal reliability was 0.86.

**Compensation and Incentives practice** was measured with three items asking employees to assess the compensation and incentives practice in their university. Respondents indicated their perception for this practice from "1 = strongly disagree" to "6 = strongly agree." An example of item asking employees to assess the compensation and incentives practice of their university is: "Compensation and incentives are contingent on performance". Cronbach's alpha estimate for internal reliability was 0.88.

**Employee Involvement and Participation practice** was measured with five items asking employees to assess their level of involvement and participation in activities in their university. Respondents indicated their perception for this practice from "1 = strongly disagree" to "6 = strongly agree." An example item asking the employee to assess their involvement and participation initiatives is: "Employees are encouraged to bring up ideas to help accomplish their department's/university's goals". Cronbach's alpha estimate for internal reliability was 0.78.

To examine the factor structure of these items, confirmatory factor analysis was initially performed. Using a combination of Kaiser-Guttman rule of eigenvalues greater than one (Guttman, 1954; Kaiser, 1970) and a Scree plot (Chattell, 1966) of eigenvalues plotted against factors indicated a single-factor solution for SEM. More specifically, first factor

had an Eigen value of 8.14, which explained 27.15% of variance. This was followed by Eigen values of 3.01, 1.98, 1.82, 1.56, 1.45, 1.34, 1.19, and 1.13.

All items above were predicted to compose the High Performance Work System; however, the factor loadings of nine items were below 0.35. Therefore, items that did not load above 0.35 were dropped from the analysis. The remaining twenty items loaded at or above 0.35 on the single factor and this factor explained 35.82% of variance in the items and had an eigenvalue of 7.88, followed by additional Eigenvalues above 1 of 1.93, 1.62, 1.26, and 1.16. The factor loadings of these twenty items are depicted in the next chapter (Table 5.28). Items selected for the perceived system of HRM practices are also described in the analysis chapter (see Table 5.28). The resulting twenty-item scale had a reliability of 0.92. This alpha is comparable to the one that Lepak and Snell (2002) obtained for their commitment HR scale ( $\alpha = 0.89$ ). Therefore, these results provide some evidence for the validity of the translation procedure and the resultant scale.

#### **4.6.2 The Human Capital Construct**

Administrative employees assessed the level of human capital that each university possesses, using four items from Youndt and Snell (2004) intellectual capital scale. This construct captures the level of human capital. This is not a measure of individual knowledge, skills and abilities, but a measure of the overall knowledge, skills and abilities of the university administrative employees. This construct was measured by asking respondents to assess the quality of the university's administrative employees relative to that of its competing universities in Cyprus for the overall knowledge, skills and ability, job related skills and educational level. Respondents indicated their perceptions for this practice on six-point Likert-type scales ("1 = strongly disagree" to "6 = strongly agree"). An example item asking the employee to assess the level of

human capital is “The employees working in this university are highly skilled”. Cronbach's alpha estimate for internal reliability was 0.88.

### **4.6.3 The Employee (Affective) Commitment Construct**

This construct refers to an individual's emotional attachment to the organisation. Affective commitment was measured using four items from Wayne et al. (1997), Meyer et al. (1993) and Allen and Meyer (1990). This construct, in the same vein as human capital, is a measure of the overall employee commitment of the University. Respondents indicated their agreement from "1 = strongly disagree" to "6 = strongly agree." Examples items are: “I would be happy to spend the rest of my career with this university”; “I find my values and the university's values very similar”. Cronbach's alpha estimate for internal reliability was 0.91.

### **4.6.4 The Employee Performance Construct**

Three items of perceived employee performance from Way (2002) and Williams and Anderson (1991) were used to measure this construct. Perceived employee performance was used rather than any other objective measure of performance, i.e., customers served per employee, which is a widely used measure of performance/productivity, due to the difficulty of collecting such objective measure at the University-level education. The first item is: "Our employees' performance/productivity is higher than those of other universities" with two additional items developed for the study ("Our employees perform/produce outputs in an efficient manner," and "Our employees' productive power is higher than those of other universities"). This construct, again, is a measure of the overall employee performance. The resulting three-item scale had a reliability of 0.88.

### 4.6.5 The Organisational Performance Construct

This construct was measured using a subjective assessment of the University's performance relatively to other universities in Cyprus. This approach was utilised because the university's ability to generate superior performance relatively to its competitors is viewed as most relevant, rather than financial measures of performance. In addition, there are potential reporting biases in using financial measures. Beckert and Gerhart (1996) state that subjective measures of HRM effectiveness is equally and perhaps even more applicable to organisational measures. As such, organisational performance was measured both subjectively and objectively.

Research has also shown that self-reported subjective performance data are generally reliable. Also, similar research has shown positive experiences with the use of subjective performance assessments (Delaney and Huselid, 1996; Youndt et al., 1996). Moreover, it has been shown that subjective measurements of organisational performance correlate highly with objective measurements of firm performance (Geringer and Hebert, 1991). The organisational performance construct for the current study consists of eight items using a five-point interval-type scale measuring performance, quality of service and programs (service quality), development of new services and programs, ability to attract essential employees, ability to retain essential employees, satisfaction of customers or clients, relations between management and other employees, relations among employees in general, profitability, innovation, and productivity.

Administrative employees were asked to rate their University's performance in relation to other universities in Cyprus over the past three years. This scale was based on similar scales developed by Delaney and Huselid (1996) and Youndt et al. (1996) for measuring

organisational performance, but minor modifications were made to some items and additional items were developed especially for university performance. An example item is “Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (quality of services and programs) of your university? Cronbach's alpha estimate for internal reliability was 0.89.

#### **4.6.6 The use of Control Variables**

For the purposes of the current study, questionnaire items that were included in section three of the questionnaire were used as control variables.

The variables which were used as controls were (see also Table 5.1):

- Employee position (Assistant Officer, Officer, Manager / Director)
- Employment status (Full-time employee, Part-time employee)
- Gender (Male, Female)
- Age (Under 19, 20 – 24, 25 – 34, 35 – 44, 45 – 54, 55 and over)
- Education Level (PhD, Master’s Degree, Bachelor’s Degree, Diploma (2-3 yrs.), High School Graduate)
- Work experience (Up to 1 year, 2 – 5, 6 -10, 11 -15, Over 15 years)

The intentions behind the inclusion of control variables were to enable at the analysis stage the application of multivariate statistical techniques (MANOVA) to examine whether significant differences existed between the study sub-samples, as these variables may influence the constructs of the study.

#### **4.7 Assessment of Internal Consistency - Cronbach's Alpha Reliability Coefficient**

The canons of scientific research suggest that in order to ensure the reliability of the research instruments and thus to safeguard the consistency, accuracy and predictability of the research findings (Nunnally, 1978; Nunnally and Bernstein, 1994, 2007), Cronbach's alpha (1951) should be used to gauge the internal consistency of the measurement instruments.

For the purposes of this thesis the internal consistency of the questionnaire was evaluated with a method known as Cronbach's alpha (Cronbach, 1951). This method is widely used and, in fact, it has subsumed the other two methods of reliability testing: split-half and test-retest.

Theoretically stated, Cronbach's alpha is a measure of the hypothetical value that would be obtained if all of the items that could constitute a given scale were available, and randomly put together into a very large number of tests of equal size. The average correlation between all possible pairs of these tests is approximated by the coefficient - alpha (Crano and Brewer 1986). In mathematical terms, Cronbach's alpha is the equivalent of the average of all possible split half estimates. To allow the estimation of Cronbach's alpha all the split-half estimates from the sample and their resulting correlations is required (a statistical routine determines the random subset of items).

The determination of alpha coefficient is simple, especially with the assistance of computer software. The formula of coefficient alpha computationally is as follows:

$$\alpha = \left( \frac{k}{k-1} \right) \left( 1 - \frac{\sum_{i=1}^k \sigma_i^2}{\sigma_t^2} \right)$$

where

$k$  is the number of items in the scale,

$\sigma_i^2$  is the variance of scores on item  $i$  across subjects, and

$\sigma_t^2$  is the variance of total scores across subjects where the total score for each respondent represents the sum of the individual item scores.

Since Cronbach's alpha is a proportion, its value can vary between .00 and 1.00. The degree of internal consistency is usually considered acceptable if this coefficient is over 0.75 or better (Crano and Brewer 1986). Hair et al. (1998) suggest that the generally agreed upon lower limit for Cronbach's alpha is 0.70, although it may decrease to 0.60 in exploratory research. However, Nunnally (1978) suggested that for social research, a Cronbach alpha coefficient at least over 0.7 is required.

#### 4.8 Assessment of Validity

The assessment of validity verifies that the questionnaire measures what it intended to measure. For a research theme in the area of strategic human resource management, it is vital to verify that the question items are valid and unambiguous. Furthermore, considering the fact that the evaluation of the conceptual model developed in this thesis is applied for the first time in the area of higher education it was deemed necessary to develop a validated and reliable set of questionnaire items. Although the approach that was followed was time consuming and complicated, it ensured to a certain extent, that the final questionnaire would be valid and reliable. Therefore, a discussion of

content/face validity in relation with the pilot questionnaire is provided. Issues related to the validity (construct, convergent and discriminant) and reliability of the SEM Model are addressed in detail in Chapter Five.

Content validity (also referred as face validity) is used to assess whether the items on an inventory or test adequately represent the construct of specific interest. Theoretically defined, content validity is a subjective measure of how appropriate the item will seem to reviewers who have some knowledge of the subject matter. This form of validity is not quantified with statistics; rather it is presented as an overall opinion of a group of trained judges. Strictly speaking, it is not a scientific measure of survey instrument's accuracy. Nevertheless, "it provides a good foundation on which to build a methodologically rigorous assessment of a survey instrument's validity" (Litwin, 1995: 35).

According to Crano and Brewer (1986: 51), "a secure means of assessing content validity is to use a panel of experts whose opinion regarding the adequacy of coverage of a particular scale, while far from infallible, provides more trustworthy information than that of a single investigator working independently". Assessment of content validity is, therefore, a subjective operation. However, a question now arises of how a reasonable degree of content validity could be achieved? Content validity lies firmly within the domain of subjective judgement.

In order to carry out a reliable objective and detailed content validity assessment the two major standards that Nunnally (1970: 136) suggested were carefully considered.

These were:

- a) “a representative collection of items”, and
- b) “sensible methods of test construction”

For the current survey the questions to be put in the research instrument were studied by “experts” (included both HR directors of universities and academics), with the item being assessed weighed for its presumed representativeness of the research topic. This means that each item was judged for its presumed relevance to the constructs being examined. The results of the pilot study led to the development of the final questionnaire.

#### **4.9 Data analysis techniques and data analysis process**

The study utilised descriptive statistics, multivariate analysis (MANOVA) and multivariate statistical modelling (Structural Equation Modelling). The later, was applied to a comprehensive model in order to check for the interdependencies between the tested variables and constructs.

##### **4.9.1 Screening of the Primary Data**

The data was first examined to ensure that the assumptions of normality were maintained. Skewness and kurtosis values greater than 2 are considered large enough to indicate a problem with the data where the assumption of normality is not met (Field, 2000). In the current study, almost all the Skewness and Kurtosis values were between -2 and +2 which mean that there was no serious violation of the normality assumption (Garson, 2012). Data were subjected to examination of the distribution of responses to each item in the data set as a way to eliminate errors (Babbie, 2008). Distributions of

each interval/ratio variable were tested and the values of Skewness and Kurtosis are listed in next chapter.

### **4.9.2 Descriptive Analysis of Data**

Prior to the employment of univariate and multivariate statistical techniques for testing the research hypotheses of this study, it was decided to proceed with a descriptive analysis of the primary data in order to provide an initial overview of the project results with the aid of graphical and tabular devices. To this end, standard descriptive statistics such as means, standard deviations and variances will be reported for all variables to analyse the data set. Frequency distributions and cross tabulations will be used to assess the accuracy of data entry for all questions/statements included in the questionnaire. Ultimately, the descriptive analysis section will assist the development of a solid base for proceeding to more advanced statistical analyses (using, for example, MANOVA and SEM).

### **4.9.3 Multivariate Analysis of Variance (MANOVA)**

Multivariate Analysis of Variance (MANOVA) is a multivariate method of analysis that can be also understood as an ANOVA for situations in which there are several dependent variables. Gravetter and Wallnau (1985) suggest that when the purpose is to compare means between two data sets (which for the purposes of the current analysis will result from the use of control variables), either a *t* test or ANOVA statistic can be chosen. However, the analysis of variance is a more robust procedure, and the assumption of normality and homogeneity of variance, can frequently be violated with relatively minor effect (Howell, 2007). Contrary to ANOVA that can be used in situations where two or more populations are compared to determine whether there are mean differences between groups (and thus is known as a univariate test), MANOVA is

designed to look at several dependent variables simultaneously. Therefore, since for the purposes of the current thesis it is aimed to examine mean differences between groups, MANOVA statistic is employed.

There are two limitations in using separate ANOVA procedures which advocate the use of MANOVA for the purposes of the current thesis. First, data were collected about several dependent variables. In case where ANOVA tests were employed, separate ANOVA's for each dependent variable have to be conducted so as to test several research hypotheses. This analytical procedure would certainly lead to wrong inferences, since the more dependent variables that have to be measured, the more ANOVA tests would need to be conducted and the greater the chance of making a Type I error (thus increasing the risk of incorrectly rejecting the true null hypothesis).

An additional shortcoming of the utilisation of successive univariate ANOVAs ignores the correlations between dependent variables (Bary and Maxwell, 1982; Huberty and Morris, 1989). This practically means that the results are wrong due to the utilisation of an inappropriate statistical test. Inevitably, this will lead to erroneous decision-making and inferences (Tonidandel and LeBreton, 2013). Second, MANOVA provides important additional information. If separate ANOVAs are conducted on each dependent variable, then any relationship between dependent variables is ignored. As such, information is lost about any correlations that might exist between the dependent variables. MANOVA, by including all dependent variables in the same analysis, takes into account the relationship between dependent variables. Related to this point, ANOVA can inform only whether groups differ along a single dimension, whereas

MANOVA has the power to detect whether groups differ along a combination of dimensions.

#### **4.9.4 Structural Equation Modelling (SEM)**

Structural equation modelling (SEM) was employed in the current study as the main method of data analysis. As mentioned above in this type of analysis, structural equation modelling (SEM) has been recommended as the most appropriate analytical strategy (Byrne, 2010). Structural equation modelling (also referred to as latent variable analysis or covariance structure analysis) is a statistical technique used for specifying and estimating models of linear relationships between variables (MacCallum and Austin, 2000). It is a flexible and powerful tool that combines aspects of both multiple regression and factor analysis (Hair, Black, Babin and Anderson, 2010).

Structural equation modelling is especially valuable in the analysis of inferential data and the testing of hypotheses where the pattern of interrelationships between the constructs of the study are specified by a priori and grounded in established theory (Hoe, 2008). It is usually used to test causal relationships between variables, because it allows the measurement of a number of variables and their interrelationships simultaneously (Hoe, 2008). Structural equation modelling varies from other multivariate techniques in a number of ways. First, it takes a confirmatory approach to the analysis of data rather than an exploratory approach. Unlike exploratory analysis, confirmatory data analysis requires the hypothesised causal relationships to be specified in advance. Then the model is tested, and based on a number of fit indices is either accepted or rejected.

Second, unlike other multivariate techniques that are based only on observed measurements, SEM can include both observed (i.e. manifest) and unobserved (i.e. latent) variables. Third, while traditional multivariate techniques are incapable of either measuring or correcting for measurement error, SEM estimates measurement error and permits the incorporation of errors within the model (Hair et al., 2010). Finally, unlike other multivariate methods, SEM offers an effective way of dealing with multicollinearity (Bacon, 1997). Because of all these desirable characteristics, SEM is employed as the main method of data analysis.

The AMOS software program has been chosen to conduct the analysis and the maximum likelihood estimation (MLE), which is the most widely used SEM estimation method, has been used. MLE is a flexible approach to parameter estimation and has been proven to be quite robust against violations of the multivariate normality assumption (Iacobucci, 2010, 2009; Hair, Black, Babin and Anderson, 2010).

## 4.10 Conclusion

The purpose of this chapter was to provide in a holistic and integrated manner the methodological framework adopted for examining the relationship of the system of HRM practices and organisational performance taking into consideration the mediating variables (human capital, employee commitment and employee performance). The conceptual perplexity that surrounds the theme under investigation in association with the fact that the suggested model is examined for the first time at university-level education demanded a coherent and detailed methodology in order to address the research questions and hypotheses. All in all, this chapter has enabled the combination of the conceptual and methodological frameworks through a structured process which ensures to a great extent the validity and reliability of the whole process.

In the following Chapter, the analysis of the data is performed and the results will be presented and discussed.

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## **Chapter 5: Empirical Analysis-Results**

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## 5.1 Introduction

Following the definition of the conceptual framework of this thesis (see Chapters 2 and 3) and after providing a detailed description and justification of the methodology that has been followed (see Chapter 4) the present chapter presents the empirical results of this thesis.

The chapter is structured in the following parts. First, the demographics of the study are presented, followed by the descriptive statistics. Then, multivariate analysis of variance (MANOVA) is presented. The next part depicts the examination of the relationship between the system of HRM practices and university performance via the application of structural equation modelling (SEM) - including the evaluation of multivariate normality of data, the measurement models evaluation and the assessment of common method bias. The last two parts include the hypotheses testing and the mediation analysis. The chapter ends with a concluding section in which the most salient findings from the analysis chapter are summarised.

The empirical analysis of this research aims at investigating the interrelationships between multiple independent and dependent variables that exist in the relationship between the perceived system of HRM practices and organisational performance at university-level education in Cyprus. The study also intends to test the resource based view and the social exchange theory in the higher education sector context, by examining the level of human capital and employee commitment as mediating mechanisms through which a system of HRM practices affects organisational performance. To analyse the data and test the proposed hypotheses, Structural Equation Modelling (SEM) was adopted.

In addition to SEM, multivariate analysis of variance (MANOVA) was employed in order to examine empirically whether there were significant differences in the perceptions of the various levels of response categories (position, age, education and work experience).

With the utilisation of a dedicated software package (SPSS AMOS v.20), Structural Equation Modelling (SEM), was conducted with a sample of 321 administrative employees. SEM, a multivariate statistical analysis method that can explore hypothesised relationships in an integrated manner, has gained notable recognition by management scholars in the last decade as a reliable and valid method, for determining whether relationships exist between constructs as a means to either accept or reject a hypothesised theory (Byrne, 2010; Hair et al., 2010; Hoe, 2008; and MacCallum and Austin, 2000).

The hypothesised model measured five latent (unobserved) variables labelled as:

- (1) Perceived System of HRM Practices (HRMSYS),
- (2) Level of Human Capital (HUMC),
- (3) Employee Commitment (COM),
- (4) Employee Performance (EMPP), and
- (5) Organisational Performance (ORGP).

The above five constructs (both independent and dependent) were developed and operationalised in the preceding chapters (see Chapters 2 and 3). Based on the theoretical background and empirical findings from the extant literature, the underlying relationships between the major independent construct “The perceived system of HRM practices” and the four dependent constructs (human capital, employee commitment,

employee performance, and organisational performance) were examined. This resulted in proposing the following eight hypotheses that aim to examine empirically the theoretical relationships between the five constructs.

**Hypothesis 1:** There is a positive relationship between the perceived system of HRM practices and the level of human capital.

**Hypothesis 2:** There is a positive relationship between the perceived system of HRM practices and HR attitude and behaviour (employee commitment).

**Hypothesis 3:** The level of human capital is significantly positively related to employee performance.

**Hypothesis 4:** Employees' commitment is significantly positively related to employee performance.

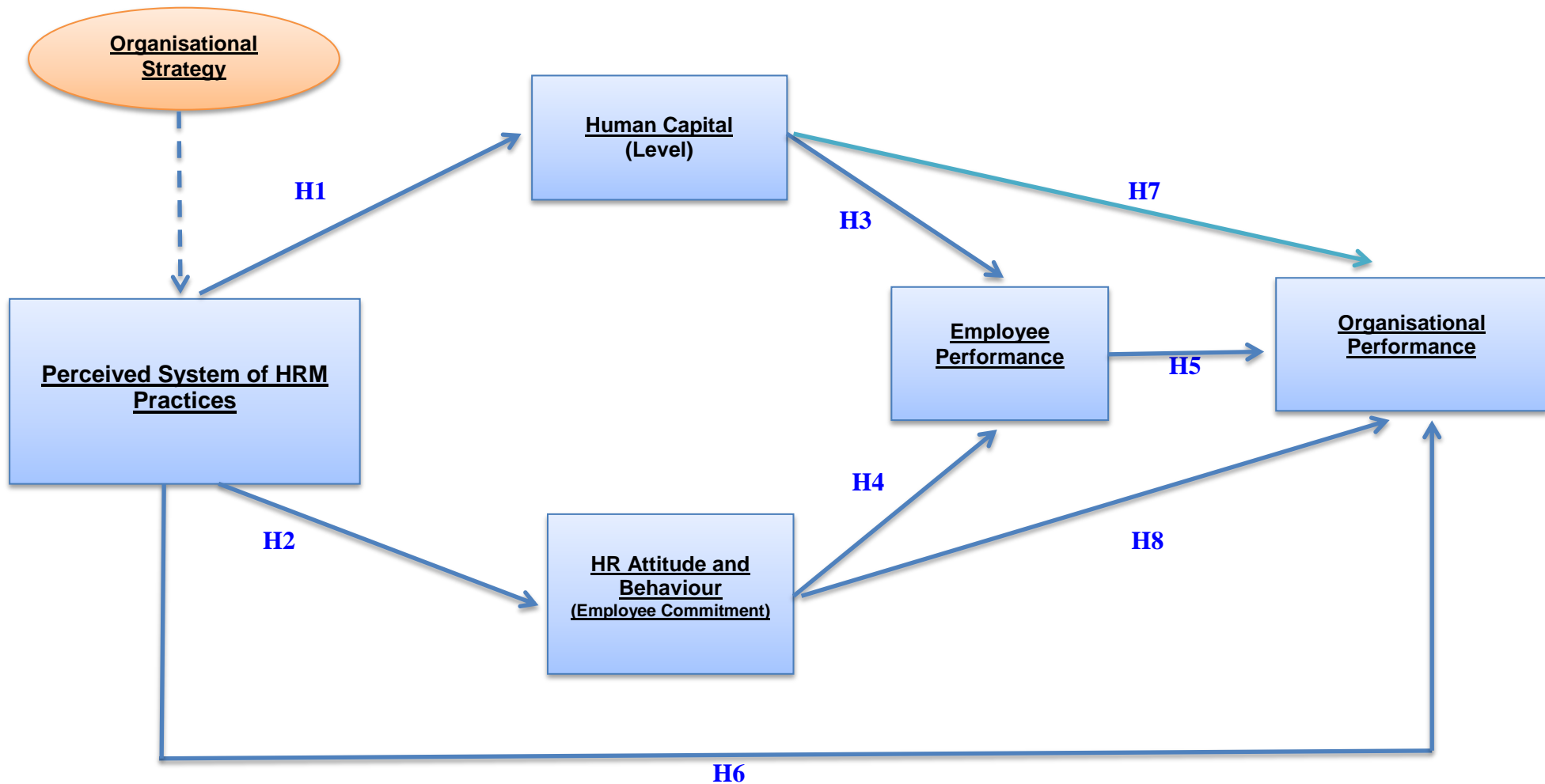
**Hypothesis 5:** Employees' performance has a positive impact on organisational performance.

**Hypothesis 6:** The perceived system of HRM practices has a direct positive impact on organisational performance.

**Hypothesis 7:** The level of human capital has a direct positive impact on organisational performance.

**Hypothesis 8:** HR attitude and behaviour (employee commitment) has a direct positive impact on organisational performance.

The above eight hypotheses when combined together configure in a holistic and integrated manner the proposed conceptual framework of the perceived system of HRM practices and organisational performance using causal paths (see Figure 5.1). The proposed conceptual framework was discussed and explained in Chapter 3.

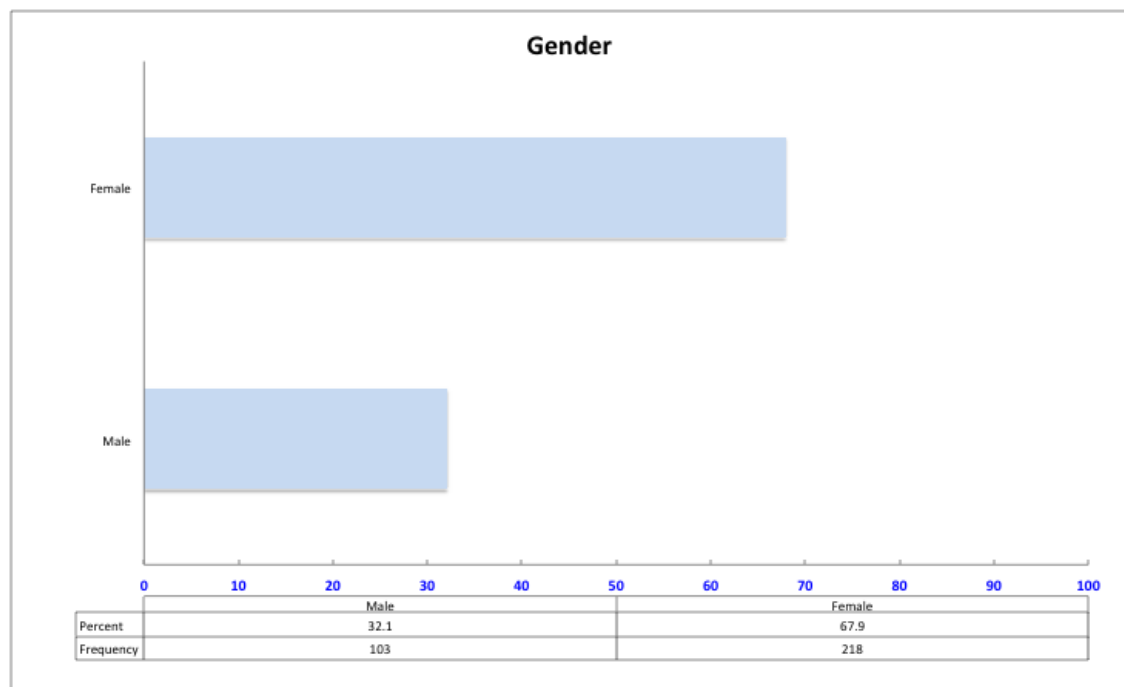
*Figure 5.1: The Proposed Conceptual Model*

Below, the results of the data analysis are presented. First, the demographics of the sample and the descriptive statistics are presented. Then, multivariate analysis of variance (MANOVA) is empirically applied and its results are discussed. The subsequent parts include the examination of the relationship between the perceived system of HRM practices and university performance, the hypotheses testing, mediation analysis and the results.

## 5.2 Analysis of the Demographic Characteristics of the Sample

In this section the demographic characteristics of the sample are presented and discussed. Apart from the gender and age of the respondents, other employment related information is also presented which cumulatively provide a complete picture of respondent characteristics.

*Figure 5.2: Gender characteristics of the Sample*



Of the total respondents (N=321), over two thirds (67.9%) were females, while only one third (32.1%) were male (see Figure 5.2). Twelve percent (12.1%) of the respondents

were 19 years old or below. About more than half of the total sample (51.4%) was in the age group of 20-24. Approximately one quarter (24%) of respondents were between the age of 25-34. 10.3% were between the age of 35-44, while only 1.2% and 0.9% were in the age groups of 45-54 and 55 and above respectively (see Figure 5.3).

*Figure 5.3: Age Groups*

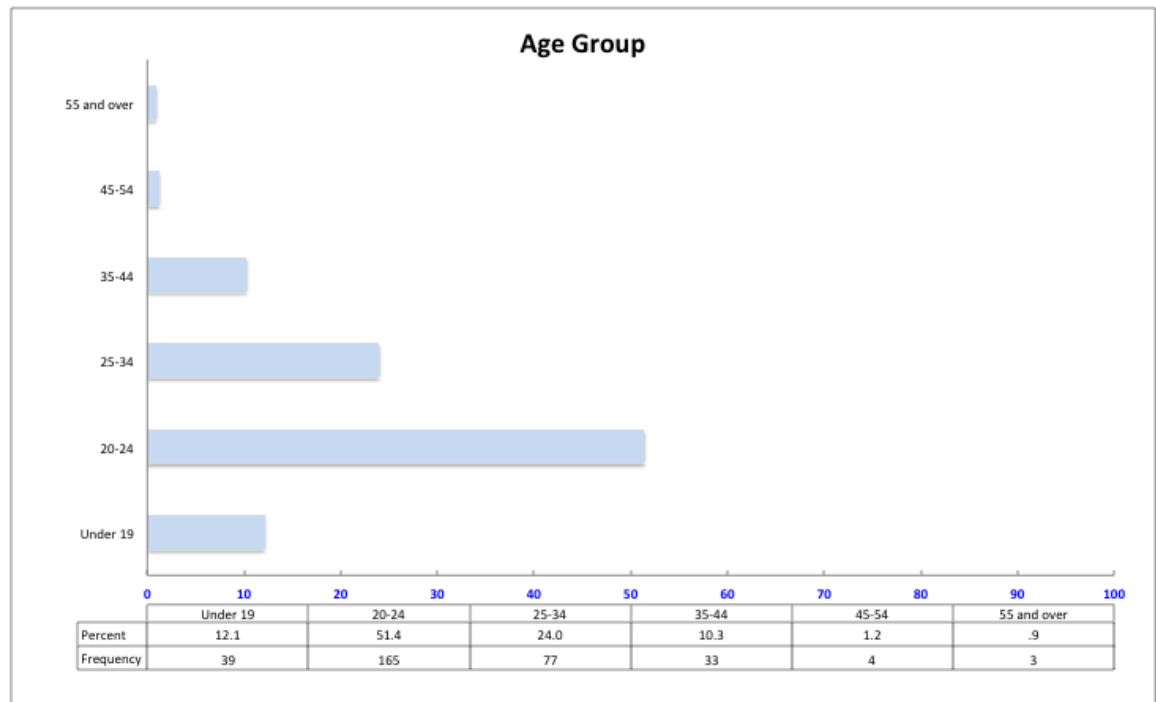
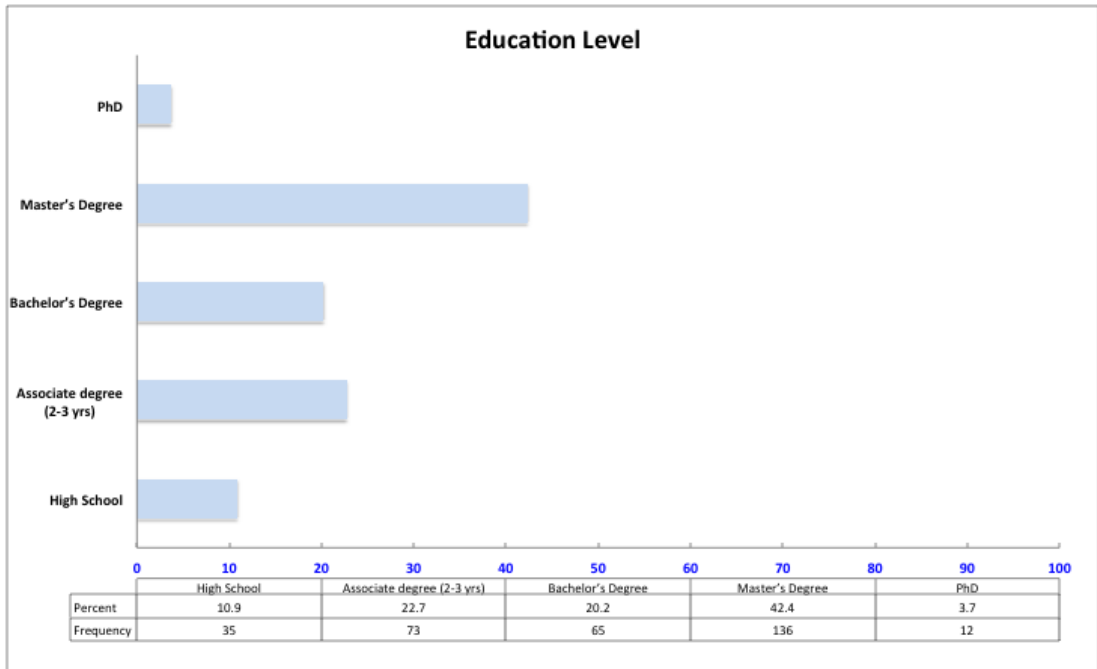


Figure 5.4 presents the educational characteristics of the respondents. A total of 10.9% were PhD holders. More than two fifths of the total sample (42.4%) are Master degree holders while another fifth holds a Bachelor degree. 22.7% of the respondents have Associate diploma level degrees (2-3 years of post-high school education). Only 10.9% of the respondents are high school graduates.

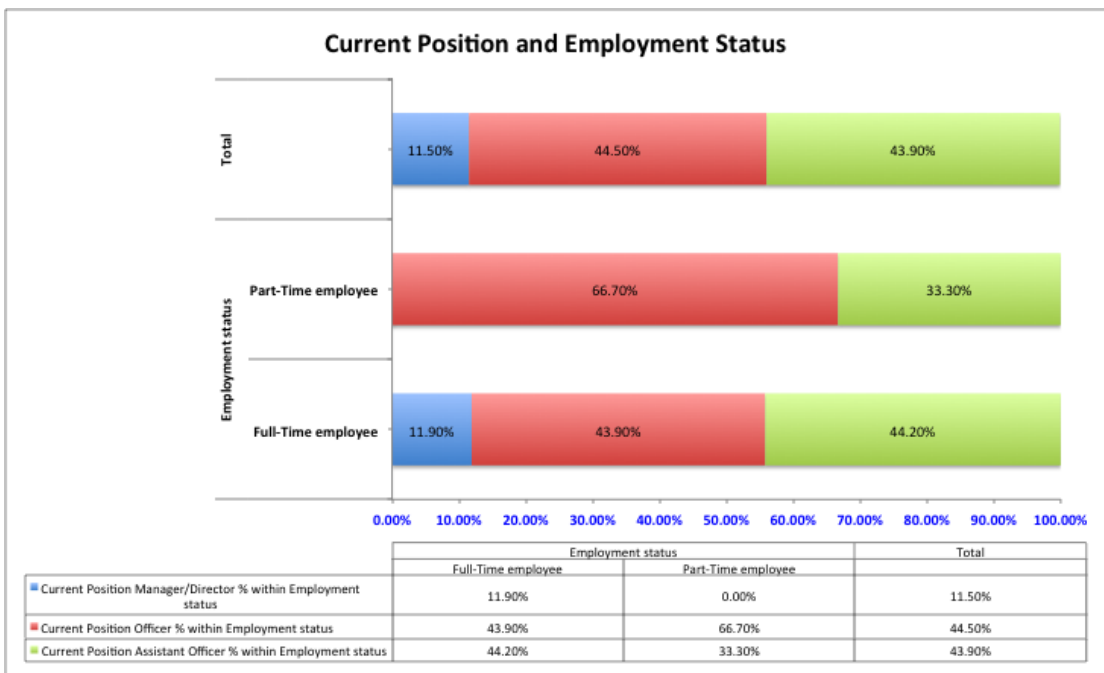
From a total sample of 321, 44.5% of the respondents held an officer's position (responsible for a specific departmental function/office), while 43.9% were assistant officers. The remaining 11.5% appear to be at the managerial level. In addition, 97.2%

of the sample was full-time employees and only 2.8% of the respondents were on a part-time basis.

