



UNIVERSITAT JAUME I
Departamento de Administración de Empresas y Marketing

DOCTORAL DISSERTATION

**INFLUENCE OF HIGH COMMITMENT
MANAGEMENT ON ORGANISATIONAL
PERFORMANCE: HUMAN RESOURCE
FLEXIBILITY AS A MEDIATOR VARIABLE**

Presented by: Inmaculada Beltrán Martín
Supervised by: Dr. Juan Carlos Bou Llusar
Castellón, July 2006



UNIVERSITAT JAUME I
Departamento de Administración de Empresas y Marketing

TESIS DOCTORAL

**INFLUENCIA DE LA GESTION POR ALTO
COMPROMISO EN LOS RESULTADOS
ORGANIZATIVOS: LA FLEXIBILIDAD DE LOS
RECURSOS HUMANOS COMO UNA VARIABLE
MEDIADORA**

Presentada por: Inmaculada Beltrán Martín
Dirigida por: Dr. Juan Carlos Bou Llusar
Castellón, julio de 2006

A mi padre

Agradecimientos

Son muchas las personas que han influido de una u otra manera en la elaboración de esta tesis. A ellos quiero dedicarles unas líneas que, sé de antemano, no van a ser suficientes para expresar mis agradecimientos.

A Juan Carlos Bou, mi director, por todo lo que me ha enseñado, por sus consejos e infinita paciencia a lo largo de este complicado proceso. Gracias por haber confiado en mí desde el primer día.

De forma muy cariñosa, a Ana Escrig y Vicente Roca, por su amistad y muestras de apoyo en el día a día.

A los profesores Stephen Wood, Gianluca Marchi, Massimo Pilati y Werner Müller, por haberme acogido en sus universidades y por mostrarme distintas formas de investigar.

A mis compañeros del Departamento de Administración de Empresas y Marketing, por haber contribuido con su experiencia y con sus ánimos a la finalización de esta tesis.

A mi amiga Alicia Martínez, por estar siempre ahí y por ser para mí una referencia de esfuerzo y trabajo.

A mi madre, Conchín y a mi hermano, Joaquín. Por no dudar un instante que era capaz de hacerlo. Por el tiempo que les he robado.

Gracias.

TABLE OF CONTENTS

CHAPTER 0. INTRODUCTION

0.1. JUSTIFICATION OF THE RESEARCH	1
0.2. OBJECTIVES OF THE RESEARCH	3
0.3. THEORETICAL PERSPECTIVES	4
0.4. STRUCTURE OF THE DISSERTATION	5

SECTION I. THEORETICAL DEVELOPMENT

CHAPTER 1. ORGANISATIONAL AND LABOUR RESPONSES TO NEW COMPETITIVE CONDITIONS

1.0. INTRODUCTION	9
1.1. NEW COMPETITIVE CONDITIONS AND ENVIRONMENTAL DYNAMISM	11
1.2. ORGANISATIONAL RESPONSES TO DYNAMIC ENVIRONMENTS: THE RELEVANCE OF ORGANISATIONAL FLEXIBILITY	16
1.3. THE CHANGING NATURE OF WORK IN TODAY'S ORGANISATIONS	20
1.4. CHAPTER SUMMARY	27

CHAPTER 2. THEORETICAL DELIMITATION OF HIGH COMMITMENT MANAGEMENT

2.0. INTRODUCTION	29
2.1. CONCEPTUAL DELIMITATION OF THE HRM STRATEGY	31
2.1.1. ORIGINS OF "HUMAN RESOURCE MANAGEMENT"	31
2.1.2. CORE COMPONENTS OF THE HRM STRATEGY	35
2.2. CONCEPTUALISATION OF HIGH COMMITMENT MANAGEMENT	38
2.2.1. HUMAN RESOURCE MANAGEMENT AND THE COMMITMENT MODEL	39
2.2.2. DEFINITION OF HIGH COMMITMENT MANAGEMENT	42
2.2.2.1. PRACTICES OF A HIGH COMMITMENT STRATEGY	43
2.2.2.2. DIMENSIONS OF THE HIGH COMMITMENT STRATEGY	48
2.2.3. HIGH COMMITMENT MANAGEMENT AND RELATED TERMS	52
2.3. THE STRATEGIC RELEVANCE OF HIGH COMMITMENT MANAGEMENT	54
2.3.1. CONTRIBUTION OF STRATEGIC MANAGEMENT TO THE FIELD OF HRM	54
2.3.2. MODES OF THEORISING BETWEEN HIGH COMMITMENT MANAGEMENT AND ORGANISATIONAL OUTCOMES	56
2.3.3. EMPIRICAL EVIDENCE ON THE INFLUENCE OF HIGH COMMITMENT	61

MANAGEMENT ON ORGANISATIONAL OUTCOMES	
2.3.4. EMERGING TRENDS IN THE STUDY OF THE CONTRIBUTION OF HIGH COMMITMENT MANAGEMENT TO ORGANISATIONAL OUTCOMES	63
2.3.4.1. INTERMEDIATE MECHANISMS BETWEEN HCM AND ORGANISATIONAL PERFORMANCE: A NEGLECTED ISSUE IN PREVIOUS STUDIES	63
2.3.4.2. THEORETICAL MODELS ON THE INTERMEDIATE MECHANISMS BETWEEN HCM AND ORGANISATIONAL OUTCOMES	67
2.3.4.3. EMPIRICAL EVIDENCE ON THE INTERMEDIATE MECHANISMS BETWEEN HCM AND ORGANISATIONAL OUTCOMES	69
2.4. CHAPTER SUMMARY	71
CHAPTER 3. CONCEPTUALISATION OF HUMAN RESOURCE FLEXIBILITY	
3.0. INTRODUCTION	73
3.1. MODES OF CONCEPTUALISING HUMAN RESOURCE FLEXIBILITY	75
3.1.1. THE MODEL OF THE FLEXIBLE FIRM	75
3.1.2. A MULTIDIMENSIONAL INTERPRETATION OF HR FLEXIBILITY	77
3.2. A FRAMEWORK FOR THE DEFINITION OF HR FLEXIBILITY FROM A RBV APPROACH	82
3.2.1. RBV AND THE INTERNAL NATURE OF HR FLEXIBILITY: A REVIEW OF PRIOR STUDIES	83
3.2.2. RESOURCE FLEXIBILITY DIMENSIONS	87
3.2.3. A SUMMARY OF THE APPLICATION OF THE RBV TO THE CONCEPTUALISATION OF HR FLEXIBILITY	92
3.3. DEFINITION OF HUMAN RESOURCE FLEXIBILITY DIMENSIONS	94
3.3.1. HUMAN RESOURCE INTRINSIC FLEXIBILITY	94
3.3.2. HUMAN RESOURCE MODIFICATION FLEXIBILITY	95
3.3.3. HUMAN RESOURCE RELATIONAL FLEXIBILITY	98
3.3.4. INTERRELATIONSHIPS BETWEEN THE HUMAN RESOURCE FLEXIBILITY DIMENSIONS	99
3.4. CHAPTER SUMMARY	102
CHAPTER 4. RELATIONSHIPS BETWEEN HIGH COMMITMENT MANAGEMENT AND ORGANISATIONAL PERFORMANCE: THE MEDIATING ROLE OF HR FLEXIBILITY	
4.0. INTRODUCTION	105
4.1. CONCEPTUAL MODEL FOR THE PRESENT STUDY	107
4.2. THE RELATIONSHIPS BETWEEN HCM AND HR FLEXIBILITY	108

4.2.1. HCM AND HR INTRINSIC FLEXIBILITY	108
4.2.2. HCM AND HR MODIFICATION FLEXIBILITY	111
4.2.3. HCM AND HR RELATIONAL FLEXIBILITY	115
4.3. THE CONSIDERATION OF HR FLEXIBILITY AS A COMPETITIVE FACTOR	116
4.3.1. THE IMPACT OF HR FLEXIBILITY ON ORGANISATIONAL PERFORMANCE	117
4.3.1.1. THE RELATIONSHIPS BETWEEN HR INTRINSIC FLEXIBILITY AND ORGANISATIONAL PERFORMANCE	117
4.3.1.2. THE RELATIONSHIPS BETWEEN HR MODIFICATION FLEXIBILITY AND ORGANISATIONAL PERFORMANCE	118
4.3.1.3. THE RELATIONSHIPS BETWEEN HR RELATIONAL FLEXIBILITY AND ORGANISATIONAL PERFORMANCE	119
4.3.2. THE MODERATING ROLE OF ENVIRONMENTAL DYNAMISM ON THE CONTRIBUTION OF HR FLEXIBILITY TO ORGANISATIONAL PERFORMANCE	121
4.3.2.1. MODERATION OF ENVIRONMENTAL DYNAMISM BETWEEN HR INTRINSIC FLEXIBILITY AND ORGANISATIONAL PERFORMANCE	121
4.3.2.2. MODERATION OF ENVIRONMENTAL DYNAMISM BETWEEN HR MODIFICATION FLEXIBILITY AND ORGANISATIONAL PERFORMANCE	122
4.3.2.3. MODERATION OF ENVIRONMENTAL DYNAMISM BETWEEN HR RELATIONAL FLEXIBILITY AND ORGANISATIONAL PERFORMANCE	123
4.4. THE MEDIATOR ROLE OF HR FLEXIBILITY IN THE RELATIONSHIP BETWEEN HCM AND ORGANISATIONAL PERFORMANCE	125
4.5. CHAPTER SUMMARY	128

SECTION II. EMPIRICAL RESEARCH

CHAPTER 5. THE EMPIRICAL RESEARCH METHODOLOGY

5.0. INTRODUCTION	131
5.1. SAMPLE AND DATA COLLECTION	133
5.1.1. DESCRIPTION OF THE UNIT OF ANALYSIS	133
5.1.2. PROCEDURE FOR DATA COLLECTION	135
5.2. MEASUREMENTS	140
5.2.1. MEASUREMENT OF HIGH COMMITMENT MANAGEMENT	140
5.2.1.1. DESCRIPTION OF THE HCM MEASURES	140
5.2.1.2. OPERATIONALISATION OF HCM CONFIGURATIONS	143

5.2.2. MEASUREMENT OF HUMAN RESOURCE FLEXIBILITY	146
5.2.3. MEASUREMENT OF ENVIRONMENTAL DYNAMISM	147
5.2.4. MEASUREMENT OF ORGANISATIONAL PERFORMANCE	148
5.2.5. MEASUREMENT OF CONTROL VARIABLES	150
5.3. STATISTICAL PROCEDURE	152
5.3.1. DESCRIPTION OF STRUCTURAL EQUATION MODELLING	152
5.3.2. AN OVERVIEW OF SOME SEM MODELS	154
5.3.2.1. MEASUREMENT MODELS AND CONFIRMATORY FACTOR ANALYSIS	154
5.3.2.2. STRUCTURAL MODELS	156
5.4. CHAPTER SUMMARY	160
CHAPTER 6. RESULTS OF THE EMPIRICAL RESEARCH	
6.0. INTRODUCTION	161
6.1. CONSTRUCT VALIDITY OF THE MEASUREMENT SCALES	162
6.1.1. CONSTRUCT VALIDITY OF THE HCM SCALE	163
6.1.1.1. DIMENSIONALITY OF THE HCM SCALE	163
6.1.1.2. RELIABILITY OF THE HCM SCALE	167
6.1.1.3. VALIDITY OF THE HCM SCALE	168
6.1.2. CONSTRUCT VALIDITY OF THE HUMAN RESOURCE FLEXIBILITY SCALE	169
6.1.2.1. DIMENSIONALITY OF THE HUMAN RESOURCE FLEXIBILITY SCALE	170
6.1.2.2. RELIABILITY OF THE HUMAN RESOURCE FLEXIBILITY SCALE	174
6.1.2.3. VALIDITY OF THE HUMAN RESOURCE FLEXIBILITY SCALE	174
6.1.3. CONSTRUCT VALIDITY OF THE ORGANISATIONAL PERFORMANCE SCALE	177
6.1.3.1. DIMENSIONALITY OF THE ORGANISATIONAL PERFORMANCE SCALE	177
6.1.3.2. RELIABILITY OF THE ORGANISATIONAL PERFORMANCE SCALE	178
6.1.3.3. VALIDITY OF THE ORGANISATIONAL PERFORMANCE SCALE	178
6.1.4. CONSTRUCT VALIDITY OF THE ENVIRONMENTAL DYNAMISM SCALE	179
6.1.4.1. DIMENSIONALITY OF THE ENVIRONMENTAL DYNAMISM SCALE	179
6.1.4.2. RELIABILITY OF THE ENVIRONMENTAL DYNAMISM SCALE	180
6.1.4.3. VALIDITY OF THE ENVIRONMENTAL DYNAMISM SCALE	181

6.2. ANALYSIS OF THE STRUCTURAL MODELS	182
6.2.1. RELATIONSHIPS BETWEEN HCM AND HUMAN RESOURCE FLEXIBILITY	182
6.2.2. CONSIDERATION OF HUMAN RESOURCE FLEXIBILITY AS A COMPETITIVE FACTOR	190
6.2.2.1. IMPACT OF HR FLEXIBILITY ON ORGANISATIONAL PERFORMANCE	191
6.2.2.2. THE MODERATING ROLE OF ENVIRONMENTAL DYNAMISM ON THE CONTRIBUTION OF HR FLEXIBILITY ON ORGANISATIONAL PERFORMANCE	196
6.2.3. THE MEDIATING ROLE OF HUMAN RESOURCE FLEXIBILITY ON THE RELATIONSHIP BETWEEN HCM AND ORGANISATIONAL PERFORMANCE	201
6.3. CHAPTER SUMMARY	211
CHAPTER 7. DISCUSSION	
7.0. INTRODUCTION	213
7.1. MAIN CONCLUSIONS OF THE RESEARCH	215
7.1.1. CONCEPTUALISATION OF HCM: SKILL DEVELOPMENT, JOB ENRICHMENT AND INCENTIVES	215
7.1.2. CONCEPTUALISATION OF HR FLEXIBILITY: INTRINSIC, MODIFICATION AND RELATIONAL FLEXIBILITY	217
7.1.3. ANALYSIS OF THE CAUSAL RELATIONSHIPS BETWEEN HCM, HR FLEXIBILITY AND ORGANISATIONAL PERFORMANCE	218
7.1.3.1. INFLUENCE OF HCM ON HR FLEXIBILITY	219
7.1.3.2. INFLUENCE OF HR FLEXIBILITY ON ORGANISATIONAL PERFORMANCE	221
7.1.3.3. THE MODERATOR ROLE OF ENVIRONMENTAL DYNAMISM ON THE HR FLEXIBILITY-ORGANISATIONAL PERFORMANCE RELATIONSHIP	224
7.2. LIMITATIONS AND FUTURE LINES OF RESEARCH	226
REFERENCES	233
APPENDIXES	261
RESUMEN DE LA TESIS	275

LIST OF TABLES

Table 0.1. Structure of the dissertation	5
Table 2.1. Alternatives for the definition of the HRM strategy	38
Table 2.2. Principles underlying the Commitment and the Control models	40
Table 2.3. Practices associated with a High Commitment Strategy	45
Table 2.4. Designations for non-taylorist HRM approaches	52
Table 2.5. A review of the implicit and explicit mechanisms between HRM strategies and organisational outcomes in the empirical studies	65
Table 3.1. Definitions of internal human resource flexibility	78
Table 3.2. A review of internal human resource flexibility characteristics	86
Table 3.3. Summary of resource flexibility dimensions	92
Table 5.1. Distribution of respondents	137
Table 5.2. Technical details of the empirical research	139
Table 5.3. A revision of the components of the AMO framework	141
Table 5.4. A revision of empirical studies extracting bundles of human resource practices	145
Table 5.5. A revision of performance criteria in the HCM literature	149
Table 6.1. Fit indices for the unidimensional models of HCM	164
Table 6.2. Fit indices for the proposed HCM model	165
Table 6.3. Standardised solution for the proposed HCM model	166
Table 6.4. Fit indices for proposed and alternative HCM models	167
Table 6.5. Discriminant validity test for HCM dimensions	169
Table 6.6. Fit indices for the unidimensional models of human resource flexibility	170
Table 6.7. Fit indices for the proposed human resource flexibility model	171
Table 6.8. Standardised solution for the proposed human resource flexibility model	172
Table 6.9. Fit indices for proposed and alternative human resource flexibility models	173
Table 6.10. Reliability of the human resource flexibility scale	174
Table 6.11. Multitrait-multimethod matrix for the human resource flexibility scale (N=170)	175
Table 6.12. Alternative test of discriminant validity for the relational flexibility dimension	177
Table 6.13. Fit indices for the unidimensional models of organisational performance	177
Table 6.14. Standardised solution for the organisational performance scales	178
Table 6.15. Reliability tests of the organisational performance scales	178
Table 6.16. Test of discriminant validity for the organisational performance scales	179
Table 6.17. Exploratory factor analysis of the environmental dynamism (oblimin solution)	180
Table 6.18. Fit indices for the two-factor model of dynamism	180
Table 6.19. Standardised solution for the two-factor model of dynamism	180
Table 6.20. Structural equations for the hypotheses relating HCM to HR flexibility	184
Table 6.21. Fit indices for the structural models of the relationships between HCM and human	184

resource flexibility	
Table 6.22. Structural parameters of the hypotheses linking HCM with human resource flexibility	184
Table 6.23. Fit indices for the global model of the determinants of human resource intrinsic flexibility	186
Table 6.24. Structural parameters for the global model of the determinants of human resource intrinsic flexibility	186
Table 6.25. Fit indices for the global model of the determinants of human resource skill malleability	187
Table 6.26. Structural parameters for the global model of the determinants of human resource skill malleability	187
Table 6.27. Fit indices for the global model of the determinants of human resource behavioural malleability	188
Table 6.28. Structural parameters for the global model of the determinants of human resource behavioural malleability	188
Table 6.29. Fit indices for the global model of the determinants of human resource relational flexibility	189
Table 6.30. Structural parameters for the global model of the determinants of human resource relational flexibility	189
Table 6.31. Structural equations for the hypotheses relating HR flexibility to organisational performance	191
Table 6.32. Fit indices for the structural models of the relationships between human resource flexibility and organisational performance	192
Table 6.33. Structural parameters of the hypotheses linking human resource flexibility with organisational performance	192
Table 6.34. Fit indices for the second-order latent factor of HRF	195
Table 6.35. Standardised solution for the second-order latent factor of HRF	195
Table 6.36. Fit indices for the structural model of the influence of HRF on organisational performance	195
Table 6.37. Fit indices for the structural models of the global influence of human resource flexibility on organisational performance	196
Table 6.38. Fit indices for the hypotheses relating HR flexibility and dynamism to organisational performance	198
Table 6.39. Structural equations for the hypotheses including the interaction term between human resource flexibility and dynamism	198
Table 6.40. Structural parameters of the models including the interaction term between human resource flexibility and dynamism	200
Table 6.41. Fit indices of the structural models of the influence of HCM on performance	202

Table 6.42. Structural parameters of the influence of HCM on performance	202
Table 6.43. Fit indices for the structural models including human resource intrinsic flexibility as a mediator variable	203
Table 6.44. Structural parameters of the models including human resource intrinsic flexibility as a mediator variable	204
Table 6.45. Fit indices for the structural models including human resource skill malleability as a mediator variable	206
Table 6.46. Structural parameters of the models including human resource skill malleability as a mediator variable	206
Table 6.47. Fit indices for the structural models including human resource behavioural malleability as a mediator variable	207
Table 6.48. Structural parameters of the models including human resource behavioural malleability as a mediator variable	208
Table 6.49. Fit indices for the structural models including human resource relational flexibility as a mediator variable	209
Table 6.50. Structural parameters of the models including human resource relational flexibility as a mediator variable	210

LIST OF FIGURES

Figure 1.1. Classification of technological investments in Spain during 2003 (percentage)	12
Figure 1.2. Systematic relationships and positive feedback among technologies, product strategies, organisation structures and competitive environments	13
Figure 1.3. Evolution of Spanish international trade (million euro)	13
Figure 1.4. Intra and extra European trade (by contries)	14
Figure 1.5. Evolution of European international trade (aggregated level)	15
Figure 2.1. The Harvard Model	32
Figure 2.2. The Human Resource Cycle	33
Figure 2.3. Levels of analysis of the HRM strategy: The 5-P Model	36
Figure 2.4. A conceptual model for the study of Strategic Human Resource Management	56
Figure 2.5. A model of human resources as a source of sustainable competitive advantage	67
Figure 2.6. Social context model of the HRM-organisation effectiveness relationship	68
Figure 3.1. The Model of the Flexible Firm	76
Figure 3.2. A multidimensional view of HR flexibility	81
Figure 3.3. Resource flexibility dimensions	88
Figure 3.4. A framework for the analysis of HR flexibility from the RBV	93
Figure 3.5. Dimensions of the HR flexibility concept	94
Figure 4.1. A conceptual model of High Commitment Management and organisational performance: the mediating role of HR flexibility	107
Figure 4.2. A summary of the conceptual model hypotheses	127
Figure 5.1. Procedure for data collection: questionnaires	137
Figure 5.2. Example of measurement model for a HCM dimension	155
Figure 5.3. Structural model with interaction term: test of moderation	158
Figure 5.4. Step 1 in structural models for tests of mediation: direct-effect model	158
Figure 5.5. Step 2 in structural models for tests of mediation: partially mediated model	159
Figure 6.1. Model of the HCM scale	164
Figure 6.2. Model of the human resource flexibility scale	171
Figure 6.3. A model of the impact of human resource flexibility on organisational performance	194
Figure 6.4. A global model of the mediator role of HR intrinsic flexibility on the relationship between the HCM configurations and performance	205
Figure 6.5. A global model of the mediator role of HR skill malleability on the relationship between the HCM configurations and performance	207
Figure 6.6. A global model of the mediator role of HR behavioural malleability on the relationship between the HCM configurations and performance	209
Figure 6.7. A global model of the mediator role of HR relational flexibility on the relationship between the HCM configurations and performance	210

Chapter 0. Introduction

0.1. JUSTIFICATION OF THE RESEARCH

Tendencies such as the increasing spread of market globalisation, new technological developments, the reduction of product life cycles and aggressive competition, are generating high levels of environmental changes and uncertainty for organisations of all types (Volberda, 1996; Sanchez, 1997). These circumstances require rapid responses through adaptations of organisational attitudes and capabilities, which lead to innovative management approaches and organisational methods (Bueno, 1996: 262).

Traditional sources of competitive advantages are changing and it is imperative to deploy new strategies to successfully compete under changing external conditions. For example, flexibility is emerging as a competitive weapon that allows organisations to counteract current market evolution and competitive levels (Ahmed et al., 1996; Volberda, 1996). Flexibility is a broad concept that can refer to operational issues such as manufacturing flexibility, or to strategic decisions such as alterations in the organisation's product-market combinations. All these factors are associated with the organisation's efforts to adjust available means to external challenges. Regardless of the specific response adopted by organisations, it is broadly believed that environmental dynamism forces managers to pay increasing attention to the management of the organisation's social issues (Wright and Snell, 1998).

From a managerial point of view, human resource management activities used by organisations in the new competitive landscape are changing. This can be seen, for

example, in job descriptions. Nowadays individual contributions to organisational goals are being substituted by team accomplishments. Furthermore, technological advances (e.g. the introduction of Internet in companies) are making it difficult to assess and manage employee performance in the workplace. As a result *High Commitment Management* (HCM) is emerging as the optimal system to manage the employment relationships in modern organisations. HCM is a particular approach to human resources management characterised by certain features such as the emphasis on the development of employee skills, job enrichment and the provision of equitable incentives. A number of authors in recent decades have demonstrated the impact of HCM on organisational outcomes.

From an employee-based perspective, organisations require a new type and level of contribution from their workforce. In order to successfully compete under dynamic conditions, people's performance of a fixed set of prescribed tasks is no longer considered adequate. Instead, competitive advantage comes from employees who are engaged in broad open-ended and interdependent roles (Campbell, 2000; Parker, 2000). In sum, from an individual perspective, *human resource flexibility* is a key success factor in current competitive environments. However, to date no accepted definition of human resource flexibility has been put forward; attempts should be made to provide this concept with a more solid theoretical background (Looise et al., 1998). In this study, I propose a conceptualisation of HR flexibility based on the premises of the Resource-Based View of the firm (RBV) (Wernerfelt, 1984; Barney, 1991; Amit and Shoemaker, 1993). Similarly to the role that value, rareness, inimitability and non-substitutability play in the consideration of resources as strategic assets (Barney, 1991), flexible resources are characterised by certain features, such as their applicability to a variety of uses or the ease with which they can be modified (Sanchez, 1995). One of the aims of this research is to apply these concepts to the conceptualisation of human resource flexibility.

All things considered, social factors are essential to the successful deployment of organisational flexibility, as are the activities used to manage employees (Dyer and Shafer, 1999). Not only are individual responsibilities different in dynamic environments, but also the human resource activities used by organisations to manage

their workforce will alter. The present study focuses on these two questions and analyses their interrelationships.

The general purpose of this research is to examine the contribution of HCM to organisational performance by considering the role that human resource flexibility plays in this relationship. That is, I question whether a high commitment approach is important to determine the workforce's flexibility and to what extent a flexible workforce enhances organisational outcomes. In the following section, I describe in greater detail the specific objectives of my research.

0.2. OBJECTIVES OF THE RESEARCH

The specific objectives of this research can be summarised as follows:

First, to revise the concept of High Commitment Management. I aim to identify similarities and differences between HCM and related terms that have emerged in this literature, such as High Performance Management or High Involvement Management. In addition, I try to provide a definition of HCM based on its underlying dimensions.

Second, to examine in depth the conceptualisation of HR flexibility from the RBV. Several studies in the RBV literature have identified the characteristics of flexible resources, in an attempt to understand why some organisations are better prepared than others to respond to or anticipate external events (e.g. Galunic and Rodan, 1998; Sanchez, 2004). I use these characteristics to define HR flexibility.

Thirdly, to examine the effects of HCM on organisational outcomes. In doing so, three interrelated questions are addressed:

- a) To analyse how HCM affects HR flexibility. In other words, does the organisation's workforce or a group of employees become more flexible when they are managed through a HCM strategy? With this research question I also aim to unlock the "black box" that frequently appears in studies focused on the relationship between human resource management and organisational outcomes (Ramsay et al., 2000).

- b) To examine the consequences of HR flexibility for organisational outcomes and thus, to add some conclusions to studies that analyse how the workforce's characteristics influences organisational effectiveness.
- c) To identify the role of environmental characteristics in the relationship between HR flexibility and performance. I attempt to determine whether HR flexibility is more important in organisations facing higher external dynamism than in firms operating in stable environments.

Various theoretical approaches must be considered in order to accomplish these objectives. These approaches are detailed in the following section.

0.3. THEORETICAL PERSPECTIVES

The analysis of linkages between HCM, HR flexibility, and organisational performance in this study brings together theoretical perspectives from several disciplines. Specifically, contributions from two fields of study are included: the Resource-Based View of the Firm (RBV) and the Human Resource Management literature.

a) Resource-Based View of the firm

According to the RBV, features of the organisation's internal resources determine the potential flexibility of an organisation. According to this perspective, resource flexibility guarantees a minimum number of alternative uses for internal resources and low cost and time spent on switching resources.

Furthermore, through the application of RBV in the field of Human Resource Management some scholars have concluded that employees (in terms of their skills and behaviours) are strategic resources that significantly contribute to the generation of sustainable competitive advantage.

Taking into consideration these two questions, I assume that the RBV provides valuable insights for the conceptualisation of human resource flexibility.

b) Human Resource Management literature

Of the various approaches to employee management, my interest focuses on High Commitment Management. As a consequence, this research includes contributions from the HRM literature concerning the conceptualisation and operationalisation of HCM strategies, as well as those that propose causal linkages between HCM and organisational outcomes.

0.4. STRUCTURE OF THE DISSERTATION

This dissertation is organised in two sections. The first section includes the theoretical argumentations of the study and provides a review of the relevant concepts included in the research. This allows the formulation of a research model on the linkages between HCM, human resource flexibility and organisational performance, which guides the formulation of the hypotheses. The second section presents the empirical research carried out and introduces the methodology employed, scope of the study and results.

The two sections are divided into seven chapters: the first four chapters constitute the theoretical section and Chapter 5 and 6, the empirical section (Table 0.1). Finally, Chapter 7 includes a discussion of the research. The content of each chapter is broken down into sections, as detailed in the table of contents.

Table 0.1. Structure of the dissertation

Section I (Theoretical development)	<i>Chapter 1</i>	Organisational and labour responses to new competitive conditions
	<i>Chapter 2</i>	Theoretical delimitation of High Commitment Management
	<i>Chapter 3</i>	Conceptualisation of human resource flexibility
	<i>Chapter 4</i>	Relationships between High Commitment Management and organisational performance: the mediating role of HR flexibility
Section II (Empirical research)	<i>Chapter 5</i>	The empirical research methodology
	<i>Chapter 6</i>	Results of the empirical research
<i>Chapter 7</i>		Discussion

a) Section I: Theoretical development

In the first chapter of Section I, I discuss how changing external conditions affect the management of social issues in the organisation. In doing so, I review some of the current trends that characterise competitive conditions, together with some of the organisational responses to counteract external dynamism. In this chapter, I also discuss how the new competitive landscape has subsequently demanded a change in the management of employees as well as a workforce of flexible and capable individuals.

In Chapter 2, I consider the human resource management literature through a review of the evolution of this field of research alongside the main components of HRM strategies. In this chapter, I focus on High Commitment Management as a specific HRM orientation, which is relevant to organisational competitiveness. I also identify some emerging trends in this field.

Chapter 3 reviews advances in the study of human resource flexibility: definitions, theoretical models and empirical evidence. The selection of the RBV as the appropriate framework to examine human resource flexibility is justified. Furthermore, I propose a conceptualisation of the term based on the RBV premises. The adoption of the RBV as the guiding framework for my conceptualisation of human resource flexibility implies that interest focuses on the internal employees of the organisation, who constitute a source of flexibility in that they meet the requirements of flexible resources.

In the fourth chapter, the research model is presented. Specifically, I try to examine to what extent HCM encourages HR flexibility and how a flexible workforce impacts organisational performance.

b) Section II: Empirical research

Chapter 5 describes the empirical research by presenting three methodological aspects: sample and data collection, measurement of variables and statistical procedure. In chapter 6, I test the hypotheses and present the main results.

Finally, chapter 7 summarises the main findings of the research and its limitations, and introduces future lines of research stemming from this study.

Section I

Theoretical Development

Chapter 1. Organisational and labour responses to new competitive conditions

1.0. INTRODUCTION

Current environmental dynamism is a consequence of market globalisation and technological advances (among others factors) and leads to new ways of achieving acceptable levels of competitiveness. This new landscape forces many organisations to continuously redefine their activities and strategies because traditional concepts that sustained competitiveness under stable conditions are no longer valid to prepare organisations for a dynamic environment (Sanchez, 1997). New managerial approaches should promote organisational flexibility in order to guarantee organisational success (Hitt et al., 1998).

Transformations in the way organisations compete are also reshaping work, workers, and working (Howard, 1995). While in the past it may have been enough for an employee to be a satisfactory task performer, nowadays the expectations of managers and supervisors are changing. Some doubts have emerged about the way in which employees should be motivated and committed in this new organisational context. Moreover, major implications have arisen for traditional notions of long-term jobs or careers. Employees are increasingly developing career paths through a number of differing employing organisations (Morris, 2004). In addition, this new conception of

work is manifested in various organisational initiatives and leadership theories, such as participation, empowerment, autonomous work groups, and self-directed teams (Campbell, 2000).

In this chapter, I offer an overview of the most relevant changes in competitive environments that organisations are facing nowadays. In doing so, I address not only organisational responses to challenging external conditions, but also the implication of such changes for people-related issues in organisations.

The chapter begins by discussing the features of contemporary environments that impose the need to re-define the sources of competitive advantages. Following this, I analyse organisational responses to dynamic environments, with an emphasis on the concept of organisational flexibility. I then present an overview of some of the implications that today's environments have for the nature of work in organisations. The final section summarises the main points of the chapter.

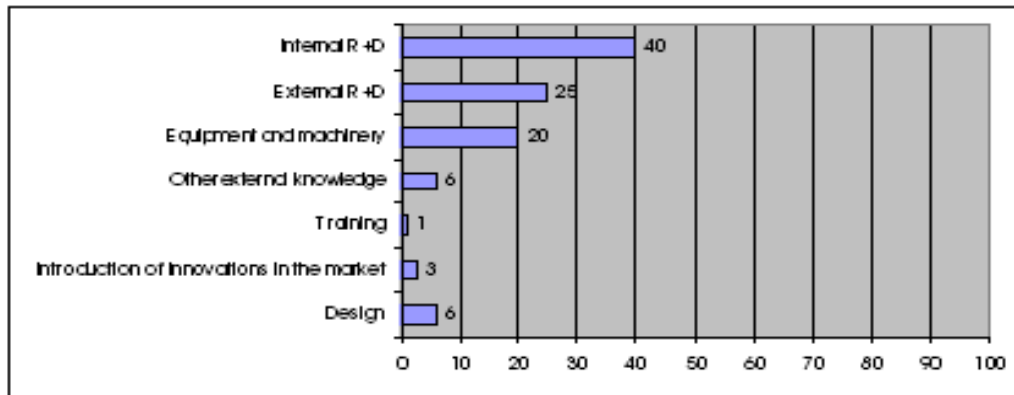
1.1. NEW COMPETITIVE CONDITIONS AND ENVIRONMENTAL DYNAMISM

During the late 90s and the first years of the 21st century, modern companies have experienced an accelerated pace of change (Prastacos et al., 2002). Nowadays they operate in environments with unprecedented and unpredictable events (Shafer et al., 2001). Companies have to face significant uncertainty, ambiguity and increasing strategic discontinuity, which are the result of several factors.

Technological advances in information transfer and telecommunications constitute one of the main sources of uncertainty in existing environments (Prastacos et al., 2002). Significant trends in this technological transformation include a high rate of technological change and diffusion, the progress of the information age, and a growing importance of knowledge in the achievement of competitive advantage.

A recent report published by the Spanish National Statistics Institute (INE) shows that nearly 20% of Spanish firms introduced technological innovations in product or process during 2001-2003. Total expenditure on technological innovation during 2003 was 11,199 million euros, distributed as shown in Figure 1.1. High technology organisations in Spain invested 6,743 million euros during 2002 in innovations (a 38.4% increase on figures for 2000) and they reached sales of 194,364 million euros (a 4.1% increase on the previous year) (INE, 2004a).

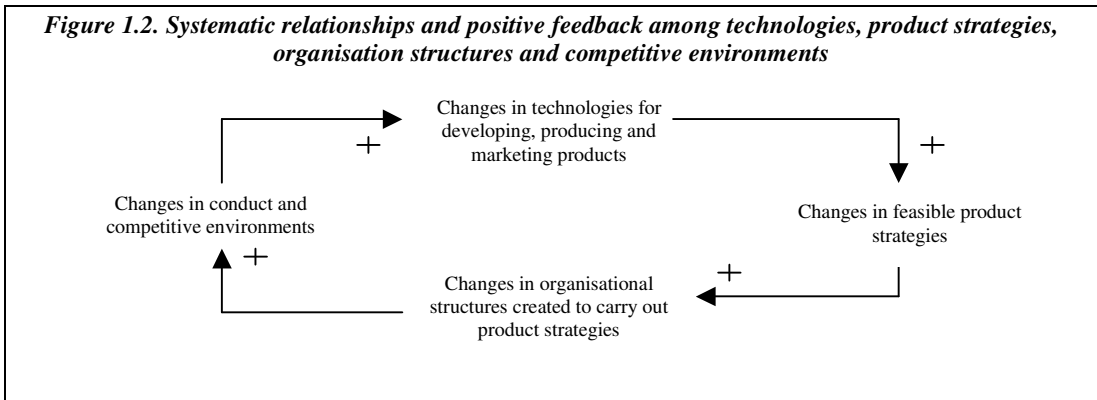
Furthermore, statistics on the use of TIC and electronic mail in Spanish organisations during 2003 show that the number of firms with their own web page increased by 5% and total sales through email increased by 33% on figures from 2002 (INE, 2004b).

Figure 1.1. Classification of technological investments in Spain during 2003 (percentage)

Source: INE (2004a)

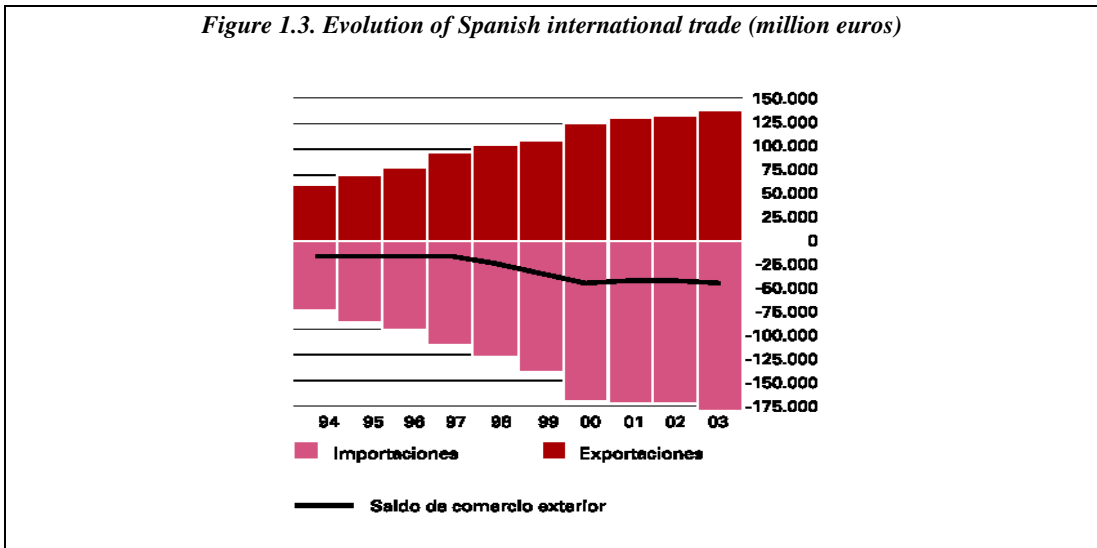
In the European context, recent reports from the Statistical Office of the European Communities (Eurostat) provide similar data. Nearly 44% of companies within the European Union carried out some form of technological innovation between 1998 and 2000 (Eurostat, 2005a), with a similar percentage for industrial (47%) and service (40%) companies. Of all European companies, 90% had Internet connexion in 2004, of which 32% ordered via Internet and 11% received orders via Internet (Eurostat, 2005b).

New technological developments create an environment where information and communication flows take place almost immediately, which ultimately leads to the reduction of product life cycles, the inadequacy of patents to protect new technology, the reduction of the time required to develop new products and the need to adapt products more quickly for each customer (Hitt et al., 1998). On the other hand, the diffusion of new production technologies has accelerated product creation processes that facilitate the development of differentiated products at competitive prices, thus leading to greater dynamism. The result of this process is that organisations increasingly demand these new technologies, stimulating further technological developments. As Sanchez (1995) states, this constitutes a “vicious circle” of change based on higher flexibilities of new product creation technologies, product strategies and organisational structures (Figure 1.2).



Source: Sanchez (1995)

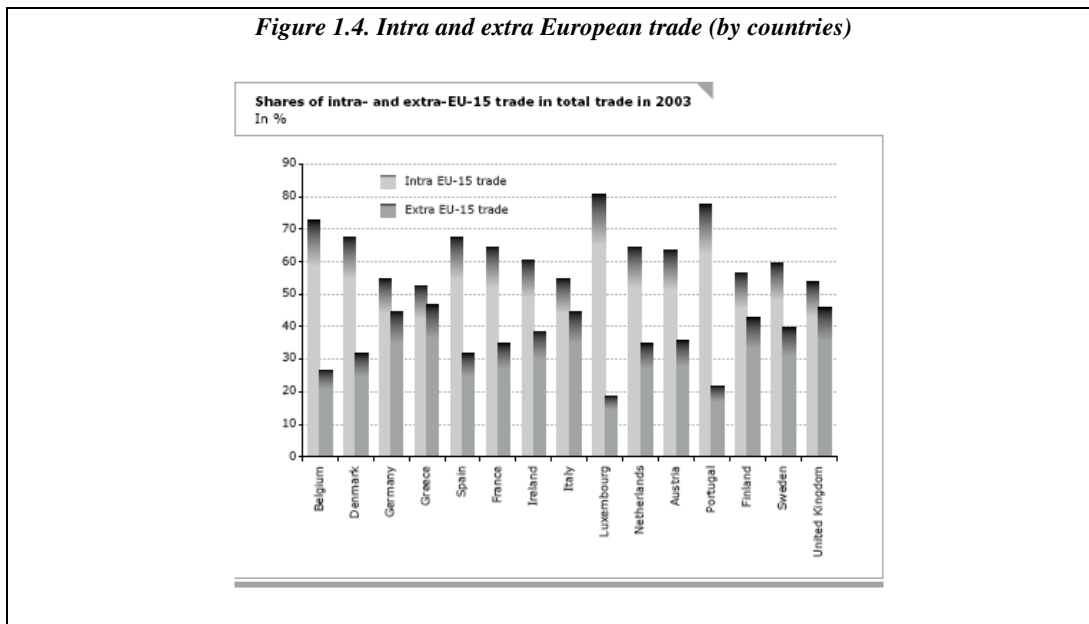
Another important source of dynamism in present environments is market globalisation. The international economic situation and recent political regulation facilitate entry into international markets. Globalisation does not only affect multinational firms, but also local companies, which increasingly maintain cross-border relationships. According to the Spanish National Statistics Institute (INE, 2005), growth in total Spanish imports and exports has been uninterrupted during the last ten years (Figure 1.3).



Source: INE (2005)

According to the same report, Spanish trade includes relationships with countries from all over the world. Exports to EU countries represent 64.6%, while the main non-EU relationships include Asia (14.6%), Africa (6.4%), South America (4.5%), non-EU European countries (4.5%) and USA (3.6%).

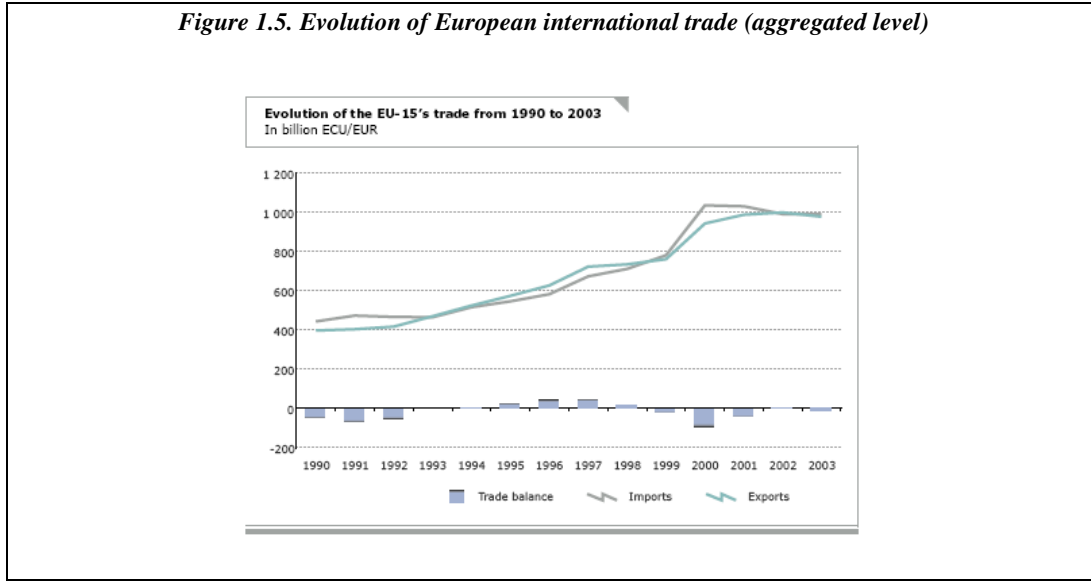
The level of Spanish international trade is similar to that of other countries such as Denmark, France or the Netherlands (Figure 1.4). The intensity of international trade differs between European countries; Luxemburg, Portugal and Belgium are the countries with the highest percentage of Intra-EU trade, while Germany and Greece have the lowest percentage of trade with other EU countries. As can be observed in Figure 1.4, trade with non-European countries reaches a similar level to within-Europe trade in several countries (Eurostat, 2004).



Source: Eurostat (2004)

Regardless of the differences between European countries, aggregated data shows a continuous improvement in both imports and exports in the period 1990-2003, achieving maximum levels during 2000-2001 (Figure 1.5).

The openness to foreign markets provides opportunities, such as incentives for innovation, but it also presents firms with multiple threats and challenges. Operating in different countries means that organisations must take into account a greater number of stakeholders and contingencies. In other words, organisations have to learn to coordinate activities across national borders, they must assume that customers' preferences and demands differ between countries, that it is more difficult to identify and analyse competitors, that the evaluation of organisational performance is more complicated, etc. (Hitt et al., 1998).

Figure 1.5. Evolution of European international trade (aggregated level)

Source: Eurostat (2004)

Together with new trends in the international situation, dynamism is also the result of actions carried out by certain existing organisations in competitive environments. New patterns of competition are largely defined by the initiatives of a set of flexible companies that make product life cycles shorter and ambiguous. Some organisations use new market research techniques based on “learning models”. Organisations that employ these models test markets through the production and commercialisation of small batches of products over a short period of time. They examine markets by assessing customers’ reactions to these products. When flexible creators discover a profitable market, they commercialise a large collection of different product models to saturate that market, thereby erecting barriers to prevent less flexible companies from entering. Flexible organisations use the knowledge accumulated through the creation of product variations to create differentiated products adapted to the preferences of specific market segments. In addition, other organisations follow a strategy rooted in “cannibalising” their own products, by introducing technological improvements in their products and thus obsoleting successful models that are currently being marketed with the aim of preventing imitators from copying their products (Sanchez, 1995).

In sum, current environments are characterised by a high level of dynamism, which describes the rate and unpredictability of change in a firm’s external environment (Dess and Beard, 1984). Dynamism is the result of multiple events (Milliken, 1990; Jaworski and Kohli, 1993; Sutcliffe and Zaheer, 1998). First, it is a consequence of a set of

primary uncertainties, referring to exogenous variables, such as changing customer preferences or the appearance of new technologies. Furthermore, the level of dynamism is determined by the existence of competitive uncertainties. Organisations need to pay attention not only to strategies implemented by existing competitors that can rapidly provide substitutes or technologically advanced products, but also to the actions of new participants in the market, relationships with subcontractors, suppliers and distributors, etc. (Suarez et al., 1996).

On the whole, the circumstances described above have forced managers to make a paradigm shift to guide their organisations. Since new challenges are complex and non-linear, imputing linear and rational attributes to non-linear problems will lead to erroneous strategic actions (Hitt et al., 1998). Therefore, new principles have emerged for managing firms in these environments where time frames for strategic decisions are narrower.

The heightened demands on organisations have subsequently called for a corresponding staff of flexible and capable individuals (van den Beukel and Molleman, 1998). Increasingly dynamic environments have forced managers to pay more attention to employees, and a change in the nature of work has occurred.

In the next section, I analyse organisational responses to environmental changes. Following this, I expose the repercussions of the new competitive landscape for the nature of work in today's organisations.