**Figure 5.4: Educational Characteristics of the Sample**



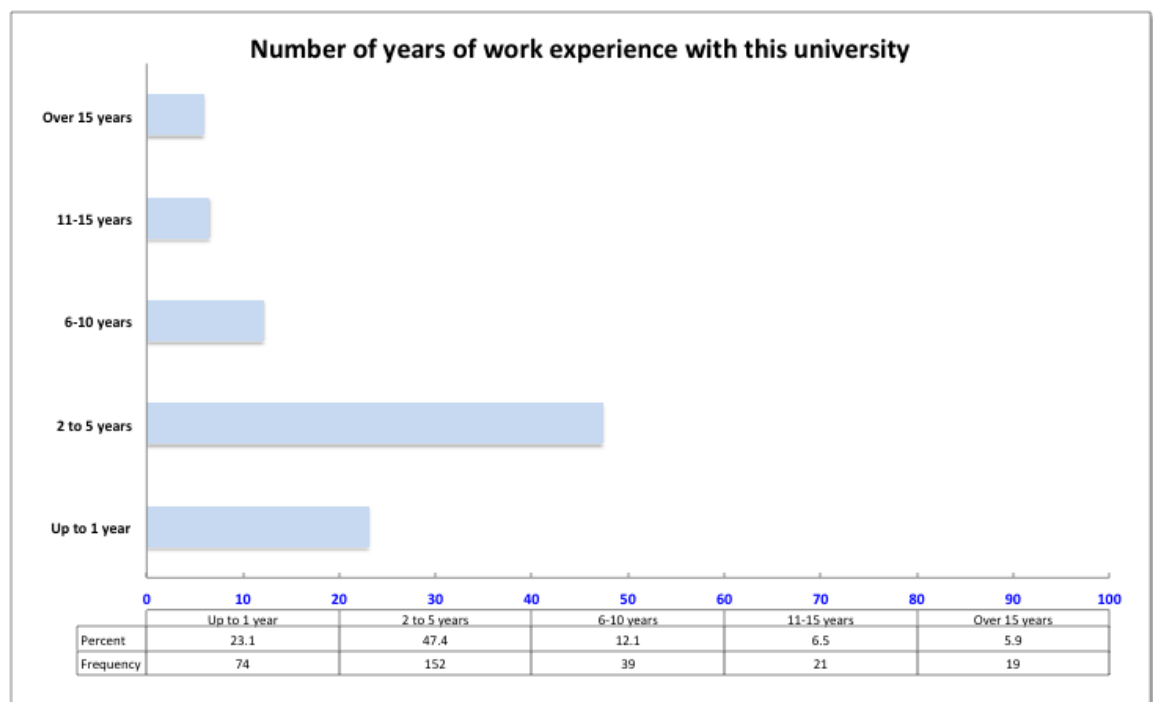
**Figure 5.5: Current Position and Employment Status**



Figures 5.6 and 5.7 present the characteristics of the sample in terms of work experience at their current employer (university) and their total years of work experience. About one in four respondents (23.1%) work up to one year at their current employer. Approximately half of the respondents (47.4%) were at the same employer between 2 to 5 years. 12.1% has 6-10 years of work experience, 6.5% has 11-15 years of work experience, while the remaining 5.9% has more than 15 years.

In terms of total years of work experience, (see Figure 5.7) only 2.8% of the respondents have up to one year of total work experience. From the total sample of 321 respondents, 19.6% have 2-5 years of total work experience, 27.7% have 6-10 years, and 15.9% have 11-15 years of total work experience. More than a quarter (25.9%) of total sample has a total work experience of more than 15 years.

**Figure 5.6: Number of years of work experience with this university**



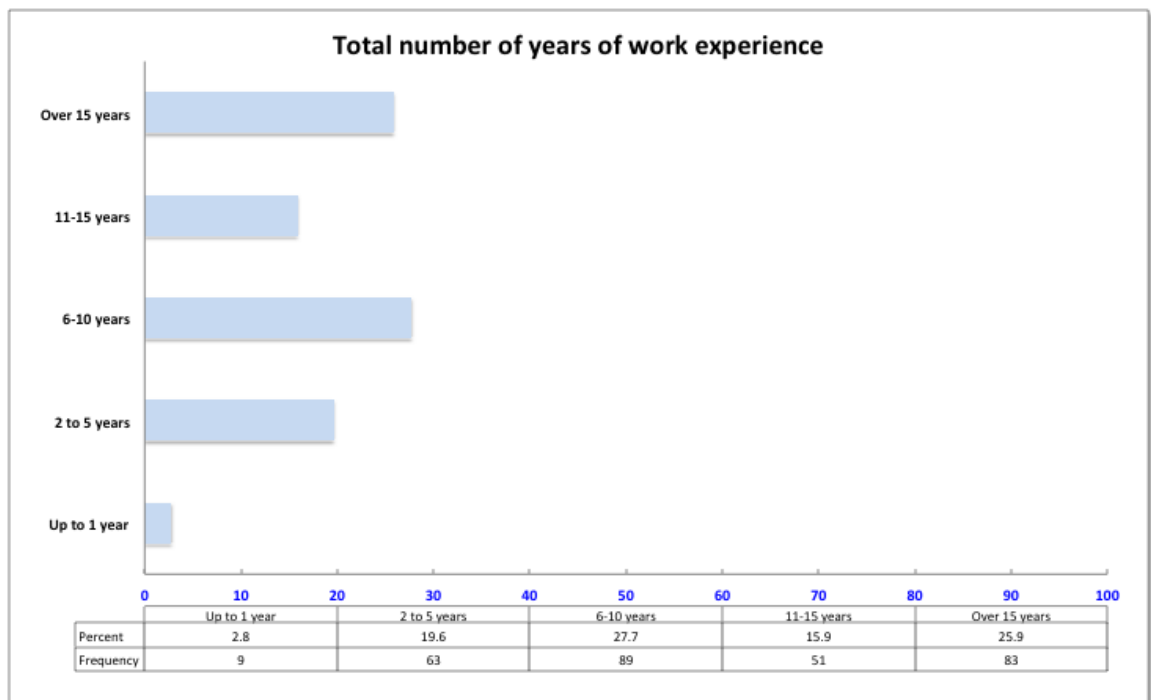
**Figure 5.7: Total number of years of work experience**

Table 5.1 gives an overview of the demographics of the study.

**Table 5.1: Demographic Profile of the Respondents (n=321)**

	Frequency*	Valid Percentage
<b><u>Gender</u></b>		
Male	103	32.1
Female	218	67.9
<b><u>Age</u></b>		
Under 19	39	12.1
20 – 24	165	51.4
25 – 34	77	24.0
35 – 44	33	10.3
45 – 54	4	1.2
55 and over	3	0.9
<b><u>Current Position</u></b>		
Assistant Officer	141	43.9
Officer	143	44.5
Manager / Director	37	11.5
<b><u>Employment Status</u></b>		
Full-time employee	312	97.2
Part-time employee	9	2.8
<b><u>Education Level</u></b>		
PhD	12	3.7
Master's Degree	136	42.4
Bachelor's Degree	65	20.2
Associate Degree (2-3 yrs.)	73	22.7
High School Graduate	35	10.9
<b><u>Number of years of work experience with this University</u></b>		
Up to 1 year	74	23.1
2 – 5	152	47.4
6 -10	39	12.1
11 -15	21	6.5
Over 15 years	19	5.9
<b><u>Total number of years of work experience</u></b>		
Up to 1 year	9	9.0
2 – 5	63	19.6
6 -10	89	27.7
11 -15	51	15.9
Over 15 years	83	25.9

**Note:** \* Some demographic questions were not answered by all participants, thus, there is a difference in the actual frequency number.

### 5.3 Descriptive Statistics

In this section the descriptive statistics of all the items (means and standard deviations) of the study are presented (see Table 5.2).

**Table 5.2: Descriptive Statistics**

Construct	Origin (Source)	Question Item	Label Item	Mean	SD
Perceived System of HRM Practices (HRMSYS)	Lepak and Snell (2002); Macky and Boxall (2007); Boselie (2010); Kehoe and Wright (2010)	Employee selection is taken very seriously by this University	A1Q1	4.47	1.118
		Employee selection emphasises promotion from within	A1Q2*	4.23	1.100
		Employee selection places priority on the candidate's potential to learn	A1Q3	3.88	1.240
		Employee selection emphasises capacity to perform well right away	A1Q4	4.10	1.160
		Employees in this university have clear career paths	A1Q5	3.66	1.240
		Employees in this university will normally go through training programs every year	A1Q6*	4.81	1.023
		Training programs strive to develop university-specific skills/knowledge	A1Q7	<b>4.86</b>	.971
		The training programs emphasise on-the-job experiences	A1Q8	4.59	1.049
		Training uses outside instruction (seminars, conferences, etc.)	A1Q9*	<b>4.99</b>	.870
		Training programs in this University have improved the effectiveness of employees	A1Q10	4.50	.975
		Performance appraisal is based on objective, quantifiable results	A1Q11	3.76	1.271
		Performance appraisals include management by objective with mutual goal setting	A1Q12	3.91	1.242
		Performance appraisals include developmental feedback	A1Q13	4.09	1.274
		Performance appraisals emphasise development of abilities / skills	A1Q14	4.18	1.181
		Performance appraisal emphasises the output of the team	A1Q15	4.06	1.271
		This university compensations package includes high wages	A1Q16*	3.72	1.280
		This university incentive system is tied to skill-based rewards	A1Q17	<b>2.95</b>	1.329
		This university incentive system has a group-based component	A1Q18	3.49	1.335
		This university incentive system values seniority	A1Q19*	3.86	1.145
		Compensation and Incentives are contingent on performance	A1Q20	<b>2.81</b>	1.270
		This university's compensation package is competitive to that of other Universities in Cyprus	A1Q21*	3.82	1.326
		Employees in this university are empowered to make decisions consistent with their status	A1Q22	4.14	1.019
		Employees in this university are often asked by their supervisor to participate in decision-making	A1Q23	3.83	1.129
		Employees are encouraged to suggest improvements in the way things are done	A1Q24	4.15	1.114
		Senior management is communicating effectively with employees in this university	A1Q25	3.71	1.188
		Employees are encouraged to bring up ideas to help accomplish their department's / university's goals	A1Q26	4.05	1.166

Construct	Origin (Source)	Question Item	Label Item	Mean	SD
<b>Level of Human Capital (HUMC)</b>	Youndt and Snell (2004)	The employees working in this university are highly skilled	A1Q27	4.28	.992
		The employees working in this university are considered the best in university education in Cyprus	A1Q28	3.81	1.060
		The employees working in the university are encouraged to be creative	A1Q29	4.00	1.151
		The employees working in the university are experts in their particular jobs and functions	A1Q30	4.14	1.001
<b>Employee Commitment (COM)</b>	Wayne et al. (1997); Meyer et al. (1993); Allen and Meyer (1990)	I am committed to this university	A1Q31*	5.27	.697
		I would be happy to spend the rest of my career with this university	A1Q32	4.82	1.049
		I really care about the future of this university	A1Q33*	5.43	.627
		I am willing to go beyond of what my job requires in order to help this university succeed	A1Q34*	5.27	.796
		I talk about this university to my friends as an ideal working place	A1Q35	4.88	1.075
		I find my values and the university's values very similar	A1Q36	4.44	1.187
		I am proud to tell others that I am a part of this university	A1Q37	5.06	.957
		I really feel as if this organisation's problems are my own	A1Q38*	4.64	1.055
<b>Employee performance (EMPP)</b>	Way (2002); Williams and Anderson (1991)	Our employees' performance / productivity is higher than those of other universities in Cyprus	A1Q39	4.11	1.078
		Our employees perform / produce in an efficient manner	A1Q40	4.45	.931
		Our employees' productive power is higher than those of other universities in Cyprus	A1Q41	4.14	1.032
<b>Organisational Performance (ORGP)</b>	Delaney and Huselid (1996); Youndt et al. (1996)	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - performance	A1Q42	4.03	.743
		quality of services and programs(service quality)	A1Q43	4.08	.756
		development of new services and programs	A1Q44	4.08	.798
		ability to attract essential employees	A1Q45	3.79	.867
		ability to retain essential employees	A1Q46*	3.59	.971
		satisfaction of customers or clients	A1Q47	3.81	.757
		relations between management and other employees	A1Q48	3.45	.921
		relations among employees in general	A1Q49	3.61	.863
		Profitability (if applicable)	A1Q50*	3.26	.813
		Rate of innovation	A1Q51*	3.83	.813
Level of Productivity	A1Q52	3.77	.836		

**Scale:** Organisational Performance: 1=Much worst; 2=worst; 3=the same; 4=Better; 5=Much better.

**Scale:** All other: 1=Strongly disagree; 2=Disagree; 3=Somewhat disagree; 4=Somewhat agree; 5=Agree; 6=Strongly agree

**Note:** Thirteen variables (indicated with an \*) have been removed from the final SEM due to exhibited factor loading of less than .6.

Table 5.2 presents all the items included in the initial survey instrument aiming to empirically measure the causal relationships between the five constructs of the study.

The items included in the first construct (the perceived system of HRM practices) range from mean score of 2.81 to 4.99. At the same time their standard deviation

demonstrated that the items do not present a high deviation from the average mean among items. The only items with a mean score lower than 3 (somewhat disagree) are “Compensation and incentives are contingent on performance” and “This university incentive system is tied to skill-based rewards”. Considering the fixed compensation system adopted by all universities, it is obvious that performance is not determining the salary level, the compensation and rewards, however based on the review of the literature (see chapter 2 section 2.10) compensations and incentives should be determined based on performance appraisal results. The two items with the highest scores are “Training uses outside instruction (seminars, conferences, etc.)” and “Training programs strive to develop university-specific skills/knowledge”, which illustrated the methods and importance that universities place on investing on their employees by continuous training and development.

The second construct (Level of human capital) includes four items which range between 3.81 and 4.28. The examination of the standard deviation scores verifies that there is no significant variation between the mean scores. The eight items included in the third construct (employee commitment) reveal no significant variation between the mean scores; however, they present high mean scores (ranging from 4.14 to 5.43) demonstrating a high level of employee commitment towards their universities. Similarly, the fourth construct (employee performance) includes items with low inter-item variability of mean scores while the mean score per item is high (4.11 to 4.45) indicating high levels of employee performance.

Finally, the eleven items of the “Organisational Performance” construct range from a mean of 3.26 to a mean of 4.08 with very low standard deviations. In comparative terms

organisation performance at the current university of respondents is perceived to operate at highest levels than the universities included in this research.

#### **5.4 Multivariate Analysis of Variance**

MANOVA is a multivariate procedure designed to explore several dependent variables, simultaneously. The purpose of this section is to reveal potential effects of the four demographic variables on the set of 39 studied dependent variables (questionnaire). These demographic variables are not inserted into the SEM analysis, so MANOVA was used as a mean to investigate the different perceptions of the employees in relation to the specific HRM practice.

Concerning the analysis, the classical approach of using separate ANOVA models for each dependent variable exhibits fatal flaws, which are related with the inflation of experiment-wise Type I and Type II error rates. Furthermore, there is also an inevitable inability on the part of the researcher to take into account the correlation among the dependent variables.

In this section MANOVA is used in order to serve the following two purposes. First, to allow the analysis of several correlated dependent variables within a single overall statistical test (thus avoiding the need to perform multiple individual ANOVA tests). Second, to explore how the independent variables (current position, gender, education level, years of employment) influence some patterning of response on the dependent variables. Thus, it will be empirically examined how the independent variables (at a collective level) influence the way in which respondents provide answers for the dependent variables.

In relation to the conceptualisation of the current thesis, this section provides the methodological and analytical basis in order to test the research question whether each of the four independent (control) variables appear to have significant differences to one or more characteristics.

#### **5.4.1 Assumptions prior to the application of MANOVA analysis**

In order to perform Multivariate Analysis of Variance, a number of assumptions need to be addressed which are related with this specific statistical methodology (Hair et al., 2010; Stevens, 1995).

**Assumption of multivariate normality:** All the dependent variables must be normally distributed and any linear combination of them must be also normally distributed. In addition, all subsets of the variables must have a multivariate normal distribution.

**Assumption of homogeneity of variance-covariance matrices:** In MANOVA, the univariate requirement of equal variances has to hold for each of the dependent variables. Furthermore, the concept is extended and requires the covariance matrices to be homogeneous.

**Assumption of independence of observations:** In MANOVA, the observations should have no relationship in each group or between the groups.

**Assumption of adequate sample size:** In MANOVA, the number of observations in each group should be higher than the number of dependent variables that are analysed.

The first assumption of multivariate normality is rarely tested in practice since MANOVA is assumed to be a robust test that can stand up to departures from multivariate normality in terms of Type I error rate. Generally, with large samples the central limit theorem suggests that normality for the sampling distributions of the means

will be approximated. The assessment of multivariate normality of the dataset collected for the purposes of this thesis revealed that the data are non-normally distributed. However, this does not pose any problems for the analytical purposes of this thesis since the Central Limit Theorem suggests that for large samples, the sample mean vectors are approximately multivariate normally distributed, even if the individual observations are not. Grim and Yarnold (1995) also argued that MANOVA analysis is robust as long as they are due to skewness rather than extreme outliers. In addition, as suggested by Tabachnick and Fidell (2007) the dependent variables should be normally distributed. Nevertheless, the F test is robust to non-normality.

The second assumption of equality of covariance matrices is practically examined through two steps. First, for this assumption to be true, the univariate test of variances via Levene's test is utilised. Due to the fact that Levene's test does not take into account the covariances, Box's test is also used. On the other hand, the Box's test is very sensitive to departures from multivariate normality and hence the results should be interpreted with caution.

What follows is the application of MANOVA for each of the four control variables: current position, gender, education and years of employment (experience).

### **5.4.2 Multivariate Analysis of Variance for Current Position**

Table 5.3 summarises the number of cases for each level of Current Position.

***Table 5.3: Descriptive statistics for current position***

		Frequency	Percent
Valid	Manager/Director	37	11.5
	Officer	143	44.5
	Assistant Officer	141	43.9
	Total	321	100.0

Table 5.4 shows the Box's test of the assumption of equality of covariance matrices testing the null hypothesis that the observed covariance matrices of the dependent variables are equal across the three groups. For the variables of the dataset, the test signifies that the covariance matrices are not equal ( $p\text{-value} < 0.001$ ) and therefore the homogeneity assumption is violated. However, as Field (2010) suggests the effect of violating the assumption is unclear. In addition Tabachnick and Fidell (2007) point out that the robustness of the Box's test is questionable, especially in cases where the multivariate normality assumptions do not hold. Furthermore, this finding is also affected by the different number of cases for each group of the independent variables.

***Table 5.4: Box's Test of Equality of Covariance Matrices***

Box's M	1349.875
F	1.483
df1	780
df2	239648.732
Sig.	.000

Table 5.5 summarises the results of the test hypothesis that Current Position has a significant impact on the set of 39 dependent variables. The hypothesis is that there will be a significant multivariate main effect for Current Position. Regarding, the four test statistics (Pillai's Trace, Wilks' Lambda, Hotelling's Trace and Roy's Largest Root), the researcher observed that for small and moderate sample sizes the four statistics differ

little in terms of power and all test statistics are relatively robust to violations of multivariate normality. Based on (Garson, 2012) it was decided to utilise two of the most widely used test statistic of Pillai's Trace and Wilks' Lambda.

The one-way MANOVA (Table 5.5) revealed a significant multivariate main effect for Current Position.

*Pillai's Trace = 0.423,  $F(78, 562) = 1.935, p < 0.001, \text{partial eta squared} = 0.212.$*

*Power to detect the effect was 1.*

*Wilks' Lambda = 0.618,  $(78,560) = 1.954, p < 0.001, \text{partial eta squared} = 0.214.$*

*Power to detect the effect was 1.*

From these results it can be concluded that the current position has a significant effect on the set of 39 variables. However, the nature of this effect is not clear from the multivariate test statistic since it does not explain which groups differed from which. In addition, it does not inform anything about the effect that the three types of current position have on the 39 dependent variables. To enable the determination of the nature of this effect, an examination and analysis of univariate tests is required.

**Table 5.5: Multivariate Tests**

Multivariate Tests(d)									
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Powerb
<b>Intercept</b>	Pillai's Trace	0.984	440.629a	39	280	0.000	0.984	17184.517	1
	Wilks' Lambda	0.016	440.629a	39	280	0.000	0.984	17184.517	1
	Hotelling's Trace	61.373	440.629a	39	280	0.000	0.984	17184.517	1
	Roy's Largest Root	61.373	440.629a	39	280	0.000	0.984	17184.517	1
<b>BQ1</b>	Pillai's Trace	0.423	1.935	78	562	0.000	0.212	150.952	1
	Wilks' Lambda	0.618	1.954a	78	560	0.000	0.214	152.385	1
	Hotelling's Trace	0.551	1.972	78	558	0.000	0.216	153.81	1
	Roy's Largest Root	0.37	2.669c	39	281	0.000	0.27	104.1	1
<b>a. Exact statistic</b>									
<b>b. Computed using alpha = .05</b>									
<b>c. The statistic is an upper bound on F that yields a lower bound on the significance level.</b>									
<b>d. Design: Intercept + BQ1</b>									

The next step of the analysis concerns the univariate test statistics. Table 5.6 presents a summary table of Levene's test of equality of variances for each of the dependent variables.

These results should be non-significant for all dependent variables if the univariate assumption of variance has been met. The results clearly show that the univariate assumption of variance has not been met for a large proportion of the dependent variables; therefore, the MANOVA findings should be interpreted with caution.

The Tables below contains the ANOVA summary Tables for the dependent variables. The columns labelled F and Sig. list the results for the F-ratios for each univariate ANOVA and their significance values. The p values indicate that there was significant difference between the types of current position for a large proportion of the variables (32 out of 39 items). At this point it should be pointed out that there is something odd when the results of the multivariate statistics are compared to those of the univariate tests. More specifically, the result of the multivariate test statistics led to the conclusion that the current position had had a significant impact on the response patterns for all the 39 variables yet the univariate results indicate that for seven of dependent variables the types of current position do not have any significant differences. According to Field (2010) this anomaly occurs because the multivariate test takes into account the correlation between dependent variables and thus it has more power to detect group differences for these data. It is therefore suggested (ibid) that the "univariate tests are not practically useful for interpretation, because the groups differ along a combination of the dependent variables".

**Table 5.6: Univariate test statistics**

	F	df1	df2	Sig.
Employee selection is taken very seriously by this University	3.148	2	318	.044
Employee selection places priority on the candidate's potential to learn	9.889	2	318	.000
Employee selection emphasises capacity to perform well right away	3.399	2	318	.035
Employees in this university have clear career paths	3.641	2	318	.027
Training programs strive to develop university-specific skills/knowledge	2.631	2	318	.074
The training programs emphasise on-the-job experiences	4.355	2	318	.014
Training programs in this University have improved the effectiveness of employees	4.203	2	318	.016
Performance appraisal is based on objective, quantifiable results	19.314	2	318	.000
Performance appraisals include management by objective with mutual goal setting	16.833	2	318	.000
Performance appraisals include developmental feedback	11.187	2	318	.000
Performance appraisals emphasise development of abilities / skills	6.630	2	318	.002
Performance appraisal emphasises the output of the team	9.871	2	318	.000
This university incentive system is tied to skill-based rewards	4.919	2	318	.008
This university incentive system has a group-based component	4.208	2	318	.016
Compensation and Incentives are contingent on performance	10.368	2	318	.000
Employees in this university are empowered to make decisions consistent with their status	4.121	2	318	.017
Employees in this university are often asked by their supervisor to participate in decision-making	3.907	2	318	.021
Employees are encouraged to suggest improvements in the way things are done	2.801	2	318	.062
Senior management is communicating effectively with employees in this university	4.129	2	318	.017
Employees are encouraged to bring up ideas to help accomplish their department's / university's goals	4.243	2	318	.015
The employees working in this university are highly skilled	1.768	2	318	.172
The employees working in this university are considered the best in university education in Cyprus	8.166	2	318	.000
The employees working in the university are encouraged to be creative	7.082	2	318	.001
The employees working in the university are experts in their particular jobs and functions	7.154	2	318	.001
I would be happy to spend the rest of my career with this university	1.948	2	318	.144
I talk about this university to my friends as an ideal working place	8.414	2	318	.000
I find my values and the university's values very similar	1.468	2	318	.232
I am proud to tell others that I am a part of this university	3.399	2	318	.035
Our employees' productivity is higher than those of other universities in Cyprus	3.280	2	318	.039
Our employees produce in an efficient manner	17.173	2	318	.000
Our employees' productive power is higher than those of other universities in Cyprus	1.466	2	318	.232
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? – performance	10.879	2	318	.000
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - quality of services and programs(service quality)	12.521	2	318	.000
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - development of new services and programs	5.656	2	318	.004
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - ability to attract essential employees	3.550	2	318	.030
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - satisfaction of customers or clients	5.487	2	318	.005
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - relations between management and other employees	3.838	2	318	.023
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - relations among employees in general	4.434	2	318	.013
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - Level of Productivity	1.158	2	318	.315

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + BQ1

Due to the fact, that the overall  $F$  test is significant (Table 5.5), the analysis explores the individual dependent variables with separate ANOVA tests (see Table 5.7 below). It has to be mentioned that the experiment-wise alpha correction provided by the overall  $F$  test does not extend to the univariate tests, so confidence levels need to be divided by the number of tests performed. In this particular experimental setup there are 39 dependent variables, so p-value of 0.05 should be divided by 39 ( $0.05/39=0.0012$ ). Hence, each

ANOVA should be tested at 0.0012 level. As shown in Table 5.7, 7 out of 39 variables are significant at the 0.0012 adjusted alpha level, indicating that differences exist among the three levels of current position.

Table 5.7: Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
BQ1	Employee selection is taken very seriously by this University	11.735	2	5.867	4.806	.009	.029	9.612	.795
	Employee selection places priority on the candidate's potential to learn	17.272	2	8.636	5.782	.003	.035	11.563	.867
	Employee selection emphasises capacity to perform well right away	3.269	2	1.635	1.216	.298	.008	2.432	.265
	Employees in this university have clear career paths	23.370	2	11.685	7.935	.000	.048	15.870	.953
	Training programs strive to develop university-specific skills/knowledge	3.125	2	1.562	1.666	.191	.010	3.331	.350
	The training programs emphasise on-the-job experiences	7.748	2	3.874	3.580	.029	.022	7.159	.662
	Training programs in this University have improved the effectiveness of employees	8.430	2	4.215	4.531	.011	.028	9.062	.770
	Performance appraisal is based on objective, quantifiable results	36.642	2	18.321	12.128	.000	.071	24.255	.995
	Performance appraisals include management by objective with mutual goal setting	49.208	2	24.604	17.608	.000	.100	35.216	1.000
	Performance appraisals include developmental feedback	26.174	2	13.087	8.435	.000	.050	16.870	.964
	Performance appraisals emphasise development of abilities / skills	21.558	2	10.779	8.073	.000	.048	16.146	.957
	Performance appraisal emphasises the output of the team	37.431	2	18.715	12.410	.000	.072	24.821	.996
	This university incentive system is tied to skill-based rewards	14.176	2	7.088	4.091	.018	.025	8.181	.724
	This university incentive system has a group-based component	43.389	2	21.694	13.095	.000	.076	26.190	.997
	Compensation and Incentives are contingent on performance	13.291	2	6.645	4.203	.016	.026	8.407	.736
	Employees in this university are empowered to make decisions consistent with their status	2.041	2	1.020	.984	.375	.006	1.967	.221
	Employees in this university are often asked by their supervisor to participate in decision-making	1.638	2	.819	.642	.527	.004	1.283	.157
	Employees are encouraged to suggest improvements in the way things are done	.221	2	.111	.089	.915	.001	.177	.063
	Senior management is communicating effectively with employees in this university	14.599	2	7.300	5.311	.005	.032	10.623	.836
	Employees are encouraged to bring up ideas to help accomplish their department's / university's goals	2.588	2	1.294	.951	.387	.006	1.902	.215
	The employees working in this university are highly skilled	5.004	2	2.502	2.565	.079	.016	5.130	.511
	The employees working in this university are considered the best in university education in Cyprus	3.238	2	1.619	1.445	.237	.009	2.891	.308
	The employees working in the university are encouraged to be creative	10.802	2	5.401	4.157	.017	.025	8.314	.731
	The employees working in the university are experts in their particular jobs and functions	.494	2	.247	.245	.783	.002	.490	.088
	I would be happy to spend the rest of my career with this university	7.248	2	3.624	3.341	.037	.021	6.683	.629
	I talk about this university to my friends as an ideal working place	13.802	2	6.901	6.169	.002	.037	12.339	.889
	I find my values and the university's values very similar	20.908	2	10.454	7.730	.001	.046	15.461	.948
	I am proud to tell others that I am a part of this university	17.310	2	8.655	9.984	.000	.059	19.967	.984
	Our employees' productivity is higher than those of other universities in Cyprus	4.390	2	2.195	1.899	.151	.012	3.798	.393
	Our employees produce in an efficient manner	13.998	2	6.999	8.446	.000	.050	16.893	.964
	Our employees' productive power is higher than those of other universities in Cyprus	2.530	2	1.265	1.190	.306	.007	2.379	.260
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - performance	5.265	2	2.632	4.885	.008	.030	9.770	.802
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - quality of services and programs(service quality)	3.752	2	1.876	3.327	.037	.020	6.655	.627
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - development of new services and programs	4.142	2	2.071	3.297	.038	.020	6.593	.623
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - ability to attract essential employees	1.503	2	.752	1.000	.369	.006	2.001	.224
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - satisfaction of customers or clients	1.499	2	.749	1.310	.271	.008	2.620	.283
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - relations between management and other employees	2.970	2	1.485	1.759	.174	.011	3.518	.368
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - relations among employees in general	2.472	2	1.236	1.668	.190	.010	3.336	.351
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - Level of Productivity	6.752	2	3.376	4.954	.008	.030	9.908	.808

**Table 5.8: Multiple Comparisons, Games-Howell Post Hoc Test**

Dependent Variable	(I) Current Position	(J) Current Position	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Employees in this university have clear career paths	Manager/Director	Officer	.24	.177	.377	-.19	.66
		Assistant Officer	-.34	.176	.142	-.76	.08
	Officer	Manager/Director	-.24	.177	.377	-.66	.19
		Assistant Officer	-.57*	.148	.000	-.92	-.22
Performance appraisal is based on objective, quantifiable results	Assistant Officer	Manager/Director	.34	.176	.142	-.08	.76
		Officer	.57*	.148	.000	.22	.92
	Manager/Director	Officer	.53*	.150	.001	.18	.89
		Assistant Officer	-.17	.142	.442	-.51	.16
Performance appraisal include management by objective with mutual goal setting	Officer	Manager/Director	-.53*	.150	.001	-.89	-.18
		Assistant Officer	-.71*	.153	.000	-1.07	-.35
	Assistant Officer	Manager/Director	.17	.142	.442	-.16	.51
		Officer	.71*	.153	.000	.35	1.07
Performance appraisals include management by objective with mutual goal setting	Manager/Director	Officer	.60*	.146	.000	.25	.94
		Assistant Officer	-.22	.139	.247	-.55	.11
	Officer	Manager/Director	-.60*	.146	.000	-.94	-.25
		Assistant Officer	-.82*	.147	.000	-1.17	-.48
Performance appraisals include developmental feedback	Assistant Officer	Manager/Director	.22	.139	.247	-.11	.55
		Officer	.82*	.147	.000	.48	1.17
	Manager/Director	Officer	.53*	.140	.001	.20	.86
		Assistant Officer	-.06	.139	.910	-.39	.27
Performance appraisals emphasise development of abilities / skills	Officer	Manager/Director	-.53*	.140	.001	-.86	-.20
		Assistant Officer	-.59*	.155	.001	-.95	-.22
	Assistant Officer	Manager/Director	.06	.139	.910	-.27	.39
		Officer	.59*	.155	.001	.22	.95
Performance appraisal emphasises the output of the team	Manager/Director	Officer	.48*	.137	.002	.16	.81
		Assistant Officer	-.05	.134	.935	-.37	.27
	Officer	Manager/Director	-.48*	.137	.002	-.81	-.16
		Assistant Officer	-.53*	.144	.001	-.87	-.19
This university incentive system has a group-based component	Assistant Officer	Manager/Director	.05	.134	.935	-.27	.37
		Officer	.53*	.144	.001	.19	.87
	Manager/Director	Officer	.56*	.176	.005	.15	.98
		Assistant Officer	-.15	.170	.665	-.55	.26
I find my values and the university's values very similar	Officer	Manager/Director	-.56*	.176	.005	-.98	-.15
		Assistant Officer	-.71*	.151	.000	-1.07	-.36
	Assistant Officer	Manager/Director	.15	.170	.665	-.26	.55
		Officer	.71*	.151	.000	.36	1.07
I am proud to tell others that I am a part of this university	Manager/Director	Officer	.42	.193	.086	-.05	.88
		Assistant Officer	-.37	.185	.126	-.81	.08
	Officer	Manager/Director	-.42	.193	.086	-.88	.05
		Assistant Officer	-.78*	.157	.000	-1.15	-.41
Our employees produce in an efficient manner	Assistant Officer	Manager/Director	.37	.185	.126	-.08	.81
		Officer	.78*	.157	.000	.41	1.15
	Manager/Director	Officer	.33	.182	.179	-.11	.76
		Assistant Officer	-.22	.176	.441	-.64	.21
I am proud to tell others that I am a part of this university	Officer	Manager/Director	-.33	.182	.179	-.76	.11
		Assistant Officer	-.54*	.141	.000	-.87	-.21
	Assistant Officer	Manager/Director	.22	.176	.441	-.21	.64
		Officer	.54*	.141	.000	.21	.87
I am proud to tell others that I am a part of this university	Manager/Director	Officer	.24	.166	.316	-.16	.64
		Assistant Officer	-.25	.154	.242	-.62	.12
	Officer	Manager/Director	-.24	.166	.316	-.64	.16
		Assistant Officer	-.49*	.111	.000	-.76	-.23
Our employees produce in an efficient manner	Assistant Officer	Manager/Director	.25	.154	.242	-.12	.62
		Officer	.49*	.111	.000	.23	.76
	Manager/Director	Officer	.67*	.110	.000	.41	.93
		Assistant Officer	.44*	.098	.000	.21	.68
Our employees produce in an efficient manner	Officer	Manager/Director	-.67*	.110	.000	-.93	-.41
		Assistant Officer	-.23	.113	.105	-.50	.04
	Assistant Officer	Manager/Director	-.44*	.098	.000	-.68	-.21
		Officer	.23	.113	.105	-.04	.50

Based on observed means.

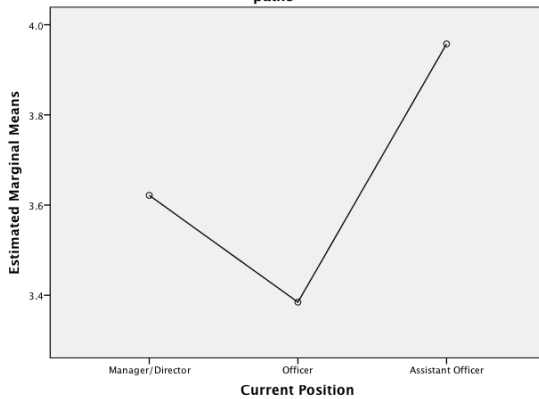
The error term is Mean Square (Error) = .682.

\*. The mean difference is significant at the .05 level.

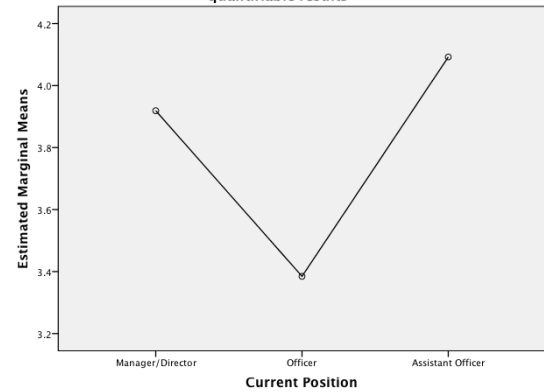
The results of the pairwise comparisons are shown in Tables 5.8 above. In Tables 5.7 Type I error was controlled across the 39 univariate ANOVAs by testing at the adjusted 0.0012 alpha level. To be consistent with this decision, the probability of committing one or more Type I errors was controlled across the multiple pairwise comparisons for the dependent variable at the 0.0012 alpha level. Due to the results of the Levene's statistics for the 39 dependent variables, Games-Howell post-hoc test was used in order to control Type I error across the pairwise comparisons. With the Games-Howell method, each comparison is tested at the alpha level for the ANOVA divided by the number of comparisons; for the purposes of this particular study, the alpha level is determined at  $0.0012/3 = 0.0004$ .

**Table 5.9: Plots of Estimated Marginal Means**

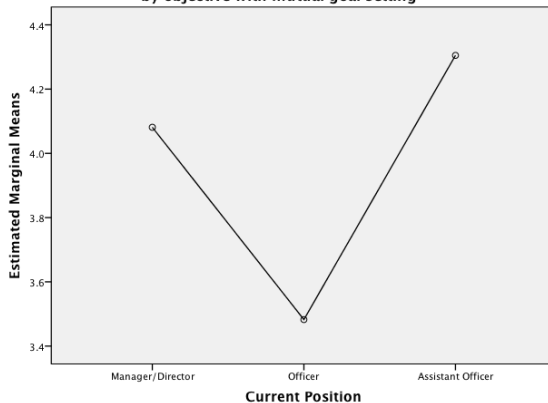
Estimated Marginal Means of Employees in this university have clear career paths



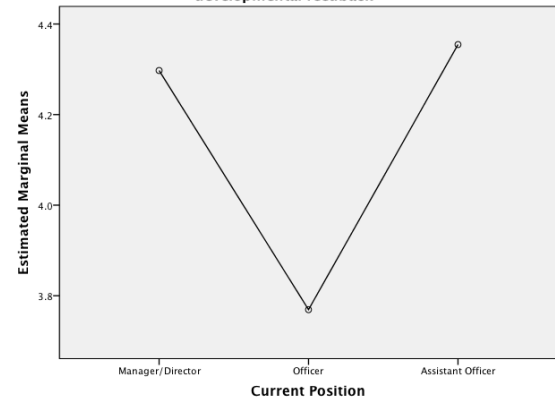
Estimated Marginal Means of Performance appraisal is based on objective, quantifiable results



Estimated Marginal Means of Performance appraisals include management by objective with mutual goal setting



Estimated Marginal Means of Performance appraisals include developmental feedback



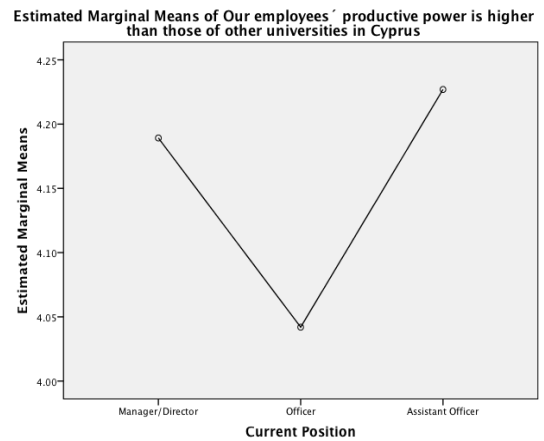
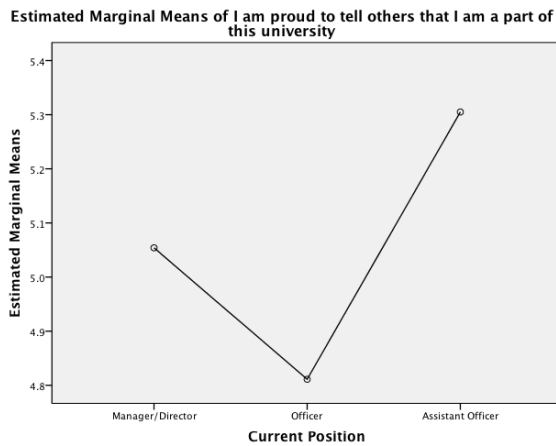
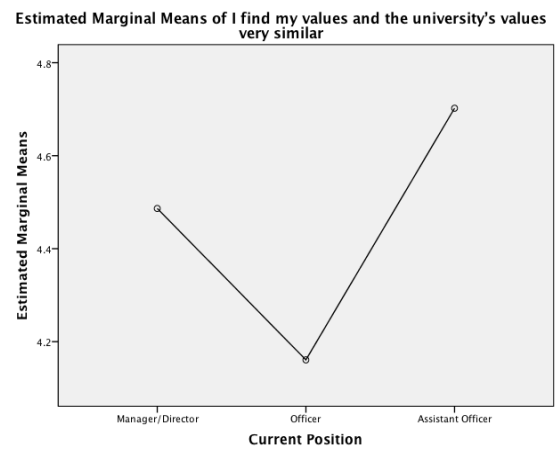
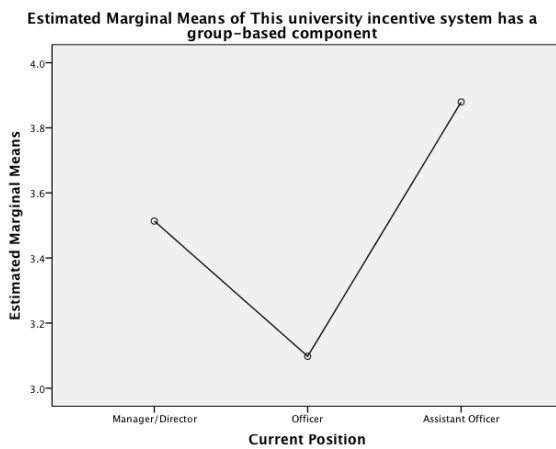
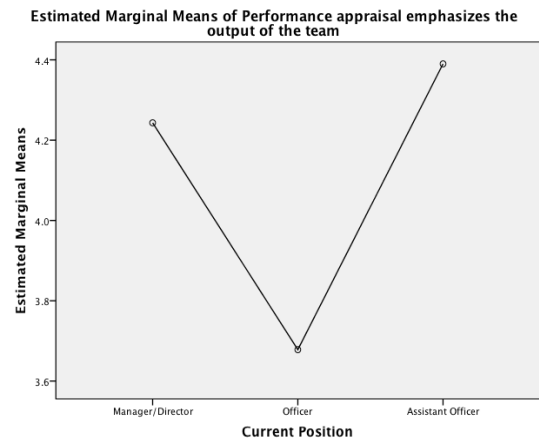
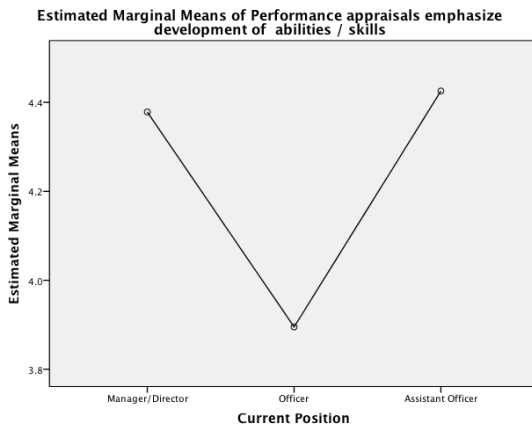


Table 5.9 above presents some interesting plots with the estimated marginal means of the set of 10 dependent variables (significant at the 0.0012 level) across the three groups of Current Position.

The results indicate that assistant officers have clearer career paths than officers. Moreover, they (assistant officers) tend to agree more to the statement “Performance appraisal is based on objective quantifiable results”.

There are significant differences between the three groups in relation to their agreement that “Performance appraisal includes MBO with mutual goal setting”. In particular, managers/directors are more likely to support the statement above (mean score = 4.08) rather than officers (3.38). It is striking the fact that assistant officers also support this item with a statistically significant difference (4.30). This result may indicate that performance appraisal systems used by universities in Cyprus are not addressing Management by Objectives (MBO) and goal setting.

With regards to the statement that “Performance appraisal includes developmental feedback”, officers deviate with managers/directors and assistant officers. This indicates that developmental feedback as it is being implemented in higher education is problematic. This is reflected by the fact that officers believe that they do not receive any developmental feedback from their line managers while assistant officers indicate that they receive developmental feedback by their officers (i.e. the immediate line managers). It is worth mentioning that although officers, as mentioned above, indicated that they do not receive any developmental feedback from their managers, managers - as this is extracted from the results - are of the view that they provide or conduct developmental feedback to the more junior staff who report to them.

Officers and assistant officers present the same pattern of statistically significant differences as to their agreement to the statement that “Performance appraisal

emphasises the development of abilities and skills and the output of the team”. The same pattern of statistically significant differences also exists between officers (3.10) and assistant officers (3.88) regarding their views towards the “group based component of the university incentive system”. These results enhance the view that officers and assistant officers perceive the above two items differently indicating the need for university management to communicate more clearly and efficiently these HRM practices so as to ensure a uniform comprehension and implementation.

Despite the fact that the overall mean values of the commitment construct items are relatively high for all three groups, managers/directors and assistant officers present higher mean values than officers and a statistically significant difference as to their agreement to the specific commitment items: “I find my values and the university’s values very similar” and “I am proud to tell others that I am a part of this university”. These results indicate that officers’ commitment levels are lower than other groups and they may further suggest that different management actions/practices are needed by this group of administrative employees.

The same pattern of statistically significant difference, as the latter, is revealed by the results for the statement “Our employees’ productive power is higher than those of other universities in Cyprus”. Managers/directors and assistant officers present higher mean values than officers, showing again the different perceptions of the three groups on the employee performance construct. The differences between managers/directors, officers and assistant officers is attributed to the extent of their involvement in the design, implementation and experience with the HRM system. Managers/directors are mainly involved in the design and implementation of the HRM system, while officers are both,

implementing and experiencing the HRM practices. At the same time, assistant officers are mainly experiencing the HRM practices. In addition, statistically significant differences between the three groups can be also explained by the extent to which HRM practices are communicated and perceived.

### 5.4.3 Multivariate Analysis of Variance by Type of Gender

Table 5.10 summarises the number of cases for each type of gender.

**Table 5.10: Descriptive statistics by type of gender**

		Value Label	N
Gender	1	Male	103
	2	Female	218

Table 5.11 shows the Box's test of the assumption of equality of covariance matrices testing the null hypothesis that the observed covariance matrices of the dependent variables are equal across the two groups.

**Table 5.11: Box's Test of Equality of Covariance Matrices**

Box's M	1287.502
F	1.396
df1	780
df2	132524.465
Sig.	.000

Table 5.12 summarises the results of the test hypothesis that Gender has a significant impact on the set of 39 dependent variables. The hypothesis is that there will be a significant multivariate main effect for Gender.

The one-way MANOVA (Table 5.12) revealed a non-significant multivariate main effect for Gender.

*Pillai's Trace = 0.163, F (39, 281) = 1.400, p > 0.001, partial eta squared = 0.163.*

*Power to detect the effect was 0.989.*

*Wilks' Lambda = 0.837, (39,281) = 1.400, p.>0.001, partial eta squared = 0.163.*

*Power to detect the effect was 0.989.*

From these results it can be concluded that the gender does not have a significant effect on the set of 39 variables.

**Table 5.12: Multivariate Tests**

Multivariate Tests(d)									
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
<b>Intercept</b>	Pillai's Trace	.987	556.199a	39.000	281.000	.000	.987	21691.777	1.000
	Wilks' Lambda	.013	556.199a	39.000	281.000	.000	.987	21691.777	1.000
	Hotelling's Trace	77.195	556.199a	39.000	281.000	.000	.987	21691.777	1.000
	Roy's Largest Root	77.195	556.199a	39.000	281.000	.000	.987	21691.777	1.000
<b>BQ3</b>	Pillai's Trace	.163	1.400a	39.000	281.000	.066	.163	54.591	.989
	Wilks' Lambda	.837	1.400a	39.000	281.000	.066	.163	54.591	.989
	Hotelling's Trace	.194	1.400a	39.000	281.000	.066	.163	54.591	.989
	Roy's Largest Root	.194	1.400a	39.000	281.000	.066	.163	54.591	.989
<b>a. Exact statistic</b>									
<b>b. Computed using alpha = .05</b>									
<b>c. The statistic is an upper bound on F that yields a lower bound on the significance level.</b>									
<b>d. Design: Intercept + BQ3</b>									

The next step of the analysis concerns the univariate test statistics. Table 5.13 presents a summary Tables of Levene's test of equality of variances for each of the dependent variables.

The results clearly show that the univariate assumption of variance has been met for a large proportion of the dependent variables, thus the interpretation of MANOVA findings can be performed with the relative assurance that multivariate and univariate results are in line.

The Tables below contains the ANOVA summary Tables for the dependent variables. The columns labelled F and Sig. list the results for F-ratios for each univariate ANOVA and their significance values. The p values indicate that there was significant difference

between males and females for a small number of items (7 out of 39 items). The examination of the individual dependent variables with separate ANOVA tests (see Table 5.14 below) at the 0.0012 adjusted alpha level, indicated that no differences exist between the two gender groups.

**Table 5.13: Univariate test statistics**

Levene's Test of Equality of Error Variances <sup>a</sup>				
	F	df1	df2	Sig.
Employee selection is taken very seriously by this University	6.021	1	319	.015
Employee selection places priority on the candidate's potential to learn	.125	1	319	.723
Employee selection emphasises capacity to perform well right away	.009	1	319	.924
Employees in this university have clear career paths	2.372	1	319	.125
Training programs strive to develop university-specific skills/knowledge	.152	1	319	.697
The training programs emphasise on-the-job experiences	1.004	1	319	.317
Training programs in this University have improved the effectiveness of employees	.197	1	319	.657
Performance appraisal is based on objective, quantifiable results	.018	1	319	.892
Performance appraisals include management by objective with mutual goal setting	.093	1	319	.761
Performance appraisals include developmental feedback	6.214	1	319	.013
Performance appraisals emphasise development of abilities / skills	3.573	1	319	.060
Performance appraisal emphasises the output of the team	2.791	1	319	.096
This university incentive system is tied to skill-based rewards	5.113	1	319	.024
This university incentive system has a group-based component	.602	1	319	.438
Compensation and Incentives are contingent on performance	.115	1	319	.735
Employees in this university are empowered to make decisions consistent with their status	1.276	1	319	.260
Employees in this university are often asked by their supervisor to participate in decision-making	3.306	1	319	.070
Employees are encouraged to suggest improvements in the way things are done	1.306	1	319	.254
Senior management is communicating effectively with employees in this university	.432	1	319	.511
Employees are encouraged to bring up ideas to help accomplish their department's / university's goals	.115	1	319	.735
The employees working in this university are highly skilled	.038	1	319	.846
The employees working in this university are considered the best in university education in Cyprus	3.613	1	319	.058
The employees working in the university are encouraged to be creative	.220	1	319	.639
The employees working in the university are experts in their particular jobs and functions	.174	1	319	.677
I would be happy to spend the rest of my career with this university	3.924	1	319	.048
I talk about this university to my friends as an ideal working place	.292	1	319	.589
I find my values and the university's values very similar	.783	1	319	.377
I am proud to tell others that I am a part of this university	.507	1	319	.477
Our employees' productivity is higher than those of other universities in Cyprus	3.346	1	319	.068
Our employees produce in an efficient manner	1.800	1	319	.181
Our employees' productive power is higher than those of other universities in Cyprus	.003	1	319	.958
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - performance	5.221	1	319	.023
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - quality of services and programs(service quality)	1.475	1	319	.225
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - development of new services and programs	4.460	1	319	.035
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - ability to attract essential employees	.209	1	319	.648
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - satisfaction of customers or clients	4.530	1	319	.034
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - relations between management and other employees	.056	1	319	.813
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - relations among employees in general	.365	1	319	.546
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - Level of Productivity	.080	1	319	.778

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + BQ3

**Table 5.14: Tests of Between-Subjects Effects**

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
BQ3	<b>Employee selection is taken very seriously by this University</b>	<b>0.815</b>	<b>1</b>	<b>0.815</b>	<b>0.651</b>	<b>0.42</b>	<b>0.002</b>	<b>0.651</b>	<b>0.127</b>
	Employee selection places priority on the candidate's potential to learn	0.004	1	0.004	0.002	0.961	0	0.002	0.05
	Employee selection emphasises capacity to perform well right away	0.562	1	0.562	0.416	0.519	0.001	0.416	0.099
	Employees in this university have clear career paths	5.35	1	5.35	3.51	0.062	0.011	3.51	0.463
	Training programs strive to develop university-specific skills/knowledge	0.109	1	0.109	0.115	0.734	0	0.115	0.063
	The training programs emphasise on-the-job experiences	0.102	1	0.102	0.093	0.761	0	0.093	0.061
	Training programs in this University have improved the effectiveness of employees	0.839	1	0.839	0.882	0.348	0.003	0.882	0.155
	Performance appraisal is based on objective, quantifiable results	1.151	1	1.151	0.712	0.4	0.002	0.712	0.134
	Performance appraisals include management by objective with mutual goal setting	3.667	1	3.667	2.388	0.123	0.007	2.388	0.338
	Performance appraisals include developmental feedback	0.355	1	0.355	0.218	0.641	0.001	0.218	0.075
	Performance appraisals emphasise development of abilities / skills	0.221	1	0.221	0.158	0.691	0	0.158	0.068
	Performance appraisal emphasises the output of the team	1.366	1	1.366	0.845	0.359	0.003	0.845	0.15
	This university incentive system is tied to skill-based rewards	0.05	1	0.05	0.028	0.867	0	0.028	0.053
	This university incentive system has a group-based component	3.38	1	3.38	1.902	0.169	0.006	1.902	0.28
	Compensation and Incentives are contingent on performance	0.138	1	0.138	0.085	0.77	0	0.085	0.06
	Employees in this university are empowered to make decisions consistent with their status	0.011	1	0.011	0.011	0.918	0	0.011	0.051
	Employees in this university are often asked by their supervisor to participate in decision-making	1.94	1	1.94	1.525	0.218	0.005	1.525	0.234
	Employees are encouraged to suggest improvements in the way things are done	0.002	1	0.002	0.002	0.966	0	0.002	0.05
	Senior management is communicating effectively with employees in this university	0.088	1	0.088	0.062	0.803	0	0.062	0.057
	Employees are encouraged to bring up ideas to help accomplish their department's / university's goals	0.117	1	0.117	0.086	0.769	0	0.086	0.06
	The employees working in this university are highly skilled	2.723	1	2.723	2.78	0.096	0.009	2.78	0.383
	The employees working in this university are considered the best in university education in Cyprus	2.634	1	2.634	2.355	0.126	0.007	2.355	0.334
	The employees working in the university are encouraged to be creative	0.7	1	0.7	0.528	0.468	0.002	0.528	0.112
	The employees working in the university are experts in their particular jobs and functions	3.031	1	3.031	3.044	0.082	0.009	3.044	0.413
	I would be happy to spend the rest of my career with this university	0.687	1	0.687	0.623	0.43	0.002	0.623	0.123
	I talk about this university to my friends as an ideal working place	0.02	1	0.02	0.018	0.895	0	0.018	0.052
	I find my values and the university's values very similar	0.238	1	0.238	0.168	0.682	0.001	0.168	0.069
	I am proud to tell others that I am a part of this university	1.366	1	1.366	1.494	0.222	0.005	1.494	0.23
	Our employees' productivity is higher than those of other universities in Cyprus	0.424	1	0.424	0.364	0.547	0.001	0.364	0.092
	Our employees produce in an efficient manner	1.283	1	1.283	1.482	0.224	0.005	1.482	0.228
	Our employees' productive power is higher than those of other universities in Cyprus	4.409	1	4.409	4.182	0.042	0.013	4.182	0.531
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - performance	0.087	1	0.087	0.158	0.692	0	0.158	0.068
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - quality of services and programs(service quality)	0.127	1	0.127	0.221	0.639	0.001	0.221	0.076
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - development of new services and programs	0.026	1	0.026	0.04	0.841	0	0.04	0.055
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - ability to attract essential employees	0.249	1	0.249	0.331	0.565	0.001	0.331	0.089
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - satisfaction of customers or clients	0.084	1	0.084	0.147	0.702	0	0.147	0.067
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - relations between management and other employees	1.039	1	1.039	1.226	0.269	0.004	1.226	0.197
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - relations among employees in general	0.001	1	0.001	0.001	0.977	0	0.001	0.05
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - Level of Productivity	6.12E-05	1	6.12E-05	0	0.993	0	0	0.05

#### **5.4.4 Multivariate Analysis of Variance for Level of Education**

The number of cases for each level of Education are summarised in Tables 5.15.

***Table 5.15: Descriptive statistics for levels of education***

<b>Between-Subjects Factors</b>			
		Value Label	N
Education	1	High School	35
	2	Associate degree (2-3 yrs)	73
	3	Bachelor's Degree	65
	4	Master's Degree	136
	5	PhD	12

Table 5.16 shows the Box's test of the assumption of equality of covariance matrices testing the null hypothesis that the observed covariance matrices of the dependent variables are equal across the five groups. For the variables of the dataset, the test signifies that the covariance matrices are not equal (p-value<0.001) and therefore the homogeneity assumption is violated (see page 222 for a theoretical explanation of this violation).

***Table 5.16: Box's Test of Equality of Covariance Matrices***

Box's M	2682.134
F	1.319
df1	1560
df2	109247.324
Sig.	.000

Table 5.17 summarises the results of the test hypothesis that levels of education have a significant impact on the set of 39 dependent variables. The hypothesis is that there is a significant multivariate main effect for level of education.

The one-way MANOVA (Table 5.17) revealed a significant multivariate main effect for levels of Education.

*Pillai's Trace* = 0.645,  $F(156, 1124) = 1.385$ ,  $p < 0.001$ , *partial eta squared* = 0.161.

*Power to detect the effect* was 1.

*Wilks' Lambda* = 0.488,  $(156, 110.615) = 1.402$ ,  $p < 0.001$ , *partial eta squared* = 0.164.

*Power to detect the effect* was 1.

**Table 5.17: Multivariate Tests**

Multivariate Tests(d)									
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Intercept	Pillai's Trace	.980	344.503a	39.000	278.000	.000	.980	13435.623	1.000
	Wilks' Lambda	.020	344.503a	39.000	278.000	.000	.980	13435.623	1.000
	Hotelling's Trace	48.330	344.503a	39.000	278.000	.000	.980	13435.623	1.000
	Roy's Largest Root	48.330	344.503a	39.000	278.000	.000	.980	13435.623	1.000
BQ5	Pillai's Trace	.645	1.385	156.000	1124.000	.002	.161	216.054	1.000
	Wilks' Lambda	.488	1.402	156.000	1110.615	.002	.164	217.909	1.000
	Hotelling's Trace	.801	1.420	156.000	1106.000	.001	.167	221.476	1.000
	Roy's Largest Root	.335	2.413c	39.000	281.000	.000	.251	94.089	1.000
a. Exact statistic									
b. Computed using alpha = .05									
c. The statistic is an upper bound on F that yields a lower bound on the significance level.									
d. Design: Intercept + BQ5									

Table 5.18 presents a summary table of Levene's test of equality of variances for each of the dependent variables.

These results should be non-significant for all dependent variables if the univariate assumption of variance has been met. The results clearly show that the univariate assumption of variance has not been met for the majority of dependent variables (22 out of 39).

Due to the fact, that the overall  $F$  test is significant (Table 5.18), the analysis explores the individual dependent variables with separate ANOVA tests (see Table 5.19 below).

In this particular experimental setup the same approach is followed as in section 5.3.1 to derive to the adjusted alpha level figure which is again set at 0.0012 level. As shown in Table 5.19, six out of thirty nine variables are significant at the 0.0012 adjusted alpha level, indicating that differences exist among the three levels of education.

**Table 5.18: Univariate test statistics**

	F	df1	df2	Sig.
Employee selection is taken very seriously by this University	2.317	4	316	.057
Employee selection places priority on the candidate's potential to learn	3.765	4	316	.005
Employee selection emphasises capacity to perform well right away	4.310	4	316	.002
Employees in this university have clear career paths	3.042	4	316	.018
Training programs strive to develop university-specific skills/knowledge	6.038	4	316	.000
The training programs emphasise on-the-job experiences	9.108	4	316	.000
Training programs in this University have improved the effectiveness of employees	6.833	4	316	.000
Performance appraisal is based on objective, quantifiable results	7.326	4	316	.000
Performance appraisals include management by objective with mutual goal setting	4.271	4	316	.002
Performance appraisals include developmental feedback	2.907	4	316	.022
Performance appraisals emphasise development of abilities / skills	2.646	4	316	.034
Performance appraisal emphasises the output of the team	3.766	4	316	.005
This university incentive system is tied to skill-based rewards	4.975	4	316	.001
This university incentive system has a group-based component	6.931	4	316	.000
Compensation and Incentives are contingent on performance	1.940	4	316	.104
Employees in this university are empowered to make decisions consistent with their status	1.432	4	316	.223
Employees in this university are often asked by their supervisor to participate in decision-making	1.764	4	316	.136
Employees are encouraged to suggest improvements in the way things are done	2.803	4	316	.026
Senior management is communicating effectively with employees in this university	3.910	4	316	.004
Employees are encouraged to bring up ideas to help accomplish their department's / university's goals	1.254	4	316	.288
The employees working in this university are highly skilled	1.614	4	316	.171
The employees working in this university are considered the best in university education in Cyprus	3.331	4	316	.011
The employees working in the university are encouraged to be creative	.871	4	316	.481
The employees working in the university are experts in their particular jobs and functions	4.183	4	316	.003
I would be happy to spend the rest of my career with this university	3.194	4	316	.014
I talk about this university to my friends as an ideal working place	4.212	4	316	.002
I find my values and the university's values very similar	3.205	4	316	.013
I am proud to tell others that I am a part of this university	1.783	4	316	.132
Our employees' productivity is higher than those of other universities in Cyprus	.583	4	316	.675
Our employees produce in an efficient manner	3.488	4	316	.008
Our employees' productive power is higher than those of other universities in Cyprus	1.098	4	316	.357
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - performance	1.719	4	316	.146
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - quality of services and programs(service quality)	.578	4	316	.679
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - development of new services and programs	1.121	4	316	.347
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - ability to attract essential employees	5.067	4	316	.001
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - satisfaction of customers or clients	.948	4	316	.436
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - relations between management and other employees	1.487	4	316	.206
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - relations among employees in general	1.588	4	316	.177
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - Level of Productivity	1.522	4	316	.195

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + BQ5

Table 5.19: Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
BQ5	Employee selection is taken very seriously by this University	19.083	4	4.771	3.958	.004	.048	15.832	.904
	Employee selection places priority on the candidate's potential to learn	23.921	4	5.980	4.035	.003	.049	16.140	.910
	Employee selection emphasises capacity to perform well right away	9.159	4	2.290	1.716	.146	.021	6.864	.524
	Employees in this university have clear career paths	17.263	4	4.316	2.875	.023	.035	11.499	.776
	Training programs strive to develop university-specific skills/knowledge	11.752	4	2.938	3.205	.013	.039	12.821	.825
	The training programs emphasise on-the-job experiences	23.221	4	5.805	5.581	.000	.066	22.326	.978
	Training programs in this University have improved the effectiveness of employees	18.013	4	4.503	4.972	.001	.059	19.886	.960
	Performance appraisal is based on objective, quantifiable results	26.672	4	6.668	4.297	.002	.052	17.188	.928
	Performance appraisals include management by objective with mutual goal setting	42.318	4	10.579	7.409	.000	.086	29.635	.996
	Performance appraisals include developmental feedback	20.685	4	5.171	3.276	.012	.040	13.103	.834
	Performance appraisals emphasise development of abilities / skills	24.791	4	6.198	4.648	.001	.056	18.592	.947
	Performance appraisal emphasises the output of the team	38.000	4	9.500	6.267	.000	.074	25.069	.989
	This university incentive system is tied to skill-based rewards	15.157	4	3.789	2.177	.071	.027	8.708	.639
	This university incentive system has a group-based component	45.537	4	11.384	6.857	.000	.080	27.426	.994
	Compensation and Incentives are contingent on performance	6.095	4	1.524	.944	.438	.012	3.777	.299
	Employees in this university are empowered to make decisions consistent with their status	4.010	4	1.002	.966	.426	.012	3.863	.305
	Employees in this university are often asked by their supervisor to participate in decision-making	1.897	4	.474	.369	.830	.005	1.478	.134
	Employees are encouraged to suggest improvements in the way things are done	1.794	4	.449	.359	.838	.005	1.435	.132
	Senior management is communicating effectively with employees in this university	15.234	4	3.808	2.758	.028	.034	11.031	.756
	Employees are encouraged to bring up ideas to help accomplish their department's / university 's goals	8.492	4	2.123	1.572	.181	.020	6.289	.484
	The employees working in this university are highly skilled	1.880	4	.470	.474	.755	.006	1.896	.162
	The employees working in this university are considered the best in university education in Cyprus	5.397	4	1.349	1.204	.309	.015	4.818	.377
	The employees working in the university are encouraged to be creative	9.695	4	2.424	1.849	.119	.023	7.395	.559
	The employees working in the university are experts in their particular jobs and functions	3.964	4	.991	.989	.414	.012	3.955	.312
	I would be happy to spend the rest of my career with this university	12.542	4	3.135	2.917	.022	.036	11.670	.783
	I talk about this university to my friends as an ideal working place	13.666	4	3.416	3.034	.018	.037	12.136	.801
	I find my values and the university's values very similar	16.439	4	4.110	2.989	.019	.036	11.956	.794
	I am proud to tell others that I am a part of this university	10.292	4	2.573	2.876	.023	.035	11.504	.776
	Our employees' productivity is higher than those of other universities in Cyprus	2.061	4	.515	.440	.780	.006	1.760	.153
	Our employees produce in an efficient manner	11.597	4	2.899	3.446	.009	.042	13.782	.855
	Our employees' productive power is higher than those of other universities in Cyprus	3.054	4	.763	.715	.582	.009	2.858	.230
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - performance	2.847	4	.712	1.294	.272	.016	5.177	.404
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - quality of services and programs(service quality)	2.637	4	.659	1.155	.331	.014	4.618	.362
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - development of new services and programs	3.083	4	.771	1.213	.305	.015	4.851	.379
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - ability to attract essential employees	12.107	4	3.027	4.189	.003	.050	16.756	.921
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - satisfaction of customers or clients	6.122	4	1.531	2.728	.029	.033	10.912	.751
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - relations between management and other employees	1.786	4	.447	.523	.719	.007	2.093	.176
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - relations among employees in general	2.599	4	.650	.872	.481	.011	3.488	.277
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - Level of Productivity	6.089	4	1.522	2.213	.067	.027	8.851	.648

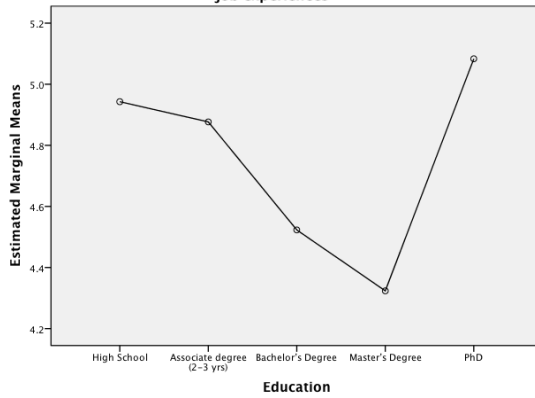
**Table 5.20: Multiple Comparisons, Games-Howell Post Hoc Test**

Games-Howell							
The training programs emphasise on-the-job experiences	High School	Associate degree (2-3 yrs)	,07	,143	,990	-,33	,46
		Bachelor's Degree	,42	,169	,103	-,05	,89
		Master's Degree	,62*	,132	,000	,25	,99
		PhD	-,14	,174	,926	-,66	,38
	Associate degree (2-3 yrs)	High School	-,07	,143	,990	-,46	,33
		Bachelor's Degree	,35	,180	,289	-,14	,85
		Master's Degree	,55*	,146	,002	,15	,96
		PhD	-,21	,185	,796	-,75	,34
	Bachelor's Degree	High School	-,42	,169	,103	-,89	,05
		Associate degree (2-3 yrs)	-,35	,180	,289	-,85	,14
		Master's Degree	,20	,171	,772	-,28	,67
		PhD	-,56	,206	,070	-1,15	,03
	Master's Degree	High School	-,62*	,132	,000	-,99	-,25
		Associate degree (2-3 yrs)	-,55*	,146	,002	-,96	-,15
		Bachelor's Degree	-,20	,171	,772	-,67	,28
		PhD	-,76*	,177	,002	-1,28	-,23
PhD	High School	,14	,174	,926	-,38	,66	
	Associate degree (2-3 yrs)	,21	,185	,796	-,34	,75	
	Bachelor's Degree	,56	,206	,070	-,03	1,15	
	Master's Degree	,76*	,177	,002	,23	1,28	
Training programs in this University have improved the effectiveness of employees	High School	Associate degree (2-3 yrs)	,41*	,124	,011	,07	,76
		Bachelor's Degree	,49*	,156	,019	,06	,92
		Master's Degree	,76*	,128	,000	,40	1,11
		PhD	,45	,212	,266	-,20	1,10
	Associate degree (2-3 yrs)	High School	-,41*	,124	,011	-,76	-,07
		Bachelor's Degree	,08	,157	,988	-,36	,51
		Master's Degree	,34	,129	,062	-,01	,70
		PhD	,03	,212	1,000	-,62	,68
	Bachelor's Degree	High School	-,49*	,156	,019	-,92	-,06
		Associate degree (2-3 yrs)	-,08	,157	,988	-,51	,36
		Master's Degree	,27	,160	,460	-,18	,71
		PhD	-,04	,233	1,000	-,73	,64
	Master's Degree	High School	-,76*	,128	,000	-1,11	-,40
		Associate degree (2-3 yrs)	-,34	,129	,062	-,70	,01
		Bachelor's Degree	-,27	,160	,460	-,71	,18
		PhD	-,31	,215	,605	-,97	,34
PhD	High School	-,45	,212	,266	-1,10	,20	
	Associate degree (2-3 yrs)	-,03	,212	1,000	-,68	,62	
	Bachelor's Degree	,04	,233	1,000	-,64	,73	
	Master's Degree	,31	,215	,605	-,34	,97	
Performance appraisals include management by objective with mutual goal setting	High School	Associate degree (2-3 yrs)	,05	,180	,999	-,46	,55
		Bachelor's Degree	,57	,211	,064	-,02	1,15
		Master's Degree	,86*	,172	,000	,38	1,34
		PhD	,68	,308	,228	-,26	1,62
	Associate degree (2-3 yrs)	High School	-,05	,180	,999	-,55	,46
		Bachelor's Degree	,52	,206	,090	-,05	1,09
		Master's Degree	,82*	,166	,000	,36	1,27
		PhD	,63	,305	,276	-,30	1,57
	Bachelor's Degree	High School	-,57	,211	,064	-1,15	,02
		Associate degree (2-3 yrs)	-,52	,206	,090	-1,09	,05
		Master's Degree	,30	,199	,576	-,26	,85
		PhD	,11	,324	,997	-,86	1,08
	Master's Degree	High School	-,86*	,172	,000	-1,34	-,38
		Associate degree (2-3 yrs)	-,82*	,166	,000	-1,27	-,36
		Bachelor's Degree	-,30	,199	,576	-,85	,26
		PhD	-,18	,300	,971	-1,11	,74
PhD	High School	-,68	,308	,228	-1,62	,26	
	Associate degree (2-3 yrs)	-,63	,305	,276	-1,57	,30	
	Bachelor's Degree	-,11	,324	,997	-1,08	,86	
	Master's Degree	,18	,300	,971	-,74	1,11	

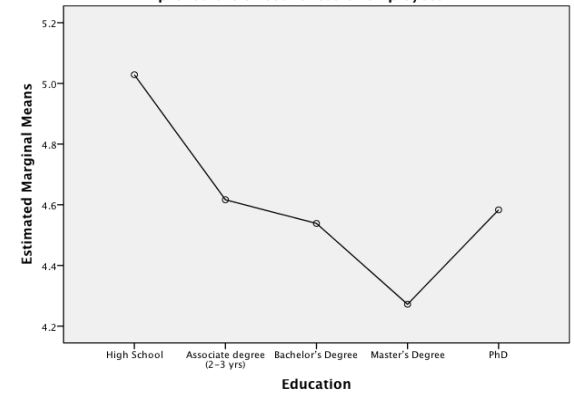
Performance appraisals emphasise development of abilities / skills	High School	Associate degree (2-3 yrs)	,18	,193	,886	-,36	,72
		Bachelor's Degree	,72*	,217	,012	,11	1,32
		Master's Degree	,70*	,173	,001	,22	1,19
		PhD	,52	,218	,151	-,12	1,15
	Associate degree (2-3 yrs)	High School	-,18	,193	,886	-,72	,36
		Bachelor's Degree	,54	,212	,089	-,05	1,12
		Master's Degree	,52*	,167	,018	,06	,98
		PhD	,34	,213	,511	-,28	,96
	Bachelor's Degree	High School	-,72*	,217	,012	-,12	-,11
		Associate degree (2-3 yrs)	-,54	,212	,089	-,12	,05
		Master's Degree	-,02	,194	1,000	-,55	,52
		PhD	-,20	,235	,916	-,87	,48
	Master's Degree	High School	-,70*	,173	,001	-,19	-,22
		Associate degree (2-3 yrs)	-,52*	,167	,018	-,98	-,06
		Bachelor's Degree	,02	,194	1,000	-,52	,55
		PhD	-,18	,195	,882	-,76	,40
PhD	High School	-,52	,218	,151	-,15	,12	
	Associate degree (2-3 yrs)	-,34	,213	,511	-,96	,28	
	Bachelor's Degree	,20	,235	,916	-,48	,87	
	Master's Degree	,18	,195	,882	-,40	,76	
Performance appraisal emphasises the output of the team	High School	Associate degree (2-3 yrs)	,02	,187	1,000	-,50	,54
		Bachelor's Degree	,64*	,217	,034	,03	1,24
		Master's Degree	,74*	,173	,000	,26	1,22
		PhD	1,04*	,317	,033	,07	2,02
	Associate degree (2-3 yrs)	High School	-,02	,187	1,000	-,54	,50
		Bachelor's Degree	,61*	,217	,044	,01	1,21
		Master's Degree	,72*	,174	,001	,24	1,20
		PhD	1,02*	,318	,037	,05	1,99
	Bachelor's Degree	High School	-,64*	,217	,034	-,124	-,03
		Associate degree (2-3 yrs)	-,61*	,217	,044	-,121	-,01
		Master's Degree	,11	,206	,986	-,46	,68
		PhD	,41	,336	,744	-,60	1,41
	Master's Degree	High School	-,74*	,173	,000	-,122	-,26
		Associate degree (2-3 yrs)	-,72*	,174	,001	-,120	-,24
		Bachelor's Degree	-,11	,206	,986	-,68	,46
		PhD	,30	,310	,863	-,66	1,26
PhD	High School	-1,04*	,317	,033	-2,02	-,07	
	Associate degree (2-3 yrs)	-1,02*	,318	,037	-1,99	-,05	
	Bachelor's Degree	-,41	,336	,744	-,141	,60	
	Master's Degree	-,30	,310	,863	-,126	,66	
This university incentive system has a group-based component	High School	Associate degree (2-3 yrs)	,15	,217	,953	-,45	,76
		Bachelor's Degree	,61	,243	,098	-,07	1,28
		Master's Degree	,94*	,197	,000	,39	1,49
		PhD	1,09*	,267	,004	,30	1,87
	Associate degree (2-3 yrs)	High School	-,15	,217	,953	-,76	,45
		Bachelor's Degree	,45	,233	,296	-,19	1,10
		Master's Degree	,78*	,185	,000	,28	1,29
		PhD	,93*	,258	,012	,17	1,69
	Bachelor's Degree	High School	-,61	,243	,098	-,128	,07
		Associate degree (2-3 yrs)	-,45	,233	,296	-,110	,19
		Master's Degree	,33	,215	,543	-,27	,93
		PhD	,48	,280	,449	-,34	1,29
	Master's Degree	High School	-,94*	,197	,000	-,149	-,39
		Associate degree (2-3 yrs)	-,78*	,185	,000	-,129	-,28
		Bachelor's Degree	-,33	,215	,543	-,93	,27
		PhD	,15	,242	,972	-,58	,88
PhD	High School	-1,09*	,267	,004	-,187	-,30	
	Associate degree (2-3 yrs)	-,93*	,258	,012	-,169	-,17	
	Bachelor's Degree	-,48	,280	,449	-,129	,34	
	Master's Degree	-,15	,242	,972	-,88	,58	