1.2. ORGANISATIONAL RESPONSES TO DYNAMIC ENVIRONMENTS: THE RELEVANCE OF ORGANISATIONAL FLEXIBILITY

In the new competitive reality, long and stable periods in which firms can achieve sustainable competitive advantage no longer exist, and old concerns such as quality and low costs are simply starting points for survival rather than ways to build competitive advantages (Ahmed et al., 1996; Volberda, 1996). The dynamic nature of current competitive environments has motivated managers to identify new sources of competitive advantage. According to numerous authors, these new sources of

competitive advantage must be rooted in achieving flexibility (e.g. Ahmed et al., 1996; Volberda, 1996; Martínez et al., 1998). Hitt et al. (1998: 26) write: “perhaps the most important attribute that firms must achieve to operate effectively in the new competitive landscape is that of strategic flexibility”.

The flexibility concept has been used loosely in the literature, referring to a set of organisational capabilities that facilitate the organisation’s adjustment to change (Bahrami, 1992). Broadly speaking, organisational flexibility can be conceived as the ability of the organisation to respond in an appropriate and timely way to substantial, uncertain and fast-occurring environmental changes that have a meaningful impact on the organisation’s performance (Aaker and Mascarenhas, 1984; Volberda, 1998).

When analysing organisations’ reactions to external challenges, different categories of responses can be identified. From a *temporal* point of view, some organisations prepare in advance for future transformations (*ex-ante* mode), while others adapt their responses once a triggering episode has occurred (*ex-post* mode). Organisations also differ in terms of their *intentional* approach to cope with environmental dynamism. In this regard, organisations adopt a defensive – or reactive – mode when they guard against predatory movements or correct past mistakes. In contrast, the offensive mode is proactive and is based on the creation of initiatives to actively influence the environment (Ansoff, 1965; Evans, 1991).

Apart from the nature of the response adopted, organisational flexibility can also be studied according to the specific actions carried out by organisations. This is the most common approach in the existing literature. Organisational efforts to face up to external challenges affect the management and functioning of the organisation. In this regard, organisational flexibility actions range from the adoption of higher-level decisions leading to major reorientations of the organisation, to lower-level decisions entailing minor changes in its actual activities (Nayyar and Bantel, 1994). In the first case, organisations pursue strategic and/or structural flexibility to counteract external pressures. Conversely, when organisations face environmental challenges through the modification of current activities, the term “operational flexibility” is more appropriate (Volberda, 1998).

Strategic flexibility is related to the very goals of the organisation. This form of flexibility is mostly qualitative, involving changes in the character (as opposed to the volume) of the activities. From this perspective, organisational flexibility includes the redefinition of strategies in order to create new strategic options (Quinn, 1980; D'Aveni, 1994; Sanchez, 1995). Strategic flexibility may entail, for example, the application of new technologies or the exhaustive renewal of the products/services offered (Volberda, 1996).

Strategic flexibility is closely linked to the organisation's decision-making process (Stalk, 1988; Stalk et al., 1992). In this regard, strategic flexibility results from the abilities to change strategic decisions in response to fast and unpredictable changes in the environment (Bierly and Chakrabarti, 1996; Pauwels and Matthyssens, 2004). Flexibility, from this point of view, will be greater when decision makers explore new ideas and assumptions about their firm and its strategic context, and when they make choices that are unusual, innovative or, at least, different from traditional responses (Mandelbaum and Buzacott, 1990; Sharfman and Dean, 1997). Flexibility from the decision-making perspective can be analysed by differentiating among its dimensions. Sharfman and Dean (1997) distinguish between openness and recursiveness. Openness refers to the extent to which decision makers are open to new ideas, information sources and roles, while recursiveness indicates the tendency of decision makers to go back in order to re-examine key assumptions.

Structural flexibility refers to the organisation's capacity to modify its structure and its decision and communication processes. This type of flexibility is possible when traditionally defined internal and external limits are removed in order to promote the rapid flux of information, ideas, resources and energy in the organisation (Askhenas et al., 1995). Structural flexibility has entailed the appearance of innovative structural forms. In the words of Bahrami (1992: 33), current environmental conditions "are collectively precipitating a move away from monolithic and rigid organizational designs which were geared for repetitive transactions and routine activities. The resulting impetus is toward flexible and agile organizational forms which can accommodate novelty, innovation, and change".

Some of these new organisational structures are the hypertext organisation (Nonaka and Takeuchi, 1995), based on a structure that promotes knowledge creation within the organisation and which is composed of interconnected levels or contexts. Network structures also become highly relevant in uncertain environments. The main features of dynamic network organisations (Miles and Snow, 1992) are the use of intermediaries, the employment of innovative information systems or the fact that activities previously carried out by the organisation become the responsibility of external organisations. Another valid structure for promoting flexibility is the virtual organisation (Davidow and Malone, 1992; Achrol, 1997; Wigand and Imamura, 1997), which is oriented towards the market and is made up of a set of related value chains between suppliers, customers, competitors and the organisation itself. At the core of the virtual organisation, a central organisation carries out critical functions, while the remaining activities are undertaken by temporary employees or other companies with whom the organisation has established alliances. These relationships cease to function when they are no longer beneficial for the organisation.

Operational flexibility is based on the organisation's existing structures or goals. This type of flexibility is reduced to certain aspects or functions of the organisation (Volberda, 1998). Thus, flexibility rests on the modification of the volume and mix of activities that the organisation carries out (rather than the kinds of activities currently performed).

From this perspective, flexibility stems from activities related to production (variation of production volume, maintenance of excess capacity, etc.) (Sethi and Sethi, 1990; Stecke and Raman, 1995), marketing (use of multiple distributing channels, development of customer loyalty, avoidance of an umbrella name, etc.) (Aaker and Mascarenhas, 1984), finance (Ittner and Kogut, 1995), information systems (Boynton and Victor, 1991), R&D (Ackoff, 1977; Aaker and Mascarenhas, 1984) and supplier management (such as just-in-time purchasing), among others (Volberda, 1998).

A large part of the literature on operational flexibility has focused on activities related to production, leading to numerous studies on the subject of manufacturing flexibility (Sethi and Sethi, 1990; Stecke and Raman, 1995).

Manufacturing flexibility reflects organisational abilities to switch the product orientation of its operations over time in response to market demands (Chang, 1998). It comprises a variety of methods related to production equipment, work organisation, planning and control procedures, among others (Gerwin, 1993). According to Sanchez (1995), manufacturing flexibility relates to “process flexibilities” – the ability of a production system to tackle internal contingencies, such as machine failures – and “product flexibilities” – the ability to increase the range of products that a system can process or to reduce the time and cost needed to switch the production mix – (Sanchez, 1995). Manufacturing flexibility is the result of the proliferation of modular products and modular process architectures together with technological advances (Pine, 1993; Sanchez, 1995; Worren et al., 2002).

To summarise, flexibility is a crucial objective in today’s organisations. Broadly speaking, organisational flexibility refers to the problem of adjusting available means to better respond to or to anticipate current and future events. Organisations’ flexible actions vary in the organisational levels and areas that are involved in the path towards flexibility, from strategic or structural flexibility to operational flexibility.

1.3. THE CHANGING NATURE OF WORK IN TODAY’S ORGANISATIONS

Environmental dynamism does not only affect organisational decisions and activities, but also the nature of work in organisations. Debates on work cannot take place in isolation from current organisational and environmental contexts (Cappelli, 2002; Morris, 2004). The striving for flexibility has been reflected in the demands that are placed on employees (van den Beukel and Molleman, 1998).

Murphy (1999) states that the definition of jobs and job performance in organisations operating in dynamic environments are becoming increasingly complex and blurry. Due to the relevance of the human factor in facing external pressures it is important to study in further detail the effects of environmental dynamism in questions such as employee performance, job design or continuous learning (Ilgen and Pulakos, 1999).

Current environmental conditions and subsequent organisational responses affect people-related issues in a variety of ways. Through the revision of some studies on the topic (e.g. Hesketh and Neal, 1999; Kozlowski et al., 1999; Murphy, 1999; Campbell, 2000), I may conclude that external challenges have, on the whole, modified the job description, employee responsibilities at work, the composition of the workforce and the managerial and supervisory roles in organisations.

a) New job descriptions

One of the main features of the current conception of work is the growing rejection of the job as the basic building block of organisations. The traditional view of jobs as comprising specific accountabilities, responsibilities and activities for which each employee is responsible implies a degree of rigidity that is inappropriate in dynamic environments (Campbell, 2000). Instead, jobs descriptions should be more fluid, general and adaptable so as to provide the organisation with greater freedom to maintain the flexibility required to successfully respond to external challenges. Three questions have centred the debate on the new description of jobs in dynamic environments:

Competency-based models. In Lawler's opinion (1994), there should be a move towards a competence-based model, according to which organisations focus on individuals and their capabilities in order to define jobs. That is, instead of thinking of people as having a job with a particular set of activities that can be captured in a relatively permanent job description, it may be more appropriate to think of them as human resources that work for an organisation. This new conception of jobs has been reinforced by an increasing emphasis on empowerment and autonomy that stimulate employees' self-management and responsibility for their own performance.

Teamwork. Another key aspect of job descriptions in today's organisations is the emphasis on group-based organisation of the workplace. Rather than assigning responsibilities and tasks to individuals, many organisations are increasingly oriented towards the assignment of broad responsibilities to teams – which may be created for specific projects or to work as a unit across several projects – (Murphy, 1999). The organisation of jobs around teams enables higher fluidity over time and among

individuals in the way duties and responsibilities are associated with team members (Ilgen and Pulakos, 1999).

New technologies. The progressive introduction of new technologies in day-to-day tasks is also characteristic of current jobs. A growing number of jobs are technology based, in a wide array of different sectors, from industry to education, finance and banking (Ilgen and Pulakos, 1999). Nowadays, many workers have rapid access to information, databases, references and so on, far beyond what was available in the past. For example, the introduction of Internet and Intranet in organisations allows employees to communicate quickly and efficiently with partners and external agents.

b) Changes in the responsibilities of employees at work

Employee responsibilities in the organisation and consequently, the notion of job performance has also changed, in part as a consequence of the changes in job descriptions outlined above. Employees become a competitive asset in organisations facing turbulent contingencies, with employees' performance becoming critical to the organisation's adaptability (Lawler, 1994). Competitive advantage in dynamic environments comes from employees who are engaged in broad open-ended and interdependent roles (Parker, 2000). This new view contrasts with older conceptions of employee performance at work, exclusively centred on pre-defined aspects of the employee necessary for the effective performance of their assigned tasks (Campbell, 2000).

Broad definition of job performance. Under changing conditions, job responsibilities and consequently, job performance standards are likely to be defined in general terms and the identification of which behaviours specific workers must demonstrate is likely to be complex and changing, as they are affected by a number of contextual factors. According to Murphy (1999), the definition of good or poor job performance is now, to certain extent, ambiguous. Nonetheless, general consensus exists that organisations pursuing flexibility need proactive employees who are involved and committed and who contribute with new ideas and a well-developed sense of responsibility. The emerging view of the proactive employee implies taking into consideration employees' features as a whole, rather than only considering particular aspects of the individual that are

necessary to perform specific tasks. Employees in modern organisations face the challenge of going beyond traditional job requirements (e.g. in terms of productivity) by showing different extra-role behaviours, such as leadership competences or initiative. The emphasis on teamwork also contributes to these new performance standards, as additional abilities (such as interpersonal skills and social intelligence) are required when employees work together in the achievement of common goals (Ilgen and Pulakos, 1999).

Effects of new technologies on job performance. In addition, the integration of technology affects employee performance at work and influences the processes of performance evaluation.

On the one hand, technological advances are a determinant of job performance for two reasons. First, technological advances supplement prior knowledge since quick access to a wide range of information diminishes the importance of recovering prior knowledge from memory (Murphy, 1999). For example, certain employees who have Internet access are able to perform some tasks more efficiently than workers who do not; furthermore, the introduction of e-learning in organisations constitutes an effective training alternative that in turn improves job performance. Second, technology can enhance task complexity (e.g. AMT increases the complexity of the operators' tasks), thus forcing employees to continuously improve their skills and abilities at work so as to make effective use of new technologies. The diffusion of advanced technology in job tasks and the need to continually upgrade skills creates an opportunity to shift the focus of training systems from the classroom to the workplace (Kozlowski et al., 1999).

On the other hand, the introduction of technology makes it difficult to assess employee performance, as it is more complicated to disentangle the contribution of the jobholder from the contribution of technology to the proficient performance of job tasks.

Emphasis on continuous learning. Not only technology, but also changing external conditions lead to the inclusion of continuous learning as a key element of job performance. In the past, performance was based entirely on previous knowledge. Nowadays, continuous learning is progressively becoming part of the organisational culture and a critical factor to survive in dynamic environments (Tracey et al., 1995). Higher demands for flexibility require employee relearning to be competitive for

different jobs, and today's organisations need to constantly analyse the skill gaps of the workforce. In addition, employees' initiative to autonomously improve their abilities are highly valued by organisations. Thus, job performance indicators also include the employees' ability to keep up with the changing skill requirements at work (London and Mone, 1999).

Customer control of job performance standards. Some of the external challenges that organisations face (such as advances in technology or global competition) have enhanced customer power in that organisations have to adapt and satisfy ever-changing customer needs in terms of quality, variety and service. Similarly, this "customer victory" (Dupuy, 1999) is seen in labour-related issues. According to London and Mone (1999), customers have become a critical element in determining how employee performance is defined and assessed. According to these authors, the product is now more intangible and more dependent on the relationship between the customer and the employee, with the customer acting as a "judge" of the performance of the workforce.

A customer-driven work environment also requires the organisation to be structured in such a way that employees can easily obtain feedback from customers on their performance. The customer is likely to point employees in the right direction as customer needs and the competitive environment change (Lawler, 1996). However, the customer-based employee evaluation presents some disadvantages, as a consequence of the subjective nature of customer satisfaction and judgements about employee performance.

The employee's interpersonal and consulting behaviours required in these customer-employee interactions differ from those of the past (Ilgen and Pulakos, 1999). The strengthened role of the client imposes the need for employees to be sufficiently knowledgeable to understand and respond to signals from a changing marketplace, and to be sufficiently entrepreneurial to take the risk associated with independent action (Slater and Olson, 2000).

c) Different workforce composition

Two features characterise workforce composition in today's organisations (Murphy, 1999). Firstly, there is an increasingly tendency on the part of the employees to change

jobs, organisations and even careers with some frequency. Secondly, increased competition has led to a higher use of contingent workers, leading to a two-tier workforce in organisations: a workforce made up of core and contingent employees (temporary, part-time, seasonal, etc.). In Spain, for example, the number of temporary contracts has continually increased over the last twenty years, attaining levels of around 30% today (INEM, 2005).

Some of the advantages of using contingent employees is that they allow organisations to meet varying business cycles and become more flexible. Conversely, the use of contingent staff also entails costs. For example, it can be detrimental to workforce commitment and job satisfaction. Furthermore, there can be certain inefficiencies of communication between full-time and contingent workers that give rise to conflicts or inefficiencies (e.g. full-time employees may feel threatened when asked to provide contingent colleagues with information and resources) (Hulin and Glomb, 1999).

d) New managerial and supervisory roles

Some of the factors described above also have implications for managerial and supervisory roles in the organisation. Traditional supervisory roles suitable for hierarchical organisations are less apt to fit well in organisations characterised by self-directed teams, proactive employees, customer-oriented performance assessment, etc. characterised by a higher degree of freedom on the part of the employee to decide how the work should be done. There is a tendency towards relationships based on trust and the elimination of strict controls over employee behaviour.

To summarise, the new competitive landscape has implications for the organisation of work in the organisation. From an individual perspective, organisations pursuing flexibility need employees with higher autonomy and initiative, going beyond traditional performance indicators. Proficiency in the performance of a set of assigned tasks is not enough to guarantee competitive advantages, and aspects such as social skills, leadership abilities or customer-oriented behaviours are included in the new job performance standards. From a managerial point of view, environmental dynamism is forcing many organisations to redefine jobs and to use contingent workers. In addition,

traditional control systems are being replaced by self-management, according to which employees are responsible for the result of their own work.

1.4. CHAPTER SUMMARY

This chapter seeks to provide an understanding of organisational and work responses to dynamic environments. In doing so, the chapter first introduces some of the factors that enhance environmental dynamism, with an emphasis on three aspects: technological advances, market globalisation and new competitive patterns.

The chapter then discusses organisational responses to external challenges. Due to the inability of traditional strategies to compete in current environments, organisations are increasingly developing flexibility as a source of competitive advantages. I provide a review of some of the definitions and components of organisational flexibility.

Following this, I examine how the new competitive landscape affects the nature of work. In this regard, I conclude that new approaches to the structuring of work in organisations changes managerial decisions on questions such as the definition of jobs, the supervisory and control systems and the composition of the workforce (managerial perspective). From an employee point of view, the new work organisation affects employee responsibilities in the organisation, which now include social skills, continuous learning or leadership abilities, among others (individual perspective).

In this dissertation, I will address the changing nature of work from both perspectives. Regarding the managerial perspective, I will focus on human resource management and, specifically, on high commitment management as an approach that captures most current trends in work issues (Chapter 2). Concerning the individual perspective, I will examine the notion of human resource flexibility (Chapter 3). I will also analyse the interrelationships between the two questions (Chapter 4).

Chapter 2. Theoretical delimitation of High Commitment Management

2.0. INTRODUCTION

The discussion provided in the preceding chapter highlights how current competitive environments have modified job design, employee responsibilities and supervisory roles in organisations. External dynamism and the need to deploy rapid responses are modifying the role that the workforce plays in the organisation. A new conception of work patterns is emerging, according to which collaborative actions and extra-role initiatives are crucial to a rapid response to environmental challenges. From a managerial point of view, this entails an alteration in the way Human Resource Management (HRM) activities are conceived and implemented. The rejection of control human resource systems seems to be appropriate in the new competitive landscape and a combination of human resource policies and practices that contribute to the involvement and commitment of employees have been recommended by several authors as a valid means to compete under current competitive conditions. In this chapter, I analyse this human resource system, usually referred to as High Commitment Management (HCM).

In doing so, I will focus on the concept of HCM as a distinct approach within the HRM literature based on the promotion of individual autonomy within, commitment to and

trust in the organisation. I will analyse the origins and components of HCM origins in terms of the policies and practices that comprise this human resource model. Furthermore, I will review the strategic relevance of HCM for organisations. I address modes of theorising between HCM and organisational-level outcomes and empirical evidence that demonstrates this relationship.

To deal with these questions, the chapter is structured in four sections. First, I outline the HRM field by considering its origins and the main components that make up any HRM strategy. In the second section I focus on High Commitment Management as a specific HRM approach. In doing so, I study the principles underlying the commitment model, the different visions around the concept and the practices through which HCM can be implemented in the organisation. The third section analyses the strategic relevance of the HCM approach by studying the theoretical frameworks that relate HCM and organisational performance, together with the existing empirical evidence. Here, I also introduce some of the emerging trends in the HCM literature. In the last section, I summarise the conclusions of the chapter.

2.1. CONCEPTUAL DELIMITATION OF THE HRM STRATEGY

The emergence of Human Resource Management (HRM) constituted a break from traditional people management approaches in organisations. A new vision of employees, the recognition that HRM decisions can influence organisational performance and the importance of defining a clear HRM strategy are some of the factors that characterise HRM as a distinctive field of research. In this section, I first provide an overview of the origins of HRM and its distinctive features. I then address the operational issues of HRM by focusing on the main components of HRM strategies.

2.1.1. ORIGINS OF “HUMAN RESOURCE MANAGEMENT”

The term “human resource management” was first used by Tichy et al. (1982) and Beer and Spector (1985) in the United States and by Guest (1987) and Storey (1987) in the United Kingdom (Legge, 1995). HRM involves all management decisions and actions that affect the nature of the relationships between the organisation and its employees (Beer and Spector, 1985; Boxall and Purcell, 2000)

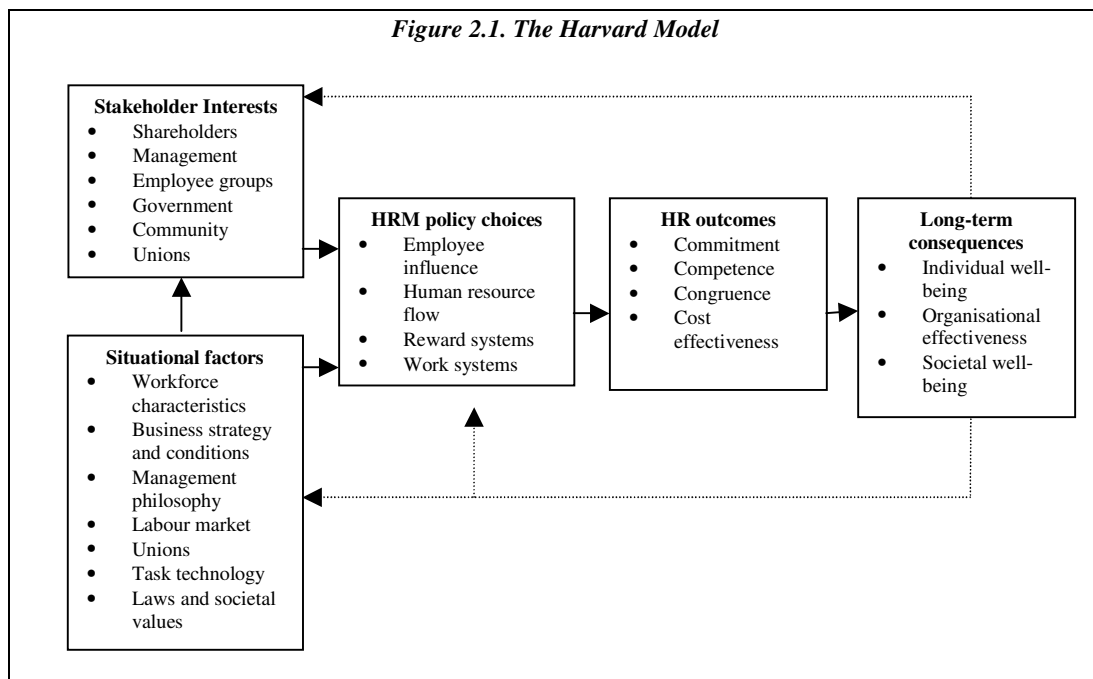
The emergence of HRM as a distinctive area within management studies was mainly due to the economic and political events that took place during the 1980s. The economic recession faced by the UK and US industries throughout this decade encouraged managers to adopt practices from Japanese companies, especially those related to the management of people as a key success factor. Managers became more aware that organisations should restructure methods of employee management in order to move beyond traditional production-oriented practices (Storey, 1992). Simultaneously, an important change occurred in the industrial and organisational structures, which represented a break away from bureaucratic systems and the introduction of higher decentralisation, delegation of responsibility and greater employee participation in the organisation.

Two conceptual models were decisive for the consolidation of HRM as an autonomous area of academic research (Legge, 1995): the Harvard model (Beer et al., 1984; Beer and Spector, 1985) and the Michigan model (Tichy et al., 1982). These models provided

frameworks for conceptualising HRM and established the basis for future theoretical and empirical advances in the field.

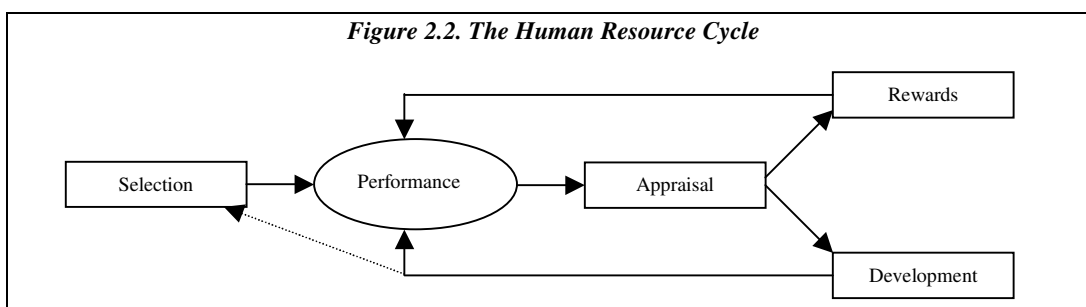
The *Harvard analytical framework* (Figure 2.1) is a broad causal mapping of the determinants and consequences of HRM. In this framework stakeholders' interests and situational factors act as constraints on HRM decisions (policy choices). These policies directly affect immediate human resource outcomes, such as employee commitment and competence. The achievement of these results will lead to favourable long-term consequences (individual well-being, organisational effectiveness and societal benefits).