**Table 5.21: Plots of Estimated Marginal Means**

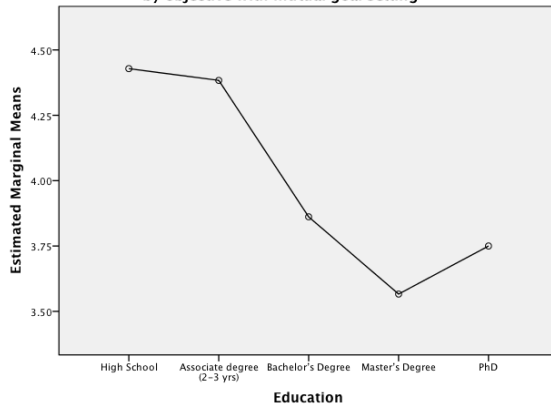
**Estimated Marginal Means of The training programs emphasize on-the-job experiences**



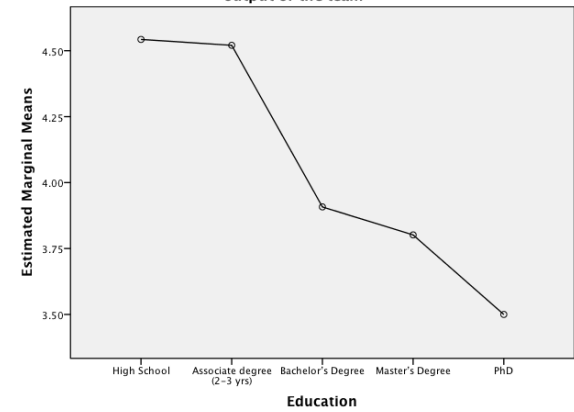
**Estimated Marginal Means of Training programmes in this University have improved the effectiveness of employees**



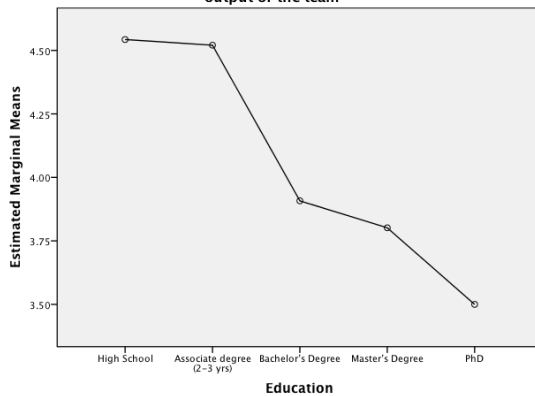
**Estimated Marginal Means of Performance appraisals include management by objective with mutual goal setting**



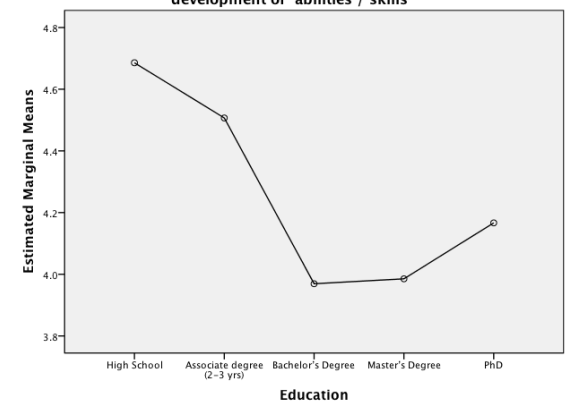
**Estimated Marginal Means of Performance appraisal emphasizes the output of the team**



**Estimated Marginal Means of Performance appraisal emphasizes the output of the team**



**Estimated Marginal Means of Performance appraisals emphasize development of abilities / skills**



The above table presents the plots with the estimated marginal means of the set of 6 dependent variables (significant at the 0.0012 level) about the five levels of Education.

The results demonstrate that employees who hold only a high school diploma (mean score = 4.94) strongly agree with the statement “The training programs emphasise on-the-job experiences” and have a statistically significant difference with employees who hold master’s degrees with mean score of 4.32. The same pattern of statistically significant differences between these two groups of employees is shown in relation to the training practice effectiveness (“Training programs in this University have improved the effectiveness of employees”). Employees who hold only a high school diploma tend to agree more (mean score = 5.03) than employees who hold master’s degrees (mean score = 4.27).

The above findings lead to the conclusion that the level of education affects the perception of administrative employees as regard to the training practice and their effectiveness. Furthermore, the above results may be influenced by the fact that different training programs are offered to different levels of employees (who have different level of education based on their job requirements).

In relation to the performance appraisal practice, the same pattern of statistically significant difference is found between three groups (high school holders, employees who hold associate degrees – 2 to 3 years programs, and master’s degree holders). More specifically, on all three statements “Performance appraisals include management by objective with mutual goal setting”, “Performance appraisals emphasise development of abilities / skills”, and “Performance appraisal emphasises the output of the team”, employees who hold only a high school diploma agree strongly (mean scores 4.43, 4.69, and 4.54 respectively). Employees who had master’s level education scored lower than all levels of education (3.57, 3.99, and 3.80), while employees with 2 to 3

years higher education (associate degree) have mean scores of 4.38, 4.51, and 4.52. Again, these results show that the level of education affects the perception of administrative employees as regard to the performance appraisal practice. By referring to the descriptive statistics of this study (see Appendix 2), employees who hold a high school diploma and/or 2-3 years associate degree are assistant officers while employees with master's level education are officers or managers. Thus, the above significant differences are explained by both, the respondents' level of education and their current position. These two characteristics determine to a great extent the way with which HRM practices are communicated, implemented and perceived.

Moreover, the interpretation of the above findings indicate that performance appraisal systems used by universities in Cyprus are not addressing MBO and goal setting (similar findings were reached in relation to the level of position variable) and their objectives are not communicated properly to the administrative staff.

With regards to the statement that "This university's incentive system has a group-based component", again the perceptions of employees who hold only a high school diploma (m.s. 4.09) deviate with employees with 2 to 3 years higher education (3.93) and master's holders (3.15) and have a statistically significant difference. The rationale behind the interpretation of this finding is the same as in the previous paragraph since the respondents' level of education and their current position explain the significant difference between the groups. Moreover, the significant differences are also attributed to the extent to which HRM practices are communicated, implemented and perceived.

### **5.4.5 Multivariate Analysis of Variance for total Years of Work Experience**

The number of cases for each level of total years of work experience is presented in Table 5.22.

***Table 5.22: Descriptive statistics by total years of work experience***

		Value Label	N
How many total years of work experience do you have?	1	Up to 1 year	8
	2	2 to 5 years	63
	3	6-10 years	89
	4	11-15 years	52
	5	Over 15 years	83

Table 5.23 shows the Box's test of the assumption of equality of covariance matrices testing the null hypothesis that the observed covariance matrices of the dependent variables are equal across the five groups.

***Table 5.23: Box's Test of Equality of Covariance Matrices***

Box's M	4150.110
F	1.306
df1	2340
df2	123620.001
Sig.	.000

Table 5.24 summarises the results of the test hypothesis that total years of work experience have a significant impact on the set of 39 dependent variables. The hypothesis is that there will be a significant multivariate main effect for total years of work experience.

The one-way MANOVA (Table 5.24) revealed a significant multivariate main effect for total years of work experience with Pillai's Trace = 0.627 and Wilks' Lambda= 0.502

**Table 5.24: Multivariate Tests**

Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Intercept Pillai's Trace	.975	256.430 <sup>a</sup>	39.000	252.000	.000	.975	10000.789	1.000
Wilks' Lambda	.025	256.430 <sup>a</sup>	39.000	252.000	.000	.975	10000.789	1.000
Hotelling's Trace	39.686	256.430 <sup>a</sup>	39.000	252.000	.000	.975	10000.789	1.000
Roy's Largest Root	39.686	256.430 <sup>a</sup>	39.000	252.000	.000	.975	10000.789	1.000
BQ9 Pillai's Trace	.627	1.216	156.000	1020.000	.047	.157	189.640	1.000
Wilks' Lambda	.502	1.218	156.000	1006.998	.045	.158	189.294	1.000
Hotelling's Trace	.760	1.220	156.000	1002.000	.044	.160	190.376	1.000
Roy's Largest Root	.272	1.781 <sup>c</sup>	39.000	255.000	.005	.214	69.478	.999

a. Exact statistic

b. Computed using alpha = .05

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

d. Design: Intercept + BQ9

The results as depicted above lead to the conclusion that total years of work experience have a significant effect on the set of 39 variables.

In the same fashion as for the previous control variables, univariate test statistics are presented. Table 5.25 presents a summary of Levene's test of equality of variances for each of the dependent variables. The results demonstrate that the univariate assumption of variance has not been met for a large proportion of the dependent variables and for this reason the interpretation of MANOVA findings should be done with caution.

Table 5.26 presents the ANOVA summary results for the dependent variables. The p values indicate that there was significant difference between the types of total years of work experience for a large proportion of the variables (30 out of 39 items).

**Table 5.25: Univariate test statistics**

	F	df1	df2	Sig.
Employee selection is taken very seriously by this University	3.319	4	290	.011
Employee selection places priority on the candidate's potential to learn	2.854	4	290	.024
Employee selection emphasises capacity to perform well right away	.252	4	290	.908
Employees in this university have clear career paths	1.385	4	290	.239
Training programs strive to develop university-specific skills/knowledge	.820	4	290	.513
The training programs emphasise on-the-job experiences	.912	4	290	.457
Training programs in this University have improved the effectiveness of employees	.864	4	290	.486
Performance appraisal is based on objective, quantifiable results	1.923	4	290	.107
Performance appraisals include management by objective with mutual goal setting	1.846	4	290	.120
Performance appraisals include developmental feedback	2.781	4	290	.027
Performance appraisals emphasise development of abilities / skills	3.097	4	290	.016
Performance appraisal emphasises the output of the team	2.045	4	290	.088
This university incentive system is tied to skill-based rewards	.652	4	290	.626
This university incentive system has a group-based component	1.325	4	290	.261
Compensation and Incentives are contingent on performance	2.130	4	290	.077
Employees in this university are empowered to make decisions consistent with their status	.360	4	290	.837
Employees in this university are often asked by their supervisor to participate in decision-making	.676	4	290	.609
Employees are encouraged to suggest improvements in the way things are done	.244	4	290	.913
Senior management is communicating effectively with employees in this university	1.553	4	290	.187
Employees are encouraged to bring up ideas to help accomplish their department's / university's goals	.639	4	290	.635
The employees working in this university are highly skilled	.089	4	290	.986
The employees working in this university are considered the best in university education in Cyprus	1.760	4	290	.137
The employees working in the university are encouraged to be creative	1.423	4	290	.226
The employees working in the university are experts in their particular jobs and functions	1.437	4	290	.222
I would be happy to spend the rest of my career with this university	.436	4	290	.783
I talk about this university to my friends as an ideal working place	.931	4	290	.446
I find my values and the university's values very similar	1.491	4	290	.205
I am proud to tell others that I am a part of this university	4.133	4	290	.003
Our employees' productivity is higher than those of other universities in Cyprus	.440	4	290	.780
Our employees produce in an efficient manner	.416	4	290	.797
Our employees' productive power is higher than those of other universities in Cyprus	.706	4	290	.588
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - performance	1.887	4	290	.113
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - quality of services and programs(service quality)	1.091	4	290	.361
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - development of new services and programs	1.548	4	290	.188
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - ability to attract essential employees	2.412	4	290	.049
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - satisfaction of customers or clients	.100	4	290	.982
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - relations between management and other employees	3.603	4	290	.007
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - relations among employees in general	3.276	4	290	.012
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - Level of Productivity	2.891	4	290	.023

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + BQ9

Due to the fact, that the overall  $F$  test is significant (Table 5.25), the analysis explores the individual dependent variables with separate ANOVA tests (see Table 5.26 below). The adjusted alpha level figure is again set at 0.0012 level. As shown in Table 5.26, none of the thirty nine variables are significant at the 0.0012 adjusted alpha level, indicating that no differences exist among the five groups of total years of work experience.

Table 5.26: Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
BQ9	Employee selection is taken very seriously by this University	10.676	4	2.669	2.102	.081	.028	8.409	.621
	Employee selection places priority on the candidate's potential to learn	12.364	4	3.091	1.930	.105	.026	7.720	.579
	Employee selection emphasises capacity to perform well right away	8.653	4	2.163	1.532	.193	.021	6.129	.472
	Employees in this university have clear career paths	8.605	4	2.151	1.359	.248	.018	5.437	.422
	Training programs strive to develop university-specific skills/knowledge	.681	4	.170	.173	.952	.002	.694	.087
	The training programs emphasise on-the-job experiences	.631	4	.158	.139	.968	.002	.554	.079
	Training programs in this University have improved the effectiveness of employees	2.346	4	.586	.606	.659	.008	2.425	.199
	Performance appraisal is based on objective, quantifiable results	12.675	4	3.169	1.920	.107	.026	7.681	.577
	Performance appraisals include management by objective with mutual goal setting	9.492	4	2.373	1.480	.208	.020	5.921	.457
	Performance appraisals include developmental feedback	7.649	4	1.912	1.117	.349	.015	4.469	.350
	Performance appraisals emphasise development of abilities / skills	12.619	4	3.155	2.202	.069	.029	8.807	.644
	Performance appraisal emphasises the output of the team	10.333	4	2.583	1.552	.187	.021	6.209	.478
	This university incentive system is tied to skill-based rewards	10.739	4	2.685	1.474	.210	.020	5.896	.456
	This university incentive system has a group-based component	26.683	4	6.671	3.778	.005	.050	15.112	.888
	Compensation and Incentives are contingent on performance	21.739	4	5.435	3.396	.010	.045	13.585	.848
	Employees in this university are empowered to make decisions consistent with their status	4.349	4	1.087	1.057	.378	.014	4.229	.332
	Employees in this university are often asked by their supervisor to participate in decision-making	2.571	4	.643	.501	.735	.007	2.003	.169
	Employees are encouraged to suggest improvements in the way things are done	2.391	4	.598	.486	.746	.007	1.945	.165
	Senior management is communicating effectively with employees in this university	7.426	4	1.856	1.284	.276	.017	5.135	.400
	Employees are encouraged to bring up ideas to help accomplish their department's / university's goals	2.367	4	.592	.416	.797	.006	1.664	.147
	The employees working in this university are highly skilled	2.789	4	.697	.693	.597	.009	2.772	.224
	The employees working in this university are considered the best in university education in Cyprus	12.333	4	3.083	2.721	.030	.036	10.883	.749
	The employees working in the university are encouraged to be creative	11.247	4	2.812	2.092	.082	.028	8.369	.619
	The employees working in the university are experts in their particular jobs and functions	2.459	4	.615	.602	.662	.008	2.407	.198
	I would be happy to spend the rest of my career with this university	3.890	4	.973	.839	.501	.011	3.356	.267
	I talk about this university to my friends as an ideal working place	1.008	4	.252	.204	.936	.003	.816	.094
	I find my values and the university's values very similar	5.650	4	1.412	.965	.427	.013	3.861	.305
	I am proud to tell others that I am a part of this university	4.986	4	1.247	1.306	.268	.018	5.224	.407
	Our employees' productivity is higher than those of other universities in Cyprus	6.694	4	1.674	1.461	.214	.020	5.843	.452
	Our employees produce in an efficient manner	2.326	4	.582	.658	.622	.009	2.630	.214
	Our employees' productive power is higher than those of other universities in Cyprus	7.096	4	1.774	1.661	.159	.022	6.644	.508
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - performance	6.933	4	1.733	3.087	.016	.041	12.347	.808
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - quality of services and programs(service quality)	2.650	4	.662	1.106	.354	.015	4.424	.347
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - development of new services and programs	.893	4	.223	.332	.856	.005	1.328	.125
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - ability to attract essential employees	3.534	4	.884	1.133	.341	.015	4.530	.355
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - satisfaction of customers or clients	2.903	4	.726	1.248	.291	.017	4.991	.389
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - relations between management and other employees	2.904	4	.726	.821	.512	.011	3.285	.262
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - relations among employees in general	4.212	4	1.053	1.370	.245	.019	5.478	.425
	Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - Level of Productivity	2.727	4	.682	.941	.441	.013	3.762	.297

Despite the fact that the p-value for MANOVA was marginally significant at 0.047 there are no differences for the separate ANOVA tests at the corrected p value of 0.0012. This anomaly is explained by the fact that MANOVA simultaneously tests if there are statistical differences between the groups of a dependent variable and a set of independent variables. More specifically, it takes into consideration the associations between dependent variables and it also has the ability to trace the differences of a combination of dimensions. On the other hand, the separate ANOVA tests presented in Table 5.24 do not take into consideration that there is a set of dependent variables with associations and explains the differences between the groups on a unidimensional basis.

As already mentioned in Chapter 4 (see section 4.9.3) successive univariate ANOVA's ignore the correlations between dependent variables. In such cases, to adequately address questions regarding how outcome variables account for relative contribution to group separation, the correlations between the dependent variables should be considered (Huberty and Morris, 1989). Thus, (as is the case of the current analysis), there is possibility that an application of a MANOVA test could detect differences between the groups of dependent variables that are associated between them, while at the same time separate ANOVA tests could produce results which indicate that - in relation to a dimension - there is no differentiation between the groups. This situation is addressed by Tatsuoka (1971) and Tonidandel and LeBreton (2013) who argued that it is quite possible that a MANOVA test could reveal a statistically significant multivariate effect while the univariate tests could be statistically non-significant since they ignore the intercorrelations between the dependent variables.

The interpretation of the above findings in practical terms reveal that there are differences between the five groups of total years of experience in relation to their perceptions on the 30 out of 39 variables while only for 9 of them their perceptions were similar. This finding once again supports the notion that total years of work experience is important and should be taken seriously into consideration in designing and implementing a system of HRM practices for an organisation.

#### **5.4.6 Overall Conclusion of MANOVA analysis**

In relation to the conceptualisation of the current thesis, section 5.4 provided the analytical basis through the application of the multivariate analysis of variance to test whether each of the four independent (control) variables appear to have significant differences regarding the perceptions of administrative employees against the 39 study variables. The results of the MANOVA analysis demonstrate how the four independent variables (current position, gender, education level, and years of employment) appear to have a patterned response on the dependent variables. Further to the analysis and interpretation performed for each independent variable above, a more specific conclusion has to do with two particular groups of employees, namely the officers (most of them hold a master's degree) and the assistant officers (normally they hold only a high school diploma). It is clear from the results that officers' answers were more insightful/informed than other administrative employees. This may be due to their education level, prior experience (including knowledge) and their direct contacts with the management team. On the other hand, employees with a high school diploma level education, who normally hold assistant officers positions (based on job descriptions' requirements), seemed to have less knowledge on the internal processes and politics of their universities and lack understanding of the purpose of specific HRM practices.

In addition, the findings could help practitioners in Cyprus universities to realise the different perceptions of their employees in relation to the specific HRM practice in place, and their outcomes. Furthermore, and based on the current results, practitioners may utilize these findings to adjust or redesign certain parts of their systems of HRM practices and/or tailor them for specific groups.

### **5.5 Examining the relationship between the perceived system of HRM practices and university performance: Testing the Research Hypotheses using Structural Equation Modelling (SEM)**

In this section structural equation modelling analysis will be performed to examine the relationship between the perceived system of HRM practices and university performance, taking into consideration the main mediating variables defined for the purposes of this study: human capital, employee commitment and employee performance. This process which starts by the application of Confirmatory Factor Analysis will ultimately lead to the examination of the eight research hypotheses listed in earlier chapters.

Before conducting SEM analysis some ex-ante conditions and assumptions are examined.

#### **5.5.1 Evaluation of multivariate normality of primary data**

An important assumption prior to conducting SEM analyses through AMOS software is that the data are multivariate normal (Byrne, 2010).

Since SEM is based on the analysis of structure covariances, evidence of kurtosis is a concern (Byrne, 2010). First univariate statistics are examined (see Table 5.27) focussing only on the last two columns. The first column shows the univariate kurtosis

value and the second the critical ratio (i.e., z-value) listed for each of the 39 items. As shown, positive values range from 0.08 to 2.79 and negative values from  $-0.97$  to  $-0.02$ , yielding an overall mean univariate kurtosis value of 0.3748.

There is no clear consensus as to how large the nonzero values should be before conclusions of extreme kurtosis can be drawn (see Kline, 2005; Bryne, 2010). Nevertheless, West et al. (1995) consider values equal to or greater than 7 to be indicative of early departure from normality. In our case (Table 5.27) the kurtosis values reported reveal no item to be substantially kurtotic.

Although, the distribution of observed variables is univariate normal, the multivariate distribution can still be multivariate nonnormal (West et al., 1995; Bryne, 2010). The multivariate normality can be assessed by the index of multivariate kurtosis and its critical ratio, both of which appear at the bottom of the kurtosis and critical ratio (C.R.) columns respectively at Table 5.27. C.R. is the most important value and represents Mardia's (1970, 1974, and 1980) normalised estimate of multivariate kurtosis (Bryne, 2010). Bentler (2010) has suggested that, in practice, values  $> 5.00$  are indicative of data that are nonnormally distributed (Bryne, 2010). In this application, the z-statistic of 49.027 is highly suggestive of nonnormality in the sample.

In cases where there is evidence of multivariate kurtosis, interpretations based on the usual Maximum Likelihood (ML) estimation may be problematic. An alternative method of estimation should be used. One approach to the analysis of nonnormal data is to base analyses on asymptotic distribution-free (ADF) estimation (Browne, 1984), which is available in AMOS (Bryne, 2010). However, unless sample sizes are extremely

large (1,000 to 5,000 cases), the ADF estimator performs very poorly (West et al., 1995). More recently, statistical research (Raykov and Marcoulides, 2006) has suggested that, at the very least, sample sizes should be greater than 10 times the number of estimated parameters, otherwise the results from the ADF method cannot be trusted (Bryne, 2010). The model under study has 99 freely estimated parameters, thereby suggesting a minimal sample size of 990. Given that the sample size of this study is 321, the use of the ADF method of estimation cannot be used.

**Table 5.27: Assessment of normality**

No.	Variable	min	max	skew	c.r.	kurtosis	c.r.
1	A2Q45	1,000	5,000	-,602	-4,404	,715	2,613
2	A2Q49	1,000	5,000	-,251	-1,839	-,022	-,079
3	A2Q48	1,000	5,000	-,098	-,718	-,337	-1,232
4	A2Q47	1,000	5,000	-,059	-,435	-,323	-1,180
5	A2Q45	1,000	5,000	-,456	-3,336	,167	,612
6	A2Q44	1,000	5,000	-,515	-3,768	-,150	-,549
7	A2Q43	2,000	5,000	-,390	-2,853	-,441	-1,613
8	A2Q42	1,000	5,000	-,467	-3,415	,253	,925
9	A1Q41	1,000	6,000	-,453	-3,317	,352	1,286
10	A1Q40	1,000	6,000	-,894	-6,538	1,646	6,021
11	A1Q39	1,000	6,000	-,523	-3,829	,531	1,942
12	A1Q32	1,000	6,000	-,995	-7,274	1,342	4,909
13	A1Q35	1,000	6,000	-1,186	-8,676	1,684	6,158
14	A1Q36	1,000	6,000	-,959	-7,016	,965	3,531
15	A1Q37	1,000	6,000	-1,355	-9,912	2,794	10,219
16	A1Q30	1,000	6,000	-,732	-5,357	,860	3,145
17	A1Q29	1,000	6,000	-,603	-4,413	,178	,652
18	A1Q28	1,000	6,000	-,641	-4,691	,100	,364
19	A1Q27	1,000	6,000	-,936	-6,847	1,389	5,080
20	A1Q15	1,000	6,000	-,654	-4,783	-,314	-1,148
21	A1Q14	1,000	6,000	-,793	-5,799	,368	1,347
22	A1Q13	,000	6,000	-,790	-5,778	,078	,286
23	A1Q12	1,000	6,000	-,609	-4,454	-,160	-,584
24	A1Q11	1,000	6,000	-,543	-3,973	-,285	-1,042
25	A1Q26	1,000	6,000	-,653	-4,779	,138	,505
26	A1Q25	1,000	6,000	-,586	-4,289	-,203	-,743
27	A1Q24	1,000	6,000	-,841	-6,152	,564	2,064
28	A1Q23	1,000	6,000	-,509	-3,725	-,208	-,762
29	A1Q22	1,000	6,000	-,721	-5,272	,746	2,726
30	A1Q20	1,000	6,000	,228	1,669	-,816	-2,986
31	A1Q18	1,000	6,000	-,186	-1,359	-,830	-3,034
32	A1Q17	1,000	6,000	,083	,610	-,968	-3,541
33	A1Q10	1,000	6,000	-,867	-6,339	1,669	6,104
34	A1Q8	1,000	6,000	-,919	-6,725	,830	3,037
35	A1Q7	1,000	6,000	-1,169	-8,552	2,056	7,520
36	A1Q5	1,000	6,000	-,338	-2,470	-,454	-1,660
37	A1Q4	1,000	6,000	-,676	-4,941	-,193	-,707
38	A1Q3	,000	6,000	-,615	-4,500	-,193	-,705
39	A1Q1	1,000	6,000	-,987	-7,222	1,089	3,982
	<b>Multivariate</b>					<b>309,492</b>	<b>49,027</b>

Instead of correcting the test statistic, Chou et al. (1991) and Hu et al. (1992) have argued that it may be more appropriate to use a different mode of estimation (Bryne, 2010). A statistic developed for this purpose, called the  $S-B\chi^2$ , has been shown to be the most reliable test statistic for evaluating mean and covariance structure models under various distributions and sample sizes (Bryne, 2010). Although the  $S-B\chi^2$  statistic works very well with smaller sample sizes (Bryne, 2010) such as in this study, this method unfortunately is not available in the AMOS program.

The performance in terms of empirical and theoretical fit of the three estimation methods described above is differentially affected by sample size, specification error, and kurtosis. Of the three methods, ML is considerably more insensitive than the other two to variations in sample size and kurtosis. Only empirical fit is affected by specification error as it should be. Moreover, ML tends in general not only to be more stable, but also demonstrates higher accuracy in terms of empirical and theoretical fit compared to the other estimators (Ollson et al., 2000). On the basis of the above discussion, for the purposes of this study the analyses are based on ML estimation.

### **5.5.2 Measurement Model Evaluation**

Before conducting SEM, it is considered to be methodologically prudent to satisfy an important criterion related to the adequacy of sample size. Although, it is suggested that the ratio between the sample size and the number of observed variables in the hypothesized model, essential for the Maximum Likelihood (ML) estimation, should be higher than 10 to 1 (Thompson, 2000), more recent scholarly work suggests that the general rule for SEM is that the number of observations needed for each parameter estimated must be between 5 and 10 observations (Hair et al., 2008, 2010). This criterion is fulfilled in the present study.

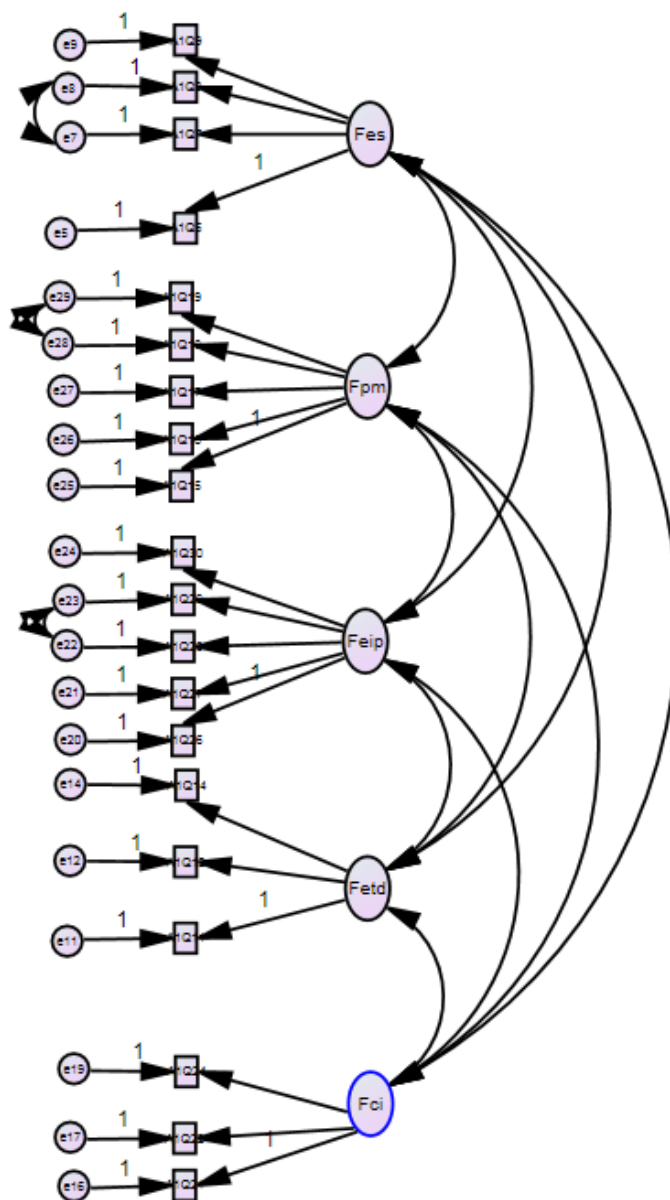
Since the model that has been developed for the purposes of the current thesis includes a 2<sup>nd</sup> order factor, the process that will be followed includes an examination of the construct validity for the 2<sup>nd</sup> order factor (HRMSYS) and then the evaluation of the overall measurement model.

#### ***5.5.2.1 Measurement Model Evaluation of the 2nd Order Factor***

Prior to the evaluation of the construct validity of the overall measurement model, the construct validity of the 2<sup>nd</sup> order factor (HRMSYS Construct – Perceived System of HRM Practices) is examined. As has been already explained, the 2<sup>nd</sup> order factor consists of five 1<sup>st</sup> order factors:

1. Fes (Employee Selection)
2. Fetd (Employee Training and Development)
3. Fpm (Performance Management)
4. Fci (Compensation and Incentives)
5. Feip (Employee Involvement and Participation)

*Figure 5.8: CFA for 2<sup>nd</sup> order Factor (HRMSYS)*



It is important at this point to reiterate that the “Perceived System of HRM Practices” construct is considered to be the main independent (explanatory) variable in the proposed model.

Below, the measurement model evaluation is explained. Goodness-of-fit measures were utilised to assess the structural fit of the proposed model. Theory suggests that if the chi-square is not significant the model is regarded as acceptable; nevertheless, many

disregard this condition since chi-square is often reported as significant mainly due to sample size restrictions and its sensitivity to the likelihood test ratio (Bentler and Bonett, 1980). The model yielded a  $\chi^2$  value of 395,095 with 162 degrees of freedom ( $p=0.000$ ). In response to chi-square's in built limitations, the CMIN/DF ( $\chi^2$  divided by the degrees of freedom) fit surfaced as the more appropriate fit statistic with values less than 3 indicating an acceptable fit (Tabachnick and Fidell, 2007). The 2<sup>nd</sup> order factor model revealed an acceptable CMIN/DF of 2.438.

In terms of additional fit statistics, the model yielded a Root Mean Square Error of Approximation (RMSEA) of (.067) (below the acceptable threshold of (.07), as suggested by Steiger, 2007), with a lower boundary of a two-sided 90% confidence interval for the population of (.058) and an upper boundary of (.075). Moreover, the model produced a CFI (Comparative Fit Index) score of .948, and an IFI (Incremental Fit Index) score of (.949): both of which fall within the ideal ranges (>.90) for acceptable fit (Hair, Black, Babin, and Anderson, 2010). Finally, parsimonious fit indices such as PRATIO (.852) and PCFI (.809) also indicate an acceptable fit. Mulaik et al. (1989) suggest that the more complex the model, the lower the fit index.

#### 5.5.2.1.1 Convergent Validity of the 2<sup>nd</sup> order factor

For the examination of convergent validity, the following indicators are taken into consideration:

1. Factor Loadings
2. Average Variance Extracted (AVE)
3. Construct Reliability

These indicators are presented in Table 5.28. As factor loadings are concerned, these should be higher than the 0.50 threshold, with ideal values at or exceeding 0.70. The extracted results indicate that all factor loading exceed 0.70. Loadings of Average Variance Extracted (AVE) should be higher than 0.50 in order to claim adequate convergent validity. Again, the extracted loading satisfies fully this criterion since all loadings are above the threshold. Finally, construct reliability should exceed 0.70 in order to claim adequate convergent or internal consistency, a criterion which is also satisfied by the current results.

**Table 5.28: Convergent Validity of the 2nd order factor**

	Feip	Fci	Fpm	Fetd	Fes	Item Reliabilities or Squared Factor Loadings (communalities)	Eigenvalue	Delta (standardised error variance)
A1Q22	0.714					0.510		0.490
A1Q23	0.745					0.555		0.445
A1Q24	0.855					0.731		0.269
A1Q25	0.775					0.601		0.399
A1Q26	0.860					0.740	3.136	0.260
A1Q17		0.767				0.588		0.412
A1Q18		0.802				0.643		0.357
A1Q20		0.713				0.508	1.740	0.492
A1Q11			0.835			0.697		0.303
A1Q12			0.909			0.826		0.174
A1Q13			0.840			0.706		0.294
A1Q14			0.821			0.674		0.326
A1Q15			0.784			0.615	3.518	0.385
A1Q8				0.856		0.733		0.267
A1Q10				0.825		0.681		0.319
A1Q7				0.828		0.686	2.099	0.314
A1Q1					0.692	0.479		0.521
A1Q3					0.791	0.626		0.374
A1Q4					0.730	0.533		0.467
A1Q5					0.730	0.533	2.170	0.467
<b>Average Variance Extracted</b>	<b>62.72%</b>	<b>58.00%</b>	<b>70.36%</b>	<b>69.96%</b>	<b>73.58%</b>			
<b>Construct Reliability</b>	<b>84.07%</b>	<b>70.61%</b>	<b>89.30%</b>	<b>83.02%</b>	<b>72.02%</b>			

### 5.5.2.1.2 Discriminant Validity of the 2<sup>nd</sup> order factor

To allow the evaluation of discriminant validity two indicators must be estimated at a first step: interconstruct correlation (IC) and squared interconstruct correlation (SIC).

Table 5.29 presents the results for both indicators.

Interconstruct correlations are correlations between factors while squared interconstruct correlations are correlations between their squared loadings. To achieve discriminant validity AVE for each factor should exceed the SIC scores for the factor itself and all the remaining factors. Table 5.30 indicates that all factors appear with higher SICs except Fci where its AVE score is lower than the SIC values of Fpm and Fes.