The Harvard Model introduced two important aspects in the HRM field. First, it adopts an open systems perspective, since long-term HRM consequences can in turn have feedback effects on the context in which HRM decisions are adopted (stakeholder interests and situational factors). Second, it delimits the main areas that make up the HRM strategy and that summarise previous personnel management activities. In this framework, the HRM areas are: employee influence, human resource flow, reward systems and work systems.



Source: Beer et al. (1984)

On the other hand, the *Human Resource Cycle* – Michigan model – (Tichy et al., 1982) defines a cycle of four component functions of HRM: selection, appraisal, rewards and development. These tasks are assumed to directly or indirectly affect performance (at employee and organisational levels). As can be observed in Figure 2.2, selection is linked to performance, which impacts on appraisal. Appraisal is linked to development and rewards, which affect performance through a feedback loop (Lundy and Cowling, 1996). The innovative aspects of this framework were the definition of a “HRM system” as a collection of functions, and the need to align these functions to the organisation’s strategy in order to obtain meaningful improvements in performance.



Source: Tichy et al. (1982)

The Harvard and Michigan frameworks are descriptive models that aim to map and classify HRM inputs and outputs. These models, together with the appearance of in-depth theoretical studies on HRM (e.g. Guest, 1987; Storey, 1987) led to the replacement of the term “personnel management” with HRM when referring to people management activities. However, during the 1980s the boundaries between the two expressions were still unclear (Miller, 1987). In this respect, Guest (1987) provides a detailed discussion of the HRM contribution to previously existing personnel management approaches. According to this author, HRM was originally used in three different ways: a) as a mere change in terminology, used to define the traditional roles of the personnel management function, without implying any obvious changes in its roles, b) as a way of reconceptualising personnel roles and describing the work of personnel departments by extending the areas pertaining to this function and c) as a new approach to the management of employees (Tichy et al., 1982). In line with this latter view, Sisson (1990) summarises the innovative aspects of HRM in several factors. This author states that HRM highlighted the consideration of people as a valued resource in the organisation and consequently, it emphasised the full and positive utilisation of

employees. Moreover, according to Sisson (1990), HRM entailed the integration of human resources into the strategic management of the organisation. Finally, with the appearance of HRM, line managers (as opposed to specialist personnel managers) became responsible for human resource matters.

This brief review of the origins of HRM suggests, first of all, that the utilisation of several functions and activities is assumed to contribute to effective people management and provide benefits for the individual, the organisation and society. These activities constitute the “HRM strategy” and will be studied in subsection 2.1.2 of this chapter (“*Core components of the HRM strategy*”). In this subsection, I will define the levels of analysis from which the HRM strategy can be analysed and the main areas that it comprises.

Secondly, the emergence of HRM represented a shift from a control-oriented perspective to employee management, to a new approach based on the principles of mutuality, people commitment and common goals (Lundy and Cowling, 1996). It emphasised the rejection of traditional technical approaches and the evolution towards management models based on a vision of the employee as a valued resource, not simply as a cost to be minimised. Several authors formally delimited this new employee management model (e.g. Walton, 1985; Guest, 1987), which led to the emergence and development of the commitment model and High Commitment Management (HCM). The meaning and components of HCM will be examined in section 2.2. (*Conceptualisation of High Commitment Management*).

Thirdly, earlier studies on HRM highlighted the importance of the HRM function in the organisation and introduced the belief that the management of employees can enhance organisational performance (McKinlay and Starkey, 1992). This argument, together with the contributions from the Strategic Management literature, facilitated the evolution of HRM towards a new sub-field: “Strategic Human Resource Management”, the basic aspects of which will be addressed in section 2.3. (*The strategic relevance of High Commitment Management*).

2.1.2. CORE COMPONENTS OF THE HRM STRATEGY

The definition of the HRM strategy involves a set of decisions to be taken at several interrelated levels. In fact, the HRM strategy has been defined as a philosophy, as a set of practices, as an organisational policy, etc. Becker and Gerhart (1996) suggest differentiating among various levels of abstraction, each of which represents a different definition of the “HRM strategy” construct. For instance, Fombrun et al. (1984) identified the strategic, managerial and operational HRM levels.

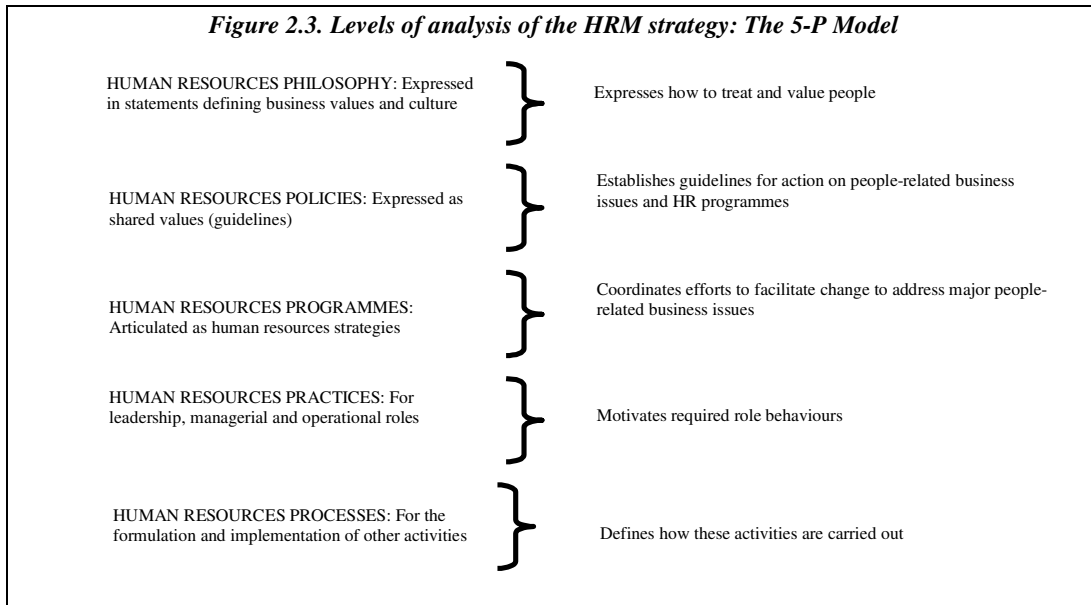
In my opinion, the 5-P Model proposed by Schuler (1992) constitutes an interesting framework that provides a generic vision of the content of a HRM strategy (Figure 2.3). As the author states: “one benefit of the 5-P Model is that it shows the interrelatedness of activities that are often treated separately in the literature” (Schuler, 1992: 19). According to this model, the components of the HRM strategy can be grouped into five levels: philosophy, policies, programmes, practices and processes. These levels differ in the extent to which their employee management activities are specified (Bonache, 2002a). They range from the most general definition of the role people play in the overall success of the organisation (philosophy), to the most specific component (processes) that establishes how to implement each practice in order to impact employee behaviours.

The consideration of the 5-P Model, together with the suggestions provided by several other authors (Peck, 1994; Jackson and Schuler, 1995; Wood and Albanese, 1995; Becker and Gerhart, 1996) support the belief that the components of a HRM strategy can be grouped into two broad levels.

First, the “architecture of the system” (Becker and Gerhart, 1996) involves the study of the HRM strategy from the point of view of its underlying policies. At this level, the guidelines of the HRM strategy are established. HRM policies represent the underlying approach that explains the association that may exist between a set of HRM activities (Wood and Albanese, 1995).

Second, the operational level of the HRM strategy refers to the concretion of the HRM policies into the set of practices required to implement the HRM strategy in the organisation. For instance, if the human resource manager states that employee performance is valued in the organisation, he or she is referring to a HRM policy.

When that HR manager specifies which mix of performance appraisal is used (incentive, promotions, etc.), or which techniques are employed (e.g. 360-degree performance appraisal or team-based incentive compensation) the HRM strategy is analysed from the point of view of its practices (Becker and Gerhart, 1996).



Source: Adapted from Schuler (1992)

It is worth noting here that when defining and assessing HRM strategies, the literature on HRM has usually focused on the level of practices (Dyer, 1984; Fombrun et al., 1984; Becker and Gerhart, 1996). Several scholars group HRM practices into five functional areas (Peck, 1994; Gómez-Mejía et al., 2001), namely staffing, training and development, performance appraisal, reward management, and job analysis and design.

Staffing: The staffing function covers tasks associated with acquiring and allocating employees within an organisation (Butler et al., 1991). It comprises a set of practices whose main purpose is to match available human resources to jobs in the organisation and to assure the efficacy of employees in their assigned tasks (Fombrun et al., 1984). Thus, this process aims to place the right employees in the right place and at the right moment in order to meet the needs of the organisation. This functional area relates to assessing future people requirements (i.e. human resource planning), recruiting candidates with the required characteristics and selecting the appropriate candidate for a specific job. This area also covers the induction of new entrants – as a future phase of initial selection – and selection for promotion, transfer and dismissal from the

organisation (Lundy and Cowling, 1996). Generally speaking, staffing practices play a crucial role in identifying people whose skills, abilities and knowledge make effective contributions to the organisation's goals (Rees and Doran, 2001).

Training and development: These practices represent key interventions in order to correct deficiencies in employees' skills or to add value to the human capital stock of the organisation (Snell and Dean, 1994). Development is a process of enhancing an individual's present and future effectiveness (Fombrun et al., 1984) and it is long-term in focus. On the other hand, training has a shorter-term focus and is aimed at helping employees to master defined tasks or areas of skill and knowledge to predetermined standards (Harrison, 1989).

Performance appraisal: Performance appraisal practices involve measuring employee performance in their jobs in terms of the agreed objectives and competence requirements (Gómez-Mejía et al., 2001). The activities within this area can assist managers and supervisors in controlling employee output, in identifying training needs and in establishing levels of merit pay (Lundy and Cowling, 1996; Bonache, 2002b). Performance appraisal activities are critical to link the performance of the organisation with the performance of individuals (Miller, 1992).

Reward management: Reward management is linked to a set of related terms such as "pay", "wages", "salaries", "remuneration" or "compensation". Its importance derives from the fact that rewards help the organisation to achieve its goals by affecting employee motivation and commitment (Beer et al., 1984; Armstrong and Murlis, 1994). Rewards can be grouped into two groups: extrinsic and intrinsic. Extrinsic rewards represent tangible expressions of the employer's side of the contract with employees in return for their contributions of time, efforts and skills. Intrinsic rewards are intangible and include status, recognition and career development, among others (Lundy and Cowling, 1996).

Job analysis and design: This area comprises activities that specify the tasks to be executed in each job, and the knowledge, skills and abilities that are necessary for its effective performance (Schneider and Konz, 1989; Gómez-Mejía et al., 2001).

For each of the above-mentioned functional areas, organisations can choose from several alternative practices (Table 2.1). Taken together, the selected practices constitute the “HRM strategy”.

Table 2.1. Alternatives for the definition of the HRM strategy

HUMAN RESOURCE STRATEGIC ALTERNATIVES	
Staffing	
<ul style="list-style-type: none"> • Internal recruitment • Staffing decisions taken by supervisors • Emphasis on the fit between the candidate and the organisational culture • Informal recruitment and socialisation for new employees 	<ul style="list-style-type: none"> • External recruitment • Staffing decisions taken by the human resource department • Emphasis on the candidate’s technical qualifications and knowledge • Formalised recruitment and socialisation for new employees
Performance appraisal	
<ul style="list-style-type: none"> • Personalised appraisals • Development-based appraisal • Multiple ends appraisal • Appraisal based on different information sources 	<ul style="list-style-type: none"> • Standard appraisal procedures • Control-based appraisal • Specific ends appraisal • Appraisal based on the supervisor’s opinion
Training and development	
<ul style="list-style-type: none"> • Individual-based training • Training in the workplace • Specific training • Recruitment of experienced employees (talent acquisition) 	<ul style="list-style-type: none"> • Team-based training • External training • General training • Emphasis on the training of existing employees (talent development)
Reward management	
<ul style="list-style-type: none"> • Fixed rewards • Job-based rewards • Seniority-based rewards • Centralised rewards decisions 	<ul style="list-style-type: none"> • Variable rewards • Employee-based rewards • Performance-based rewards • Decentralised rewards decisions
Job analysis and description	
<ul style="list-style-type: none"> • Efficiency • Control • Explicit job description • Detailed job planning 	<ul style="list-style-type: none"> • Innovation • Flexibility • Broad job description • Broad job planning

Source: Adapted from Gómez-Mejía, et al. (2001).

2.2. CONCEPTUALISATION OF HIGH COMMITMENT MANAGEMENT

As stated in the previous section, the appearance of HRM as a separate discipline resulted in an important change in the view of employees within the organisation. Drawing from a new vision of employees, some scholars founded the basis for the development of the “Commitment Model”, later labelled “High Commitment Management” (HCM). In this section I introduce some of the basics of HCM by addressing, first of all, its place within the HRM literature. Following this, I analyse the

different modes of conceptualising HCM with the intention of providing a selection of its main components.

2.2.1. HUMAN RESOURCE MANAGEMENT AND THE COMMITMENT MODEL

The emergence of HRM changed the conception of the employees' role in the organisation, leading to their being considered as key assets for organisations. Following this premise, the HRM vogue introduced the *commitment model* as the ideal approach to manage employees. Commitment-based HRM draws from a specific view of human nature based on the human relations movement (Mayo, 1945). According to this movement, organisations are social systems and employees have a deep need to belonging, and to cooperate and communicate with other employees. The contribution of the human relations movement to the commitment model rests on the belief that by promoting people's commitment, satisfaction and participation, employee behaviours can be directed towards high productive standards. The idea of motivating people in order to achieve their maximum potential is also consistent with McGregor's Theory Y (1960), another key contribution to the development of the commitment model.

In this model, the supporters of the commitment approach found a possible way of introducing the technological changes and continuous improvement required to face the economic situation of the 1980s (Wood and De Menezes, 1998). At the same time, it was becoming increasingly accepted that Taylorist methods – based on control, authority and compliance – lead to demotivation among employees, impeding their initiative, judgement and quality at work (Gallie et al., 2001).

The commitment model marked a movement away from these traditional approaches, by promoting an alteration in the relationships between employer and employee. The main contribution of this version of HRM is that it aims to achieve mutuality of interests between the two parties and to increase employee self-direction and commitment. Broadly speaking, it is manifest in a rejection of employee compliance to the organisation's regulations and a greater emphasis on employee initiative and autonomy to manage their own behaviours (Wood and De Menezes, 1998).

In the HRM literature, Walton (1985) and Guest (1987) formally addressed for the first time the conceptualisation of the commitment model.

In his study, Walton (1985) compares this model with traditional “control” approaches to people management. Walton (1985) characterises this new model by drawing on observations of leading-edge developments in American organisations that have abandoned their Taylorist methods. This author assumes that the commitment model entails a) a particular orientation on the part of employers to their employees (based on a conception of employees as important organisational assets) and b) the use of certain HRM practices (Wood, 1999).

Regarding the first issue, Walton (1985) recognises the existence of a philosophy underlying the commitment model based on the belief that eliciting employee commitment leads to higher performance as a second-order consequence. As this author states, the commitment model provides more satisfying work and a more human work environment, and it accords more legitimacy to the management of the organisation.

On the second issue, Walton (1985) associates the adoption of this model with the introduction of specific HRM practices, whose guidelines clearly differ from the control perspective (Table 2.2).

Table 2.2. Principles underlying the Commitment and the Control models

	Commitment	Control
Job design principles	a) individual responsibility extended; b) job design enhances content of work, whole task, and combines doing and thinking, c) use of teams; d) flexible definition of duties	a) individual attention limited to performing individual job; b) job design deskills and fragments work and separates doing and thinking; c) accountability focused on individual; d) fixed job definition
Performance expectations	Emphasis placed on higher “stretch objectives”, which tend to be dynamic and oriented to the marketplace	Measured standards define minimum performance. Stability seen as desirable
Management organisation: structure, systems and style	a) flat organisation structure; b) coordination and control based on shared goals; c) emphasis on problem solving and expertise; d) minimum status differentials	a) layered structure and top-down controls; b) coordination and control based on rules and procedures; c) emphasis on positional authority; d) status symbols
Compensation policies	a) variable rewards to create equity and to reinforce group achievements; b) individual pay linked to skills and mastery	a) variable pay where feasible to provide individual incentive; b) individual pay geared to job evaluation
Employment assurances	a) assurances that participation will not result in loss of job; b) high commitment to avoid or assist in reemployment; c) priority for training and retaining existing work force	Employees regarded as variable costs
Employee voice policies	a) employee participation encouraged. Attendant benefits emphasised; b) business data shared widely	a) employee input allowed on relatively narrow agenda; b) business information distributed on strictly defined “need to know” basis
Labour-management relations	a) mutuality in labour relations, joint planning and problem solving on expanded agenda; b) unions, management, and workers redefine their respective roles	Adversarial labour relations; emphasis on interest conflict.

Source: Adapted from Walton (1985)

Another key contribution to the prominence of the commitment model was the study developed by Guest (1987). Following the premises provided by some motivational frameworks – in particular McGregor’s Theory Y (1960) – Guest (1987) argues that the introduction of any HRM strategy in the organisation should be accompanied by an emphasis on the motivation and commitment of the workforce. The definition of HRM strategies should be oriented towards the promotion of employee commitment together with high integration, quality and flexibility in order to have a positive influence on organisational outcomes (Guest, 1997). Thus, integration, commitment, quality and flexibility act as intermediate HRM goals that guide organisational HRM.

The *goal of integration* includes four aspects. First, the recognition that human resources can provide an organisation with a competitive advantage and, consequently, the assumption that integrating human resources into strategic management provides great benefits for the organisation. Second, Guest (1987) highlights the importance of achieving coherence among HRM practices. Third, the involvement of line managers with the responsibilities that HRM entails. Finally, the integration of employees in the functioning of the organisation is addressed.

The *goal of employee commitment* entails guaranteeing commitment to the organisation, which is based on the assumption that “committed employees will be more satisfied, more productive and more adaptable” (Guest, 1987: 513).

The *goal of flexibility/adaptability* refers to the organisation’s structural properties as a way of allowing the organisation to manage unexpected changes. Guest (1987) highlights the benefits provided by organic structures and the promotion of “change agent” skills among the workforce. Another requirement for flexibility is functional flexibility, which includes flexible employee skills and a willingness to display flexibility and to move between tasks.

The *goal of quality* refers to three issues. First, employee quality, in terms of their abilities and adaptability. Second, the proficiency in achieving high standards (i.e. quality of performance). Finally, this goal captures the idea that organisations implementing commitment models for the management of their employees will attain a better reputation and public image.

These two studies represented major steps forward in the study of commitment-based management within organisations. In my opinion, the main contribution of Walton's study (1985) was its definition of the principles underlying the commitment model, which were later used to operationalise the HCM strategy. On the other hand, Guest's (1987) interpretation of the commitment model provided a broad vision into the potential impact that this approach could have on the organisation, in terms of integration, commitment, flexibility and quality goals.

Broadly speaking, these earlier studies emphasised the concern for the needs and expectations of employees, the humanising of work and the utilisation of more equitable practices (Kamoche, 1994). To borrow Hendry and Pettigrew's (1990) terms, the commitment model is based upon *developmental-humanism* principles, which refer to the attempts to meet the needs of employees and to create a climate of belonging to the organisation.

2.2.2. DEFINITION OF HIGH COMMITMENT MANAGEMENT

The commitment model was popularised in the HRM literature with the term "High Commitment Management" (HCM). Wood and Albanese (1995) provide an explanation for the addition of the adjective *high* to the prior designation. According to these authors, the term commitment by itself is not a distinctive feature of HCM, since traditional HRM approaches also required a minimum of commitment and cooperation on the part of employees. HCM approaches are oriented towards encouraging a "more than average" level of organisational commitment, so as to favour a match between individual objectives and the organisation's goals. Wood and Albanese (1995) also provide a general definition of HCM, which has been widely used in the HRM literature:

HCM is assumed to be aimed at eliciting a strong commitment to the organisation, so that behaviour is primarily self-regulated rather than controlled by sanctions and pressures external to the individual (Wood and Albanese, 1995: 220).

The adoption of a high commitment model entails the use of certain human resource practices (Walton, 1985) that shape the high commitment strategy. In order to examine the components of the high commitment strategy, I first provide a review of existing

studies in this field, and analyse common themes and discrepancies that have emerged in this literature. Secondly, I propose a definition of HCM that is rooted in the underlying dimensions of this strategy.

2.2.2.1. Practices of a high commitment strategy

In order to analyse the content of the high commitment strategy, I reviewed sixteen relevant studies in the field of high commitment management that have conceptualised and measured this strategy (Table 2.3). All these studies adopted an operational definition of HCM, centred on the practices that make up this strategy.

As can be observed in the table, while certain practices are recommended by nearly all the scholars (e.g. comprehensive training programmes, teamwork, communicative activities), in general terms, there is a lack of agreement when operationalising the high commitment strategy. In the words of Guest (1997: 273): “there is little consensus on what these [the practices] are and little interest to date in developing theory about what they might be”.

On the one hand, certain practices are only considered by one or two scholars as being part of the HCM concept. This is the case of formal human resource planning (Koch and McGrath, 1996; Roche, 1999), realistic job previews (Hoque, 1999), the use of commitment as a selection criterion (Wood and Albanese, 1995), formal systems to communicate organisational values to new staff (Hoque, 1999), systematic assessment of training efficacy (Roche, 1999) and of selection processes (Koch and McGrath, 1996), use of training programmes for new entrants (MacDuffie, 1995), training for technical skills (Vandenberg et al., 1999), behaviour-based performance appraisal (Youndt et al., 1996) or quality-based incentives (Applebaum et al., 2000).

On the other hand, certain practices that are included in a number of studies are ignored in others. Such controversy appears, for instance, in the area of reward management (Gallie et al., 2001). While some authors include in their conceptualisation of a high commitment strategy collective performance-based rewards such as employee share options or group bonuses (e.g. Arthur, 1994; Youndt et al., 1996; Guthrie, 2001), others scholars only consider the individual component of remuneration, based on the

determination of rewards on the basis of each employee performance (e.g. MacDuffie, 1995; Hoque, 1999). Still other researchers simultaneously consider both options, such as in the studies by Huselid (1995) and Roche (1999), which include both collective-based and individual-based rewards. Similarly, in the area of staffing, some studies recommend the use of comprehensive selection processes (e.g. Huselid, 1995; Delaney and Huselid, 1996; Whitener, 2001), while others ignore this practice when defining HCM (e.g. Jayaram et al., 1999; Vandenberg et al., 1999; Applebaum et al., 2000).

In my opinion, such discrepancies could be solved by revising the underlying dimensions of the high commitment strategy. This approach could provide a more systematic approach to analyse the components of the high commitment model. In the following sub-section I will address this question.

Table 2.3. Practices associated with a High Commitment Strategy

FUNCTIONS	HIGH COMMITMENT PRACTICES	STUDIES ¹																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
STAFFING AND PROMOTIONS	Use of formal human resource planning			*												*		
	Use of comprehensive selection processes				*		*		*	*							*	
	Selection techniques to evaluate employee competencies			*			*			*								
	Selection techniques to evaluate employee attitudes (interpersonal skills, problem-solving skills, psychological tests etc.)			*			*	*			*						*	
	Realistic job previews during recruitment processes										*							
	Commitment as a selection criterion					*												
	Formal systems to communicate organisational values to new staff										*							
	Trainability as a selection criterion					*		*			*							
	Formal socialisation processes for new employees										*							
	Use of internal promotions		*			*	*		*	*	*					*	*	*
	Use of temporary staff to protect the security of the core workforce				*													
	Performance-based promotions		*		*		*											
	Formal planning of promotion			*														
	Internal promotion to management positions			*														
	Equilibrium between internal and external staffing			*														
Formal evaluation of selection processes																	*	
TRAINING AND DEVELOPMENT	Comprehensive training activities		*		*		*	*	*	*	*	*	*	*	*	*	*	*
	Efforts towards "learning organisation"									*								
	Use of training programmes for new entrants							*										
	Systematic assessments of employee training activities			*														
	Systematic assessment of training efficacy			*														
	Training oriented towards the long term		*			*												*
	Training for problem-solving skills									*	*		*					
	Training for technical skills									*								
	Cross-functional training		*	*									*					
	Training for teamwork skills													*				
	Training for participation skills													*				
	Training for organisational policies and procedures									*								
	Training for change management													*				

¹ List of studies analysed and their corresponding number in the table: 1. Arthur (1994); 2. Guthrie (2001); 3. Roche (1999); 4. Whitener (2001); 5. Wood and Albanese (1995); 6. Huselid (1995); 7. MacDuffie (1995); 8. Delaney and Huselid (1996); 9. Youndt et al. (1996); 10. Hoque (1999); 11. Applebaum et al. (2000); 12. Jayaram et al. (1999); 13. Vandenberg et al. (1999); 14. Cappelli and Newmark (2001); 15. Koch and McGrath (1996); 16. Ichniowski (1990).

Table 2.3. Practices associated with a High Commitment Strategy (continued)

FUNCTIONS	HIGH COMMITMENT PRACTICES	STUDIES															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PERFORMANCE APPRAISAL	Use of formal appraisal methods			*			*				*						
	Performance appraisal based on performance									*							
	Performance appraisal based on behaviours									*							
	Participative appraisal processes				*						*						
	Performance appraisal based on flexible performance standards				*												
	Comprehensive appraisal processes				*	*											
	Performance appraisal oriented towards employee development				*						*						
JOB ANALYSIS AND DESCRIPTION	Job rotation							*									
	Flexible description of jobs			*		*				*		*					*
	Employee empowerment, autonomy, self-inspection processes					*		*		*	*	*					
	Job design oriented towards skills enhancement					*				*							
	Description of jobs based on teamwork		*			*		*		*	*	*	*	*	*		
	360-degree feedback													*			
	Flexibility to achieve a family-work balance													*			

Table 2.3. Practices associated with a High Commitment Strategy (continued)

FUNCTIONS	HIGH COMMITMENT PRACTICES	STUDIES															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
REWARDS	Quality-based incentives										*						
	Internally equitable reward systems				*					*					*		
	Pay levels competitive with similar organisations (external equity)				*					*							
	Collective performance-based pay schemes (employee share options, profit sharing, group bonus schemes etc.)	*	*	*			*		*					*	*		
	Skill-based rewards		*														
	Individual performance-based rewards			*	*		*	*	*		*				*		
	Long-term incentives														*		
	Employee stock ownership		*														
	Short-term incentives														*		
OTHER PRACTICES	Single status terms and conditions of employment					*		*	*	*							
	Information sharing with employees (top-down: briefing, information cascading, etc.)	*			*	*				*		*		*			
	Communicative activities with employees (bottom-up: works council, regular workforce meetings, quality circles, suggestion schemes, formal grievance procedures, attitude surveys, etc.)	*	*		*	*	*	*		*	*				*		*
	Top management commitment to specific performance objectives (quality, flexibility, etc.)												*				
	Decentralised HRM decisions								*								
	Open organisational culture												*				
	Establishment of clear performance objectives for each employee													*			

2.2.2.2. Dimensions of the high commitment strategy

Even though there is little consensus in the literature of how best to analyse human resource strategies, a number of authors have studied them on the basis of a set of underlying dimensions, that is, by studying the “architecture of the system” (Becker and Gerhart, 1996). In this vein, several studies have grouped human resource practices into “systems” (also known as bundles), proving the existence of a high degree of correlation among the component practices of each system (e.g. Osterman, 1994; Milgrom and Roberts, 1995). For example, Youndt and Snell (2004) have recently examined human resource strategies by differentiating among five “configurations” of practices, namely: acquisition, developmental, egalitarian, collaborative and information technology human resource configuration. This approach could complement the traditional area-focused description of the high commitment strategy, according to which practices are grouped into the staffing, training, performance appraisal, job description or reward management functions. Instead, by focusing on the core dimensions of the strategy, a more in-depth analysis of the meaning of the high commitment strategy is provided.

Regarding HCM, three main dimensions constitute the “architecture” of this strategy (Wood and Albanese, 1995; Edwards and Wright, 2001; Gallie et al., 2001). In essence, it is believed that the high commitment strategy should contribute to the development of employee skills and abilities, to the enrichment of jobs through employee participation, discretion and “longer distance” control systems, and to the provision of an incentive structure that enhances motivation and commitment. Classic mass production approaches, by contrast, emphasise low skill requirements, narrow jobs with low discretion, and few incentives for discretionary efforts (Batt, 2002: 587). The distinction between these dimensions has its origins in the framework proposed by Bailey (1993), which has been termed the AMO Model: (A)ilities, (M)otivation, and (O)pportunities to participate. This model has been adopted as a theoretical framework by many studies in the field of HRM (e.g. Delaney and Huselid, 1996; Guest, 1997; Applebaum et al., 2000; Gardner et al., 2001) and according to various scholars, it has an important potential for enhancing the theoretical understanding of HCM (Boselie et al., 2005; De Menezes and Wood, 2006).

Following the terminology employed by Youndt and Snell (2004) and in accordance with the above reasoning, I will refer to the components of HCM as the *skill development configuration* (Abilities), the *job enrichment configuration* (Opportunities to participate) and the *incentive configuration* (Motivation)

a) *Skill development configuration*

As stated in the review of the origins of the commitment model, one of the premises of this approach is that employee potential is not fully utilised and can be enhanced through the appropriate means. Thus, “commitment building organizations are seen as those that take seriously the skill development of individuals” (Gallie et al., 2001: 1082). Organisations have various options to enhance employee skills. According to Delery and Doty (1996), a higher level of human capital (i.e. collective skills and abilities) can be attained by focusing on either the selection processes that determine the characteristics of the workforce – “buy” orientation – or on developmental actions covering current employees – “make” orientation –.

First, efforts can be oriented towards the improvement of the quality of the employees hired. In this vein, the comprehensiveness of the staffing processes has been considered as a critical element to determine the nature of the organisation’s future workforce. Many scholars assume that a selection process is comprehensive when a high number of candidates are considered for each vacancy (Huselid, 1995; Delaney and Huselid, 1996; Youndt et al., 1996; Whitener, 2001). However, other scholars (Koch and McGrath, 1996; Roche, 1999) relate the exhaustiveness of the staffing processes to the existence of detailed planning of the organisation’s human resource needs as well as a formal evaluation of the results of the selection processes. Regardless of the specific selection process management technique, HCM places special emphasis on finding the right person for each position offered.

Second, organisations can improve the quality of their present employees by providing developmental activities after selection. Development initiatives have usually been associated to training programmes. In quantitative terms (i.e. training intensity), several studies in the HCM literature have highlighted the need for extensive training programmes either in terms of the number of hours provided or the percentage of

employees covered by the training programmes (MacDuffie, 1995; Delaney and Huselid, 1996; Youndt et al., 1996). In qualitative terms, that is, concerning the scope of the training activities, there is certain agreement over the appropriateness of cross-functional type training programmes (Arthur, 1994; Jayaram et al., 1999; Guthrie, 2001) and the transmission of generic abilities (such as problem-solving skills or teamwork abilities) (Youndt et al., 1996; Vandenberg et al., 1999; Applebaum et al., 2000). Other authors, such as Wood and Albanese (1995) address the temporal dimension of training, and recommend the long-term focus of the training activities, oriented towards future skill requirements that may be needed in the organisation.

b) Job enrichment configuration

Another main feature of the high commitment strategy is a “conscious attempt by management to eliminate the worst aspects of routinised work and to provide an intrinsically satisfying work” (Wood and Albanese, 1995: 223). Job enrichment refers to the organisation’s provision of meaningful jobs, and to the enhancement of the employees’ level of responsibility at work (Drach-Zahavy, 2004). The aim of this configuration is to utilise human resources to the full by providing high quality challenging jobs for high calibre staff that contrasts with rigid Taylorist systems of narrow job specifications and limited employee autonomy (Guest, 1987; Edwards and Wright, 2001). Job enrichment entails that jobs are meaningful, provide employees with control and allow for adequate feedback (Vandenberg et al., 1999).

Therefore, job enrichment refers to different aspects of job design (Hackman and Oldham, 1980). Job enrichment is based, first of all, on the empowerment and autonomy of the workforce. HCM supports a workforce that is self-programming and self-managing, that differs from a traditional approach in which the thinking and controlling element of the work is separated from the “doing” of the work (Lawler, 1992). In addition, job enrichment is based on affording opportunities to practice a variety of complex skills. From this perspective, the job itself constitutes an alternative learning instrument, providing employees with the opportunity to demonstrate their proficiency at work and thus to avoid the obsolescence of their skill base. A further feature of enriched jobs is the permeability of organisational boundaries. In this regard,

one of the common elements that all scholars recommend when defining the high commitment strategy is its focus on teamwork, encouraging interaction among employees so as to achieve a set of common goals (Huselid, 1995; Wood and Albanese, 1995; Guthrie, 2001).

c) Incentive configuration

Previous HCM configurations assure that employees have an appropriate pool of skills and abilities that they can fully utilise at work. However, employees need to be motivated to effectively contribute to organisational success. The third dimension of HCM refers to the provision of monetary and non-monetary rewards that are perceived by employees as fair (Takeuchi et al., 2004). As Applebaum et al. (2000) suggest, HCM systems include many features that are likely to affect the organisational justice perceptions of the workforce. On the one hand, HCM contributes to generating a sense of procedural equality, by determining rewards according to the result of employee performance evaluations. When decisions about employee rewards or internal promotions are based on the results of their work, employees perceive that the means used to determine those outcomes are fair. As Cobb et al. (1995) state, performance appraisal systems and compensation based on merit have become almost synonymous with the idea of fairness in the organisation, which contributes to motivating employees. On the other hand, HCM promulgates equitable rewards (both internally and externally), which leads to employees' perception of a match between the inputs and outcomes that they perceive in relation to those of relevant others (Lam et al., 2002; Paterson et al., 2002).

These three configurations shape the content of HCM, and many of the practices that previous studies considered as part of the high commitment strategy fit into these dimensions. For example, although nearly all scholars consider the skill development component of the high commitment strategy, they operationalise this dimension differently, in terms of the practices included. Thus, while Roche (1999) highlights the use of formal human resource planning and promotion, Wood and Albanese (1995) contemplate the relevance of commitment as a selection criterion and authors such as

Huselid (1995) and Whitener (2001) emphasise the comprehensive nature of the staffing processes. However, all of them refer to the convenience of fostering the exhaustiveness of staffing to recruit employees that best fit the organisational values.

2.2.3. HIGH COMMITMENT MANAGEMENT AND RELATED TERMS

As previously stated, high commitment management is a people management model that contrasts directly with Taylorist and control methods (Walton, 1985). This model is known by several terms in the literature, such as high-involvement management, innovative human resource practices, high performance work systems, human capital enhancing systems, etc. In Table 2.4, I offer an overview of different designations attributed to this model.

Table 2.4. Designations for non-Taylorist HRM approaches

Label	Studies
High commitment management	Arthur (1994), Pfeffer (1994), Wood and de Menezes (1998), Roche (1999), Gallie et al. (2001), Whitener (2001), Roca et al. (2002)
High involvement management	Lawler (1986), Guest and Hoque (1994), Vandenberg et al. (1999), Edwards and Wright (2001), Guthrie (2001)
Innovative/progressive human resource management	Ichniowski (1990), MacDuffie (1995), Delaney and Huselid (1996), Jayaram et al. (1999), Cappelli and Newmark (2001)
High performance management/ high performance work systems	Huselid (1995), Kalleberg and Moody (1994), Applebaum et al. (2000)
Human resource management	Snell and Dean (1992), Hoque (1999), Camelo et al. (2004)
Human resource management sophistication	Koch and McGrath (1996)
Human capital enhancing human resource system	Youndt et al. (1996)
Strategic HRM effectiveness	Huselid et al. (1997)

In view of the propagation of so many related terms, Wood (1999) highlights the importance of analysing the commonalities and differences among them. Specifically, high commitment management can be interpreted from either a more or a less literal approach. The *restrictive* definition of HCM assumes that this form of management will benefit the organisation exclusively because it contributes to the enhancement of workforce commitment. Conversely, the *less literal* definition recognises that HCM aims to encourage not only employee commitment, but also their acquisition of a broad range of skills and abilities. In addition, the concept of “commitment” adopted in this broader view of HCM embraces a set of interrelated attitudes, such as group-orientation or flexible role, among others (Wood, 1999).

Most of the studies included in Table 2.4 correspond to the less literal conceptualisation of HCM, and generally consider that the processes explaining the relevance of HCM for organisational performance go beyond employee commitment. In accordance with numerous scholars (e.g. Becker and Gerhart, 1996; Delaney and Huselid, 1996; Pfeffer and Veiga, 1999), I also adopt a broad conception of HCM in this study. Consequently, I consider that the benefits that HCM provides to the organisation can be explained not only by its repercussion on employee commitment, but also by its effects on people's skills, abilities, behaviours, and attitudes (other than commitment). Thus, components of HCM are not limited to activities with verified effects on commitment, but rather they include a set of progressive practices that encourage employee involvement and autonomy and differ greatly from traditional Taylorist methods (Wood, 1999). This idea is coherent with Guest's (1987) model, which includes as HCM outcomes not only employee commitment, but also quality and flexibility.

Possibly the most widespread terms used to refer to this broad conception of the human resource management model are "high performance management" or "high performance work systems". However, authors such as Pil and MacDuffie (1996) or Wood (1999) reject these terms as misleading in the absence of clear empirical tests of their actual link to performance. In accordance with Boxall and Purcell (2000), I prefer the term "high commitment management" because it is more descriptive of the character of the practices included.

In light of the above, the terms high involvement management, high performance work systems and high commitment management will be used synonymously in this study. Generally speaking, these so-called "new workplace practices" (Bacon and Blyton, 2001) or "new forms of labour management" (Edwards and Wright, 2001) reflect a philosophy that clearly contrasts with conventional systems of narrow job specifications and limited worker autonomy.

Having revised the components of High Commitment Management, in the next section I centre my attention on the competitive importance of this strategy. In doing so, I also consider some theories and concepts stemming from the Strategic Management literature that have been critical in the development of studies aimed at demonstrating the contribution of HCM to organisational outcomes.

2.3. THE STRATEGIC RELEVANCE OF HIGH COMMITMENT MANAGEMENT

The popularisation of High Commitment Management in the HRM literature has been greatly supported by studies that demonstrated its positive effects on organisational outcomes. These studies form part of the “Strategic Human Resource Management” (SHRM) literature. In this section, I first briefly review the distinctive features of SHRM as a sub-discipline within the HRM literature. Second, I provide a review of the theoretical frameworks that support the relationships between HCM and organisational performance. I then analyse the empirical studies that attempt to demonstrate that HCM has a positive impact on organisational outcomes. Finally, I review some emerging trends in the analysis of the contribution of HCM to organisational outcomes.

2.3.1. CONTRIBUTIONS OF STRATEGIC MANAGEMENT TO THE FIELD OF HRM

The strategic perspective of HRM grew out of scholars’ interest in proving the importance of human resource-related decisions for the organisation’s success (Delery and Doty, 1996). Strategic management facilitated the advancement of the HRM field towards *Strategic Human Resource Management*. The distinctive features of this new sub-discipline can be summarised in two aspects.

First, SHRM provided a new vision of the HRM function in the organisation based on the need to design a coherent HRM strategy aligned with the strategic processes of the organisation. In this line, a widely accepted definition of SHRM is that provided by Wright and McMahan (1992: 298), who state that SHRM is “the pattern of planned human resource deployment and activities intended to enable an organisation to achieve its goals”.

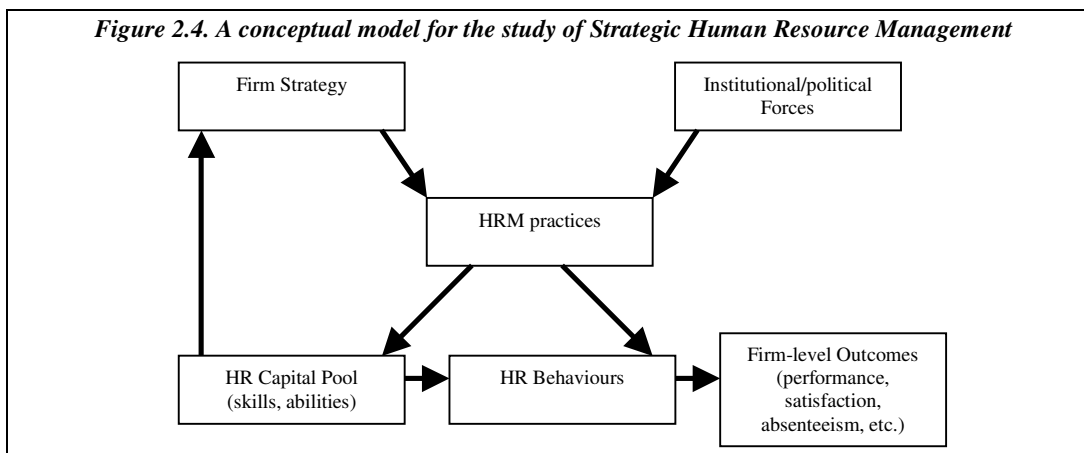
Implicit in this definition are the concepts of *internal fit* and *external fit* of human resource strategies. Internal or horizontal fit refers to the coordination among the different component practices of the human resource strategy. That is, the key to effective SHRM lies in finding a combination of practices linked through an appropriate pattern (Guest, 1997). External or vertical fit implies the integration of human resource

decisions into the strategic process of the organisation as a way of generating competitive advantages (Lähteenmäki et al., 1998). This latter fit led to the emergence of studies that theoretically proposed linkages between HRM practices and certain organisational strategies (e.g. Miles and Snow, 1984; Schuler and Jackson, 1987), and to research that examined the extent to which the integration between HRM and organisational strategies improves organisational performance (Delery and Doty, 1996; Youndt et al., 1996; Becker and Huselid, 1998). I will revise these models in greater detail in later sections.

Second, SHRM research includes some of the theories from the Strategic Management field in the analysis of the internal and external fit of human resource strategies. Such theories supported empirical propositions on the competitive relevance of human resource management issues and greatly contributed to the enrichment of this field.

Wright and McMahan (1992) summarised all these aspects in a conceptual model for the study of SHRM (Figure 2.4). The purpose of this framework is to highlight the variables of interest in the SHRM field and their interrelationships in order to guide empirical and theoretical research.

The SHRM literature includes studies on the determinants of human resource decisions (such as organisational strategies or institutional/political forces), the characteristics of employee skills resulting from human resource strategies, their influence on employee behaviours and the effectiveness of human resource strategies. Broadly speaking, SHRM is based on two fundamental beliefs. First, the idea that human resources have a strategic importance, providing the organisation with the appropriate capabilities to formulate and implement strategies. Second, SHRM highlights the role of HRM strategies to develop the strategic capabilities of employees (Colbert, 2004: 341).



Source: Adapted from Wright and McMahan (1992)

It is not my intention here to provide a detailed review of all the research areas in the SHRM field². Rather, my interest centres on studies that attempt to demonstrate the importance of HCM for organisational success. In this regard, one of the most effective arguments lies in proving the empirical relationship between this human resource strategy and organisational outcomes (Gerhard et al., 2000), which has become the dominant issue in the field. In the next section, I review the main theoretical perspectives that have been adopted to justify the linkage between HCM and organisational results.

2.3.2. MODES OF THEORISING BETWEEN HIGH COMMITMENT MANAGEMENT AND ORGANISATIONAL OUTCOMES

Research on the linkages between HCM and organisational outcomes has included premises from several organisational theories, such as institutional theory (Wright and McMahan, 1992), contingency theory (Lengnick-Hall and Lengnick-Hall, 1988), configurational approaches (Doty et al., 1993) or transaction cost analysis (Jones, 1984), among others (Colbert, 2004). Nonetheless, three theoretical approaches have guided the majority of empirical research in the field: the Behavioural Perspective, Human Capital Theory, and the Resource-Based View of the Firm. Each of these frameworks has led to a different conception of the interrelationships between human resource strategies, employee characteristics and organisational performance. Of special

² For a review of SHRM research areas and theoretical frameworks see, for example, Guest (1997), Wood (1999) and Boxall and Purcell (2000).

significance in the HCM field is the Resource-Based View of the Firm, which has greatly contributed to integrating the fields of strategy and human resource management (Wright et al., 2001).

The *Behavioural Perspective* assumes that employee behaviours mediate between organisational strategies and performance (Miles and Snow, 1984; Schuler and Jackson, 1987). According to these studies, each organisational strategy needs specific “role behaviours” for successful implementation. This model also assumes that human resource practices influence and control employee behaviours. Consequently, each organisation needs a different set of human resource practices that promote the required employee behaviours.

Human Capital Theory claims that employee knowledge, skills and abilities (KSAs) provide economic benefits to the organisations. Consequently, the costs incurred in improving KSAs are only justified when they provide higher returns through increased productivity. Thus, the higher the potential employee contribution to the organisation, the more likely the organisation will be to invest in human capital and that these investments will lead to improved employee productivity and organisational outcomes (Youndt et al., 1996). Several studies have been based on this theoretical reasoning, including Ichniowski (1990), Huselid et al. (1997) and Guthrie (2001).

The *Resource-based View of the Firm* (Wernerfelt, 1984; Barney, 1991; Amit and Schoemaker, 1993) critical for the development of SHRM, has had greater repercussions (McMahan et al., 1999; Wright et al., 2001; Colbert, 2004). As Delery (1998: 290) states, “in explaining the significance of human resources to firm performance, the majority of work in SHRM has either implicitly or explicitly adopted the resource-based view of the firm”. Since this theoretical approach focuses on the internal characteristics of the organisation, it provides an important tool to examine the extent to which human resources constitute a source of sustainable competitive advantage, together with the role that human resource strategies play in developing that competitive advantage. A review of the literature shows that a high number of authors have adopted this framework as the basis for their empirical research (e.g. Huselid, 1995; Jackson and Schuler, 1995; Wright et al., 1995; Koch and McGrath, 1996; Youndt et al., 1996; Becker and Huselid, 1998; De Saá-Pérez and García-Falcón, 2002).

Three studies initially addressed the application of RBV ideas to the field of human resource management: Lado and Wilson (1994), Wright et al. (1994) and Boxall (1996). These theoretical studies discuss the conditions under which human resource-related issues contribute to the generation of sustainable competitive advantages in the organisation. The adoption of the RBV as the theoretical framework involves the examination of two interrelated questions: the definition of human resources, and the conditions under which human resources can constitute a source of sustainable competitive advantage.

a) Definition of human resources from the RBV

According to Wright et al. (1994), human resources include the human capital pool of the organisation and employee behaviours. The human capital pool refers to employee skills, knowledge and abilities at a specific point in time, while employee behaviours introduce the consideration of employees as cognitive and emotional beings that can decide which actions carry out; in other words, as individuals with “free will” within the organisation (Wright et al., 2001).