**Table 5.29: Interconstruct Correlation and Squared Interconstruct Correlation**

			IC	SIC
Fes	<-->	Fetd	0.736	0.542
Fes	<-->	Fci	0.812	0.659
Fes	<-->	Feip	0.700	0.490
Fes	<-->	Fpm	0.824	0.679
Fetd	<-->	Fci	0.598	0.358
Fetd	<-->	Feip	0.551	0.304
Fetd	<-->	Fpm	0.708	0.501
Fci	<-->	Feip	0.693	0.480
Fci	<-->	Fpm	0.800	0.640
Feip	<-->	Fpm	0.585	0.342

**Table 5.30: Discriminant Validity of the 2<sup>nd</sup> order factor**

Factor	AVE	SIC's				
		Feip	Fci	Fpm	Fetd	Fes
<b>Feip</b>	62.72%		48.02%	34.22%	30.36%	49.00%
<b>Fci</b>	58.00%	48.02%		64.00%	35.76%	65.93%
<b>Fpm</b>	70.36%	34.22%	64.00%		50.13%	67.90%
<b>Fetd</b>	69.96%	30.36%	35.76%	50.13%		54.17%
<b>Fes</b>	73.58%	49.00%	65.93%	67.90%	54.17%	

### **5.5.2.2 Overall Measurement Model Evaluation**

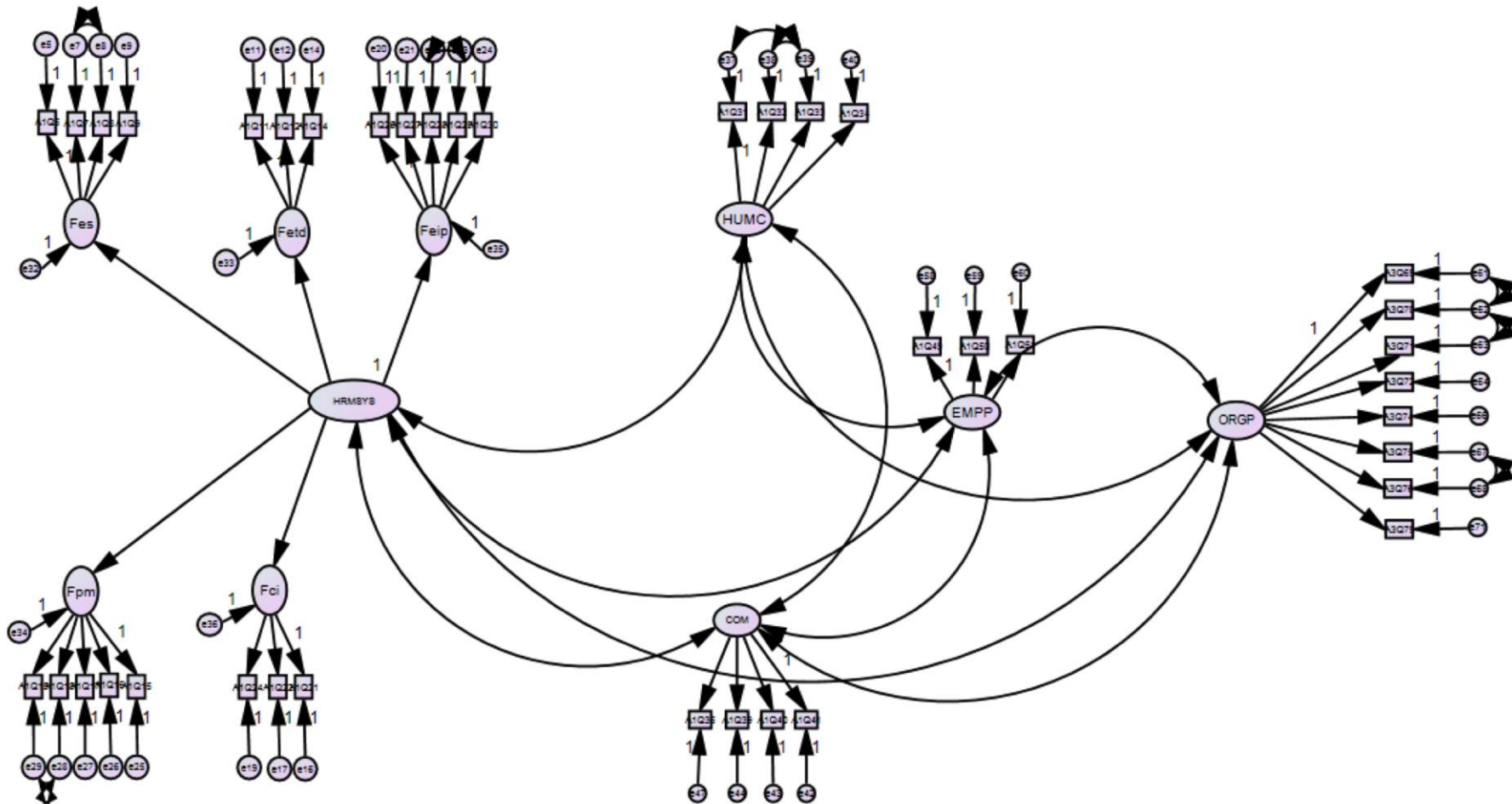
Following the evaluation of the 2<sup>nd</sup> order factor which indicates that the HRMSYM construct is both reliable and valid, the subsequent step involves the evaluation of the overall model.

Below, the measurement model evaluation is explained. Goodness-of-fit measures were utilised to assess the structural fit of the overall model.

The overall model yielded a  $\chi^2$  value of 1585,871 with 681degrees of freedom ( $p=0.000$ ). In response to chi-square's in built limitations, the model revealed an acceptable CMIN/DF of 2.329. The Root Mean Square Error of Approximation (RMSEA) yields a score of (.064) with a lower boundary of a two-sided 90% confidence interval for the population of (.060) and an upper boundary of (.069). The model produced a CFI (Comparative Fit Index) score .901, and an IFI (Incremental Fit Index) score .901; all falling within the ideal ranges ( $>.90$ ) for acceptable fit.

Finally, parsimonious fit indices such as PRATIO (.919) and PCFI (.828) which also indicates an acceptable fit. Many scholars suggest a CFI and IFI threshold of  $>.95$  for accepting a model. Nevertheless, as suggested by Hair et al. (2010), both the complexity of the observed variables and the number of observations affect fit indices. The literature (Hair et al, 2010) suggests that for models with more than 250 observations and with 30 or more observed variables with a CFI above (.90) in conjunction with an RMSEA of less than (.07) (which both stand for the final model of this thesis), suggest an acceptable fit.

Figure 5.9: CFA for the Overall Model



#### 5.5.2.2.1 Convergent Validity of the overall model

For the examination of convergent validity, the following indicators are taken into consideration:

1. Factor Loadings
2. Average Variance Extracted (AVE)
3. Construct Reliability

The indicators required for the examination of convergent validity (factor loadings, average variance extracted and construct reliability) are presented in Table 5.31. As factor loadings are concerned, the extracted results indicate that all factors loading exceed 0.70. Average Variance Extracted (AVE) loadings satisfy fully the criterion of 0.50 since all loadings are above the threshold. Finally, construct reliability exceeds 0.70 enabling us to claim adequate convergent or internal consistency.

**Table 5.31: Convergent Validity of the Overall Model**

	HRMSYS	HUMC	COM	EMPP	ORGP	Item Reliabilities or Squared Factor Loadings (communalities)	Eigenvalue	Delta (standardised error variance)
Feip	0.777					0.604		0.396
Fci	0.877					0.769		0.231
Fpm	0.859					0.738		0.262
Fetd	0.748					0.560		0.440
Fes	0.937					0.878	3.548	0.122
A1Q27		0.774				0.599		0.401
A1Q28		0.831				0.691		0.309
A1Q29		0.871				0.759		0.241
A1Q30		0.724				0.524	2.572	0.476
A1Q37			0.868			0.753		0.247
A1Q36			0.859			0.738		0.262
A1Q35			0.866			0.750		0.250
A1Q32			0.785			0.616	2.857	0.384
A1Q39				0.864		0.746		0.254
A1Q40				0.737		0.543		0.457
A1Q41				0.931		0.867	2.156	0.133
A2Q42					0.734	0.539		0.461
A2Q43					0.690	0.476		0.524
A2Q44					0.710	0.504		0.496
A2Q45					0.696	0.484		0.516
A2Q47					0.770	0.593		0.407
A2Q48					0.696	0.484		0.516
A2Q49					0.674	0.454		0.546
A2Q52					0.750	0.563	4.097	0.438
<b>Average Variance Extracted</b>	<b>70.96%</b>	<b>64.31%</b>	<b>71.44%</b>	<b>71.88%</b>	<b>51.22%</b>			
<b>Construct Reliability</b>	<b>92.39%</b>	<b>87.76%</b>	<b>90.90%</b>	<b>88.37%</b>	<b>89.34%</b>			

Note: Model's Average Variance Extracted (AVE) = 0.62.

### 5.5.2.2.2 Discriminant Validity of the Overall Model

Table 5.32 presents the results for both interconstruct correlation (IC) and squared interconstruct correlation (SIC) of the overall model. It appears that discriminant validity is achieved since AVE scores for each factor exceed the SIC scores for the factor itself and all the remaining factors (see Table 5.33).

**Table 5.32: Interconstruct Correlation and Squared Interconstruct Correlation**

			IC	SIC
HRMSYS	<-->	HUMC	0.7090	0.5027
HRMSYS	<-->	COM	0.5940	0.3528
HRMSYS	<-->	EMPP	0.5180	0.2683
HRMSYS	<-->	ORGP	0.6150	0.3782
HUMC	<-->	COM	0.4100	0.1681
HUMC	<-->	EMPP	0.5650	0.3192
HUMC	<-->	ORGP	0.5490	0.3014
COM	<-->	EMPP	0.3870	0.1498
COM	<-->	ORGP	0.4880	0.2381
EMPP	<-->	ORGP	0.6500	0.4225

**Table 5.33: Discriminant Validity of the Overall Model**

Factor	AVE	SIC's				
		HRMSYS	HUMC	COM	EMPP	ORGP
HRMSYS	70.96%		50.27%	35.28%	26.83%	37.82%
HUMC	64.31%	50.27%		16.81%	31.92%	30.14%
COM	71.44%	35.28%	16.81%		14.98%	23.81%
EMPP	71.88%	26.83%	31.92%	14.98%		42.25%
ORGP	51.22%	37.82%	30.14%	23.81%	42.25%	

### **5.5.3 Assessing Common Method Bias**

Common method bias refers to variance attributable to a measurement method rather than to the construct or constructs purportedly represented by the measures (Campbell and Fiske, 1959; Podsakoff et al., 2003). For instance, in research where participants respond to all survey items in a single sitting, CMB may threaten the validity of the data (Burton-Jones, 2009). Common method variance has been shown to introduce systematic bias into a study by artificially inflating or deflating correlations, thereby threatening the validity of conclusions drawn about the links between constructs (Reio, 2010). Many studies pointed out that only few published papers have addressed common method variance despite using the self-report survey method (Woszczyński and Whitman, 2004).

According to Richardson, et al. (2009), common method bias is a potential problem associated with research in the social and behavioural sciences, especially studies involving self-reports such as questionnaires, surveys, and interviews (Richardson et al., 2009). Malhorta, Kim and Patil (2006), support that in the area of human resource management self-report surveys are the most common form of data collection in the social sciences. HRM researchers need to be more informed about how their research designs and data collection practices can create common method bias and how to overcome this limitation.

Social scientists and organisational researchers (Podsakoff et al., 2003) have identified two main approaches for controlling possible CMB in quantitative studies: (a) strengthening the procedural design of the study and (b) using statistical controls. Both main approaches have been followed for the purposes of this thesis.

Following Reio (2010) and other studies (Podsakoff et al, 2003; Liang et. al, 2007) a number of procedures have been followed in order to minimise the likelihood of CMB:

1. Anonymity and confidentiality of the participants was ensured.
2. Scale items used were written clearly and precisely and, thus, less subject to bias.
3. Participants were informed that there is no preferred or correct answer; rather their honest appraisal of the items was desired.
4. Attention was given to ensure that all responses require equal effort (e.g., avoid complicated wording and syntax, as well as double-barreled questions).
5. Clear instructions were given to respondents in order to complete the questionnaire and avoid confusion (Nunnally and Bernstein, 2007; Podsakoff et al., 2003).
6. The respondents originated from all universities in Cyprus, thus data were collected from different research settings (heterogeneous sample – see Torrente et al., 2012)
7. Primary data were collected from three different hierarchy levels (managers/directors, officers, assistant officers) hence it originated from different sources (Torrente et al., 2012).

With regards to the second approach, which entails the use of statistical controls, Harman's one-factor test was performed. Following Podsakoff et al. 2003, the presence of common method bias was checked by conducting Harman's one-factor test in our data. A principal components factor analysis with an unrotated solution yielded seven factors with eigenvalues greater than 1, accounting for 69.63% of the total variance. The largest variance explained by Factor 1 is 39.79%, which suggests that no single factor accounted for a majority of the covariance in the variables (see Table 5.34). The result

shows that common method variance is unlikely to be a serious problem (see also Chow, Huang, and Liu, 2008).

**Table 5.34: Herman's Single Factor Test**

Component	Total Variance Explained					
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	15.521	39.798	39.798	15.521	39.798	39.798
2	3.251	8.337	48.135	3.251	8.337	48.135
3	2.274	5.830	53.965	2.274	5.830	53.965
4	1.874	4.806	58.771	1.874	4.806	58.771
5	1.592	4.082	62.853	1.592	4.082	62.853
6	1.397	3.582	66.435	1.397	3.582	66.435
7	1.247	3.198	69.633	1.247	3.198	69.633

## 5.6 Hypotheses Testing

In section 5.6 the hypotheses testing is empirically performed and the results are presented and discussed. It should be noted that the discussion provided in this chapter purposely is limited to the empirical properties of the empirical model used (SEM). The in-depth discussion of the implications of the project results are presented in the next chapter.

As mentioned in the methodology Chapter (see Chapter 4) structural equation modelling (SEM) has been selected as the most appropriate analytical strategy to test the causal relationships between the constructs developed for the purposes of the current thesis. To reiterate, structural equation modelling varies from other multivariate techniques that it takes a confirmatory approach to the analysis of data rather than an exploratory approach. Unlike exploratory analysis, confirmatory data analysis requires the hypothesised causal relationships to be specified in advance. In addition, unlike other multivariate techniques that are based only on observed measurements, SEM can

include both observed (i.e. manifest) and unobserved (i.e. latent) variables. Moreover, while traditional multivariate techniques are incapable of either measuring or correcting for measurement error, structural equation modelling estimates measurement error and permits the incorporation of errors within the model (Hair et al., 2010). Finally, unlike other multivariate methods, SEM offers an effective way of dealing with multicollinearity (Bacon, 1997). Because of all these desirable characteristics, SEM is employed as the main method of data analysis.

The method most widely used for estimation is Maximum Likelihood (ML) estimation, which assumes multivariate normal data and reasonable sample size, e.g. about 200 observations. In more technical terms, it is a method that improves parameters estimates in a way that minimises the difference between the observed and estimated covariance matrices. The analysis performed indicated that the explained variances were 0.36 for the level of human capital, 0.52 employee commitment, and 0.36 for employee performance; which according to the literature (Chin, 1998), are considered moderate to substantial.

Standardised path coefficients and the significance of the hypothesised relationships were utilised to test the postulated hypotheses in a causal diagrammatic form. The aim of the study was to test and investigate the structural model that explains the relationship between all the five constructs (the perceived system of HRM practices, human capital, employee commitment, employee performance, and organisational performance). The statistical results for the structural model are represented in Figure 5.13.

Hypothesis 1 posits that there is a positive relationship between the perceived system of HRM practices and the level of human capital. The structural model demonstrates that the path estimates between the perceived system of HRM practices and the level of human capital were significant (standardised path coefficient  $\beta = .712$ ;  $t = 11.271$ ,  $p < 0.001$ ) leading to the acceptance of Hypothesis 1.

Hypothesis 2 posited that there is a positive effect of the perceived system of HRM practices on HR attitude and behaviour (employee commitment). The results confirmed that the perceived system of HRM practices has significant positive effects on employee commitment (standardised path coefficient  $\beta = .593$ ;  $t = 10.130$ ,  $p < 0.001$ ). Therefore, Hypothesis 2 is supported.

Hypothesis 3 posited that the level of human capital is significantly and positively related to employee performance and Hypothesis 4 predicted that employee commitment is significantly and positively related to employee performance. The model demonstrated that the level of human capital has significant positive effect on employee performance (standardised path coefficient  $\beta = .492$ ;  $t = 7.763$ ,  $p < 0.001$ ); and employee commitment has also significant positive effect on employee performance (standardised path coefficient  $\beta = .188$ ;  $t = 3.266$ ,  $p < 0.001$ ), hence providing support for Hypotheses 3 and 4.

Hypothesis 5 posited that employee performance has a positive impact on organisational performance. The impact of employee performance on organisational performance was found to be positive and statistically significant (standardised path coefficient  $\beta = .427$ ;  $t = 6.600$ ,  $p < 0.001$ ), thus providing support for Hypotheses 5.

Hypothesis 6 proposed that the perceived system of HRM practices has a direct positive impact on organisational performance. The analysis revealed that the perceived system of HRM practices has significant positive and direct impact on organisational performance (standardised path coefficient  $\beta = .273$ ;  $t = 3.253$ ,  $p < 0.001$ ). Hence, Hypothesis 6 is supported.

Hypothesis 7 proposed that the level of human capital has a direct positive impact on organisational performance. The relationship between the level of human capital and organisational performance was found not to be statistically significant (standardised path coefficient  $\beta = .060$ ;  $t = 0.814$ ; n.s.). Therefore, Hypothesis 7 is not supported (the level of human capital is not directly related with organizational performance).

Finally, Hypothesis 8 proposed that HR attitude and behaviour (employee commitment) has a direct positive impact on organisational performance. The results show that the relationship between employee commitment and organisational performance is positively significant and direct (standardised path coefficient  $\beta = .138$ ;  $t = 2.217$ ,  $p < 0.05$ ). Therefore, Hypothesis 8 is supported.

Overall, the results are exhibited in Table 5.35 and they revealed that seven out of the proposed hypotheses can be accepted, whereas Hypothesis 7 cannot be supported.

**Table 5.35: Summary of Hypotheses and Results**

Hypotheses	Standardized path coefficient	t-value	Results
<b>H1: HRMSYS → (+) HUMC</b>	.712	11.271**	Accepted
<b>H2: HRMSYS → (+) COM</b>	.593	10.130**	Accepted
<b>H3: HUMC → (+) EMPP</b>	.492	7.763**	Accepted
<b>H4: COM → (+) EMPP</b>	.188	3.266**	Accepted
<b>H5: EMPP → (+) ORGP</b>	.427	6.600**	Accepted
<b>H6: HRMSYS → (+) ORGP</b>	.273	3.253**	Accepted
<b>H7: HUMC → (+) ORGP</b>	.060	0.814	Not supported
<b>H8: COM → (+) ORGP</b>	.138	2.217*	Accepted

**Note:** HRMSYS=Perceived System of HRM Practices; HUMC=Human Capital; COM=Employee Commitment; EMPP=Employee performance; ORGP=Organisational Performance

\*Significant at  $p < 0.05$ ; \*\*Significant at  $p < 0.01$ ; n.s. = non-significant.

## 5.7 Testing for Mediation Effects

Mediation refers to a situation that includes three or more variables, such that there is a causal process between all three variables. The mediation relationship as applies in the context of the current analysis describes a *direct effect* between an independent variable (system of HRM practices) and the dependent variable (organisational performance). There might be also *indirect effects* between the independent variable and the mediating variables (human capital and employee commitment), and between the mediating variables and the dependent variable. The degree to which the direct effect changes as a result of including the mediating variables is referred to as the *mediational effect* (MacKinnon et al., 2002; Preacher and Hayes, 2008; Krull and MacKinnon, 2001).

The empirical model developed (see Figure 5.12) has multiple mediations meaning that there are several putative mediators to account for the relationship between the system of HRM practices and organisational performance. Specifically, HRMSYS has a direct relation with ORGP (HRMSYS → ORGP) and two indirect (mediated) relations through COM (HRMSYS → COM → ORGP) and HUMC (HRMSYS → HUMC → ORGP) respectively.

In cases of multiple mediations it is advised (Preacher and Hayes, 2008) that all the mediations are tested using a single multiple mediation model. The methodology involves two distinct models. First a model is built (Model 1 – Figure 5.10) that includes only the direct relationship of HRMSYS to ORPG. Then Model 2 – Figure 5.11 is developed with all the indirect relationships and the direct one.

**Figure 5.10: Model 1 - Direct relationship of HRMSYS to ORPG**

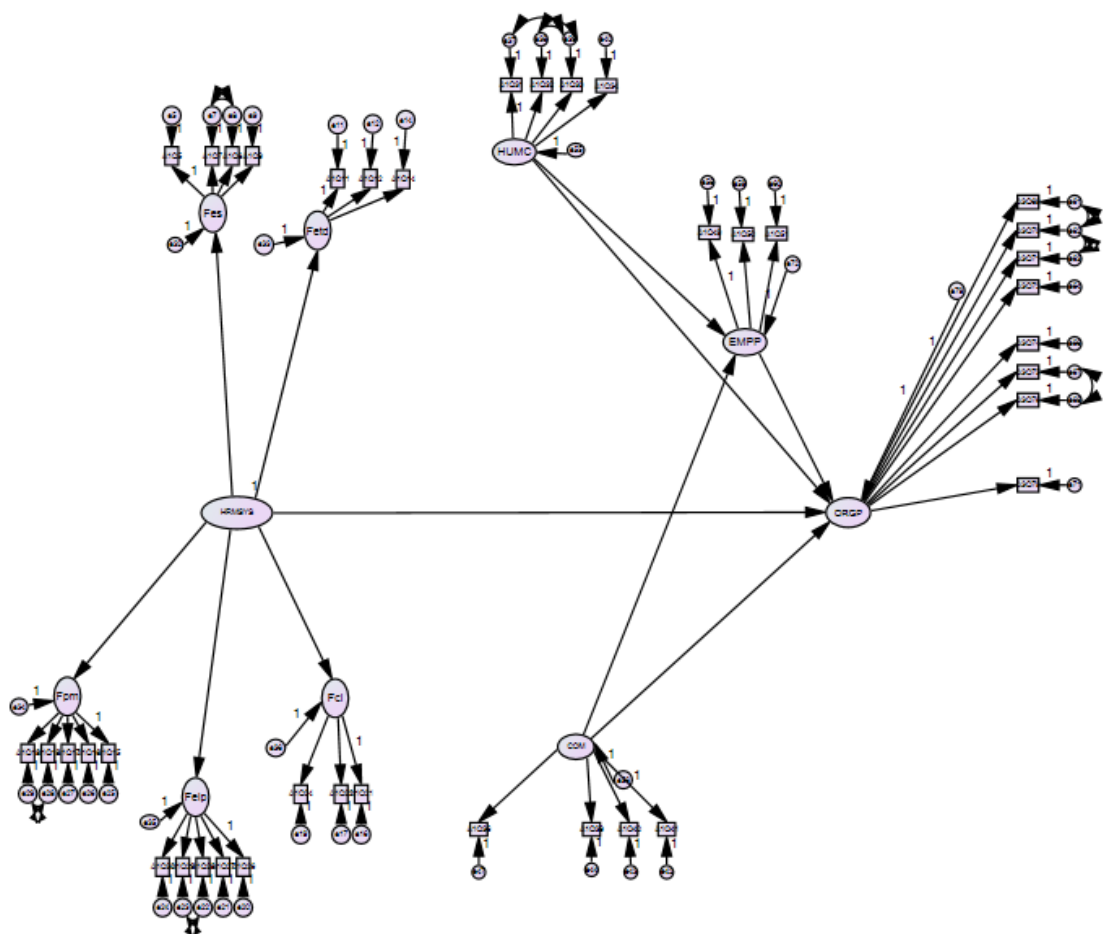
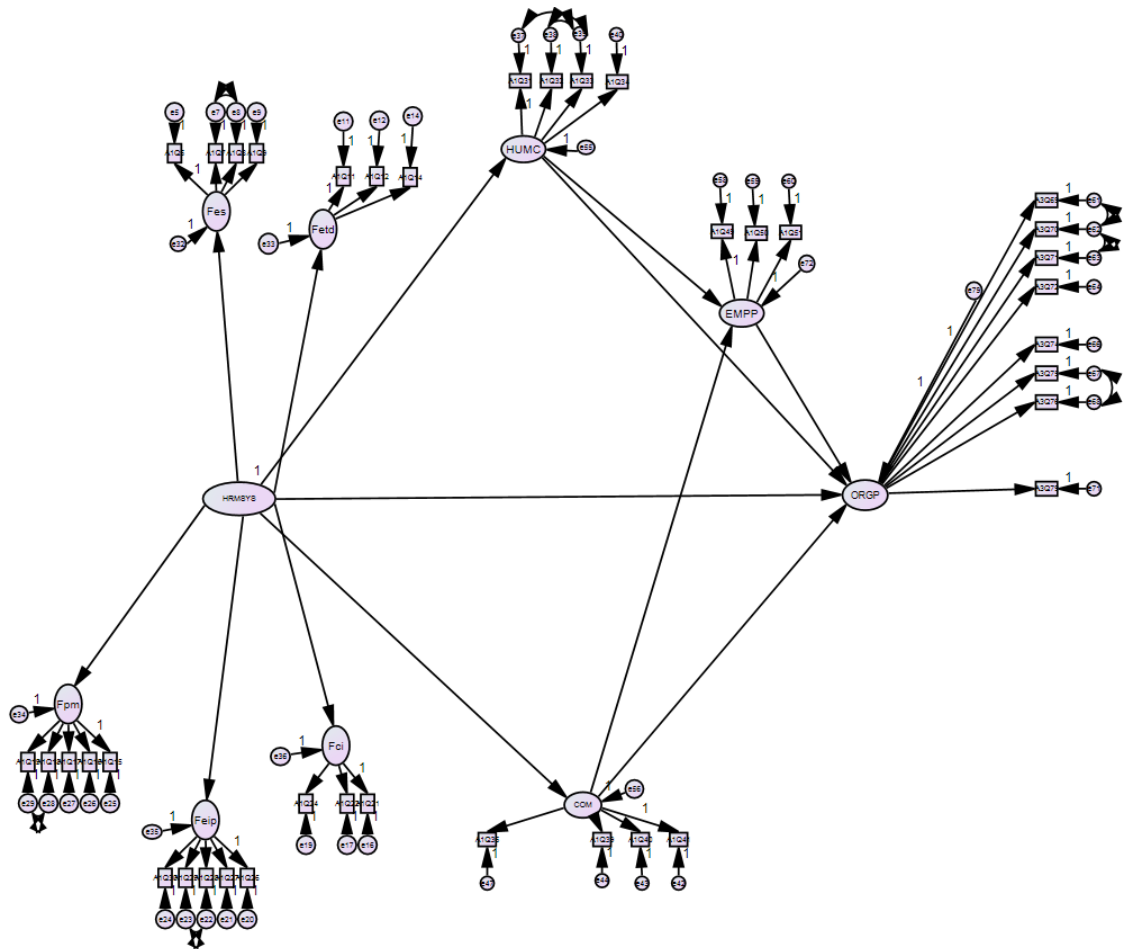


Figure 5.11: Model 2 – Full Mediation Effects



Model 1 investigates if the regression weight of the direct relationship is statistically significant whereas Model 2 investigates if the direct and indirect effects are statistically significant. In this situation the following four scenarios may hold:

1. The indirect effects are not significant. Then there is *no mediation*.
2. Both direct effects (from Model 1 and Model 2) are *not* significant, but indirect effects are significant. Then there are *indirect effects*.
3. Direct effects from Model 1 are significant whereas from Model 2 are not. Also, indirect effects are significant. Then there is a *full mediated* relationship.
4. Direct and indirect effects are significant. In this case there is *partial mediation*.

Table 5.36 summarises the meditational effects results. Since direct and indirect effects are statistically significant at 5% level, it is concluded that there is a partial mediation.

**Table 5.36: Results from Model 1 and 2 concerning direct and indirect effects.**

*(Inside the parentheses in the significance level computed from AMOS).*

Direct effect w/o Med (Model 1)	Direct effect with Med (Model 2)	Indirect effects (Model 2)	Mediation Type Observed
0,138 (***)	0,273 (0,002)	0,322 (0,002)	Partial

Furthermore the model comparison suggests that Model 2 has a better fit than Model 1.

$$\Delta x^2 / \Delta(df) = 287.032 (2), p \leq 0.05$$

In practical terms the above results indicate that the proposed system of HRM practices has both direct and indirect (through employee commitment) on organisational performance. This finding is in agreement with other studies on HRM and performance.

The Sobel test was performed to further test mediation effects and to evaluate the significance of the indirect paths from the independent variable to the dependent (Table 5.37 and Table 5.38). It should be noted that Sobel test will provide empirical support for the existence (or not) of partial mediation. In other words, it is an empirical routine that reconfirms the indirect effects. It must be noted that since a basic assumption of the methodology is multivariate normality in order to overcome this shortcoming bootstrapping was performed (1000 samples).

**Table 5.37: Sobel test results for mediator COM**

	Test statistic	Std. Error	p-value
<b>Sobel test</b>	2.14447291	0.02064843	0.03199501

**Table 5.38: Sobel results for mediator HUMC**

	Test statistic	Std. Error	p-value
<b>Sobel test</b>	0.82472262	0.02831134	0.40952909

The test statistic for COM mediator is equal to 2.144, with standard error 0.0206 and the statistical significance equal to 0.031, while the test statistic for HUMC mediator is equal to 0.824, with standard error 0.0283. The statistical significance is equal to 0.409. The results show that mediator COM (Table 5.37) is statistically significant at level 5%, whereas mediator HUMC (Table 5.38) is not statistically significant. This result indicates that the HUMC is not a mediator.

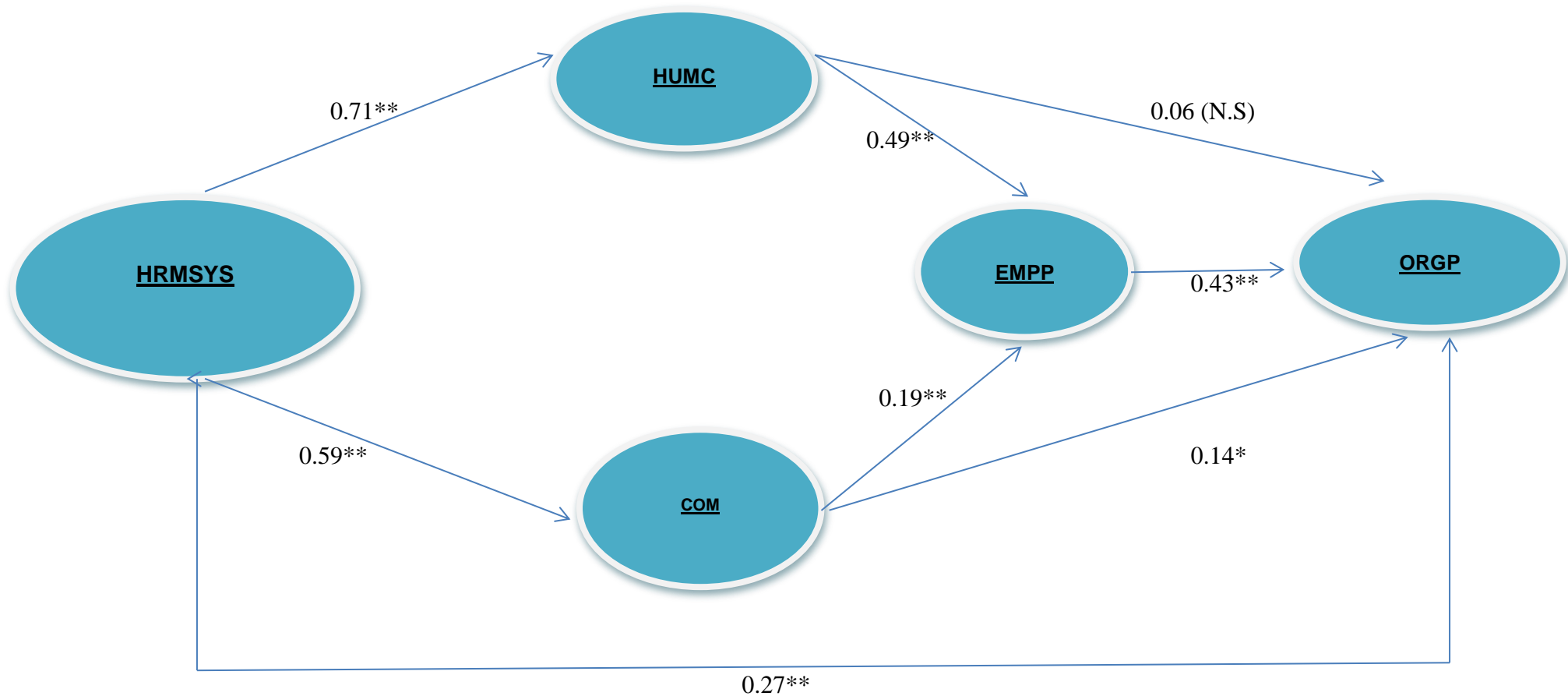
The above empirical finding is compatible with the recent literature (Ng and Feldman, 2010) where it is supported that the level of human capital is considered as very important in the relationship between the HRM practices and organisational performance. However, as it was empirically extracted in the above results its relation to organisational performance is not direct, but rather affects employee performance which in turn impacts organisational performance.

## 5.8 Conclusion

As has been discussed in the preceding sections, the structural model (see Figure 5.13) indicates that the perceived system of HRM practices has significant positive effects on both, the level of human capital and employee commitment. In addition, the analysis revealed that the level of human capital has significant positive effects on employee performance while at the same time employee commitment has also significant positive effect on employee performance. Moreover, the impact of employee performance on organisational performance was found to be positive and statistically significant. The analysis also revealed that the perceived system of HRM practices has a significant positive and direct impact on organisational performance. Finally, the relationship between employee commitment and organisational performance is positively significant and direct. Interestingly, the model indicates no significant direct impact between the level of human capital and organisational performance.

This chapter has presented and discussed the empirical results of the model developed and tested for the purposes of this thesis. In the next chapter the results will be discussed in relation to literature and other studies and at subsequent step conclusions, theoretical and practical implications will be extracted.

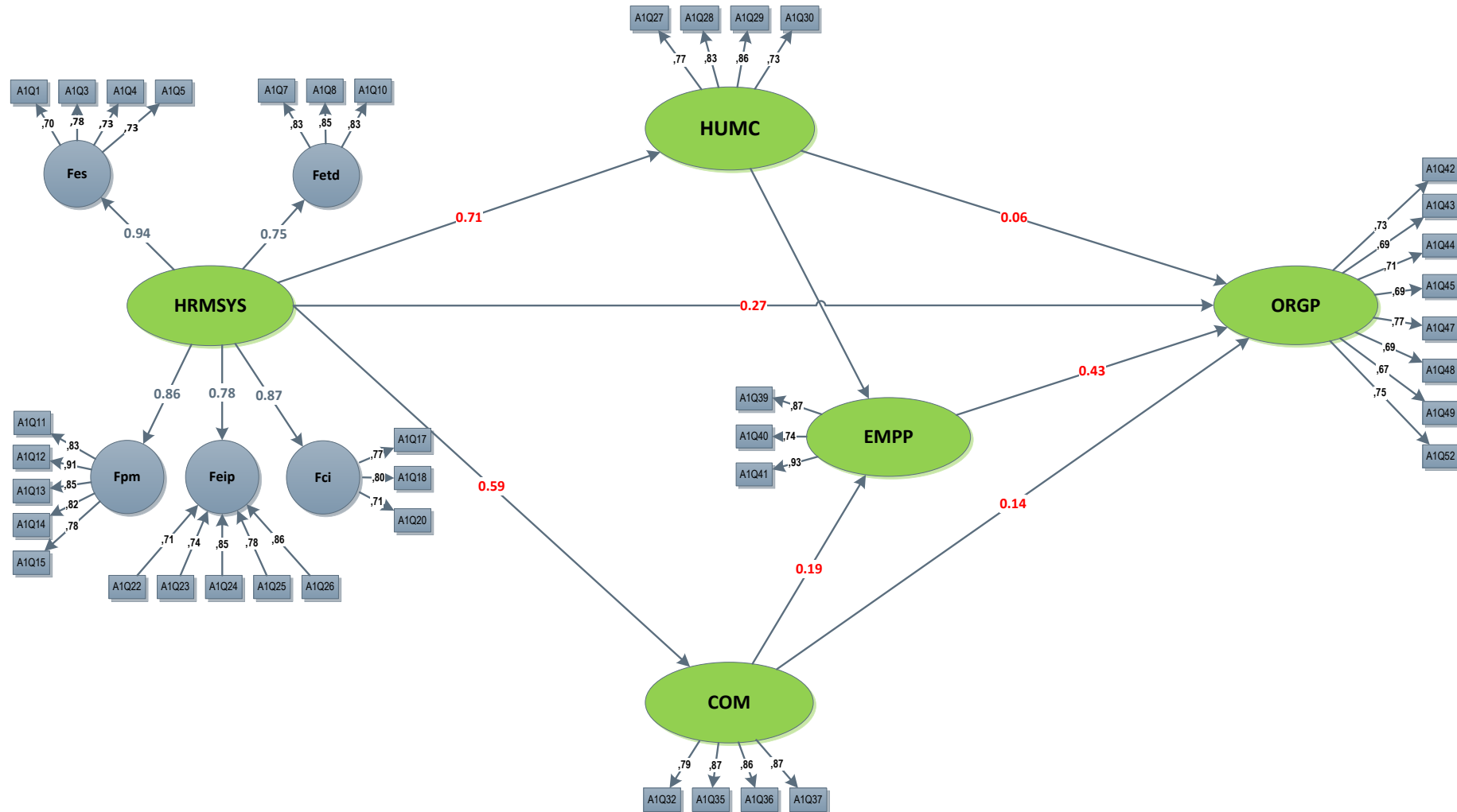
**Figure 5.12: The Final Model (latent variables are denoted with SEM acronyms\*)**



**\*Note:** HRMSYS=Perceived System of HRM Practices; HUMC=Human Capital; COM=Employee Commitment; EMPP=Employee Performance; ORGP=Organisational Performance

**\*Significant at  $p < 0.05$ ; \*\*Significant at  $p < 0.01$ ; n.s. = non-significant.**

Figure 5.13: The SEM Model (latent variables are denoted with SEM acronyms)



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# Chapter 6: Discussion and Conclusions

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## 6.1 Chapter Overview

In Chapter 5, the data were analysed and presented followed by a discussion of the results derived from the study. The main purpose of this chapter is to further discuss the findings in relation to theory and other similar studies and to present the contribution and recommendations of the study. Moreover, the chapter provides the main limitations of the study, and finally, it presents the conclusion of the thesis.