This conceptualisation of human resources is wider than both that provided by the Human Capital Theory (focused solely on the pool of skills and abilities) and by the Behavioural Perspective (exclusively centred on employee behaviour). Furthermore, this distinction is linked to the double objective of SHRM in the organisation, posited by Boxall (1999). According to this author, SHRM pursues a “can-do goal”, focused on the development of employee competencies, and a “will-do goal”, oriented towards the encouragement of favourable attitudes in employees, such as motivation or commitment to align their behaviours with the organisational objectives.

On the other hand, studies within the RBV approach also recognise the interrelationships between skills and behaviours. First, without specific skills, certain behaviours cannot be displayed by employees; in Wright et al.’s (1994) words: “although employee behaviour is the most direct way in which strategies are implemented, employees must have the KSAs necessary to exhibit the behaviours”. Furthermore, the value of some skills can only be realised through certain behaviours

(Wright et al., 2001). In sum, KSAs are a necessary, but not a sufficient condition for employee contributions to the organisation.

b) Human resources as a source of sustainable competitive advantage

Having defined the concept of “human resources”, some studies have then examined the conditions under which these resources can constitute a source of sustainable competitive advantage in the organisation (Wright et al., 1994, 1995, 2001). Organisational resources should meet four conditions in order to provide the organisation with sustainable competitive advantages: they must provide value to the organisation, they must be rare, difficult to imitate, and difficult to substitute (Barney, 1991). Wright et al. (1994) considered these criteria and evaluated the conditions under which they are met by human resources.

Regarding the first criterion, Wright et al. (1994) suggest that human resources can provide value to the organisation because there is a heterogeneous demand for labour (i.e. organisations have jobs that require diverse skills) and a heterogeneous supply of labour (i.e. each person has different skill features and levels). Thus, individuals will provide varying degrees of value depending on their skill and ability related characteristics.

Second, these authors study the conditions in which human resources are rare. Following the previous discussion, since specific employee skills – cognitive abilities – are relevant for each job, there is a variance in individual contributions to the firm. Due to the normal distribution of abilities, quality human resources, that is, employees with the required skills for the organisation’s jobs, are rare.

Third, concerning the criterion of non inimitability, Wright et al. (1994) use the concepts of unique historical conditions, causal ambiguity and social complexity to show that the competitive advantage that derives from human resources is difficult to imitate, because it depends on the specific contingencies of each organisation.

Organisational culture and norms that are developed under specific historical conditions influence employees’ behaviours and their willingness to cooperate and make an effort to support the goals of the organisation. Inimitability also derives from the causal

ambiguity concerning team performance levels. When several employees work together, it is difficult to identify which of them contributes to the competitive advantage, since the total performance of the team is not an aggregation of the performance of each of its components, but the result of their interactive actions. The issue of social complexity refers to human interactions among persons belonging to a specific transaction, which leads to the creation of a social network that impedes the replication of the advantage that derives from it.

In addition to the inimitability of the organisation's human resources, Wright et al. (1994) also question the mobility of these resources, as this hinders other organisations from hiring these resources and thus avoiding the need to imitate them. According to these authors, human resources are not mobile for two reasons. First, because employees have to face transaction costs derived from changing from one job to another. Second, because the conditions of unique historical conditions, causal ambiguity and social complexity make it difficult for a competing organisation to know which employees they should acquire to obtain the same efficacy levels from them once they have succeeded in doing so.

Regarding the fourth criterion – non-substitutability – Wright et al. (1994) argue that, although human resources can be substituted by other resources (e.g. advanced technologies) in the short term, these new resources do not constitute a source of sustainable competitive advantage. Resources such as new technologies do not meet the conditions to impede their imitability, so human resources constitute the actual source of sustainable competitive advantage. Furthermore, employees are a type of organisational resource which does not become obsolete (e.g. through training activities) and which is applicable across several products, markets and technologies.

In summary, the RBV suggests that an organisation's sustainable competitive advantages depend on the combination of employees' skills and behaviours (which meet the criteria of strategic resources) (Wright et al., 2001). Thus, human resource management activities will contribute to organisational performance in as far as they promote employees whose characteristics fulfil the strategic resources requirements.

2.3.3. EMPIRICAL EVIDENCE ON THE INFLUENCE OF HIGH COMMITMENT MANAGEMENT ON ORGANISATIONAL OUTCOMES

Together with the introduction of the Strategic Management concepts on the field of HRM, a number of studies have attempted to demonstrate the competitive relevance of High Commitment Management by analysing the extent to which the adoption of a high commitment strategy enhances organisational outcomes³. In this regard, existing studies have adopted three distinct approaches. First, some scholars defend the benefits of this human resource strategy across all types of organisations – the best practice or universalistic perspective. Second, other studies consider that HCM is only appropriate for certain organisations and under specific circumstances – the contingent and configurative approaches.

Studies within the *universalistic perspective* assume that the non-Taylorist methods that emerged in the 1980s are always beneficial for organisational performance. Earlier proponents of HCM defended this idea (Walton, 1985; Guest, 1987) and a great number of studies have provided empirical evidence on the positive universalistic effects of HCM on organisational outcomes. Most of these studies adopt the RBV premises to justify the linkage between HCM and organisational outcomes.

For instance, studies by Arthur (1992, 1994) showed that human resource strategies aimed at increasing employee commitment were related to higher performance. This author also demonstrated that traditional human resource strategies – with a greater focus on control, efficiency and lower employee discretion – negatively affected manufacturing performance. Another key contribution within the universalistic approach is the research carried out by Huselid (1995), which provides evidence that a high commitment strategy – labelled High Performance Management by the author – results in greater productivity and organisational performance and in lower employee turnover. Delaney and Huselid (1996) conclude that HCM is positively related with perceptual measures of organisational performance and Huselid et al. (1997) demonstrate its influence on employee productivity, cash flow and market value. Other

³ The interest on this question in the 1990s resulted in the publication of special academic issues focused on studies linking HRM strategies to organisational performance, such as the *Academy of Management Journal*, in 1996 (No.4), *Industrial Relations*, also in 1996 (No.3) or the *International Journal of Human Resource Management*, in 1997 (No.3).

studies within the universalistic perspective of High Commitment Management are Delery and Doty (1996), Pfeffer (1994, 1998) and Koch and McGrath (1996).

Contingent and configurative approaches assume that organisations manage their human resources rationally, as with any other factor of production (Truss et al., 1997). Such a calculative view of human resources emphasises the “strategic fit” of the human resource strategies, that is, their internal and external fit.

Regarding the internal fit (*configurational perspective*), the literature on HCM emphasises the need to adopt coherent systems or bundles of high commitment practices (Arthur, 1994; Delery and Doty, 1996; MacDuffie and Kochan, 1995). The empirical evidence shows that many HCM practices are usually found together, that is, these practices are driven from a common philosophy (Vandenberg et al., 1999; Gallie et al., 2001). For example, Wood and Albanese (1995), on a sample of manufacturing companies, demonstrated that there is an underlying commitment approach to the management of human resources that explains the association between the practices making up a HCM strategy. Consequently, these practices should be introduced in the organisation as a coherent system that assures an internal logic among them. Some studies have shown the benefits of an integrated high commitment strategy, in terms of its impact on the organisation’s results (e.g. MacDuffie and Kochan, 1995; Delery and Doty, 1996).

The external fit (*contingent perspective*) is based on the idea that the organisational strategy acts as a moderator variable that increases or reduces the impact of the human resource strategy on organisational performance (Delery and Doty, 1996; Youndt et al., 1996; Becker and Huselid, 1998; Camelo et al., 2004). This approach provides a deeper view into organisational phenomena, leading to more situational specific theories and prescriptions for practice (Youndt et al., 1996). It goes beyond the linear causal relationships analysed in the universalistic models of HCM and allows for interaction effects depending on the presence of a contingent variable (Colbert, 2004). As a result, from this point of view, HCM outperforms other systems only under specific circumstances (Wood, 1999). For instance, research by Youndt et al. (1996) suggests that a high commitment strategy enhances performance when the organisation adopts

either a quality⁴ or a flexibility manufacturing strategy. Conversely, this strategy is not appropriate for organisations following a cost strategy. In these cases, an administrative or traditional human resource strategy would be the most suitable approach.

Regardless of the guiding approach (universalistic, configurative or contingent), it is clear that a great part of the HCM literature has focused on demonstrating the impact of this strategy for organisational performance. In what follows, I will discuss possible lines of study that can contribute to the understanding of why and how HCM has a strategic importance in the organisation.

2.3.4. EMERGING TRENDS IN THE STUDY OF THE CONTRIBUTION OF HIGH COMMITMENT MANAGEMENT TO ORGANISATIONAL OUTCOMES

Despite the progress made in demonstrating the relationship between HCM and organisational performance, some questions remain unanswered concerning the processes through which these relationships occur (the so-called *black box problem*) (Ramsay et al., 2000). Empirical studies in the SHRM field have often ignored which mechanisms explain the impact of HCM on organisational outcomes. Recently, a new generation of studies has included some intermediate variables, even though this line of research is still in its infancy.

2.3.4.1. Intermediate mechanisms between HCM and organisational performance: a neglected issue in previous studies

A review of some of the most relevant empirical studies in the HCM field (Table 2.5) shows underlying assumptions about the variables that explain the influence of HCM on different organisational outcomes in most empirical studies. Many of the scholars in this literature have recognised the relevance of employee-related variables to explain the influence of HCM on organisational results. These variables include employee skills

⁴ Similarly, Hoque (1999) confirms that the relationship between HCM and performance is positive when organisations emphasise the importance of quality enhancement. The literature on Total Quality Management also supports this idea. In this regard, some studies have demonstrated the interaction effect of TQM with certain elements of the High Commitment Strategy on organisational results (e.g. Chandler and McEvoy, 2000; Allen and Kilmann, 2001; Ahmad and Schroeder, 2002).

and abilities, together with a range of attitudes and behaviours, such as motivation, involvement, discretionary effort and commitment. However, as can be observed in the table, there is still a lack of empirical evidence on how these variables mediate the relationship between HCM and organisational outcomes⁵.

It should also be pointed out that although some of these empirical studies have included employee-related variables such as turnover, labour productivity, job satisfaction, absenteeism, flexibility or quality, they have been dealt with as final variables, at the same level as organisational outcomes, rather than as a mechanism between HCM and organisational results (Ichniowski, 1990; Arthur, 1994; Guest and Hoque, 1994; Huselid, 1995; Koch and McGrath, 1996; Hoque, 1999).

To understand how HCM enhances organisational effectiveness, it must be assumed that before manifesting in final results, HCM influences other intermediate organisational outcomes (Huselid and Becker, 2000). Numerous authors have acknowledged the importance of better understanding the variables that mediate between human resource management activities and organisational outcomes (e.g. Dyer and Reeves, 1995; Becker et al., 1997; Wright and Gardner, 2003)⁶. This deeper study of how and why HCM affects organisational performance belongs to the “next generation” of SHRM research (Wright, 2003).

In what follows, I offer a brief review of the studies that propose theoretical models to delimit the intermediate mechanisms between HCM and organisational results. I then provide a review of an emergent research stream that includes mediator variables between HCM and organisational performance.

⁵ Only the study by Vandenberg et al. (1999), has empirically tested the indirect effect of High Involvement work processes on organisational performance through the effect of HRM on employee job satisfaction, organisational commitment and turnover intentions.

⁶ During recent years, many other authors have pointed out the need to examine these intermediate mechanisms. See, for instance: Becker and Huselid (1998), Delery (1998), McMahan et al. (1999), Wood (1999), Applebaum et al., (2000), Gardner et al. (2001), Ostroff and Bowen (2000), Ramsay et al. (2000), Moynihan et al. (2001, 2002), Wood and Wall (2002), Wright (2003), Youndt and Snell (2004).

Table 2.5. A review of the implicit and explicit mechanisms between HRM strategies and organisational outcomes in the empirical studies

Studies ⁷	Independent variable	Dependent variables	Implicit intermediate mechanisms	Explicit mechanisms
1. Huselid (1995)	High performance work practices	Turnover Productivity	1) skills, 2) motivation, 3) organisational structures (that provide employees with the ability to control how their roles are performed). These three variables increase the discretionary efforts of employees	None
2. Hoque (1999)	Human resource management	Organisational performance: 1) productivity, 2) service quality, 3) financial performance. HR outcomes: commitment, job satisfaction, flexibility, ability to move between jobs, quality of work, quality of staff, absenteeism	None Although the study analyses HR outcomes, they are not treated as determinants of organisational performance	None
3. Jayaram et al. (1999)	Innovative HR practices	Cost, quality, flexibility, time performance	None	None
4. Vandenberg et al. (1999)	High involvement work processes	ROE Turnover	Employee morale	Indirect effect of HIWP on performance through employee morale: 1) job satisfaction, 2) organisational commitment, 3) turnover intentions. Direct effect of HIWP on performance through employee knowledge, skills and experience
5. Cappelli and Newmark (2001)	Innovative work practices	Sales per employee Total labour cost per employee Sales value / labour cost	Employee involvement	None
6. Koch and McGrath (1996)	HRM sophistication	Labour productivity	Knowledge, skills and abilities embedded in the human capital (theoretical framework: RBV)	None
7. Youndt et al. (1996)	Human capital enhancing HR system	Customer alignment Productivity Machine efficiency	Employee skills and capabilities (RBV)	None

⁷ This table considers all the studies included in Table 2.3, except for those that do not explore the HCM – organisational performance relationship (i.e. Wood and Albanese, 1995; Roche, 1999; Whitener, 2001). I have replaced the Wood and Albanese study (1995) with subsequent research conducted by Wood and De Menezes (1998), in which the influence of HCM on organisational performance is analysed. In summary, this table contains fourteen relevant studies on the HCM – organisational performance linkage.

Table 2.5. A revision of the implicit and explicit mechanisms between HRM strategies and organisational outcomes in the empirical studies (continued)

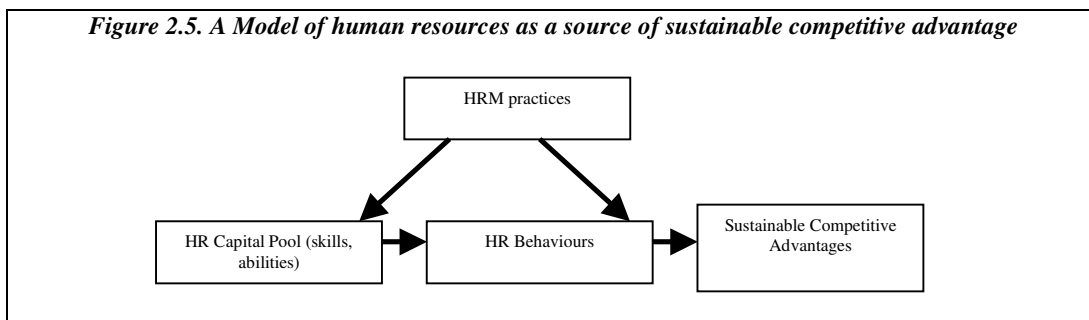
Studies	Independent variable	Dependent variables	Implicit intermediate mechanisms	Explicit mechanisms
8. Arthur (1994)	Commitment HR system	Productivity Scrap rate Turnover	Commitment (as a variable that promotes OCB and that reduces the resources needed to monitor employee compliance)	None
9. Guthrie (2001)	High involvement work practices	Productivity Employee retention	Experience and knowledge of employees (theoretical framework: human capital perspective. HIWP affect organisational performance because they are instrumental in the acquisition and development of valuable skills)	None
10. MacDuffie (1995)	Innovative HR practices	Productivity Quality	Skills Motivation – commitment	None
11. Delaney and Huselid (1996)	Progressive HRM practices Performance-enhancing HRM practices	Organisational and market performance	Skills and abilities Motivation	None
12. Wood and De Menezes (1998)	High commitment management	Productivity, change, financial performance, job creation, employee relations climate, labour turnover, absenteeism	Organisational commitment	None
13. Ichniowski (1990)	Progressive HRM systems	Labour productivity Tobin's Q	None (in this study three theoretical frameworks and their implicit mechanisms are reviewed: human capital theory – skill development and acquisition - , psychological theories – motivation and commitment, and studies of trade unions – worker representation and voice -	None
14. Applebaum et al. (2000)	High performance work systems	Recorded uptime	Opportunity to participate, skills and incentives which affect employee discretionary effort	None

2.3.4.2. Theoretical models on the intermediate mechanisms between HCM and organisational outcomes

As Wright and Gardner (2003) argue, one of the inherent difficulties in the theoretical definition of models including mechanisms between HRM and organisational outcomes is deciding which and how many intervening variables should be included. Some initial attempts have been made to theoretically delimit the causal chain between HRM and organisational performance. In my opinion, these studies can be classified in two groups: 1) those that delimit the variables that can be included as mediating mechanisms and 2) those that suggest how HRM activities affect the intermediate variables.

In the first group, Beer et al. (1984) identified competence, commitment, congruence and cost effectiveness as intermediate variables between HCM and organisational performance. Later, Becker et al. (1997) and Becker and Huselid (1998) suggested employee skills, employee motivation, job design and work structure as mediating mechanisms.

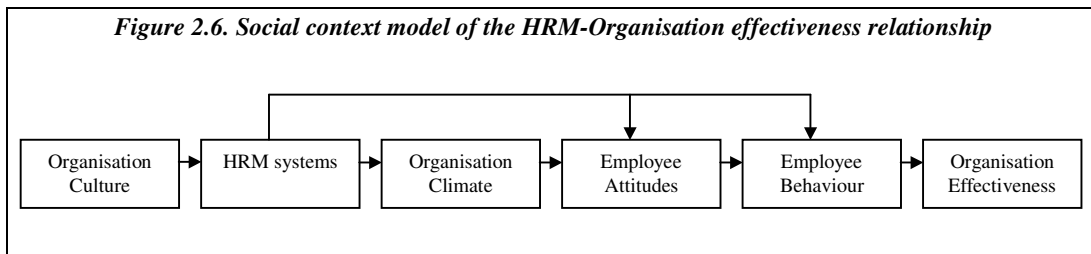
From a RBV perspective, Wright et al. (1994) affirm that HRM contributes to the generation of sustainable competitive advantages in the organisation because they promote a workforce whose skills, abilities and behaviours are valuable, rare, non-imitable and non-substitutable (i.e. strategic resources). Specifically, human resource practices develop the human capital pool by identifying, attracting and retaining high-quality employees. Furthermore, these practices encourage the employee behaviours needed to support the organisation's purposes. Chadwick and Cappelli (1999) also adopt a RBV perspective and argue that systems of human resource practices may lead to higher organisational outcomes by developing and exploiting key internal capabilities that lead to sustained competitive advantage (Figure 2.5).



Source: Wright et al. (1994)

Guest (1997) extracts some concepts from the expectancy theory of motivation and suggests that organisational performance depends on high employee motivation together with the possession of the necessary skills, an appropriate role in the organisation and a correct understanding of that role⁸. These elements (motivation, skills and organisational role) should act as mediator variables between HRM and higher-level outcomes.

Within the second group of studies, Ferris et al. (1998) present a conceptual framework to explain the mechanisms between HRM and organisational outcomes in which the term “social context” plays a crucial role (Figure 2.6). In this framework, employee attitudes and behaviours are the mechanism between HRM and organisational outcomes. In addition, the impact of HRM on employee responses – attitudes and behaviours – can be either direct or indirect. First, HRM can affect employee attitudes and behaviours directly, through the HRM effect on employee skills and abilities. For instance, employees with a wider range of knowledge on a specific task would probably show higher job performance. Second, HRM can also indirectly influence employee attitudes and behaviours, through the way people interpret the organisational climate.



Source: Adapted from Ferris et al. (1998)

More recently, Ostroff and Bowen (2000) presented a theoretical model that retains certain similarities with the framework proposed by Ferris et al. (1998), since both studies recognise that HRM can influence employee features either directly (impact on employee skills and abilities) or indirectly (impact on their interpretation of the organisational features).

⁸ MacDuffie (1995) follows a similar reasoning and assumes that HRM enhances organisational performance when employees possess certain skills that managers lack, when employees have enough motivation to apply those skills through discretionary behaviour, and when the organisation’s strategy needs those discretionary efforts in order to be successfully implemented.

In conclusion, most of the theoretical studies agree that intermediate variables which explain the impact of HRM on organisational outcomes refer to the workforce's skill, ability, attitude or behaviour characteristics. The emergence of these theoretical frameworks on the causal mechanisms between HCM and organisational results has been partially accompanied by the empirical testing of the suggested relationships. As I will discuss in the following section, some emergent studies within this "new generation" have attempted to examine the role that employee-based outcomes play in the contribution of HCM to organisational performance.

2.3.4.3. Empirical evidence on the intermediate mechanisms between HCM and organisational outcomes

As some authors have stated, efforts to demonstrate the intermediate processes between HRM strategies and organisational outcomes should deal not only with the theoretical definition of the causal chain, but should also be supported by empirical studies that aim to demonstrate the proposed models (Ferris et al., 1998; Wright, 2003). Recently, a number of studies have provided initial attempts to "unlock the black box" (Ramsay et al., 2000; Moynihan et al., 2001) by empirically testing the impact of HCM on employee responses and the impact of these responses on organisational outcomes.

For example, the study carried out by Moynihan et al. (2001) demonstrates that HCM, through its impact on employee organisational commitment, affects customer satisfaction. In a further development of this study, Moynihan et al. (2002) prove that employee customer orientation also exerts a mediator effect on this relationship. Ramsay et al. (2000) test to what extent HRM impacts organisational performance through several employee-related variables, depending on the underlying theoretical perspective. Thus, when adopting a High Commitment approach, this study focuses on employee commitment as the mediator variable. From a High Involvement interpretation, attention is placed on job discretion, and from a labour process model, the emphasis centres on work intensification. Nevertheless, Ramsay et al. (2000) found little empirical support for these mechanisms.

Fey et al. (2000) analyse the mediating role of human resource motivation, retention, capability and development in the relationship between several human resource

practices and firm performance. Rogg et al. (2001) verified, for a sample of 385 franchise dealerships, that the impact of human resource practices on customer satisfaction is produced through their influence on organisational climate (a composite of four aspects: cooperation, customer orientation, employee commitment and managerial competence). Paul and Anantharaman (2003) demonstrated that employee competence, teamwork, organisational commitment and customer orientation explain the relationship between certain human resource systems and the organisation's operational and financial results. Park et al. (2003) showed that employee skills, attitudes and motivation in 52 Japanese multinational corporations mediate the relationship between human resource practices and organisational outcomes. More recently, Youndt and Snell (2004) included intellectual capital as a mediator variable between different human resource configurations and organisational performance. The results of this study partially support the mediating role of the workforce's intellectual capital, demonstrating that human capital and social capital mediate in the relationship between certain human resource management configurations and organisational performance.

As can be observed, no consensus has emerged from empirical studies into the relevant variables that should be included as mediating mechanisms. The range of employee-related variables is wide and further efforts should be made to integrate more solid theoretical frameworks that help researchers to decide which and how many variables to include between HCM and organisational outcomes. As I will discuss later, human resource flexibility should be considered as a mediating mechanism, because of its relevance in current competitive environments. In the next chapter, I will define this concept from the premises of the RBV.

2.4. CHAPTER SUMMARY

The aim of this chapter is to provide a general vision of the High Commitment Management concept, its importance in the HRM field and emerging trends in the HCM literature. The chapter shows that HCM has been widely recommended as the ideal approach to employee management in current environments. Numerous scholars have provided empirical evidence of HCM impact on organisational success by assessing its influence on different measures of organisational performance.

A new generation of studies is emerging in this literature, which recommends the inclusion of mediating variables between HCM and organisational performance. Existing empirical evidence is contradictory with regards to which and how many intervening variables should be considered and there is a lack of a solid theoretical framework that supports these studies. In the following chapter I address this question by analysing the HR flexibility concept as a mediating mechanism.

Chapter 3. Conceptualisation of human resource flexibility

3.0. INTRODUCTION

A flexible workforce is emerging as a critical success factor to counteract certain organisational rigidities and to guarantee organisational competitiveness in challenging environments. For example, Sanchez (2004: 526) recently affirmed that flexible human resources can constitute a valid alternative in production activities characterised by inflexible specialised production systems. The recognition of the importance of employee flexibility for modern organisations has led to a body of research on *labour flexibility* and *human resource flexibility*⁹. Broadly speaking, HR flexibility refers to the possibility of varying the quality and quantity of personnel to suit changes in the environment (Gouswaard et al., 2001; Peiró et al., 2002). Interest in these questions arose in the early 1980s and has expanded during recent decades, as can be seen from the development of large-scale studies (e.g. Brewster et al.'s, 1994 study of labour flexibility strategies in Europe) or from the appearance of academic journal special issues on human resource flexibility¹⁰.

Due to the growing interest in people as a source of flexibility, it is worth analysing whether HR flexibility has the same meaning for everyone. This chapter provides a

⁹ Other authors (e.g. Arulampalam and Booth, 1998) use the term *labour market flexibility*.

¹⁰ See, for example, the *Canadian Journal of Administrative Sciences*, vol. 18, No.1, or the *European Journal of Work and Organizational Psychology*, vol.7, No.1.

review of the relevant definitions and classifications of HR flexibility that have appeared during recent years.

Furthermore, in this chapter I propose a conceptualisation of the term based on the RBV premises. The adoption of the RBV as the guiding framework for my conceptualisation of human resource flexibility implies that interest lies in the internal employees of the organisation, who constitute a source of flexibility in so far as they meet the requirements of flexible resources.

In order to address these questions, the chapter is structured as follows. In the first section, I introduce different modes of conceptualising HR flexibility. Following this, in the second section I propose a general framework for the definition of HR flexibility based on the RBV premises and in the third section, I apply this framework to the definition and operationalisation of HR flexibility. The last section summarises the main conclusions of the chapter.

3.1. MODES OF CONCEPTUALISING HUMAN RESOURCE FLEXIBILITY

HR flexibility emerges as a key aspect in organisations operating in uncertain environments and whose efforts are oriented towards the development of rapid and diverse responses. It is believed that neglecting social issues in favour of technological and cost variables can lead to the failure of flexibility initiatives in organisations (Upton, 1995; Karuppan, 2004). Due to the relevance of HR flexibility for modern organisations, it is important to provide a clear definition of the concept.

The *Model of the Flexible Firm*, formulated by Atkinson (1984), Atkinson and Gregory (1986) and Atkinson and Meager (1986) is the most well known framework on HR flexibility and one of the first studies to deal with the multidimensionality of HR flexibility. Other recent studies coincide with the idea that human resource flexibility is a multidimensional concept and complement the Atkinson et al. framework.

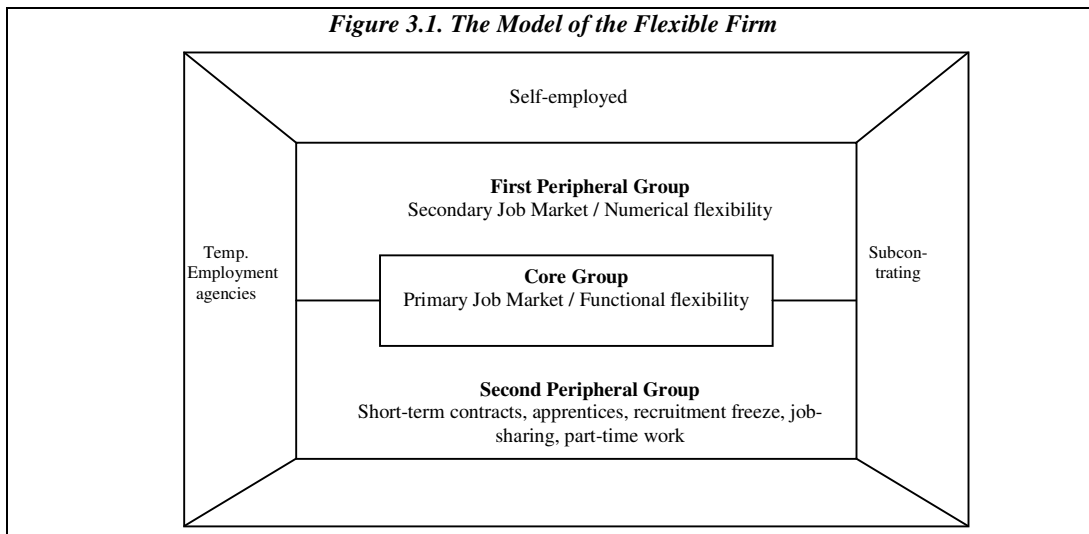
3.1.1. THE MODEL OF THE FLEXIBLE FIRM

One of the most popular models of HR flexibility is the *Model of the Flexible Firm*, developed at the Institute of Manpower Studies (Atkinson, 1984; Atkinson and Gregory, 1986; Atkinson and Meager, 1986). According to this model, different groups of employees provide the organisation with different sources of flexibility, as depicted in Figure 3.1.

First, there is a core group of employees (“primary job market”) who are full-time, manifest high levels of commitment towards the organisation and possess a broad pool of skills. Employees within this group are usually managers, designers or technicians and due to their attributes, they can easily move between functions and roles, accepting responsibilities that go beyond their job descriptions (Valverde et al., 2000: 651). In other words, they manifest “functional flexibility”.

Second, organisations can also obtain flexibility from peripheral groups of employees, by altering the size of the workforce according to organisational needs (i.e. “numerical flexibility”). In this regard, Atkinson distinguishes between a first and a second peripheral group of employees. The former group – secondary job market – is made up

of full-time employees who do not perform activities others than the duties specified in their job descriptions. The second peripheral group comprises fixed-term or part-time employees, among others. Organisations can reduce or increase the number of peripheral employees without incurring high costs because these employees do not belong to the central activities of the organisation (Mayne et al., 1996).



Source: Atkinson (1984)

Despite the popularisation of the *Model of the Flexible Firm* in studies on HR flexibility, several authors concur that the work of Atkinson and his colleagues suffers from a lack of solid theoretical underpinnings (Pinch et al., 1991; Blyton and Morris, 1992; Kalleberg, 2001). Kalleberg (2001) considers that this model does not provide a clear definition of what constitutes the “core” and the “peripheral” workforce. Kalleberg (2001) also points out that the *Model of the Flexible Firm* assumes that core and peripheral employees belong to completely separate parts of the organisation, thus ignoring the potential interrelationships and collaborative processes that can emerge between core and peripheral groups.

These weaknesses do not prevent Atkinson’s model from representing an important advance in disentangling the meaning of HR flexibility. The distinction between functional and numerical flexibility has been adopted by a number of studies in the literature since the publication of the model (e.g. Gooderham and Nordhaug, 1997; Creagh and Brewster, 1998; Friedrich et al., 1998) and it constituted a critical step in the multidimensional interpretation of HR flexibility. In line with this framework, a further

set of studies has contributed to the multidimensional definition of human resource flexibility. I now provide a more detailed review of the dimensions of HR flexibility.

3.1.2. A MULTIDIMENSIONAL INTERPRETATION OF HR FLEXIBILITY

The *Model of the Flexible Firm*, together with other studies within the HRM field, introduced classifications of HR flexibility types based on two interrelated dimensions: a) scope of the analysis and b) nature of variations in the workforce.

In terms of the *scope of the analysis*, HR flexibility can be interpreted as the flexibility manifested by the pool of human resources in the organisation at a certain point of time (internal HR flexibility) or as the flexibility that can be attained from the external labour market, beyond organisational boundaries and current workforce (external HR flexibility) (Looise et al., 1998; Arulampalam and Booth, 1998; Kalleberg, 2001). The *nature of the variations in the workforce* can involve qualitative modifications in the tasks performed by the workforce or quantitative modifications in the number of employees or in the number of hours worked.

a) Internal HR flexibility

When referring to *internal HR flexibility*, attention centres on the current workforce of the organisation and it is defined as the extent to which existing employees contribute to the organisation's flexibility. Several authors have interpreted HR flexibility from this point of view (Table 3.1), such as Molleman and Slomp (1999), who associate labour flexibility with the responsiveness of a fixed team of employees (referred to as the "labour system" in their study). Molleman and Slomp's (1999) study is formulated under the constraint of the "autonomy of the labour system". This refers to the extent to which the organisation can deal with external challenges through its current set of employees, without employing outer-system capacity (i.e., without recruiting new employees). Similarly, Chow (1998) and Karuppan (2004) adopt an internal vision of HR flexibility, as both scholars propose that flexibility depends on employees' adjustments in the development of their tasks according to the organisation's needs.

Table 3.1. Definitions of internal human resource flexibility

Study	Definition
Molleman and Slomp (1999)	Responsiveness of a <i>labour system</i> (fixed team of employees) to variation in the supply and demand of labour, without resorting to outer-system capacity
Chow (1998)	Organisational abilities to constantly motivate employees who possess multiple and firm-specific skills so as to adjust their tasks to the needs of the organisation
Karuppan (2004)	Job enlargement, i.e. the number of tasks or operations performed, the number of machines operated, intradivisional jobs that a worker can perform, and intradivisional workstations at which an operator can work

Internal flexibility is similar to the “mutual investment” approach in Tsui et al.’s (1997) framework¹¹. According to these authors, higher flexibility can be attained when managers develop and encourage employees to adopt permeable and expandable work roles. Managers adopting this approach care about employee well-being and professional careers and, in exchange, the employee’s obligations and contributions include working on job assignments that fall outside prior agreements or expertise. Employees managed through this approach easily accept job transfers when requested by the employer to do so.

The meaning of internal HR flexibility can also be examined by analysing its nature. To this end, I include the concepts of quantitative and qualitative HR flexibility in the analysis of internal HR flexibility.

On the one hand, *quantitative* internal HR flexibility is related to “time flexibility” (Peiró et al., 2002), and implies that the workforce of the organisation is willing to enhance the number of hours worked (e.g. overtime work or variable working time).

On the other hand, *qualitative* internal HR flexibility entails modifications in the content of work in accordance with employee qualifications, and is usually associated with the ease with which employees move between tasks, for instance through job rotation or multi-tasking (Looise et al., 1998). This is the most commonly adopted definition of HR internal flexibility, and it corresponds with the idea of functional flexibility in the *Model of the Flexible Firm*. That is, qualitative internal HR flexibility refers to the adaptability of the internal workforce to face non-routine circumstances and events that demand

¹¹ Tsui et al. (1997) in a further development of a previous study (Tsui et al., 1995) suggest four approaches for the employee-organisation relationship (i.e. employer’s expectations of employee contributions). The first two approaches are associated with the creation of distinct types of flexibility for organisations.

creativity and initiative (Huang and Cullen, 2001: 34). It is usually associated with the employee's ability to undertake a range of tasks and/or employ a variety of skills (Blyton and Morris, 1992). For this reason, functional flexibility has also been termed "flexibility on the intensive margin" (Michie and Sheehan-Quinn, 2001).

Functional flexibility involves the processes of increasing employees' range of skills in such a way that they acquire the capacity to work across traditional occupational boundaries (Cordery, 1989; Cordery et al., 1993). In this regard, functional flexibility is linked to the human capital of the organisation (i.e. employee collective skills). This strategy allows organisations to quickly respond to changes in products, production methods and technology since it enables the organisation to allocate employees where and when needed easily and without extra costs (Atkinson and Meager, 1986). Consequently, the operational concept that underlies functional flexibility is *labour substitutability* or the extent to which one employee in a job can be substituted by another. This substitutability can be complete, when employees carry out other jobs as required (e.g. a waiter is transferred for the whole day from the restaurant to the bar), or incomplete, which comprise "boundary loosening approaches" oriented towards the combination of certain aspects of different jobs (e.g. the restaurant hostess helps in the bar in the early evening before she gets busy or goes into the kitchen) (Riley and Lockwood, 1997).

b) External HR flexibility

External HR flexibility focuses on the set of potential employees available to the organisation and refers to the improvements in organisational flexibility as a result of alteration in the volume of labour employed. It usually coincides with the use of the external labour market when the organisation needs it (e.g. with temporary employees). External HR flexibility has been the subject of numerous studies, which associate HR flexibility with atypical working practices, broadly called flexible employment contracts (Storey et al., 2002) or flexible working patterns (Volberda et al., 1998). This type of flexibility resembles the "quasi spot contract" in Tsui et al.'s (1997) model, which rests on a pure economic exchange model and attempts to create a market-like flexibility so that the employer is free to hire and fire employees. According to this model, the

employer offers short-term, purely economic inducements in exchange for well-specified contributions by the employee.

Much of the literature considers that external HR flexibility is related to *quantitative* modifications in the amount of work available to organisations, providing the organisation with a higher or lower number of employees according to its needs (e.g. with seasonal employment to cover “peaks” of work demands) (Peiró et al., 2002). It corresponds with the notion of numerical flexibility introduced in Atkinson’s model. Numerical flexibility¹² entails flexibility “on the extensive margin” (Beatson, 1995; Michie and Sheehan-Quinn, 2001) and refers to the ability to adjust the volume of work to changes in environmental forces.

From this quantitative interpretation, organisations can attain higher numerical flexibility through a set of non-standard employment relations or atypical working patterns, whose aims are to limit either the duration of the employment relation or the number of hours worked (Mayne et al., 1996). First, the organisation has greater freedom to adjust the volume of work to changing circumstances when contracts have a predetermined duration. This can be achieved through temporary workers hired for finite periods, or through temporary help agency employees. These employees may be highly skilled (e.g. consultants, independent professionals) or low skilled (e.g. food service) (Kalleberg, 2001). Second, organisations can alter the number of hours worked in the organisation by recruiting part-time workers.

Qualitative external HR flexibility only appears in specific cases, such as when the organisation uses independent consultants that assume responsibility for more than one task in the organisation (Looise et al., 1998).

Figure 3.2 provides a synthesis of the above discussion, in a four-quadrant conceptualisation of HR flexibility resulting from the combination of its scope of analysis (internal vs. external) and nature (quantitative vs. qualitative).

¹² As Kalleberg (2001) states, numerical flexibility has been referred to as “flexible staffing arrangements” (Houseman, 2001), “market-mediated work arrangements” (Abraham and Taylor, 1996), “contingent work” (Polivka and Nardone, 1989) and “non-standard” work arrangements (Kalleberg et al., 1997).

Figure 3.2. A multidimensional view of HR flexibility

		SCOPE OF ANALYSIS	
		Internal	External
<i>NATURE</i>	Quantitative	Modifications in the number of hours worked by current employees. Time flexibility (e.g. overtime)	Modifications in the number of employees. Contract flexibility (e.g. short-term contracts)
	Qualitative	Modifications in the content of work of the existing workforce. Functional flexibility (e.g. job rotation)	Modifications in the content of work carried out by external employees. Contract flexibility (e.g. consultancy)

Source: Adapted from Looise et al. (1998) and Peiró et al. (2002)

The conceptualisations of HR flexibility presented in this section on the whole adopted a practice-oriented perspective. That is to say, previous studies on HR flexibility included a set of recommendations for managers that strived to attain high levels of flexibility in their organisations. While this *managerial perspective* of HR flexibility offers helpful recommendations for daily practice in organisations pursuing flexibility, from a theoretical perspective they are to some extent incomplete. According to Looise et al. (1998), the analysis of HR flexibility has ignored relevant frameworks in the human resource management field, such as the Resource-Based View of the firm and the behavioural perspective. For this reason, the connection between the HR flexibility field and HRM research has been weak, thus preventing researchers from analysing either the antecedents of HR flexibility (including the role of HRM strategies) or the consequences that HR flexibility strategies have for employees (e.g. satisfaction, commitment, etc.) and organisational outcomes.

The model of the flexible firm formulated by Atkinson and the subsequent studies on the concept of HR flexibility can be considered as suitable starting points for developing a more comprehensive definition of HR flexibility. I coincide with Looise et al. (1998) in considering that greater efforts should be made to define HR flexibility from a more solid theoretical framework. In the following sections, I focus on the conceptualisation of HR flexibility based on the RBV.

3.2. A FRAMEWORK FOR THE DEFINITION OF HR FLEXIBILITY FROM A RBV APPROACH

The RBV approach is a prominent framework in the SHRM literature, as noted in Chapter 2. The RBV, with its emphasis on the internal workings of organisations, conceives employees as sources of sustainable competitive advantage, and it has enriched theoretical and empirical research on the influence of human resource-related issues on organisational performance (Lado and Wilson, 1994; Wright et al., 1994; Boxall, 1996).

In line with several scholars (Dyer and Shafer, 1999; Chadwick and Cappelli, 1999, 2002), I believe that the RBV provides interesting insights for developing a definition of HR flexibility that complements prior conceptualisations of the term. Others scholars, such as Wright and Snell (1998) and Lepak et al. (2003), have adopted the RBV perspective to analyse HR flexibility.

From the RBV perspective, Wright and Snell (1998) define HR flexibility as:

the extent to which the firm's human resources possess skills and behavioural repertoires that can give a firm options for pursuing strategic alternatives in the firm's competitive environment as well as the extent to which the necessary HRM practices can be identified, developed, and implemented quickly to maximise the flexibilities inherent in those human resources (Wright and Snell, 1998: 761)

According to this definition, the study of HR flexibility from a RBV perspective embraces two interrelated questions: a) what features characterise a flexible workforce and b) what HRM practices contribute to generating flexible employees (Wright and Snell, 1998; Dyer and Shafer, 1999). Throughout this chapter I focus on the first of these questions. The influence of human resource activities on HR flexibility will be addressed in the next chapter.

To start with, in this section I present a general framework that can serve as a guide to adapt the RBV to the definition of HR flexibility and to identify the features that characterise a flexible workforce. In doing so, I try to clarify two initial questions that should be taken into account when applying the RBV premises in the field of HR flexibility. First, I discuss the internal focus that the RBV posits on the study of HR

flexibility and that differentiates it from previous definitions of the term. Secondly, I introduce the concept of flexible resources from a RBV approach.

3.2.1. RBV AND THE INTERNAL NATURE OF HR FLEXIBILITY: A REVIEW OF PRIOR STUDIES

The RBV has been proved to be a valid framework in the field of SHRM, and it provides a theoretical basis for moving knowledge about HR flexibility forward. The RBV has an organisation-focused orientation, as it considers that sources of competitive advantage come from the internal resources of the firm. Resources are stocks of available factors that are owned or controlled by the organisation (Peteraf, 1993). Thus, the application of the RBV in the conceptualisation of HR flexibility means that the level of analysis lies in *internal human resource flexibility*. By focusing on internal HR flexibility, a longer-term perspective on organisational competitiveness is adopted. As Murphy (1999) states, organisations that rely too heavily on contingent workers (i.e. external HR flexibility) run the risk of depleting the pool of available high-quality workers and are likely to fail to develop the core workforce they need. Although short-term gains might be realised by replacing permanent employees with contingent workers, the long-run implication of an over-reliance on contingent workers can be fatal to organisations.

Thus, from the perspective of the RBV, it is important to examine which features of the organisation's current workforce are relevant in achieving higher levels of organisational flexibility. Specifically, my discussion of the conceptualisation of human resources from the RBV highlighted the consideration of employees as "cognitive and emotional beings". Thus, from this theoretical model, the definition of HR flexibility should be based on the employee attributes that can best contribute to generating flexibility in organisations. By focusing on the skills, attitudes and behaviours of employees, the RBV assumes that individual members are the important resource in organisations, rather than the practices and procedures used by the firm (e.g. use of temporary work contracts) (Wright et al., 1994). Consequently, a further benefit of the RBV as the guiding framework is that it examines HR flexibility from the point of view of the variables that may be influenced by organisational human resource decisions and

practices (Wright et al., 1994; Dyer and Shafer, 1999). Defining the dimensions of HR flexibility in terms of employee characteristics is important in order to make advances in the activities that best promote them. For example, it is important to know what kind of skills are necessary to promote flexibility in order to design training activities that encourage them or staffing practices that select employees with these skills (Pulakos et al., 2000: 614).

Some recent studies have attempted to advance the conceptualisation of internal HR flexibility by delimiting a set of employee attributes (skills, attitudes, behaviours, etc.) that best contribute to the generation of flexibility in organisations.

For example, Wright et al. (1994), by adopting a logical-incremental perspective (Quinn, 1980), suggest three ways by which employees can contribute to the organisation's flexibility. According to these authors, to be flexible employees should manifest a proclivity to detect external changes and appropriate responses, together with the abilities to implement the required activities.

Pulakos et al. (2000) develop a taxonomy of "adaptive job performance" from an organisational behaviour point of view. These authors, through a review of previous literature on adaptability at the individual, team and organisational levels¹³, offer a conceptualisation of flexible-related aspects of employee performance that differentiates between eight dimensions (handling emergencies or crisis situations, handling work stress, solving problems creatively, dealing with uncertain work situations, etc.).

Breu et al. (2001) review several conceptualisations of HR flexibility and introduce an operationalisation of workforce agility based on twelve attributes, such as responsiveness to external change, speed of skill development, knowledge sharing, virtual team working, implementation of collaborative technologies, etc.

Shafer et al. (2001) carried out an exploratory study in a healthcare organisation that allowed them to extract a set of agile attributes, in terms of people's flexible

¹³ The development of this taxonomy is based on the job performance model developed by Campbell et al. (1993), which treats alternative models of content and structure of job performance. According to Campbell et al.'s (1993) model, job performance is synonymous with behaviour and can be classified into the following components: 1) job-specific task proficiency, 2) non-job-specific-task proficiency, 3) written and oral communication, 4) demonstrating effort, 5) maintaining personal discipline, 6) maintaining peer performance, 7) supervision/leadership, 8) management/administration. The concept of adaptive performance is considered by Pulakos et al. (2000) as a performance component not included in the previous eight dimensions.

competencies and behaviours. Dyer and Shafer (2002), following the conclusions of Shafer et al.'s (2001) exploratory study and focusing exclusively on employee behaviours, suggested their own conception of HR flexibility, which (as the same authors affirm, pp.15) is a *tentative list* of requisite flexible attributes. These authors group flexible behaviours into three categories: 1) proactivity (includes initiative and improvisation), 2) adaptiveness (includes assumption of multiple roles, rapid redeployments and spontaneous collaboration), and 3) generativeness (referring to willingness to learn and share knowledge and information). Similarly, Kara et al. (2002) carried out an exhaustive review of previous literature on flexibility and proposed four human resource flexibility indicators, namely, keenness to improve skills, functional flexibility, work group and willingness to change.

In Table 3.2, I offer a summary of the abovementioned flexible variables. In elaborating this table, I have attempted to establish correspondences between the concepts considered by these studies in order to identify common themes and differences among researches.

Table 3.2. A review of internal human resource flexibility characteristics

Wright et al. (1994)	Pulakos et al. (2000)	Breu et al. (2001)	Shafer et al. (2001)	Dyer and Shafer (2002)	Kara et al. (2002)
Detection of environmental changes			Capacity to pursue new business opportunities and threats	Initiative to spot threats and opportunities in the marketplace	
Capabilities to identify strategies in response to the detected changes					
Implementation of strategies according to environmental changes		Responsiveness to external change	Take action to minimise potential effects of threats		
		Benchmarks for skill assessment			
	Learning work tasks, technologies, and procedures	Speed of skill development		Abilities to learn	Craft (increasing labour skills)
		Speed of adaptation to new work environments		Assumption of multiple roles Rapid redeployments	Functional flexibility
		Speed of information access			
		Speed of information systems change			
		Use of mobile technologies			
		Workplace independence			
	Demonstrating interpersonal adaptability	Collaborative technologies		Spontaneous collaboration	Group work
		Virtual team working			
		Knowledge sharing		Knowledge and information sharing	
		Employee empowerment			
			Commitment		
				Improvisation	
			Accountable		
			Efficacy		
					Willingness to change
	Handling emergencies or crisis situations				
	Handling work stress				
	Solving problems creatively		Focused		
	Dealing with uncertain and unpredictable work situations		Comfortable with ambiguity		
	Demonstrating cultural adaptability				
	Demonstrating physically oriented adaptability				
			Business-driven		

A review of this literature shows a consensus on four main questions when defining a flexible workforce (Murphy and Jackson, 1999): flexible employees should contribute to the detection of external changes, respond quickly to the detected challenges, continuously improve their skills, and adopt a collaborative attitude in the organisation (see Table 3.2). Apart from these factors, the table shows a lack of congruence among the dimensions and variables that the previous literature has considered as components of the employee-perspective HR flexibility concept. The lack of consensus over the HR flexibility concept presents a hurdle to the operationalisation of the term as well as to the understanding of its antecedents and consequences in the organisation. Breu et al. (2001) emphasise the need to thoroughly examine the conceptualisation of the internal HR flexibility in the following terms:

The review of the literature has shown that the discussion of workforce agility is dispersed across various literatures, addressing agility from the perspective of the workforce only implicitly. Despite recognition in the literature of the agile workforce as a critical organisational resource, the concept of workforce agility has not yet been systematically studied, with researchers voicing the need for defining its characteristics (Breu et al., 2001: 23).