## 6.2 Introduction

The main objectives of the thesis, as introduced in Chapter One, evolved around the two main research questions: first, which are the processes/mechanisms through which a perceived system of HRM practices impacts organisational performance; and, second, what are the mediating roles of human capital, employee attitude and behaviour (employee commitment) and employee performance on the relationship between the perceived system of HRM practices and organisational performance? More specifically, the aim of the study was to reveal the underlying mechanisms through which a perceived system of HRM practices affects organisational performance at University-level education by integrating two theories (the RBV and the Social Exchange Theory). The literature revealed that these theories have been mainly employed separately and have not been tested in the higher education setting.

Although previous studies in businesses often implied that human capital and employee commitment are important aspects in the process of improving organisational performance (Guthrie et al., 2009; Nishii et al., 2008; Wright et al., 2005), empirical examinations of the mediating mechanism, termed the "black box", through which a perceived system of human resources management practices affects university

performance, have not been initiated yet. Some calls for the need of such research studies have begun recently (TEMPUS, 2012; Dowds, 2010).

The literature offers findings (see Chapters 2 and 3) that provide empirical support for the claims of both the resource-based view of the firm, with human capital considered one resource that may have positive impact on performance, and social exchange theory, with employee attitudes and behaviours being the critical mediating mechanisms through which a system of HRM practices affects organisational performance. Moreover, HRM practices or system can be seen as “signals of the organisation’s intentions towards its employees and are interpreted as such by individual employees” (Den Hartog et al., 2004: 563). These signals may, however, not be interpreted consistently by different employees (especially by employees at different levels of seniority) or reacted to in similar or consistent ways (Den Hartog et al., 2004). As a result, variation can occur in the HRM system because of differences in the implementation and communication of the HRM practices throughout the organisation; thus, the intended HRM system varies within employees’ perceptions of the HRM system (Wright and Nishii, 2007).

In light of the above, the current research is one of the pioneering studies in the area of strategic HRM in higher education, demonstrating that the simultaneous use of the resource-based view of the firm and the social exchange theory could provide empirical evidence for examining the mediating role of the organisational resources (the level of human capital) and employee attitude and behaviour (employee commitment) as well as employee performance at university-level education. Moreover, the results of this thesis add to the current knowledge regarding the role of a system of HRM practices as an organisational mechanism (Messersmith and Guthrie, 2010) that may help universities

to configure valuable bundles of committed employees who are equipped with high level of KSA's.

### 6.3 Summary of Findings

In general, the results suggest that the perceived system of HRM practices has a strong effect on University performance (see Chapter 5). To be more precise, the results show that through their KSA's and behaviours, employees allow organisations to maximise the benefit achieved by their employees. Thus, it becomes increasingly important for an organisation not only to acquire, develop and retain employees with higher levels of human capital, but also to ensure its employees exhibit the necessary behaviours (through employee commitment) for the organisation to be successful.

It is also important to reiterate that the university performance measure (the main dependent variable of this thesis) was measured by utilising a cross sectional dataset consisting of employee perceptions. This approach is in line with the relevant literature (Takeuchi et al., 2007; Way, 2002; Delaney and Huselid, 1996; Youndt et al., 1996) which suggests that the utilisation of perceptual measures of performance obtained by employees is empirically more reliable and valid than perceptual measures obtained by managers.

The results from the structural equation modelling analyses found that the perceived system of HRM practices had significant and positive effects on the level of human capital. The path estimates between the perceived system of HRM practices and the level of human capital were significant (standardised path coefficient  $\beta = .712$ ;  $t = 11.271$ ,  $p < 0.001$ ) leading to the acceptance of H1. These findings are consistent with

past research which found that HRM practices affect the level of human capital (Bui and Baruch, 2011; Liao, et al., 2009; Swart and Kinnie, 2010).

Hypothesis 2 predicted that there is a positive relationship between the perceived system of HRM practices and HR attitude and behaviour (employee commitment). The results confirmed that the perceived system of HRM practices has significant positive effects on employee commitment. The path estimates between the perceived system of HRM practices showed significant positive effect on employee commitment (standardised path coefficient  $\beta = .593$ ;  $t = 10.130$ ,  $p < 0.001$ ). Therefore, hypothesis 2 is supported. These findings are consistent with past research which found that HRM practices can affect organisational commitment of staff employees at public institutions of higher education (Watson, 2002). Takeuchi et al. (2009) found that HPWS utilisation was associated with individual employee job satisfaction and affective commitment. Another study by Macky and Boxall (2007) also found a positive relationship between HPWS utilisation and organisational commitment.

Recently, Sang et al. (2013) in their study of occupational stress in a Chinese higher education institute (academic and non-academic employees) found that employees' perceptions of their organisation's commitment to them (through HRM practices) are positively related to employees' commitment to the organisation.

Hypothesis 3 posited that the level of human capital is significantly and positively related to employee performance. The findings demonstrated that the level of human capital has a significant positive effect on employee performance. The path estimates between the level of human capital and employee performance were significant (standardised path coefficient  $\beta = .492$ ;  $t = 7.763$ ,  $p < 0.001$ ), leading to the acceptance

of hypothesis 3. These findings are consistent with past research which found that more education/employee human capital enhances job performance (Baruch et al., 2005; Chang and Chen, 2011), and that education level is related to both task and contextual performance (Ng and Feldman, 2010).

Hypothesis 4 predicted that employee commitment is significantly positive related to employee performance. The results support that employee commitment and employee performance are significantly positively related. The path estimates between employee commitment and employee performance were (standardised path coefficient  $\beta = .188$ ;  $t = 3.266$ ,  $p < 0.001$ ), hence providing support for Hypothesis 4. These findings are consistent with past research which found that commitment affects performance (Smeenk et al., 2008; Jaramillo et al., 2005; Riketta, 2002). With regards to the impact of commitment construct, the results support previous findings on the positive effect of affective commitment on the quality of job performance (Meyer et al., 2002), job performance (Chang and Chen, 2011; Riketta, 2008), unit performance (Nishii et al., 2008), and firm performance (Gong et al. 2009).

Hypothesis 5 posited that employee performance has a positive impact on organisational performance. The findings demonstrated that, indeed, employee performance has a significant positive effect on organisational performance. The impact of employee performance on organisational performance was found to be positive and statistically significant (standardised path coefficient  $\beta = .427$ ;  $t = 6.600$ ,  $p < 0.001$ ), thus providing support for Hypotheses 5. These findings are consistent with past research which found that employee outcomes positively influence organisational performance (Boselie et al., 2005; Nishii et al., 2008; Zhang and Moris, 2013).

Hypothesis 6 proposed that the perceived system of HRM practices has a direct positive impact on organisational performance. The results revealed that the perceived system of HRM practices has significant positive and direct impact on organisational performance (standardised path coefficient  $\beta = .273$ ;  $t = 3.253$ ,  $p < 0.001$ ). Hence, Hypothesis 6 is also supported. These findings are consistent with past research findings suggesting that HRM practices affect performance (Smeenk et al., 2008; Boselie et al., 2003).

Hypothesis 7 proposed that the level of human capital has a direct positive impact on organisational performance. The results did not support, however, the hypothesis that the level of human capital and organisational performance are directly related; thus it was found that their relationship is not statistically significant. The path estimates between human capital and organisational performance were standardised path coefficient  $\beta = .060$ ;  $t = 0.814$ ; n.s. In addition, the mediation analysis has revealed that human capital is not statistically significant, indicating that human capital is not a mediator.

These findings are consistent with past research which found that the effect(s) of human capital on performance is not direct, but instead mediated by both personal attributes and job performance (Ng and Feldman, 2010). Moreover, this finding (H7) may imply that human capital is associated with organisational performance via other mediating variables and psychological mechanisms such as employee performance. Another explanation for this result may be that the interaction between human capital and employee commitment impacts organisational performance.

Finally, Hypothesis 8 proposed that HR attitude and behaviour (employee commitment) has a direct positive impact on organisational performance. The results show that the

relationship between employee commitment and organisational performance is positively significant and direct. The path estimates between employee commitment and organisational performance were significant (standardised path coefficient  $\beta = .138$ ;  $t = 2.217$ ,  $p < 0.05$ ). In addition, the mediation analysis has shown that employee commitment is statistically significant, proving that employee commitment is a mediator. Therefore, Hypothesis 8 is supported. These findings are consistent with empirical evidence of positive association between positive psychological resources (overall workplace attitudes) and performance (Luthans et al., 2007; Luthans et al., 2010) and employees' organisational commitment with unit/organisational level performance (Conway and Briner, 2012).

The results of H7 and H8 are increasingly interesting and important. Although they are different, they show that employee commitment has a positive and significant effect and a direct impact on organisational performance, while human capital is not associated with organisational performance directly. Thus, human capital is related to organisational performance via other mediating variables and psychological mechanisms. Therefore, these findings indicate that employee commitment is a key linking mechanism in the relationship between the perceived system of HRM practices and organisational performance. Moreover, these particular results of the current thesis are in line with a recent study by Gong et al. (2009), who found that affective commitment has been found to mediate the relationship between high performance HRM practices and higher level performance outcomes thus emphasising affective commitment's established importance for SHRM theory.

In addition, further findings of the current thesis were the effects of employee commitment on both, the employee and organisational performance. Shore et al. (2004)

noted that social exchange research lacks knowledge of factors affecting on-going exchange. The current study found employee commitment to be an important factor in explaining reciprocal effects, and its impact was found to be significant and direct to both employee and university performance. This suggests that the exchange relationship depends on the quality of the system of HRM practices and the way it is perceived by the employees. Future research should explore additional factors that moderate the on-going employee-employer exchange.

The study shows how human capital, employee commitment and employee performance acted as mediators in the relationships between the perceived system of HRM practices and university performance. The perceived system of HRM practices was positively related to both the level of human capital and employee commitment. Thus, the perceived system of HRM practices appears to have a positive influence on the level of human capital (KSAs of employees) and on the shared perceptions regarding the terms of obligations or social exchanges (employee commitment). What is more, human capital and employee commitment have a positive influence on employee performance and in turn on university performance.

From the results it can also be inferred that the increase in shared perceptions in relations to the enhanced level of human capital is accomplished through the system of HRM practices (rigorous selection, higher incentives, better training and development, appropriate performance appraisal and feedback practices) that attracts, develops and retains similar types and highly capable employees at a university. Similarly, through better job design, better benefit and incentive structure, long-term focus on training and development, and participation and incentive practices, there are empirical evidences from the current thesis that the system of HRM practices improves upon the long-term

relational aspects of employees' commitment with the university, so that employees in general feel higher level of obligations to reciprocate.

The level of human capital and employee commitment has a positive influence on employee performance, which in turn affects positively the organisational performance. Furthermore, employee performance acts as a mediator of the relationship between the level of human capital and organisational performance. Although employee performance has been shown to act as a mediator on the relationship between the perceived system of HRM practices and organisational performance, the current thesis is one of the first studies that illustrates that in the university setting the mediating role of employee performance is based on the relationships between both the level of human capital and employee commitment, the central variables from the resource-based view of the firm and the social exchange theory. These results extend the previous research by empirically demonstrating the underlying mechanisms that more accurately describe the processes occurring between the perceived system of HRM practices and organisational performance.

#### **6.4. Theoretical Contributions**

This study contributes to the extant body of the relevant literature in a number of ways and has important implications for further theory building. Firstly, it looks at the performance effects of the perceived system of HRM practices in relation to human capital and employee commitment drawing on two influential but distinct theories, the RBV and social exchange theory, by integrating them in a holistic conceptual model for the first time in higher education. This, along with the evidence provided by the results of the current thesis (that the level of human capital and employee commitment relate to employee and university performance), contribute to the better understanding of the

mechanisms linking HRM and university performance and shows the value of thinking across theoretical boundaries.

Secondly, the findings of the study highlight the importance of the perceived system of HRM practices and its multi-dimensional nature. Although in other studies in the literature, this construct was operationalised as a separate uni-dimensional construct, in the current study, the perceived system of HRM practices was conceptualised and treated as a multi-dimensional construct. Moreover, the multi-dimensional construct of the perceived system of HRM practices was subject to model testing using structural equation modelling analysis among administrative employees in university-level education settings to test its interrelated and extrapolated nature.

A third contribution is that the final model and the path coefficients using the structural equation model showed that there were a number of causal indicators which are theoretically acceptable. The variable path relationships between the latent and observed variables were examined as hypothesised. The model path relationships indicated that the perceived system of HRM practices scale is fully operationalised for examining the HRM practices in the university setting. In addition, the empirical results and the overall hypothesised model appear to be quite congruent with the data. The structural model indices demonstrated an acceptable level of compatibility, thereby reflecting the interrelationships between the variables. Although the confirmatory factor analysis using structural equation modelling reduces uncertainties in the findings, which may arise due to conceptual weaknesses, there is a strong framework for the perceived system of HRM practices scale as the results from this study demonstrated a strong relationship between the latent and the observed variables.

Fourthly, the results revealed some interesting conclusions regarding the contextual organisational/demographic variables such as the type of position, gender, level of education and total years of work experience that are more closely linked with the HRM practices. The demographic variables were predicted to affect the perceived system of HRM practices, and the findings of the MANOVA analysis revealed important results (see Chapter 5) for the type of position, level of education and total years of work experience of administrative employees in relation to the study constructs. Specifically, the MANOVA results indicated significant differences between individuals in their perceptions of the university system of HRM practices and their outcomes.

An additional (fifth) contribution is that the findings of the current study have important theoretical implications for managing human resources in Cypriot universities. The present study contributed to the organisational commitment literature, by highlighting and providing insight into the level of organisational commitment among administrative employees. The results of the current study provide scholars with significant understanding about the employee commitment level (through affective commitment), as these are reflected in the structural equation modelling, and have crucial implications for theory and practice. Furthermore, it contributes to theory with respect to organisational commitment and employee attitudes. The findings encourage Cypriot universities to focus more on employee perceptions and commitment, by providing a better understanding of the motivational factors at work. Thus universities can more effectively motivate their employees by creating a suitable working climate.

While these findings support much of the prior individual research conducted on the relationship between HRM practices and organisational performance, the current study is unique in the following ways: first, it allows an investigation of a system of HRM

practices in one integrated model; second, the employee data provides the opportunity to study the perceived system of HRM practices; third, it reveals the development of a scale to obtain the perceptions for a comprehensive system of HRM practices; fourth, it allows the examination of the impact of both human capital and employee commitment on employee and organisational performance in one integrated model; fifth, it utilises a second generation statistical analytical technique (SEM); and sixth, it is one of the pioneering studies that examines the relationship of the perceived system of HRM practices and organisational performance in the higher education sector.

Finally, the results of this thesis contribute to the literature on strategic human resources management, human capital, employee commitment, and university management and performance by opening up the “black box” and explicating the mediating processes associated with the system of HRM practices and performance, namely human capital and employee commitment. In addition, the current study demonstrates the important role that employee commitment in the mechanism that links the perceived system of HRM practices and organisational performance. Furthermore, the results provide important implications for HRM researchers, university managers, and other HRM practitioners.

## 6.5. Practical Contributions and Recommendations

Besides the scholarly contributions, the current research has also important practical implications since this is the first study conducted examining the relationship between the perceived system of HRM practices and university performance via the level of human capital and commitment of administrative employees. The results of this thesis may help practitioners in the field of HRM in universities to design and implement their HRM strategy in general and their system of HRM practices in particular. A number of practical/managerial implications and suggestions for higher education institutions, leaders and HRM services follow as these were extracted from the empirical findings of the current thesis.

The managerial relevance of this research study rests in providing the university HRM services with information about how to configure a coherent and consistent system of HRM practices and to link this system with their unique context in order to increase performance. Moreover, the findings of this study provide recommendations about what factors are important, at an initial stage, for achieving a fit between the practices within the HRM system and subsequently, for determining the factors that are important in achieving a higher level of human capital and in enhancing employee commitment.

In addition, the study has also shown the importance of aligning HRM practices with each other in a consistent HRM system (internal fit). This was achieved by utilising the analytical properties of SEM via the 2<sup>nd</sup> order factor analysis. The perceived system of HRM practices (HRMSYS construct) in the final model was examined not only in relation to other constructs of the model, but also within (five HRM practices) as a system of HRM practices. To ensure that an organization maintains internal fit - or the alignment between separate HRM practices in an HRM system – it is suggested to

strengthen the interaction between HRM practices. The interpretation of the empirical results has demonstrated that a strong internal fit indicates the presence of strong connections with HRM practices that strengthen each other.

A third contribution, pertinent to managers, is extracted from the empirical finding showing that employee commitment is an important driver for both employee and university performance. As employee commitment has significant effects on employee and organisational performance, managers should be alerted to the potential bottom-line implications of highly committed university departments. Managers need to recognise that committed employees have a value beyond their immediate and individual performance as such individuals may contribute to the department's performance; thus a practical recommendation that stems out from this thesis is that managers may use different interventions such as channelling the behaviours of committed employees towards filling in gaps in the delivery of service, encouraging synergy between employees and emphasising the achievement of department-level performance targets (Conway and Briner, 2012).

Another contribution of this thesis is related to the investment on human resources as a strategic avenue for improving organisational performance. In particular, the current results suggest that human resource investments for increasing employee commitment and job attitudes in general, might lead to long-term improvements in organisational performance. More specifically, the current findings are deemed as useful to practitioners when they evaluate the benefits of their human resource initiatives and the added value of commitment programs (as well as for human capital enhancement programs) to their bottom line results. In addition, and inferring again on the empirical results of this study, by increasing the level of human capital investments employee

commitment is expected to be affected positively (see hypotheses testing results), and thus improvements in employee and university performance will be accomplished.

Another aspect which stems out from the empirical results is associated with the employee selection and the training and development practice. This particular finding is of great importance for HRM managers since the level of human capital is significantly related to employee performance. Thus, managers should use applicants' education level and work experience record (see MANOVA results) as a screening device to minimise the number of qualified applicants and to reduce the associated hiring costs. In addition, the results of the current thesis indicate to HRM managers that using human capital as a screening device has strong validity (a competency/skill-based pay scheme may also alternatively based on the results).

The current thesis also offers several suggestions for managers to increase the performance of their employees. This could be achieved by ensuring that their employees perceive the system of HRM practices as beneficial; by constantly sending signals that employees are valuable assets for the university and that their contributions make a difference to the success of the university; and by designing and implementing a coherent and consistent system of HRM practices tailored for the internal and external environment of their university.

In general, for university managers, the results of the thesis are useful in facilitating organisational interventions to increase the benefit of the system of HRM practices. For instance, if the university management has not realised that the university has been gaining the benefit of the system of HRM practices to the maximum extent possible, the

source of the problem may be diagnosed by examining the level of human capital and/or employee commitment for the specific department of the university. If it is proven that the specific department of the university does not have sufficient number of employees with high knowledge, skills and abilities, components of the system of HRM practices (such as selection and recruitment or training and development) may be revised to enhance the level of human capital for the department. On the other hand, if it is the employee commitment that was identified as a source of problem, other components of the system of HRM practices such as performance appraisal, compensation, benefits and incentives as well as involvement and participation may be modified to improve employees' commitment and consequent behaviours and performance.

In addition to formulating the components of the system of HRM practices, the results of this thesis emphasise the importance of both, the level of human capital and employee commitment on employee performance. Therefore, university managers need to be aware of these linkages and be ready to provide support to strengthen them. For example, given that the level of human capital is positively related to employee performance, university managers may be able to utilise a combination of management by objectives and performance incentives to underscore the links between the system of HRM practices and reward to influence employees with higher knowledge, skills and abilities to work harder and smarter so that their contribution to their department and the university unit will be greater. In a similar vein, employees' commitment may be enhanced if the university management can show that they value and respect employee contributions and that they care about them. Once the employees perceive that the university has provided them something that they value, they are more likely to

reciprocate by exerting more effort on the task as well as by providing more extra-role behaviours that are beneficial to both, their department and the university as a whole.

Given the strong relationship between employee performance and organisation performance, the highest return for the university managers is the development of strategies to retain highly skilled employees who also provide suggestions, helping others improve the efficiency and effectiveness of their departments. These employees are central in maintaining and improving university performance. Therefore, the benefits that are gained by retaining such employees are likely to be substantially greater than retaining several average employees.

Research findings suggest that the impact of introducing and investing in HRM practices is an important topic for HRM practitioners as it addresses the value-added effect of the university HRM function, and the ability of the system to more clearly recognise the relationship and effects of the system of HRM practices and employee and organisational performance. HRM practitioners continue to have a difficult time placing a tangible return on investment placed on HRM practices and systems. This difficulty is even greater in higher education institutions where there is no tradition and established culture of such systems and their impacts on university performance. Thus, the results of this study could serve as a stimulus for HRM managers and other university top managers to justify the need for adopting a value-added coherent system of HRM practices that will positively impact the level of human capital and employee commitment, and through them to improve employee and university performance.

It is evident from the results of this study that employee selection, employee training and development, performance management, compensation and incentives, and

employee participation and involvement practices (as a system) directly influence the employee and organisational performance. From an academic perspective, there is now a better assessment on which HRM practices constitute a system of HRM practices that is more strongly related to the level of human capital and employee commitment in the university setting. In addition, there is a better understanding of how a comprehensive set (system) of HRM practices and the mediating variables (level of human capital and employee commitment) as a mechanism impact employee and organisational performance. After all, when HRM managers are aware of the internal and external environment of their universities, this thesis shows which specific HRM practices (as a system) help build human capital and employee commitment in their universities. Moreover, the results of the thesis demonstrate to HR managers how the system of HRM practices impact employee and organisational performance. The results of the current thesis can be extrapolated beyond university managers to other services and public and private sectors practitioners who have to cope with similar complex environment.

The current study has provided initial support for the important role that human capital and employee commitment play in the relationship between the system of HRM and performance in higher education. In addition, it emphasises the need, as well as the benefits, of using strategic human resource management in university administration. The system of HRM practices should assist the organisation in attracting, selecting, developing and retaining employees with the necessary KSA's and the required behaviours in order to implement its strategic plans and achieve its strategic goals. In this way, the organisation must align its strategy with the system of HRM practices, which in turn should increase the level of human capital and employee commitment thereby improving organisational performance.

Although the current study suggests that a specifically designed system of HRM practices is associated with and can have positive effects on employee and university performance, other intermediary variables associated with the implementation process may be critical and they should be addressed by university HRM managers. To achieve alignment between HRM practices and strategy, universities should match the university strategy with the system of HRM practices in such a way that HRM practices aim at achieving university objectives; universities should integrate the process of strategy formulation with the process of HRM strategy formulation, (for example, by involving the HRM services in designing the university strategy); likewise, universities should implement the HRM strategy by involving employees in the objective setting process and they must clearly communicate to employees what university goals are and what is expected of them.

For achieving alignment between university systems, organisational characteristics and the system of HRM practices, emphasis must be placed on the importance of recognising what the university needs to achieve in order to be successful. Therefore, it is important to design and implement HRM practices in such a way that they are linked to the development of key success factors through their alignment with the provision of university services and the university culture. University culture and core values, for instance, can be used to communicate how employees are expected to behave in a university. Therefore, university culture can be a powerful tool for managing employees. Moreover, it is also important to use HRM practices for managing employee skills and knowledge, employee results and employee behaviours. For example, a university can align desired employee results (or better behaviour) with university interests by using performance appraisal and reward practices which link university and administrative services goals with individual performance goals. At the same time,

performance appraisal and rewards can be used to evaluate administrative service directors on whether their demonstrated behaviour reflects basic values. Furthermore, universities should use systems of HRM practices that promote a high degree of participation in decision making and job autonomy. In turn, this may affect employee attitudes and behaviours. Thus, high performance HRM practices like selection, training and development and employee participation can be used in order to enhance employee commitment and satisfaction.

Another important area is the context within which a university is operating. Therefore, in aligning HRM with the university context, it is important to recognise that optimising efficiency and effectiveness is not the only organisational goal. Morals and ethics are also important goals in order to survive in the long run. For example, rules and regulations developed by unions and the government affect the choice for certain HRM practices in a university. As a result of these pressures, a university can experience less freedom or autonomy for HRM practices such as rewards and employment conditions because they are determined by legislation and/or unions. However, an active, preferably proactive attitude of HRM decision makers such as maintaining good and creative relations with unions, can help establish flexibility in order to develop systems of HRM practices in such a way that they improve university effectiveness and/or efficiency, but still consider other aspects such as the rightfulness within the university context.

Finally, a significant contribution of the current study is that it provides sufficient information for managers in universities on how to deal with the administrative employees while employing a system of HRM practices. Guest and Clinton (2007) state that many line managers in universities find it difficult to be fully responsible because

they are still in need of high skills and confidence in handling their tasks. An example is to provide full accountability and responsibility to line managers in order to handle the day to day work, and to employ effectively the HRM practices such as recruitment and selection, training and development, performance appraisal and rewards.

## **6.6 Limitations of the Current Study**

The findings of the current study should be interpreted with consideration of a number of limitations, which must be recognised to “establish the boundaries, exceptions, and reservations inherent” (Creswell, 2003: 147). This study has several limitations. The results of this study need to be taken with a number of cautions.

First, the study is based on a cross-sectional design. As with most research in management studies, the cross-sectional design of the current study does not allow for any conclusions regarding causality. Strategic HRM literature assumes that HRM practices affect organisational performance through employee KSAs and attitudes and behaviours. However, reversed causality is also a reasonable option; for example, higher organisational performance may lead to higher level of human capital or increased employee commitment or even higher levels of perceived HRM practices (Wright et al., 2005). This study presents the first step in examining the role of human capital and employee commitment in the relationship between the perceived system of HRM practices and organisational performance, showing that there are significant relationships. Future research could further explore these relationships by testing the causal order, for example, using a longitudinal design in examining how employees' perceptions of the system of HRM practices affect organisational performance using repeated measures. Grant and Wall (2009) recommend the use of interrupted time series designs that allow stronger causal results and can determine if an HR intervention has

immediate or delayed effect on the dependent variables. Moreover, Ployhart and Vandenberg (2010) suggest that to permit a full analysis of change and to accurately test causality, a collection of repeated measures for a minimum of three occasions is required.

Additionally, common method variance (CMV) may be a concern as this study used a self-report questionnaire to collect data from the same group at the same time. The findings of the current study may suffer from common method variance since all the study variables were measured using the same source. This issue would have been overcome if some of the variables in the study had been measured through other ratings. However, there are researchers who argue that common method variance problems are overstated and are less pervasive than assumed sometimes (Spector, 2006). Furthermore, this concern becomes strongest when both the dependent and focal explanatory variables are perceptual measures derived from the same group (Podsakoff et al., 2003). Nevertheless, a number of procedures have been followed in order to minimise the likelihood of CMV bias and the Harman's one-factor test was performed with results showing that common method variance is unlikely to be a serious problem (see chapter 5). Future research could explore these relationships by utilising different methods and sources of data. Furthermore, there is a need to test the overall model of the relationships in this study over time in order to make causal inferences relative to both antecedents and outcomes.

The limited amount of research studies available on HRM and performance in higher education has limited the opportunity to gather content-rich information from previous studies. In addition, the very limited amount (or the non-existence) of research studies available on HRM and performance in Cyprus has also limited the opportunity to gather

content-rich information. Despite these limitations, the results from this study are a significant addition to the scant international literature on HRM and performance, and they could be used to help human resource managers make more well-informed decisions regarding the management of their universities' administrative employees.

A fourth limitation of the study is its focus on the higher education sector. Despite this constraint, the study provides empirical evidence of the effect of the system of HRM practices and suggests that the level of human capital and employee commitment are important mediating variables for better organisational performance. Today, the higher education sector is characterised by newly established practices such as market-based reforms, the introduction of client-based higher education, and the use of performance measurement in research and teaching and government steering (Decramer et al., 2012; Taylor, 2011).

Despite these limitations, the findings of the current thesis provide convincing evidence that the perceived system of HRM practices affects human capital, employee commitment and employee performance which in turn affect organisational performance thus the data offers an encouraging base, for researchers (and practitioners), on which to explore these relationships further.

## **6.7 Future Research Directions**

The results of this study identify opportunities for more comprehensive future research in light of the new model tested in this study, which will facilitate the implication of human capital and employee commitment within universities, opening the way for additional support validity and construct stability over time. In addition, given that employee performance focused on aggregate behaviours at the university level of

analysis, there may be additional variables that act as mediators on the relationships between the perceived system of HRM practices and organisational performance in higher education institutions, besides the ones already noted (human capital, employee commitment and employee performance). For example, job satisfaction has been found to relate to organisational citizenship behaviours (Nishii et al. 2008; Organ, Podasakoff and MacKenzie, 2005), which may act as additional aggregate variables that mediate these relationships. Thus, there are additional opportunities at the university level of analysis to examine these processes further.

Another opportunity for future research is to study the role of line managers and their leadership style in relation to the impact of the system of HRM practices on the level of human capital and employee commitment. The implementation aspect of the system of HRM practices rests primarily on the line managers. Recent empirical results by Lorinkova et al., (2013) suggest that teams led by a directive leader initially outperform those led by an empowering leader. However, despite lower early performance, the latter group experiences higher performance improvement over time because of higher levels of team learning, coordination, empowerment and mental model development. In another current study by Toegel et al., (2013), it was found that both the employees and their line managers agreed on the necessity of controlling emotions for the good of the organisation and that employees perceived treating as part of the managers' role that requires no reciprocation, whereas managers see such help-giving as discretionary extra-role behaviour that requires reciprocated commitment.

Furthermore, the study demonstrates that administrative employees' perceptions of the system of HRM practices are strongly related to their perceptions on human capital and employee commitment as well as on employee and organisational performance. Thus,

human capital and employee commitment can add value to research on the “black box” between HRM and organisational performance. The findings also demonstrate that the relationships between perceived system of HRM practices and employee and organisational performance may well be indirect, occurring via employee commitment, and that this relationship differs from the direct link. Although, the findings of the current study imply that with the use of an appropriate (coherent and consistent) system of HRM practices, universities may be able to manage the levels of human capital, and, in turn, this may affect employee and university performance, future research is needed to gain more insight into this relationship between perceived system of HRM practices, human capital and employee commitment and employee and organisational performance. Moreover, the empirical finding, as resulted from the application of the Sobel Test (see the Chapter 5 – Analysis and Results) provide additional support that universities by managing the levels of human capital may affect employee and university performance.

The MANOVA results indicated significant differences between individuals in their perceptions of the university system of HRM practices and their outcomes. Managing these perceptions could be beneficial for an organisation as employee attitudes and behaviours lead to higher organisational performance. Wright and Nishii (2007) suggest that variation in employee perceptions stems from implementation failures and variation in communication. In addition, employees might actually receive different amounts of the HRM practices (such as development, autonomy and rewards), which could lead to differences in perceptions. Other possible determinants of variation in individual perceptions include, for example, leadership style, line managers’ support and trust. More research is needed to examine the causes of variation in employee perceptions of

HRM practices in order to give organisations more insight into managing these important employee perceptions effectively.

Future research could further explore these relationships by testing the causal order, as human capital and employee commitment potentially affect perceptions of the system of HRM practices and superior organisational performance may affect the system of HRM practices. In the same vein, Paauwe and Richardson (1997: 258) stated “that firm performance itself will give rise to a change (improvement) in HRM practices”. Therefore, the causal order needs to be investigated further.

In summary, the conceptualisations and operationalisation developed for the study, as well as the assessment of the contribution of human capital and employee commitment to strategic HRM research may create opportunities for further research in the relationship between HRM and performance in different contexts, such as different sectors of the economy in Cyprus and/or different countries in the region. In addition, examining the causal association between HRM and performance in other cultural context is necessary in order to generalise the findings. Suggestions for future research may include further conceptualisation and operationalisation of the current study constructs, the investigation between additional mediating variables in this relationship and the comparison of such relationships in different countries.

## 6.8. Conclusion

The main objective of this study was to examine both the effects/outcomes of the perceived system of HRM practices on organisational performance and the mediating effects of human capital, employee commitment and employee performance. The findings of the current study are encouraging as they provide additional support for the positive effects of the system of HRM practices. The system of HRM practices is designed to enhance employee knowledge, skill and ability as well as employee motivation and commitment so as to positively influence employee outcomes in organisations. Overall, the findings of the current study support the findings of other studies in both public and private organisations (Gould-Williams and Gatenby, 2010; Katou and Budhwar, 2010).

This research synthesised theoretical and empirical literature on general HRM practices and assessed psychometrically the five measures of the system of HRM practices for their suitability to be subsumed into a single measure. In doing so, this study empirically examined the items in each measure through a confirmatory factor analysis, adopting a structural equation modelling technique to develop a parsimonious model for the perceived system of HRM practices through the data that was collected from the administrative employees in Cypriot Universities. However, this research presents the first attempt towards using a composite scale to measure HRM practices, in general, which is a constructive starting point for examining the implementation of HRM practices in different contexts. Although the findings of the study are specific to administrative employees working in Cypriot Universities, the findings could be generalised for the service sector in general.

This study is an essential foundation for future research and theory-building on the system of HRM practices in higher education and particularly in University-level education. Given the seriousness of problems that can arise from improper HRM practices, it is hoped that future research continues to explore this important topic in order to develop suggestions for Universities in managing these important HRM practices. Across the disciplines, human capital and employee commitment attracts crucial attention from practitioners and researchers. Searching through Western literature it can be seen that there many studies on human capital and employee commitment, whereas non-Western literature shows very few such studies. The findings of this study indicate that the causal model is consistent with the data and contributes to a better understanding of both, the role that the level of human capital and commitment of the administrative employees in the university setting play in the relationship between the system of HRM practices and employee and organisational performance.

The results of the current study contribute significantly to the literature and tend to be different from previous studies, as the model focuses more on **both** the level of human capital and employee commitment within the relationship between the system of HRM practices and employee and organisational performance. Also, this model could be employed for further research in the areas of human capital and commitment in different sectors and different countries that share the same culture and work settings (Greece and the Eastern Mediterranean region).

The primary objective of this thesis was to evaluate the impact of the perceived system of HRM practices on organisational performance in higher education institutions in Cyprus. From a large number of HRM practices, the ones that were initially proposed by Pfeffer (1998) and labelled “High Performance Work Practices – HPWP” were

used/selected and examined for the purpose of this study. Based on the results of the analysis of the data, it is clear that there are linkages between the perceived system of HRM practices and organisational performance. More specifically, the HRM functions that constitute the system of HRM were significantly correlated with human capital, employee commitment, employee performance and university performance. Thus, the current study has added knowledge and shed light on the strength and impact of the system of HRM practices and examined “why” and “how” HRM systems lead to better university performance. This study, to the best of my knowledge, is the first that uses a path analytic model to investigate the impact of a perceived HRM system on organisational performance in the higher education sector.

In closing, it is worth mentioning that considerable research demonstrates that many organisations do not employ state-of-the-art human resource practices or systems, simply because very few HRM managers read the research literature (Rynes et al., 2002). Moreover, Becker and Huselid (2006: 898) claim that “managers are either unaware or simply uninterested in scholarly developments in our field (SHRM)”. Due to this, research findings are not implemented in organisations. This gap between research and practice is even greater, and more vital, if practitioners consider the findings of another research study conducted by Terpstra and Rozell (1997), demonstrating that organisations whose HRM professionals read the academic research literature and implement research findings have higher financial performance than those who do not.

Failure to be aware of and implement relevant research findings may put an organisation at a competitive disadvantage. Therefore, the transfer of knowledge from research to practice becomes essential for the success of organisations and becomes even more vital for universities facing continuous pressures for change and those

undergoing major transformation (Van Ameijde et al., 2009). Due to this, the findings of the current thesis could be useful to both, the practitioners in higher education (so that they can be informed and implement changes) and to research scholars (so that they can further develop the area of HRM in higher education by conducting research and utilising business management theories in higher education management). After all, higher education needs to create a better balance between the market forces and its public purposes (Bok, 2003), and these entrepreneurial efforts can help increase the ways in which higher education serves the public good (Zemsky et al., 2005).

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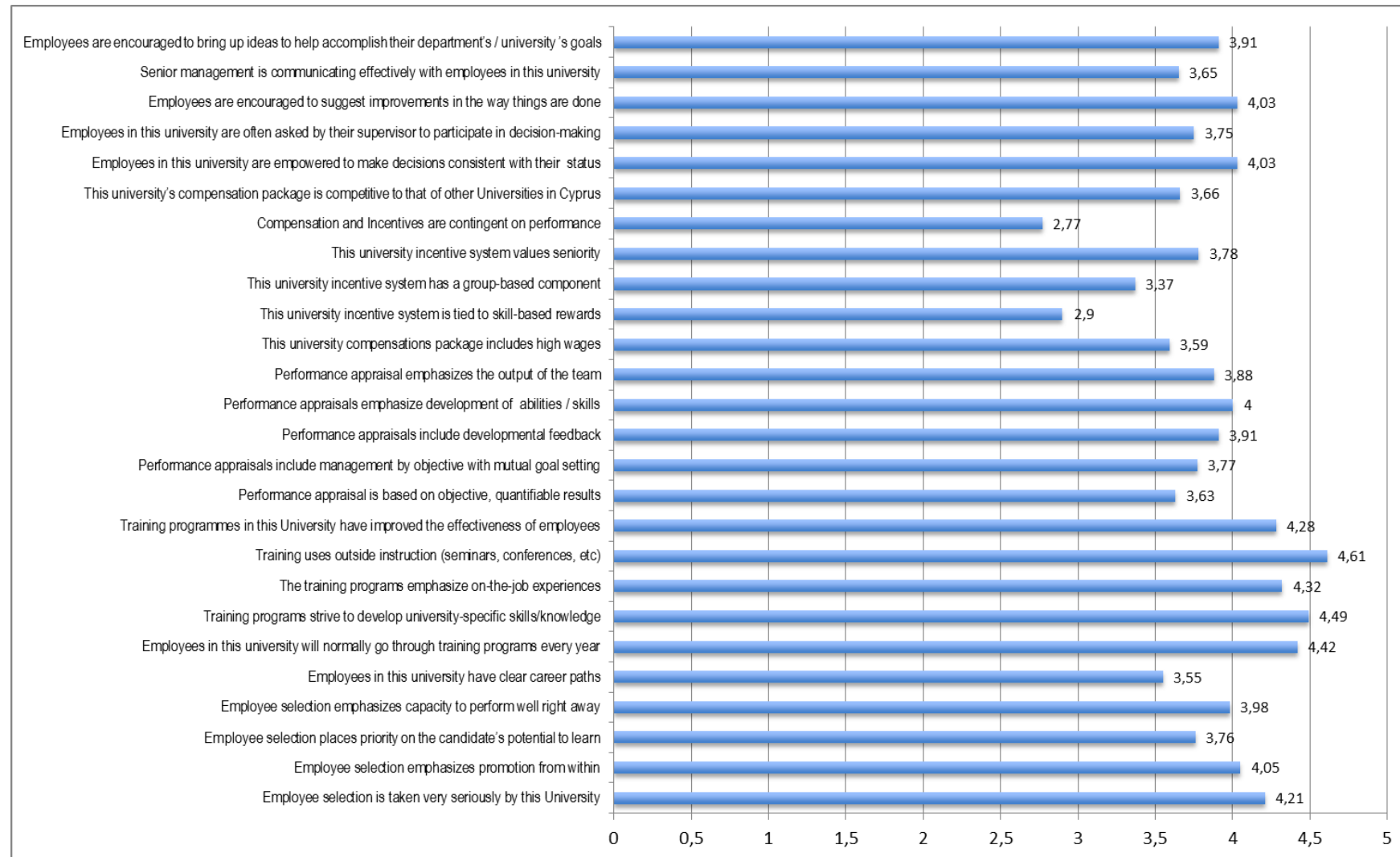
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# Appendices

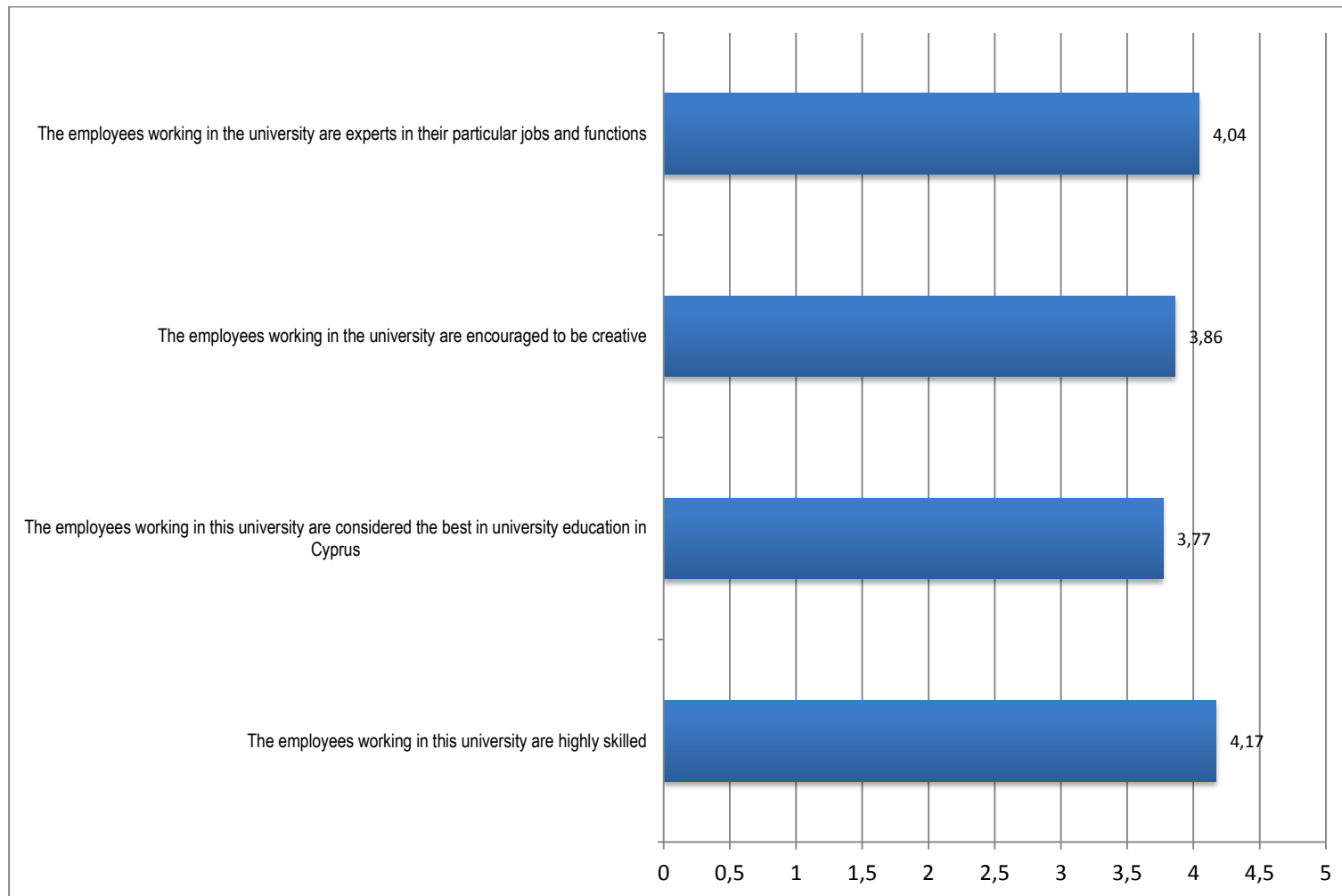
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## **Appendix 1: Analysis of Means**

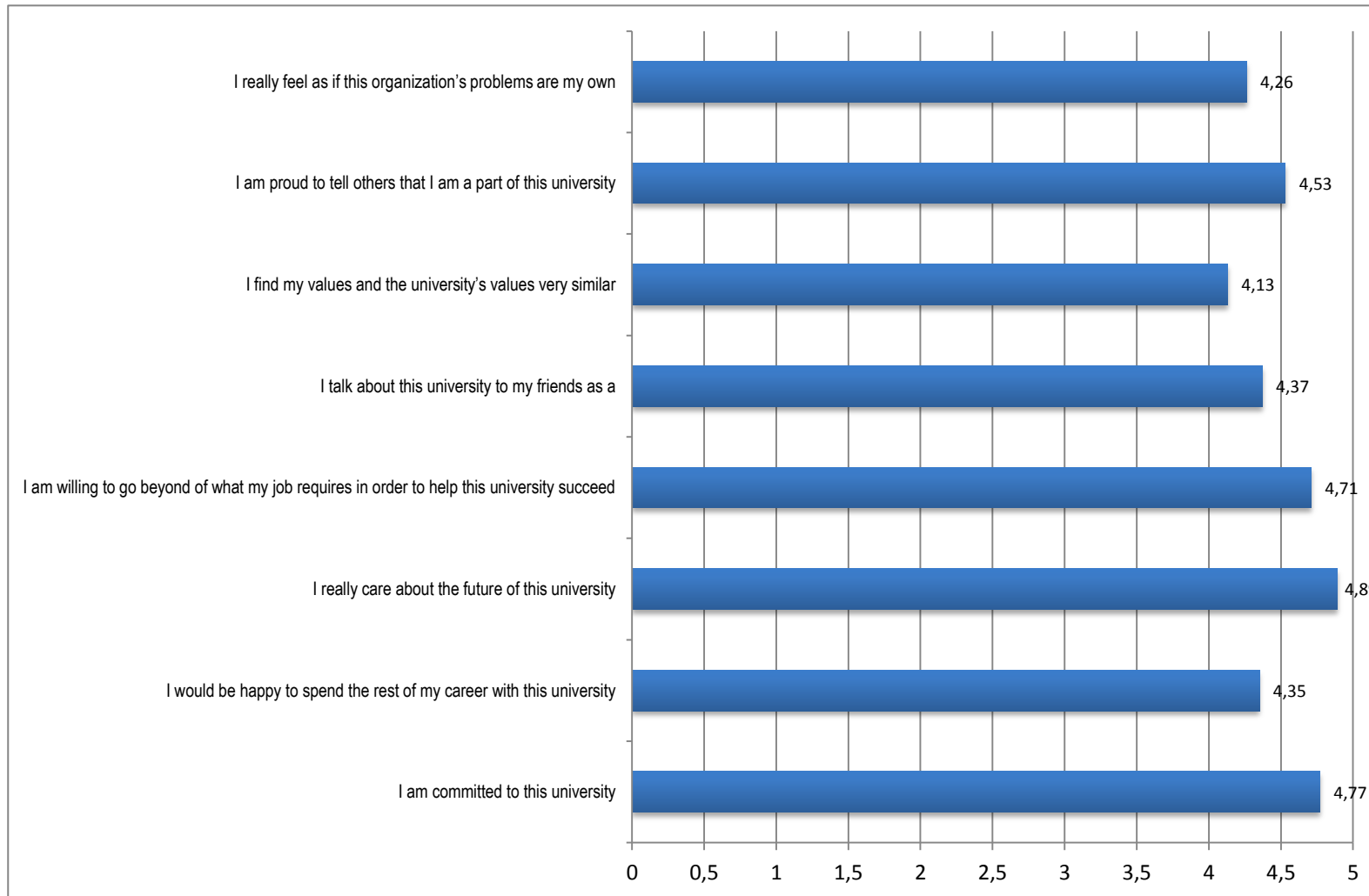
### **I. HRM SYSTEM**



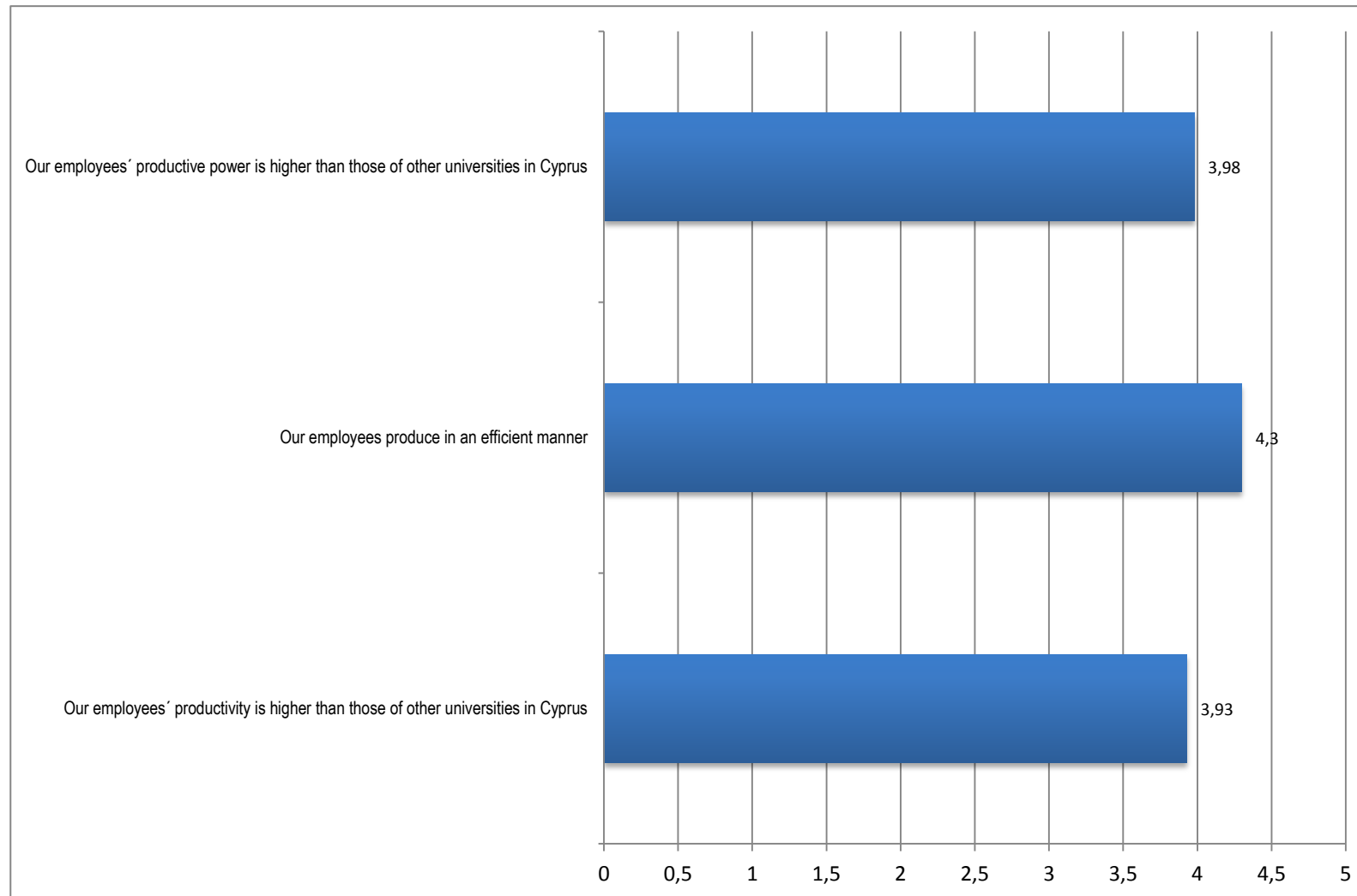
## II. LEVEL OF HUMAN CAPITAL



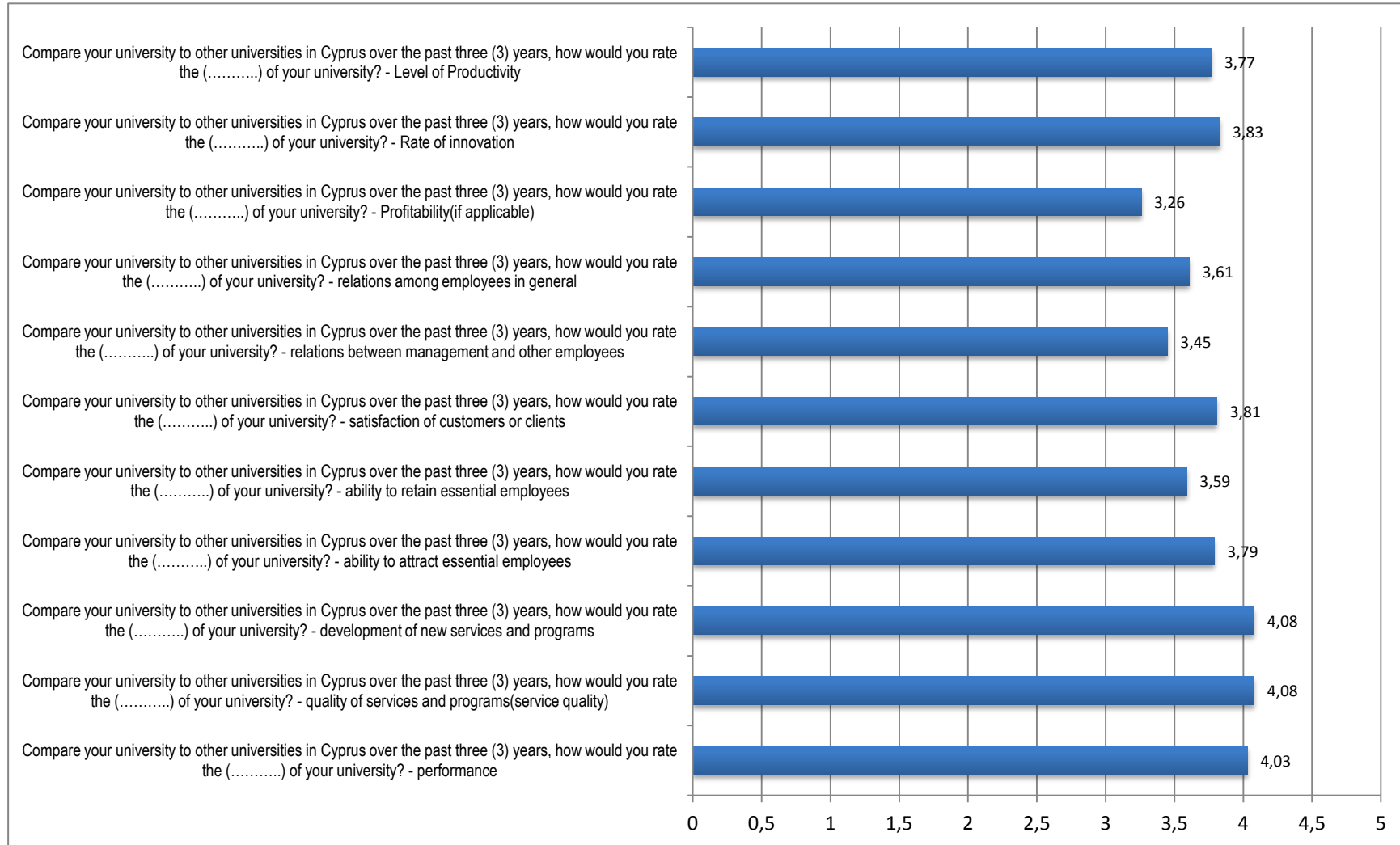
### III. EMPLOYEES' COMMITMEN



#### IV. EMPLOYEES' PERFORMANCE



V. **ORGANIZATIONAL PERFORMANCE**



***Appendix 2: Descriptive Statistics*****Descriptive Statistics – Levels of Education**

	Education	Mean	Std. Deviation	N
Employee selection is taken very seriously by this University	High School	4.86	.845	35
	Associate degree (2-3 yrs)	4.74	.972	73
	Bachelor's Degree	4.49	1.106	65
	Master's Degree	4.22	1.191	136
	PhD	4.42	1.311	12
	Total	4.47	1.118	321
Employee selection places priority on the candidate's potential to learn	High School	4.43	.815	35
	Associate degree (2-3 yrs)	4.12	1.079	73
	Bachelor's Degree	3.86	1.391	65
	Master's Degree	3.63	1.247	136
	PhD	3.75	1.603	12
	Total	3.88	1.240	321
Employee selection emphasises capacity to perform well right away	High School	4.46	.741	35
	Associate degree (2-3 yrs)	4.23	1.021	73
	Bachelor's Degree	4.03	1.414	65
	Master's Degree	3.96	1.173	136
	PhD	4.25	1.138	12
	Total	4.10	1.160	321
Employees in this university have clear career paths	High School	3.91	1.067	35
	Associate degree (2-3 yrs)	4.01	1.242	73
	Bachelor's Degree	3.57	1.392	65
	Master's Degree	3.46	1.173	136
	PhD	3.58	1.165	12
	Total	3.66	1.240	321
Training programs strive to develop university-specific skills/knowledge	High School	5.03	.707	35
	Associate degree (2-3 yrs)	5.11	.737	73
	Bachelor's Degree	4.82	1.158	65
	Master's Degree	4.67	1.033	136
	PhD	5.17	.577	12
	Total	4.86	.971	321
The training programs emphasise on-the-job experiences	High School	4.94	.539	35
	Associate degree (2-3 yrs)	4.88	.942	73
	Bachelor's Degree	4.52	1.147	65
	Master's Degree	4.32	1.115	136
	PhD	5.08	.515	12
	Total	4.59	1.049	321

Training programs in this University have improved the effectiveness of employees	High School	5.03	.514	35
	Associate degree (2-3 yrs)	4.62	.757	73
	Bachelor's Degree	4.54	1.047	65
	Master's Degree	4.27	1.092	136
	PhD	4.58	.669	12
	Total	4.50	.975	321
Performance appraisal is based on objective, quantifiable results	High School	4.37	.690	35
	Associate degree (2-3 yrs)	4.03	1.130	73
	Bachelor's Degree	3.55	1.426	65
	Master's Degree	3.56	1.332	136
	PhD	3.67	1.073	12
	Total	3.76	1.271	321
Performance appraisals include management by objective with mutual goal setting	High School	4.43	.778	35
	Associate degree (2-3 yrs)	4.38	1.049	73
	Bachelor's Degree	3.86	1.333	65
	Master's Degree	3.57	1.298	136
	PhD	3.75	.965	12
	Total	3.91	1.242	321
Performance appraisals include developmental feedback	High School	4.49	.887	35
	Associate degree (2-3 yrs)	4.41	1.223	73
	Bachelor's Degree	3.91	1.378	65
	Master's Degree	3.89	1.315	136
	PhD	4.17	.937	12
	Total	4.09	1.274	321
Performance appraisals emphasise development of abilities / skills	High School	4.69	.832	35
	Associate degree (2-3 yrs)	4.51	1.132	73
	Bachelor's Degree	3.97	1.334	65
	Master's Degree	3.99	1.180	136
	PhD	4.17	.577	12
	Total	4.18	1.181	321
Performance appraisal emphasises the output of the team	High School	4.54	.780	35
	Associate degree (2-3 yrs)	4.52	1.132	73
	Bachelor's Degree	3.91	1.389	65
	Master's Degree	3.80	1.310	136
	PhD	3.50	1.000	12
	Total	4.06	1.271	321

This university incentive system is tied to skill-based rewards	High School	3.43	1.037	35
	Associate degree (2-3 yrs)	3.12	1.471	73
	Bachelor's Degree	2.91	1.400	65
	Master's Degree	2.76	1.295	136
	PhD	2.83	.718	12
	Total	2.95	1.329	321
This university incentive system has a group-based component	High School	4.09	.951	35
	Associate degree (2-3 yrs)	3.93	1.240	73
	Bachelor's Degree	3.48	1.470	65
	Master's Degree	3.15	1.331	136
	PhD	3.00	.739	12
	Total	3.49	1.335	321
Compensation and Incentives are contingent on performance	High School	3.20	1.106	35
	Associate degree (2-3 yrs)	2.77	1.359	73
	Bachelor's Degree	2.77	1.355	65
	Master's Degree	2.75	1.240	136
	PhD	2.75	.965	12
	Total	2.81	1.270	321
Employees in this university are empowered to make decisions consistent with their status	High School	4.23	.690	35
	Associate degree (2-3 yrs)	4.27	1.058	73
	Bachelor's Degree	4.08	.973	65
	Master's Degree	4.04	1.081	136
	PhD	4.42	1.084	12
	Total	4.14	1.019	321
Employees in this university are often asked by their supervisor to participate in decision-making	High School	3.80	1.023	35
	Associate degree (2-3 yrs)	3.79	1.312	73
	Bachelor's Degree	3.74	1.122	65
	Master's Degree	3.91	1.043	136
	PhD	3.67	1.303	12
	Total	3.83	1.129	321
Employees are encouraged to suggest improvements in the way things are done	High School	4.20	.677	35
	Associate degree (2-3 yrs)	4.10	1.314	73
	Bachelor's Degree	4.14	1.171	65
	Master's Degree	4.14	1.076	136
	PhD	4.50	1.000	12
	Total	4.15	1.114	321

Senior management is communicating effectively with employees in this university	High School	4.26	.817	35
	Associate degree (2-3 yrs)	3.82	1.229	73
	Bachelor's Degree	3.63	1.232	65
	Master's Degree	3.55	1.222	136
	PhD	3.75	.754	12
	Total	3.71	1.188	321
Employees are encouraged to bring up ideas to help accomplish their department's / university's goals	High School	4.31	.796	35
	Associate degree (2-3 yrs)	4.04	1.230	73
	Bachelor's Degree	4.02	1.125	65
	Master's Degree	3.95	1.225	136
	PhD	4.67	1.073	12
	Total	4.05	1.166	321
The employees working in this university are highly skilled	High School	4.37	.690	35
	Associate degree (2-3 yrs)	4.21	1.054	73
	Bachelor's Degree	4.31	1.158	65
	Master's Degree	4.26	.945	136
	PhD	4.58	.996	12
	Total	4.28	.992	321
The employees working in this university are considered the best in university education in Cyprus	High School	4.06	.725	35
	Associate degree (2-3 yrs)	3.79	1.166	73
	Bachelor's Degree	3.65	1.138	65
	Master's Degree	3.86	1.048	136
	PhD	3.50	.798	12
	Total	3.81	1.060	321
The employees working in the university are encouraged to be creative	High School	4.34	.906	35
	Associate degree (2-3 yrs)	4.05	1.141	73
	Bachelor's Degree	4.05	1.255	65
	Master's Degree	3.83	1.132	136
	PhD	4.33	1.303	12
	Total	4.00	1.151	321
The employees working in the university are experts in their particular jobs and functions	High School	4.40	.651	35
	Associate degree (2-3 yrs)	4.18	1.171	73
	Bachelor's Degree	4.09	1.142	65
	Master's Degree	4.06	.901	136
	PhD	4.33	.985	12
	Total	4.14	1.001	321

I would be happy to spend the rest of my career with this university	High School	5.17	.857	35
	Associate degree (2-3 yrs)	4.86	1.146	73
	Bachelor's Degree	5.00	.810	65
	Master's Degree	4.61	1.090	136
	PhD	4.83	1.267	12
	Total	4.82	1.049	321
I talk about this university to my friends as an ideal working place	High School	5.31	.676	35
	Associate degree (2-3 yrs)	5.00	1.130	73
	Bachelor's Degree	4.95	.779	65
	Master's Degree	4.68	1.198	136
	PhD	4.83	1.193	12
	Total	4.88	1.075	321
I find my values and the university's values very similar	High School	4.86	.912	35
	Associate degree (2-3 yrs)	4.59	1.256	73
	Bachelor's Degree	4.55	1.104	65
	Master's Degree	4.21	1.238	136
	PhD	4.17	.835	12
	Total	4.44	1.187	321
I am proud to tell others that I am a part of this university	High School	5.29	.750	35
	Associate degree (2-3 yrs)	5.22	.932	73
	Bachelor's Degree	5.14	.747	65
	Master's Degree	4.85	1.092	136
	PhD	5.25	.622	12
	Total	5.06	.957	321
Our employees' productivity is higher than those of other universities in Cyprus	High School	4.26	.852	35
	Associate degree (2-3 yrs)	4.15	1.126	73
	Bachelor's Degree	4.05	1.165	65
	Master's Degree	4.11	1.073	136
	PhD	3.83	1.030	12
	Total	4.11	1.078	321
Our employees produce in an efficient manner	High School	4.86	.550	35
	Associate degree (2-3 yrs)	4.52	.868	73
	Bachelor's Degree	4.48	1.002	65
	Master's Degree	4.27	.970	136
	PhD	4.75	.965	12
	Total	4.45	.931	321

Our employees' productive power is higher than those of other universities in Cyprus	High School	4.37	.808	35
	Associate degree (2-3 yrs)	4.15	1.023	73
	Bachelor's Degree	4.05	1.082	65
	Master's Degree	4.14	1.034	136
	PhD	3.92	1.379	12
	Total	4.14	1.032	321
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - performance	High School	4.17	.664	35
	Associate degree (2-3 yrs)	4.11	.792	73
	Bachelor's Degree	3.92	.735	65
	Master's Degree	4.04	.734	136
	PhD	3.75	.754	12
	Total	4.03	.743	321
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - quality of services and programs(service quality)	High School	4.20	.677	35
	Associate degree (2-3 yrs)	4.19	.739	73
	Bachelor's Degree	3.95	.759	65
	Master's Degree	4.05	.773	136
	PhD	4.00	.853	12
	Total	4.08	.756	321
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - development of new services and programs	High School	4.17	.664	35
	Associate degree (2-3 yrs)	4.23	.755	73
	Bachelor's Degree	4.00	.919	65
	Master's Degree	4.03	.788	136
	PhD	3.92	.793	12
	Total	4.08	.798	321
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - ability to attract essential employees	High School	4.06	.765	35
	Associate degree (2-3 yrs)	3.93	.903	73
	Bachelor's Degree	3.69	.748	65
	Master's Degree	3.77	.911	136
	PhD	3.00	.426	12
	Total	3.79	.867	321
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - satisfaction of customers or clients	High School	4.03	.707	35
	Associate degree (2-3 yrs)	3.92	.795	73
	Bachelor's Degree	3.65	.694	65
	Master's Degree	3.81	.775	136
	PhD	3.42	.515	12
	Total	3.81	.757	321

Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - relations between management and other employees	High School	3.60	.976	35
	Associate degree (2-3 yrs)	3.51	1.002	73
	Bachelor's Degree	3.45	.867	65
	Master's Degree	3.40	.914	136
	PhD	3.25	.622	12
	Total	3.45	.921	321
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - relations among employees in general	High School	3.74	.817	35
	Associate degree (2-3 yrs)	3.71	.935	73
	Bachelor's Degree	3.58	.808	65
	Master's Degree	3.57	.875	136
	PhD	3.33	.651	12
	Total	3.61	.863	321
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - Level of Productivity	High School	4.00	.804	35
	Associate degree (2-3 yrs)	3.89	.891	73
	Bachelor's Degree	3.68	.773	65
	Master's Degree	3.72	.841	136
	PhD	3.33	.651	12
	Total	3.77	.836	321

#### Descriptive Statistics - Current position

	Current Position	Mean	Std. Deviation	N
Employee selection is taken very seriously by this University	Manager/Director	4.70	.812	37
	Officer	4.26	1.209	143
	Assistant Officer	4.62	1.059	141
	Total	4.47	1.118	321
Employee selection places priority on the candidate's potential to learn	Manager/Director	4.24	.641	37
	Officer	3.63	1.346	143
	Assistant Officer	4.04	1.204	141
	Total	3.88	1.240	321
Employee selection emphasises capacity to perform well right away	Manager/Director	4.32	.784	37
	Officer	4.01	1.230	143
	Assistant Officer	4.13	1.166	141
	Total	4.10	1.160	321
Employees in this university have clear career paths	Manager/Director	3.62	.861	37
	Officer	3.38	1.267	143
	Assistant Officer	3.96	1.236	141
	Total	3.66	1.240	321

Training programs strive to develop university-specific skills/knowledge	Manager/Director	4.84	.727	37
	Officer	4.76	.973	143
	Assistant Officer	4.96	1.017	141
	Total	4.86	.971	321
The training programs emphasise on-the-job experiences	Manager/Director	4.70	.661	37
	Officer	4.41	1.037	143
	Assistant Officer	4.73	1.120	141
	Total	4.59	1.049	321
Training programs in this University have improved the effectiveness of employees	Manager/Director	4.73	.608	37
	Officer	4.32	1.039	143
	Assistant Officer	4.62	.961	141
	Total	4.50	.975	321
Performance appraisal is based on objective, quantifiable results	Manager/Director	3.92	.595	37
	Officer	3.38	1.353	143
	Assistant Officer	4.09	1.218	141
	Total	3.76	1.271	321
Performance appraisals include management by objective with mutual goal setting	Manager/Director	4.08	.595	37
	Officer	3.48	1.294	143
	Assistant Officer	4.30	1.177	141
	Total	3.91	1.242	321
Performance appraisals include developmental feedback	Manager/Director	4.30	.520	37
	Officer	3.77	1.320	143
	Assistant Officer	4.35	1.299	141
	Total	4.09	1.274	321
Performance appraisals emphasise development of abilities / skills	Manager/Director	4.38	.545	37
	Officer	3.90	1.232	143
	Assistant Officer	4.43	1.191	141
	Total	4.18	1.181	321
Performance appraisal emphasises the output of the team	Manager/Director	4.24	.830	37
	Officer	3.68	1.330	143
	Assistant Officer	4.39	1.206	141
	Total	4.06	1.271	321
This university incentive system is tied to skill-based rewards	Manager/Director	3.24	1.065	37
	Officer	2.72	1.297	143
	Assistant Officer	3.11	1.392	141
	Total	2.95	1.329	321
This university incentive system has a group-based component	Manager/Director	3.51	.932	37
	Officer	3.10	1.406	143
	Assistant Officer	3.88	1.239	141
	Total	3.49	1.335	321

Compensation and Incentives are contingent on performance	Manager/Director	3.03	.897	37
	Officer	2.58	1.183	143
	Assistant Officer	2.98	1.401	141
	Total	2.81	1.270	321
Employees in this university are empowered to make decisions consistent with their status	Manager/Director	4.08	.795	37
	Officer	4.06	1.083	143
	Assistant Officer	4.23	1.003	141
	Total	4.14	1.019	321
Employees in this university are often asked by their supervisor to participate in decision-making	Manager/Director	3.95	.880	37
	Officer	3.87	1.150	143
	Assistant Officer	3.75	1.166	141
	Total	3.83	1.129	321
Employees are encouraged to suggest improvements in the way things are done	Manager/Director	4.08	.862	37
	Officer	4.17	1.107	143
	Assistant Officer	4.15	1.183	141
	Total	4.15	1.114	321
Senior management is communicating effectively with employees in this university	Manager/Director	3.89	1.022	37
	Officer	3.48	1.221	143
	Assistant Officer	3.91	1.158	141
	Total	3.71	1.188	321
Employees are encouraged to bring up ideas to help accomplish their department's / university 's goals	Manager/Director	4.24	.683	37
	Officer	3.97	1.241	143
	Assistant Officer	4.09	1.186	141
	Total	4.05	1.166	321
The employees working in this university are highly skilled	Manager/Director	4.57	.647	37
	Officer	4.32	.969	143
	Assistant Officer	4.17	1.075	141
	Total	4.28	.992	321
The employees working in this university are considered the best in university education in Cyprus	Manager/Director	4.05	.621	37
	Officer	3.73	1.127	143
	Assistant Officer	3.83	1.075	141
	Total	3.81	1.060	321
The employees working in the university are encouraged to be creative	Manager/Director	4.30	.661	37
	Officer	3.80	1.252	143
	Assistant Officer	4.12	1.118	141
	Total	4.00	1.151	321

The employees working in the university are experts in their particular jobs and functions	Manager/Director	4.24	.435	37
	Officer	4.14	1.025	143
	Assistant Officer	4.11	1.083	141
	Total	4.14	1.001	321
I would be happy to spend the rest of my career with this university	Manager/Director	4.89	.875	37
	Officer	4.65	1.050	143
	Assistant Officer	4.96	1.072	141
	Total	4.82	1.049	321
I talk about this university to my friends as an ideal working place	Manager/Director	5.08	.640	37
	Officer	4.65	1.164	143
	Assistant Officer	5.06	1.030	141
	Total	4.88	1.075	321
I find my values and the university's values very similar	Manager/Director	4.49	.901	37
	Officer	4.16	1.260	143
	Assistant Officer	4.70	1.120	141
	Total	4.44	1.187	321
I am proud to tell others that I am a part of this university	Manager/Director	5.05	.848	37
	Officer	4.81	1.081	143
	Assistant Officer	5.30	.774	141
	Total	5.06	.957	321
Our employees' productivity is higher than those of other universities in Cyprus	Manager/Director	4.14	.751	37
	Officer	3.99	1.163	143
	Assistant Officer	4.23	1.053	141
	Total	4.11	1.078	321
Our employees produce in an efficient manner	Manager/Director	4.95	.405	37
	Officer	4.27	1.043	143
	Assistant Officer	4.50	.859	141
	Total	4.45	.931	321
Our employees' productive power is higher than those of other universities in Cyprus	Manager/Director	4.19	.776	37
	Officer	4.04	1.113	143
	Assistant Officer	4.23	1.003	141
	Total	4.14	1.032	321
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - performance	Manager/Director	3.97	.440	37
	Officer	3.91	.777	143
	Assistant Officer	4.18	.749	141
	Total	4.03	.743	321
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - quality of services and programs(service quality)	Manager/Director	4.03	.440	37
	Officer	3.97	.796	143
	Assistant Officer	4.20	.767	141
	Total	4.08	.756	321

Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - development of new services and programs	Manager/Director	4.05	.575	37
	Officer	3.97	.859	143
	Assistant Officer	4.21	.770	141
	Total	4.08	.798	321
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - ability to attract essential employees	Manager/Director	3.81	.660	37
	Officer	3.72	.915	143
	Assistant Officer	3.87	.864	141
	Total	3.79	.867	321
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - satisfaction of customers or clients	Manager/Director	3.89	.567	37
	Officer	3.73	.769	143
	Assistant Officer	3.87	.786	141
	Total	3.81	.757	321
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - relations between management and other employees	Manager/Director	3.38	.681	37
	Officer	3.36	.923	143
	Assistant Officer	3.56	.966	141
	Total	3.45	.921	321
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - relations among employees in general	Manager/Director	3.65	.676	37
	Officer	3.52	.812	143
	Assistant Officer	3.70	.947	141
	Total	3.61	.863	321
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - Level of Productivity	Manager/Director	3.81	.701	37
	Officer	3.61	.831	143
	Assistant Officer	3.91	.849	141
	Total	3.77	.836	321

**Descriptive Statistics – Gender**

	Gender	Mean	Std. Deviation	N
Employee selection is taken very seriously by this University	Male	4.54	1.312	103
	Female	4.44	1.015	218
	Total	4.47	1.118	321
Employee selection places priority on the candidate's potential to learn	Male	3.88	1.255	103
	Female	3.88	1.236	218
	Total	3.88	1.240	321
Employee selection emphasises capacity to perform well right away	Male	4.04	1.188	103
	Female	4.13	1.149	218
	Total	4.10	1.160	321
Employees in this university have clear career paths	Male	3.48	1.327	103
	Female	3.75	1.189	218
	Total	3.66	1.240	321
Training programs strive to develop university-specific skills/knowledge	Male	4.88	.963	103
	Female	4.84	.976	218
	Total	4.86	.971	321
The training programs emphasise on-the-job experiences	Male	4.61	1.002	103
	Female	4.57	1.072	218
	Total	4.59	1.049	321
Training programs in this University have improved the effectiveness of employees	Male	4.57	1.053	103
	Female	4.46	.936	218
	Total	4.50	.975	321
Performance appraisal is based on objective, quantifiable results	Male	3.67	1.248	103
	Female	3.80	1.283	218
	Total	3.76	1.271	321
Performance appraisals include management by objective with mutual goal setting	Male	3.76	1.184	103
	Female	3.99	1.264	218
	Total	3.91	1.242	321
Performance appraisals include developmental feedback	Male	4.04	1.137	103
	Female	4.11	1.336	218
	Total	4.09	1.274	321
Performance appraisals emphasise development of abilities/skills	Male	4.15	1.097	103
	Female	4.20	1.220	218
	Total	4.18	1.181	321
Performance appraisal emphasises the output of the team	Male	3.96	1.220	103
	Female	4.10	1.295	218
	Total	4.06	1.271	321

This university incentive system is tied to skill-based rewards	Male	2.93	1.239	103
	Female	2.96	1.372	218
	Total	2.95	1.329	321
This university incentive system has a group-based component	Male	3.34	1.295	103
	Female	3.56	1.350	218
	Total	3.49	1.335	321
Compensation and Incentives are contingent on performance	Male	2.78	1.260	103
	Female	2.82	1.277	218
	Total	2.81	1.270	321
Employees in this university are empowered to make decisions consistent with their status	Male	4.15	.944	103
	Female	4.13	1.054	218
	Total	4.14	1.019	321
Employees in this university are often asked by their supervisor to participate in decision-making	Male	3.94	1.092	103
	Female	3.78	1.144	218
	Total	3.83	1.129	321
Employees are encouraged to suggest improvements in the way things are done	Male	4.15	1.106	103
	Female	4.15	1.120	218
	Total	4.15	1.114	321
Senior management is communicating effectively with employees in this university	Male	3.69	1.138	103
	Female	3.72	1.213	218
	Total	3.71	1.188	321
Employees are encouraged to bring up ideas to help accomplish their department's / university 's goals	Male	4.08	1.226	103
	Female	4.04	1.139	218
	Total	4.05	1.166	321
The employees working in this university are highly skilled	Male	4.42	.985	103
	Female	4.22	.992	218
	Total	4.28	.992	321
The employees working in this university are considered the best in university education in Cyprus	Male	3.94	1.037	103
	Female	3.75	1.067	218
	Total	3.81	1.060	321
The employees working in the university are encouraged to be creative	Male	4.07	1.165	103
	Female	3.97	1.146	218
	Total	4.00	1.151	321
The employees working in the university are experts in their particular jobs and functions	Male	4.28	.994	103
	Female	4.07	1.000	218
	Total	4.14	1.001	321
I would be happy to spend the rest of my career with this university	Male	4.88	1.013	103
	Female	4.78	1.067	218
	Total	4.82	1.049	321

I talk about this university to my friends as an ideal working place	Male	4.89	1.119	103
	Female	4.88	1.055	218
	Total	4.88	1.075	321
I find my values and the university's values very similar	Male	4.48	1.267	103
	Female	4.42	1.150	218
	Total	4.44	1.187	321
I am proud to tell others that I am a part of this university	Male	4.96	1.019	103
	Female	5.10	.925	218
	Total	5.06	.957	321
Our employees' productivity is higher than those of other universities in Cyprus	Male	4.17	.961	103
	Female	4.09	1.131	218
	Total	4.11	1.078	321
Our employees produce in an efficient manner	Male	4.54	.838	103
	Female	4.41	.971	218
	Total	4.45	.931	321
Our employees' productive power is higher than those of other universities in Cyprus	Male	4.31	.970	103
	Female	4.06	1.052	218
	Total	4.14	1.032	321
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? – performance	Male	4.06	.623	103
	Female	4.02	.794	218
	Total	4.03	.743	321
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? – quality of services and programs(service quality)	Male	4.11	.713	103
	Female	4.06	.777	218
	Total	4.08	.756	321
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? – development of new services and programs	Male	4.07	.757	103
	Female	4.09	.818	218
	Total	4.08	.798	321
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? – ability to attract essential employees	Male	3.83	.864	103
	Female	3.78	.869	218
	Total	3.79	.867	321
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? – satisfaction of customers or clients	Male	3.79	.666	103
	Female	3.82	.798	218
	Total	3.81	.757	321
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? – relations between management and other employees	Male	3.37	.918	103
	Female	3.49	.922	218
	Total	3.45	.921	321

Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? – relations among employees in general	Male	3.61	.854	103
	Female	3.61	.868	218
	Total	3.61	.863	321
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - Level of Productivity	Male	3.77	.831	103
	Female	3.77	.840	218
	Total	3.77	.836	321

**Descriptive Statistics- Total years of work experience**

	How many total years of work experience do you have?	Mean	Std. Deviation	N
Employee selection is taken very seriously by this University	Up to 1 year	4.87	.835	8
	2 to 5 years	4.68	.779	63
	6-10 years	4.20	1.263	89
	11-15 years	4.40	1.257	52
	Over 15 years	4.51	1.130	83
	Total	4.44	1.135	295
Employee selection places priority on the candidate's potential to learn	Up to 1 year	4.63	1.188	8
	2 to 5 years	4.03	1.204	63
	6-10 years	3.62	1.394	89
	11-15 years	3.77	1.293	52
	Over 15 years	3.92	1.150	83
	Total	3.84	1.274	295
Employee selection emphasises capacity to perform well right away	Up to 1 year	4.38	1.506	8
	2 to 5 years	4.33	1.164	63
	6-10 years	3.98	1.187	89
	11-15 years	3.85	1.258	52
	Over 15 years	4.12	1.130	83
	Total	4.08	1.192	295
Employees in this university have clear career paths	Up to 1 year	4.38	.744	8
	2 to 5 years	3.73	1.181	63
	6-10 years	3.56	1.305	89
	11-15 years	3.81	1.221	52
	Over 15 years	3.49	1.319	83
	Total	3.64	1.261	295

Training programs strive to develop university-specific skills/knowledge	Up to 1 year	4.87	.641	8
	2 to 5 years	4.81	.981	63
	6-10 years	4.91	1.051	89
	11-15 years	4.83	1.167	52
	Over 15 years	4.80	.823	83
	Total	4.84	.985	295
The training programs emphasise on-the-job experiences	Up to 1 year	4.63	1.061	8
	2 to 5 years	4.60	1.040	63
	6-10 years	4.55	1.118	89
	11-15 years	4.46	1.179	52
	Over 15 years	4.55	.953	83
	Total	4.55	1.061	295
Training programs in this University have improved the effectiveness of employees	Up to 1 year	4.87	.641	8
	2 to 5 years	4.48	.931	63
	6-10 years	4.36	1.079	89
	11-15 years	4.50	1.000	52
	Over 15 years	4.45	.927	83
	Total	4.45	.981	295
Performance appraisal is based on objective, quantifiable results	Up to 1 year	4.50	1.195	8
	2 to 5 years	3.97	1.204	63
	6-10 years	3.65	1.315	89
	11-15 years	3.46	1.407	52
	Over 15 years	3.70	1.237	83
	Total	3.72	1.293	295
Performance appraisals include management by objective with mutual goal setting	Up to 1 year	4.63	1.188	8
	2 to 5 years	4.02	1.171	63
	6-10 years	3.83	1.333	89
	11-15 years	3.62	1.444	52
	Over 15 years	3.90	1.144	83
	Total	3.87	1.270	295
Performance appraisals include developmental feedback	Up to 1 year	4.88	.991	8
	2 to 5 years	4.16	1.035	63
	6-10 years	4.08	1.440	89
	11-15 years	3.94	1.406	52
	Over 15 years	3.95	1.306	83
	Total	4.06	1.309	295
Performance appraisals emphasise development of abilities / skills	Up to 1 year	5.00	1.069	8
	2 to 5 years	4.35	.953	63
	6-10 years	4.11	1.377	89
	11-15 years	3.87	1.329	52
	Over 15 years	4.14	1.072	83
	Total	4.15	1.207	295

Performance appraisal emphasises the output of the team	Up to 1 year	4.88	.991	8
	2 to 5 years	4.17	1.158	63
	6-10 years	3.98	1.357	89
	11-15 years	3.79	1.446	52
	Over 15 years	4.00	1.230	83
	Total	4.02	1.295	295
This university incentive system is tied to skill-based rewards	Up to 1 year	3.63	1.302	8
	2 to 5 years	3.14	1.255	63
	6-10 years	2.73	1.304	89
	11-15 years	2.87	1.482	52
	Over 15 years	2.99	1.384	83
	Total	2.94	1.354	295
This university incentive system has a group-based component	Up to 1 year	4.38	1.188	8
	2 to 5 years	3.87	1.276	63
	6-10 years	3.39	1.240	89
	11-15 years	3.12	1.517	52
	Over 15 years	3.28	1.346	83
	Total	3.44	1.354	295
Compensation and Incentives are contingent on performance	Up to 1 year	4.13	.835	8
	2 to 5 years	2.97	1.164	63
	6-10 years	2.62	1.257	89
	11-15 years	2.58	1.289	52
	Over 15 years	2.87	1.359	83
	Total	2.80	1.285	295
Employees in this university are empowered to make decisions consistent with their status	Up to 1 year	4.50	.926	8
	2 to 5 years	4.27	.937	63
	6-10 years	4.07	.986	89
	11-15 years	4.23	1.096	52
	Over 15 years	4.01	1.053	83
	Total	4.14	1.014	295
Employees in this university are often asked by their supervisor to participate in decision-making	Up to 1 year	3.75	1.282	8
	2 to 5 years	3.98	1.100	63
	6-10 years	3.75	1.131	89
	11-15 years	3.83	1.184	52
	Over 15 years	3.75	1.114	83
	Total	3.81	1.129	295

Employees are encouraged to suggest improvements in the way things are done	Up to 1 year	4.38	.744	8
	2 to 5 years	4.24	1.073	63
	6-10 years	4.22	1.126	89
	11-15 years	4.15	1.144	52
	Over 15 years	4.04	1.120	83
	Total	4.17	1.105	295
Senior management is communicating effectively with employees in this university	Up to 1 year	4.13	1.246	8
	2 to 5 years	3.89	1.018	63
	6-10 years	3.51	1.262	89
	11-15 years	3.60	1.225	52
	Over 15 years	3.70	1.247	83
	Total	3.67	1.205	295
Employees are encouraged to bring up ideas to help accomplish their department's / university 's goals	Up to 1 year	4.00	1.309	8
	2 to 5 years	4.10	1.073	63
	6-10 years	4.09	1.240	89
	11-15 years	3.85	1.274	52
	Over 15 years	4.01	1.163	83
	Total	4.02	1.188	295
The employees working in this university are highly skilled	Up to 1 year	4.25	1.035	8
	2 to 5 years	4.40	.959	63
	6-10 years	4.29	1.014	89
	11-15 years	4.10	1.089	52
	Over 15 years	4.33	.964	83
	Total	4.29	1.001	295
The employees working in this university are considered the best in university education in Cyprus	Up to 1 year	4.13	.641	8
	2 to 5 years	3.97	.967	63
	6-10 years	3.69	1.114	89
	11-15 years	3.44	1.092	52
	Over 15 years	3.95	1.092	83
	Total	3.79	1.077	295
The employees working in the university are encouraged to be creative	Up to 1 year	4.38	.518	8
	2 to 5 years	4.19	1.030	63
	6-10 years	3.93	1.250	89
	11-15 years	3.65	1.219	52
	Over 15 years	4.12	1.152	83
	Total	4.00	1.168	295

The employees working in the university are experts in their particular jobs and functions	Up to 1 year	4.38	.916	8
	2 to 5 years	4.21	.883	63
	6-10 years	4.08	1.140	89
	11-15 years	4.02	1.093	52
	Over 15 years	4.23	.902	83
	Total	4.15	1.008	295
I would be happy to spend the rest of my career with this university	Up to 1 year	4.50	.926	8
	2 to 5 years	4.70	.978	63
	6-10 years	4.75	1.111	89
	11-15 years	4.94	1.127	52
	Over 15 years	4.93	1.091	83
	Total	4.82	1.076	295
I talk about this university to my friends as an ideal working place	Up to 1 year	4.88	.641	8
	2 to 5 years	4.79	1.034	63
	6-10 years	4.87	1.150	89
	11-15 years	4.98	1.057	52
	Over 15 years	4.87	1.187	83
	Total	4.87	1.105	295
I find my values and the university's values very similar	Up to 1 year	4.75	.886	8
	2 to 5 years	4.51	.982	63
	6-10 years	4.40	1.268	89
	11-15 years	4.60	1.225	52
	Over 15 years	4.24	1.312	83
	Total	4.42	1.209	295
I am proud to tell others that I am a part of this university	Up to 1 year	5.13	.641	8
	2 to 5 years	5.24	.588	63
	6-10 years	5.00	1.022	89
	11-15 years	5.19	.908	52
	Over 15 years	4.92	1.202	83
	Total	5.06	.979	295
Our employees' productivity is higher than those of other universities in Cyprus	Up to 1 year	4.63	.518	8
	2 to 5 years	4.30	1.042	63
	6-10 years	4.06	1.091	89
	11-15 years	3.92	1.082	52
	Over 15 years	4.06	1.097	83
	Total	4.10	1.074	295

Our employees produce in an efficient manner	Up to 1 year	4.63	.744	8
	2 to 5 years	4.38	.923	63
	6-10 years	4.37	.922	89
	11-15 years	4.27	1.012	52
	Over 15 years	4.51	.942	83
	Total	4.40	.938	295
Our employees' productive power is higher than those of other universities in Cyprus	Up to 1 year	4.50	.535	8
	2 to 5 years	4.27	1.081	63
	6-10 years	4.15	1.072	89
	11-15 years	3.83	.944	52
	Over 15 years	4.12	1.041	83
	Total	4.12	1.038	295
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - performance	Up to 1 year	4.25	.463	8
	2 to 5 years	4.21	.676	63
	6-10 years	3.84	.865	89
	11-15 years	3.92	.710	52
	Over 15 years	4.13	.712	83
	Total	4.03	.760	295
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - quality of services and programs(service quality)	Up to 1 year	4.38	.518	8
	2 to 5 years	4.16	.766	63
	6-10 years	3.97	.872	89
	11-15 years	4.02	.727	52
	Over 15 years	4.13	.712	83
	Total	4.07	.775	295
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - development of new services and programs	Up to 1 year	4.38	.518	8
	2 to 5 years	4.11	.785	63
	6-10 years	4.04	.940	89
	11-15 years	4.06	.725	52
	Over 15 years	4.08	.784	83
	Total	4.08	.817	295
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - ability to attract essential employees	Up to 1 year	4.25	.463	8
	2 to 5 years	3.87	.751	63
	6-10 years	3.74	.936	89
	11-15 years	3.63	.817	52
	Over 15 years	3.77	.979	83
	Total	3.77	.884	295

Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - satisfaction of customers or clients	Up to 1 year	3.75	.886	8
	2 to 5 years	3.87	.772	63
	6-10 years	3.74	.716	89
	11-15 years	3.62	.690	52
	Over 15 years	3.88	.832	83
	Total	3.79	.764	295
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - relations between management and other employees	Up to 1 year	3.63	.916	8
	2 to 5 years	3.57	.797	63
	6-10 years	3.47	.918	89
	11-15 years	3.27	.819	52
	Over 15 years	3.46	1.119	83
	Total	3.46	.939	295
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - relations among employees in general	Up to 1 year	4.00	.535	8
	2 to 5 years	3.70	.796	63
	6-10 years	3.62	.886	89
	11-15 years	3.62	.796	52
	Over 15 years	3.43	.990	83
	Total	3.59	.879	295
Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university? - Level of Productivity	Up to 1 year	4.25	.463	8
	2 to 5 years	3.81	.692	63
	6-10 years	3.74	.899	89
	11-15 years	3.65	.738	52
	Over 15 years	3.73	.989	83
	Total	3.75	.851	295

### Appendix 3: Questionnaire in Greek



#### ΕΡΕΥΝΑ ΣΤΡΑΤΗΓΙΚΗΣ ΔΙΕΥΘΥΝΣΗΣ ΑΝΘΡΩΠΙΝΟΥ ΔΥΝΑΜΙΚΟΥ (ΔΑΔ)

Αγαπητέ κύριε/α,

Η παρούσα έρευνα διεξάγεται μέσα στα πλαίσια εκπόνησης διδακτορικής διατριβής και έχει ως βασικό στόχο να εξετάσει την σχέση μεταξύ των συστημάτων διεύθυνσης ανθρώπινου δυναμικού των πανεπιστημίων της Κύπρου και τις απόδοσης τους, αναλύοντας τον ρόλο που διαδραματίζουν το επίπεδο των δεξιοτήτων του προσωπικού και συγκεκριμένες εργασιακές συμπεριφορές του.

Η έρευνα στο τομέα της Στρατηγικής Διεύθυνσης Ανθρώπινου Δυναμικού (ΔΑΔ) έχει καταδείξει τη σημαντική σχέση μεταξύ της ποιότητας / καταλληλότητας του συστήματος Διεύθυνσης Ανθρώπινου Δυναμικού του οργανισμού και της απόδοσης του. Επίσης, έχει διαπιστωθεί ότι τα συστήματα ΔΑΔ μπορούν να δημιουργήσουν σημαντικό ανταγωνιστικό πλεονέκτημα για τον οργανισμό δημιουργώντας σημαντικές εξειδικευμένες δεξιότητες στους εργαζομένους. Οι συγκεκριμένες δεξιότητες των εργαζομένων που αυξάνουν την απόδοση, τις περισσότερες περιπτώσεις, διαφέρουν. Για αυτό οι ερευνητές διαπιστώνουν την ανάγκη για περαιτέρω ανάλυση των συμπεριφορών του προσωπικού οι οποίες συνδέουν της πρακτικές ΔΑΔ με την απόδοση σε διαφορετικές συνθήκες και οργανισμού.

Σας παρακαλώ να συμμετάσχετε στην παρούσα έρευνα συμπληρώνοντας το παρακάτω ερωτηματολόγιο. Το ερωτηματολόγιο είναι πολύ απλό και η συμπλήρωση του απαιτεί περίπου 15 λεπτά από τον χρόνο σας.

Η εθελοντική συμμετοχή σας στην έρευνα αυτή θα συμβάλει στην κατανόηση της σχέσης μεταξύ της ποιότητας / καταλληλότητας του συστήματος Διεύθυνσης Ανθρώπινου Δυναμικού του οργανισμού σας και της απόδοσης του. Μέχρι σήμερα στη Κύπρο δεν έχει πραγματοποιηθεί παρόμοια έρευνα στον τομέα της πανεπιστημιακής εκπαίδευσης.

Θα υπάρξει εχεμύθεια ως προς τη διαχείριση των απαντήσεων. Δεν θα αναφερθούν ονόματα ατόμων ή οργανισμών στη συγγραφή ή στην παρουσίαση των αποτελεσμάτων της έρευνας αυτής. Μετά τη συμπλήρωση του ερωτηματολογίου, οι πληροφορίες θα καταχωρηθούν σε λογισμικό πρόγραμμα στατιστικής ανάλυσης.

Σε περίπτωση που επιθυμείτε να σας κοινοποιηθούν τα αποτελέσματα της έρευνας, παρακαλώ σημειώστε ✓ στο πιο κάτω πεδίο:

Επιθυμώ να λάβω τα αποτελέσματα της έρευνας στην ακόλουθη ηλεκτρονική διεύθυνση:

Παρακαλώ επικοινωνήστε μαζί μου στα τηλέφωνα 99650374/25002585 ή μέσω ηλεκτρονικού ταχυδρομείου στην διεύθυνση [costas.hoppas@cut.ac.cy](mailto:costas.hoppas@cut.ac.cy) στην περίπτωση που επιθυμείτε να υποβάλετε οποιοδήποτε ερωτήσεις σχετικές με την παρούσα έρευνα.

Με εκτίμηση

**Κώστας Χόππας**

Υποψήφιος Διδάκτορας  
Τ.Θ. 50329, 3603 Λεμεσός, Κύπρος  
Τηλέφωνο: 25002585 / 99650374  
Τηλεομοίτυπο: 25002770  
Ηλ.Ταχ. [costas.hoppas@cut.ac.cy](mailto:costas.hoppas@cut.ac.cy)

## ΜΕΡΟΣ Α' - ΟΔΗΓΙΕΣ

Στην ενότητα αυτή θα θέλαμε να γνωρίζουμε σε ποιο βαθμό συμφωνείτε με τις ακόλουθες δηλώσεις. Κατά την απάντησή σε αυτό το μέρος μπορείτε να σκεφτείτε αυτές τις πρακτικές ΔΑΔ που εφαρμόζονται για τον μέσο υπόλληλο που εργάζεται στις διοικητικές υπηρεσίες του Πανεπιστημίου σας. Παρακαλώ σημειώστε « σε ποιο βαθμό συμφωνείτε με κάθε μία από τις παρακάτω δηλώσεις».

	Διαφωνώ απόλυτα	Διαφωνώ	Διαφωνώ en μέτρα	Συμφωνώ en μέτρα	Συμφωνώ	Συμφωνώ απόλυτα
1. Η επιλογή των εργαζομένων αντιμετωπίζεται ως ένα σημαντικό ζήτημα από το πανεπιστήμιο.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Για την επιλογή των εργαζομένων δίνεται έμφαση στην προέλευση εκ των έσω (from with-in).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Για την επιλογή των εργαζομένων τίθεται ως προτεραιότητα η ικανότητα του υποψηφίου να μάθει.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Για την επιλογή των εργαζομένων δίνεται έμφαση στην ικανότητα του υποψηφίου να είναι αποδοτικός άμεσα.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Οι εργαζόμενοι σε αυτό το πανεπιστήμιο έχουν ελεύθερη προσωπική σταδιοδρομία εκτός του πανεπιστημίου.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Οι εργαζόμενοι σε αυτό το πανεπιστήμιο συμμετέχουν σε επιχειρηματικό προγράμματα κάθε χρόνο.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Τα επιχειρηματικά προγράμματα επιδέχονται να αναπτύξουν συγκεκριμένες δεξιότητες / γνώσεις που είναι σημαντικές για το πανεπιστήμιο.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Τα επιχειρηματικά προγράμματα δίνουν έμφαση στην απόκτηση εμπειρίας μέσα στον εργασιακό χώρο (on-the-job experience).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Για την επιμόρφωση χρησιμοποιείται εξωτερική εκπαίδευση (σημινάρια, συνέδρια, κ.λπ.).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Τα επιχειρηματικά προγράμματα σε αυτό το πανεπιστήμιο έχουν οδηγήσει στη βελτίωση της αποτελεσματικότητας των εργαζομένων.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Η αξιολόγηση της απόδοσης βασίζεται σε συγκεκριμένα, μετρήσιμα αποτελέσματα.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Η αξιολόγηση της απόδοσης συνδέεται με τους στόχους του πανεπιστημίου και της υπηρεσίας και βασίζεται σε συγκεκριμένους και αμοιβαία συμφωνημένους στόχους (Management-by-objectives).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Η αξιολόγηση της απόδοσης περιλαμβάνει ανατροφοδότηση από τον προϊστάμενο στον υφιστάμενο για σκοπούς βελτίωσης (developmental feedback).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Διαφωνώ απόλυτα	Διαφωνώ	Διαφωνώ en μέτρα	Συμφωνώ en μέτρα	Συμφωνώ	Συμφωνώ απόλυτα
14. Η αξιολόγηση της απόδοσης δίνει έμφαση στην ανάπτυξη των ικανοτήτων / δεξιοτήτων.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Η αξιολόγηση της απόδοσης δίνει έμφαση στην απόδοση της ομάδας.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Το πακέτο αμοιβών αυτού του Πανεπιστημίου περιλαμβάνει υψηλούς μισθούς.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Το σύστημα παροχής κινήτρων αυτού του Πανεπιστημίου συνδέεται με αμοιβαί βδοα των δεξιοτήτων.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Ένα μέρος του συστήματος παροχής κινήτρων αυτού του Πανεπιστημίου είναι βασισμένο στην ομαδικότητα.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19	Το σύστημα παραγωγής κινήτρων αυτού του Πανεπιστημίου λαμβάνει υπόψη την αρχαιότητα (seniority) των υπαλλήλων.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20	Οι αμοιβές και τα κίνητρα εξαρτώνται από την απόδοση.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21	Το πακέτο αμοιβών αυτού του Πανεπιστημίου είναι ανταγωνιστικό σε σύγκριση με εκείνα των άλλων κυπριακών Πανεπιστημίων.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22	Οι εργαζόμενοι σε αυτό το Πανεπιστήμιο ενθαρρύνονται να λαμβάνουν αποφάσεις σχετικές με τα καθήκοντά τους.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23	Σε αυτό το πανεπιστήμιο οι προϊστάμενοι ζητούν συχνά από τους εργαζόμενους να συμμετέχουν στη διαδικασία λήψης αποφάσεων.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24	Οι εργαζόμενοι ενθαρρύνονται να προτείνουν βελτιώσεις στον τρόπο με τον οποίο διεκπεραιώνονται οι εργασίες/καθήκοντα τους.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25	Η βολή της επικοινωνίας αποτελεί σημαντικό με τους εργαζόμενους σε αυτό το πανεπιστήμιο.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26	Οι εργαζόμενοι ενθαρρύνονται να εκφράσουν ιδέες που θα βοηθούσαν στην εκπλήρωση των στόχων της υπηρεσίας / του πανεπιστημίου τους.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27	Οι υπάλληλοι που εργάζονται σε αυτό το πανεπιστήμιο έχουν εξειδικευμένες γνώσεις και εμπειρία.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28	Οι υπάλληλοι που εργάζονται σε αυτό το πανεπιστήμιο θεωρούνται ευρέως ως οι καλύτεροι / πιο αξιολογικοί στο χώρο της πανεπιστημιακής εκπαίδευσης στην Κύπρο.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29	Οι υπάλληλοι που εργάζονται στο πανεπιστήμιο ενθαρρύνονται να είναι δημιουργικοί.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30	Οι υπάλληλοι που εργάζονται στο πανεπιστήμιο είναι ειδικά στις συγκεκριμένες εργασίες και σχολεία τους.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Σκιαφάξτε πώς συμπεριφέρεστε στο χώρο εργασίας. Πόσο συχνά κάνετε κάθε ένα από τα ακόλουθα; (Κλίμακα: Όπου 1 = Σε καμία περίπτωση έως 6 = Σε κάθε δυνατή ευκαιρία)

Παρακαλώ σημειώστε + σε ποιο βαθμό συμφωνείτε με κάθε μία από τις παρακάτω δηλώσεις.

31	Είμαι αφοσιωμένος/ή σε αυτό το πανεπιστήμιο	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32	Θα ήμουν ευτυχής να περάσω το υπόλοιπο της καριέρας μου σε αυτό το πανεπιστήμιο.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33	Ενδιαφέρομαι πραγματικά για το μέλλον αυτού του πανεπιστημίου.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34	Είμαι πρόθυμος να δώσω περισσότερα από αυτά που απαιτεί η δουλειά μου, έτσι ώστε να βοηθήσω αυτό το πανεπιστήμιο να επιτύχει.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35	Συστήνω αυτό το πανεπιστήμιο στους φίλους μου ως έναν ιδανικό εργασιακό χώρο.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
36	Βρίσκω πολύ όμοιες τις προσωπικές μου αξίες και τις αξίες του πανεπιστημίου.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
37	Είμαι υπερήφανος όταν αναφέρω στους άλλους ότι είμαι μέρος αυτού του πανεπιστημίου.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
38	Αισθάνομαι πραγματικά ότι τα προβλήματα αυτού του οργανισμού είναι σαν να είναι δικά μου.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
39	Η απόδοση των εργαζομένων του πανεπιστημίου μας είναι υψηλότερη από εκείνη των άλλων κυπριακών πανεπιστημίων.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- 40. Οι εργαζόμενοι μας παράγουν έργο με αποδοκασματικό τρόπο.
- 41. Η παραγωγικότητα των εργαζομένων μας είναι υψηλότερη από εκείνη άλλων πανεπιστημίων στην Κύπρο.

Συγκρίνοντας το πανεπιστήμιο σας με τα άλλα πανεπιστήμια στην Κύπρο, πώς θα αξιολογούσατε την (.....) του πανεπιστημίου σας στα τελευταία τρία (3) έτη; Παρακαλώ σημειώστε \* σε ποιο βαθμό συμφωνείτε με κάθε μία από τις παρακάτω δηλώσεις.

	Πολύ χειρότερη	Χειρότερη	Ίδια	Καλύτερη	Πολύ καλύτερη
42. απόδοση (performance)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
43. ποιότητα των υπηρεσιών και προγραμμάτων (πολύτερα υπηρεσιών)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
44. ανάπτυξη νέων υπηρεσιών και προγραμμάτων	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
45. ικανότητα να προσελκύει αξιόλογους υπολλήλους	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
46. ικανότητα να διατηρεί αξιόλογους υπολλήλους	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
47. ικανοποίηση των εκάστων	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
48. σχέσεις μεταξύ της διοίκησης και των άλλων εργαζομένων	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
49. σχέσεις μεταξύ των εργαζομένων	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
50. καρδιαφορία (αν εφαρμόζεται)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
51. καινοτομία	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
52. παραγωγικότητα (productivity)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
53. Υπάρχει κάτι άλλο που θα θέλατε να μας πείτε σχετικά με τους οργανωτικούς παράγοντες που διευκολύνουν ή εμποδίζουν τη δική σας απόδοση μέσα στον οργανισμό; Εάν ναι, παρακαλούμε να χρησιμοποιήσετε τον παρακάτω χώρο για το σκοπό αυτό. Θα εκτιμήσουμε πολύ τα σχόλιά σας.					

**ΜΕΡΟΣ Β' - ΟΔΗΓΙΕΣ**  
 Παρακαλώ δώστε μας τα ακόλουθα δημογραφικά στοιχεία τα οποία θα μας βοηθήσουν να μελετήσουμε τα δεδομένα. Όλες οι απαντήσεις θα παραμείνουν ανώνυμες.

- 54. Τρέχουσα Επαγγελματική Θέση
- 55. Επαγγελματική Κατάσταση
- 56. Φύλο
- 57. Σε ποια ηλικιακή κατηγορία ανήκατε;
- 58. Εκπαίδευση
- 59. Χρόνια εργασιακής εμπειρίας σε αυτό το πανεπιστήμιο
- 60. Συνολικός αριθμός χρόνων εργασιακής εμπειρίας στην πανεπιστημιακή εκπαίδευση
- 61. Συνολικός αριθμός ετών στη τρέχουσα θέση εργασίας
- 62. Συνολικό χρόνο επαγγελματικής εμπειρίας

ΣΑΣ ΕΥΧΑΡΙΣΤΩ ΠΟΛΥ ΓΙΑ ΤΟ ΧΡΟΝΟ ΠΟΥ ΔΕΔΩΣΑΤΕ ΚΑΙ ΓΙΑ ΤΗΝ ΣΥΝΗΤΟΧΗ ΣΑΣ

ΑΠΟΣΤΟΛΗ ΕΡΩΤΗΜΑΤΟΛΟΓΙΟΥ

### **Appendix 4: Questionnaire items in English**

#### **Strategic HRM Survey**

**Section A - Directions:** In this section, I would like to know to what extent you agree with the following statements. When answering this section, please think about those HRM practices used for the average employees who work in the administration services of your University. Please tell me the extent to which you agree with each of the statements below.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
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39.					
40.					
41.					

Compare your university to other universities in Cyprus over the past three (3) years, how would you rate the (.....) of your university?

(Much Worse / Worse / Same / Better / Much Better)

42. performance
43. quality of services and programs(service quality)
44. development of new services and programs
45. ability to attract essential employees
46. ability to retain essential employees
47. satisfaction of customers or clients
48. relations between management and other employees
49. relations among employees in general
50. Profitability (if applicable)
51. Rate of innovation
52. Level of Productivity

**Section B- Directions:** Please provide me with the following demographic information which will help us sort out the data. All responses will remain anonymous.

**1. Current Position:**

- Manager / Supervisor  
 Officer  
 Assistant Officer  
 Other (specify) \_\_\_\_\_

**2. Employment Statuses**

- Full-time Employee       Part-time Employee       Other \_\_\_\_\_

**3.Gender:**  Male  Female

**4.Age:** \_\_\_\_\_

**5.Education:**

- High School       Associate Degree (2-3 yrs)       Bachelor's Degree  
 Master's Degree       PhD       Other \_\_\_\_\_  
 Professional Qualification \_\_\_\_\_

**6.Number of years of work experience at this University:** \_\_\_\_\_

**7.Total number of years of work experience in University-level education:** \_\_\_\_\_

**8.Total number of years in current position:** \_\_\_\_\_

**9.Total years of work experience:** \_\_\_\_\_