As I now discuss, the RBV can contribute to enriching the conceptualisation of employee-based HR flexibility from a more systematic point of view.

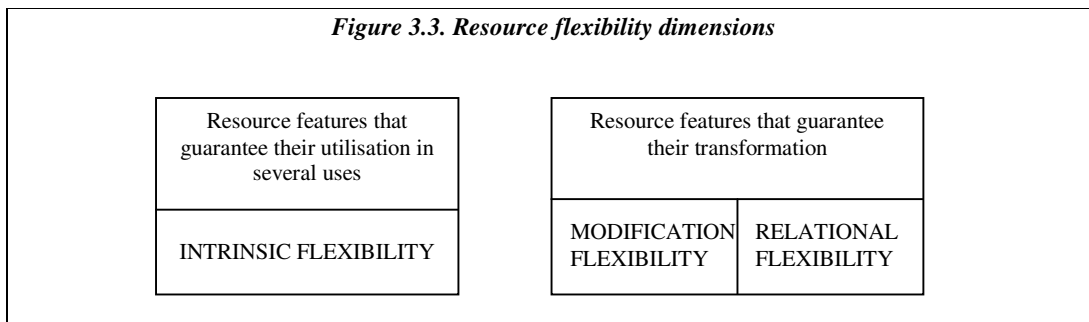
3.2.2. RESOURCE FLEXIBILITY DIMENSIONS

Similarly to the role that value, rareness, durability and inimitability play in the generation of sustainable competitive advantages (Barney, 1991), the RBV suggests a set of criteria that define flexible resources, which can be applied to the analysis of HR flexibility. The RBV approach considers that flexible resources, when managed through appropriate organisational activities and in accordance with information about external events, provide the organisation with a “strategic option bundle” (i.e., with access to various viable paths for both exploration and exploitation of the environment) (Helfat and Raubitschek, 2000; Mathews, 2002; Sanchez, 2004).

According to the RBV, organisational resources are flexible when they are suppliers of *novel services*. This is possible when resources 1) can be used in several ways or 2) can be easily transformed so as to be valid under novel circumstances (Penrose, 1959; Galunic and Rodan, 1998; Sanchez, 2004). Drawing from these studies, it is possible to

extract the dimensions that define resource flexibility. The first question (use of resources in various ways) corresponds to the intrinsic flexibility of resources. Concerning the second question (transformation of resources), the organisation can obtain new resources from existing ones so long as they are easily modifiable or combinable with other resources.

Therefore, from the RBV approach, resource flexibility is a multidimensional concept, whose components are: a) *intrinsic flexibility*, that is, resource applicability to different situations, b) *modification flexibility* or the extent to which a resource can be easily transformed (with low costs and time) in order to be used in new circumstances, and c) *relational flexibility*, which facilitates the combinability of one resource with others (Figure 3.3).



a) Resource intrinsic flexibility

The intrinsic flexibility of a resource refers to its applicability in multiple situations. Intrinsic flexibility corresponds to resource versatility, which refers to the number of alternative uses to which the resource can be applied without being modified. Examples of versatile (or multiple-use) resources are: cash, general-purpose machines, mail order and internet-based marketing channels, information technologies, flexible production systems, a group of engineers with capabilities valid for a range of products, etc. (Sanchez, 1995, 2004; Ghemawat and Del Sol, 1998). All these resources are valuable in situations characterised by high resource obsolescence, rapid technological changes or uncertainty about future technology, among others factors (Wernerfelt and Karnani, 1987; Sanchez, 1997).

In contrast, non-versatile resources are called specialised or specific resources (Sanchez, 1997; Ghemawat and Del Sol, 1998) and are only highly efficient in limited uses. This kind of resource constrains the options available for the organisation to increase or decrease production volume or to change from one product to another. For instance, Friedli et al. (2004), when exposing the obstacles to becoming flexible faced by a manufacturing organisation (*Fashion Inc.*), detected that specificity of implicit and explicit knowledge required for the smooth working of production sites imposed constraints on the relocation of such facilities. As a result, when the need to expand the product range arose, costs of switching production facilities forced the firm to outsource production or to adjust its internal structure.

The relevance of resource intrinsic flexibility derives from the fact that the organisation can apply these resources to a variety of situations (e.g. Sanchez, 1995, 1997). When the organisation detects specific environmental contingencies that require rapid organisational responses and when it activates the appropriate resource allocation routines (Burgelman, 1994; Malone and Crowston, 1994), intrinsic flexibility guarantees that internal resources are applied in different situations according to organisational needs, and at the right moment.

In summary, resources that manifest high intrinsic flexibility guarantee their application by the organisation to a wide range of alternative uses. Consequently, the organisation can face new situations with its existing resources, without the need to acquire, develop or modify them. In other words, the organisation has a great number of paths or degrees of freedom to adjust its strategy (Evans, 1991; Teece et al., 1997).

b) Resource modification flexibility

Apart from their general applicability, “resources also differ in their flexibility to be incrementally improved” (Sanchez, 2004: 526). Thus, the second dimension of resource flexibility corresponds to modification flexibility. This refers to resource malleability, or the amenability of resources to change and their capacity to accommodate multiple transformations (Johnson et al., 2003). Modification flexibility involves changes in the nature of the resource that make it valid for application to new uses (i.e. resource

extendability), without incurring high costs that offset the benefits obtained from the new resource (Sanchez, 2004).

For instance, machines equipped with electronic controls are highly malleable, since the organisation can easily add new functionalities by, for example, adding a fax card to the computer. Other examples of malleable resources are certain organisational techniques, such as management by objective systems, whose evaluation criteria can be easily adapted to each employee and position within the organisation (Wright and Snell, 1998). Nonetheless, the degree of malleability of a resource is dependent upon its nature, and is higher in knowledge-based resources (Galunic and Rodan, 1998). Thus, employee know-how, organisational learning or commitment are highly malleable resources that are easily modified and improved with suitable organisational activities.

The possession of malleable resources enables the organisation to easily transform (with low costs and time) available resources in order to guarantee their appropriateness in novel situations. Thus, the impact of modification flexibility on organisational responses is similar to the benefits provided by intrinsic flexibility, but in this case the focus is on the longer term, and organisations need to identify potential improvements in current resources that can make them suitable for different uses. In this regard, organisations should analyse internal knowledge, extend existing resources with the accumulated organisational knowledge and leverage knowledge into new applications (Mendelson, 2000; Pavlou and El Sawy, 2004).

To continue with the example used previously, when analysing the transformation process of *Fashion Inc.* to become a more flexible organisation, Friedli et al. (2004) observe that the success of this process was greatly due to the transformation of internal production facilities. Specifically, this organisation divided its production sites into three sub-units, each of them providing flexible responses to the specific demands of a group of customers.

c) Resource relational flexibility

The final dimension in my analysis of resource flexibility is relational flexibility, which facilitates the emergence of a new combination of resources. Combinable resources can easily be reconfigured, that is to say, linked to each other so that they can jointly

achieve a broader objective (Galunic and Rodan, 1998). While modification flexibility implies resource transformations, relational flexibility only requires altering linkages between resources. These new combinations do not necessarily involve changes in the nature of the resources (Mathews, 2002).

Resource relational flexibility has received attention from a variety of fields. In the innovation literature, Henderson and Clark (1990: 12) state that the essence of architectural innovation is the reconfiguration of an established system to link together existing components in a new way. In the field of production management, modular product designs constitute an alternative to traditional design systems, which can increase a range of product model variations, the creation of new families of derived product models and the development of new products through the substitution of upgraded components of previous products (Sanchez, 1995). Resource combinability (or “relatedness”) has also received attention in studies analysing relations between industries, organisations or organisational segments (Fan and Lang, 2000). For instance, in territorial agglomerations of organisations, firms share some knowledge-based resources that are combined with each organisation’s specific knowledge. This can result in the generation of new resources that represent a source of flexibility. On the other hand, cooperation agreements favour resource combinability and enhance the likelihood of a wider pool of knowledge being generated. In such cases, intangible resources are more easily combined with others such as organisational cultures, information and communication technologies, managerial processes or customer base.

In summary, the range of strategic options that organisations can develop in order to respond to environmental changes is dependent upon the availability of flexible resources. Resource flexibility is a multidimensional term, including intrinsic, modification and relational flexibility (Table 3.3).

Table 3.3. Summary of resource flexibility dimensions

Dimension	Definition	Examples
Intrinsic flexibility	Extent to which resources are versatile, i.e. they can be employed in a number of alternative uses without high costs and time	<ul style="list-style-type: none"> • Cash • General-purpose machines • Mail-order channels • Information technologies • Polyvalent employees
Modification flexibility	Extent to which characteristics of resources can be easily altered (malleable resources)	<ul style="list-style-type: none"> • Machines equipped with electronic controls • Employee know-how • Organisational learning • Employee commitment • Organisational reputation • Organisational culture
Relational flexibility	Extent to which resources can be easily combined, i.e. linked to each other so that they can jointly contribute to common goals	<ul style="list-style-type: none"> • Modular production systems • Organisational culture • Managerial processes • Customer base • Information technologies

The above resource characteristics play an important role in organisations operating in changing environments, allowing them to develop appropriate responses in light of external challenges. These dimensions have appeared in studies on the flexibility of different resources (e.g. flexible production technologies, information systems, etc.), but their application in the field of HR flexibility is still scarce. I believe that the reasoning employed by the RBV to study the features of flexible resources can also be used to advance the conceptualisation of HR flexibility.

3.2.3. A SUMMARY OF THE APPLICATION OF THE RBV TO THE CONCEPTUALISATION OF HR FLEXIBILITY

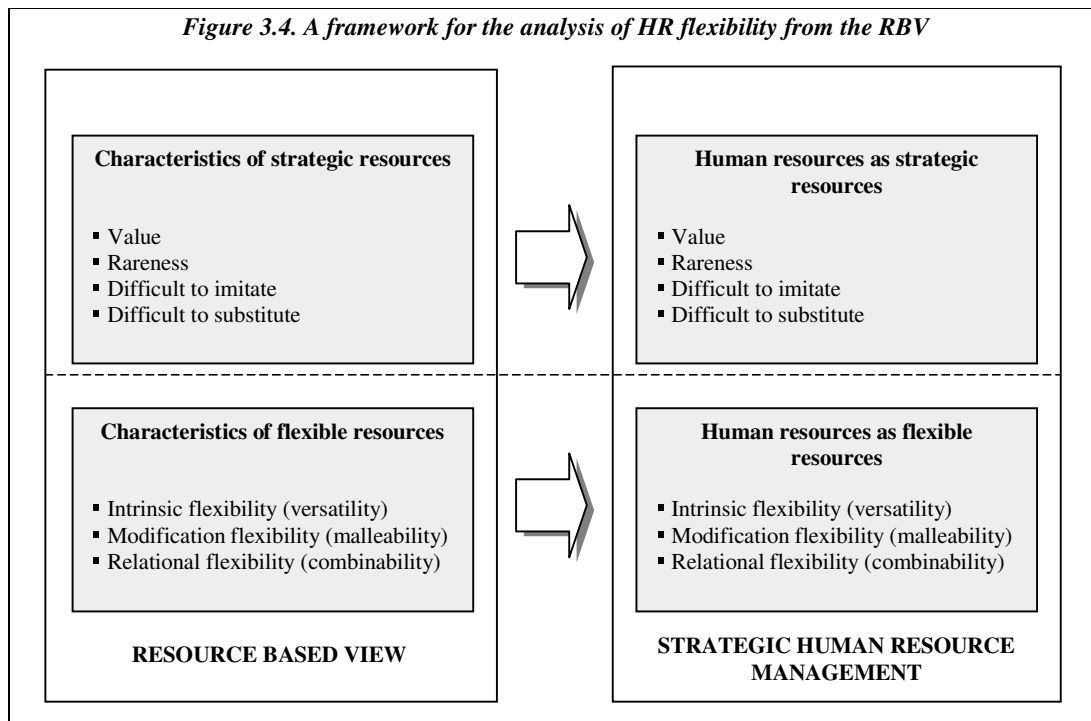
Drawing from the reasoning introduced in this section, I can conclude that the definition of HR flexibility from the point of view of the RBV should take into account two questions:

- 1) HR flexibility is an internal characteristic of the organisation, and it is defined in terms of employee features.
- 2) The flexibility of organisational resources can be assessed by attending to three dimensions, namely intrinsic, modification and relational flexibility.

Since human resources are one of the most important resources in current organisations, they can be considered flexible when they fulfil the criteria of flexible resources. To

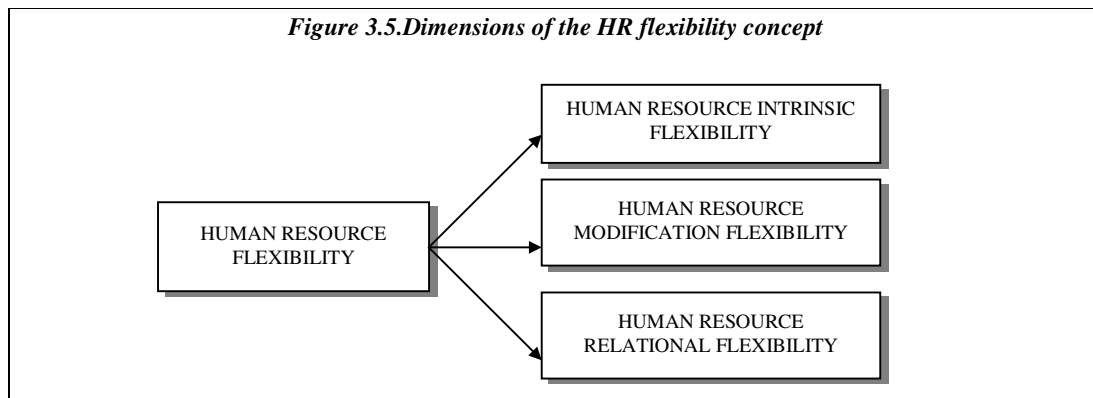
date, practically no study has clearly delimited these requirements (Peiró et al., 2002). I aim to fill this gap in next section by defining the characteristics of human resources that meet the requisites of flexible resources.

This question is congruent with the approach adopted by previous studies that integrate RBV concepts into the SHRM field in order to examine the potential contribution of human resources to organisational outcomes (e.g. Wright et al., 1994; Boxall, 1996). For example, Wright et al.'s (1994) study, by adopting the criteria that organisational resources must meet in order to be a source of sustainable competitive advantage, discuss the conditions under which human resources meet these requisites and consequently, can be considered strategic resources (upper part of Figure 3.4). Similarly, as I discussed in this section, the RBV has recommended a set of flexible criteria that make organisational resources valid for generating alternative strategic options. My interest will now focus on the application of these criteria to the conceptualisation of HR flexibility, as depicted in the lower part of the figure.



3.3. DEFINITION OF HUMAN RESOURCE FLEXIBILITY DIMENSIONS

In this section, I apply the concepts of internal, modification and relational flexibility to the analysis of HR flexibility in order to provide a more systematic definition of HR flexibility from the employee perspective. Following the premises of the RBV approach, I argue that HR flexibility is a multidimensional construct, as depicted in Figure 3.5.



3.3.1. HUMAN RESOURCE INTRINSIC FLEXIBILITY

The first dimension dealt with in my discussion of resource flexibility in the previous section was the adaptability of resources to different uses; in other words, their versatility or intrinsic flexibility. HR intrinsic flexibility implies that employees are able to work on different tasks and under diverse circumstances and that the costs and time needed to mobilise employees into new duties or jobs are low (van den Berg and van der Velde, 2005). This kind of employee usually possesses a wide repertoire of competences¹⁴ (MacDuffie, 1995; Riley and Lockwood, 1997) or a set of general abilities such as leadership skills, problem-solving abilities, etc. that allow them to carry out a high number of tasks easily and without high costs.

The conceptualisation of HR intrinsic flexibility under the RBV is similar to that of “functional flexibility” in the *Model of the Flexible Firm* (Atkinson, 1984; Atkinson and Gregory, 1986; Atkinson and Meager, 1986), as it refers to changes in the nature of

¹⁴ Human resources versatility has been given different terms, such as, “multi-skilling”, “ability extension” and “polyvalence” (Cordery, 1989).

work that allow the organisation to respond to novel contingencies. Human resource intrinsic flexibility is manifest in the organisation either through employees accepting responsibilities with a similar level of complexity to those in their everyday job (i.e. cross-functional movements), or when they perform duties belonging to different organisational levels such as administrative or leadership activities (i.e. vertical movements). For instance, in research by Rosenblatt and Inbal (1999) among schoolteachers, employee intrinsic flexibility involves teaching more than one subject and performing school roles other than their lessons, such as implementation of databases. Furthermore, as discussed above, the labour substitutability implicit in functional flexibility can be complete (when employees move between jobs) or incomplete (when they assume certain tasks belonging to other jobs).

In summary, organisations with a versatile workforce can easily assign employees to the appropriate tasks, in accordance with their knowledge of environmental challenges and demands and their consequences for organisational processes (Tüselmann, 1996; Sparrow, 1998; Storey et al., 2002). This type of employee provides the organisation with the freedom to modify its strategies, thus reducing the need for the alternative forms of extended labour supply, such as casual or short-term labour (Riley and Lockwood, 1997: 418).

3.3.2. HUMAN RESOURCE MODIFICATION FLEXIBILITY

The second dimension considered in the analysis of resource flexibility from the RBV was resource malleability. A resource is considered malleable when its characteristics can be modified without difficulty. In terms of HR flexibility, and following the same reasoning, employee malleability indicates the extent to which the workforce's characteristics are easily modifiable. Since the RBV conceives human resources as the pool of skills possessed by employees and the behaviours they exhibit, malleability should be analysed in terms of both skills and behaviours. That is, employees will manifest modification flexibility when they innovate their skills or modify their behaviours ahead of need (Boudreau and Ramstad, 1997; Wright and Snell, 1998; Breu et al., 2001). While HR intrinsic flexibility corresponds to immediate employee features (i.e. people perform tasks in accordance with their possibilities), modification flexibility

entails changes in individual traits. In order to advance the conceptualisation of HR modification flexibility, I propose the differentiation between “skill malleability” and “behavioural malleability”.

Skill malleability refers to how easily and quickly employees obtain the abilities needed to carry out new tasks (Maurer et al., 2003). In this sense, employees manifest skill malleability when they train and retrain as necessary, anticipate future skill requirements, demonstrate enthusiasm for learning new approaches to conduct their jobs and perceive every event in the organisation as an opportunity to learn something significant for the future (Arulampalam and Booth, 1998; Pulakos et al., 2000; Dyer and Ericksen, 2005). For instance, in environments characterised by rapid technological innovations, employees must continuously learn new ways to perform their job and try to keep their skills as up-to-date as possible in order to make valuable contributions to the organisation’s goals. According to Ilgen and Pulakos (1999), employee abilities or willingness to engage in continuous learning and actually learn effectively should be a formal aspect of performance definition and assessment.

Indicators of skill malleability should reflect the processes of development planning, learning, and applying new knowledge and skills to changing organisational conditions. People who are committed to continuous learning search for new information about themselves and about emerging performance requirements that suggest a learning gap. Moreover, they are willing to devote the time, energy, and financial resources to gain the education needed to close the gap and improve their performance.

The concept and definition of *behavioural malleability* has received relatively little research attention in the human resource management field. However, useful contributions stemming from the organisational behaviour literature can help researchers to understand and operationalise this term¹⁵.

As the starting point for my reasoning, I adopt the analysis of employee behaviour in organisations provided by Wright and Snell (1998). These authors conceive employee behaviours as *scripts*, which are sequences of routines adopted by employees in their jobs. Behaviours are considered rigid (or non-malleable) when employees who have applied a particular script in the repetitive handling of situations, select the same script

¹⁵ Crant (2000) offers a review of this literature.

to deal with a novel situation. In contrast, if employees look for new sequences of actions with which to perform their daily activities or to face new circumstances, their behaviours are malleable. Thus, behavioural malleability refers to adjustments in the routines usually followed by employees. An employee with malleable behaviours adapts his or her responses to new circumstances, based on improvisation and not on fixed patterns of action.

Several concepts in the organisational behaviour literature bear a similarity to the idea of behavioural malleability, such as proactivity, improvisation, initiative or role innovation, among others. These terms broadly refer to change-oriented employees who are willing to face novel problems through innovative solutions (Dyer and Ericksen, 2005). In my opinion, one of the concepts that best represents the notion of behavioural malleability is that of *taking charge* (Morrison and Phelps, 1999), close to the idea of individuals' *initiative* at work (Frese et al., 1996). These concepts refer to employee efforts to alter the way they perform their duties in the context of their jobs, work units or organisations.

In their study of employee initiative, Frese et al. (1996) used an interesting example that may clarify the meaning of behavioural malleability. These authors introduced the example of an accountant who does not receive the information required to calculate the salaries of the organisation's employees on time. This accountant decides to work overtime in order to finish the salary calculation in time to pay the staff salaries. Furthermore, the accountant takes steps to ensure that this situation does not happen again in the future, by introducing changes in his or her job. In this case, for example, he or she may decide to install new computer software that captures the required information immediately. This example shows that one of the features of behavioural malleability is employee ability to manage changing conditions by providing immediate solutions to job problems. The decisions adopted by this accountant (i.e. working overtime and introducing new software) involve alterations to his or her work routines. Employees show behavioural malleability when they take decisions to avoid further mistakes or introduce changes in the way daily activities are performed.

In short, HR modification flexibility indicates the ease with which employees demonstrate change from previous states (Ilgen and Pulakos, 1999). Two concepts make

up this second dimension of HR flexibility. First, skill malleability indicates improvements in employees' abilities and knowledge, and is linked to the keenness of employees to continuously master their skills and to avoid specialisation in only one area of knowledge. Second, behavioural malleability refers to changes in the way of acting when faced with novel situations.

3.3.3. HUMAN RESOURCE RELATIONAL FLEXIBILITY

The final dimension in the analysis of flexible resources considers that available resources provide the organisation with a higher number of strategic options when they can be easily combined. In terms of HR flexibility, this latter dimension indicates how easy it is to coordinate individuals to work together, and resembles the idea of *collective mind* or *social capital*¹⁶ (Weick and Roberts, 1993; Youndt and Snell, 2004). According to Haiyang and Yan (2002) some employees have better team capabilities than others, as they can easily understand their role within the group and possess suitable abilities to engage in mutual interaction with other employees. When this happens, members of the organisation or an organisational unit can easily be integrated into some form of higher-order systems or clusters of resources, such as in technological areas (e.g. printed circuit board assembly) (Teece et al. 1997; Galunic and Rodan, 1998), resulting in the combination of different sources of expertise. Thus, relational flexibility refers to employee mobilisation into cooperative tasks (Forsythe, 1997; Breu et al., 2001).

In this regard, Shafer et al. (2001) demonstrated that flexible organisations follow the principle of "reliance on each other", based on the respect for the ideas and work of others, on expressing appreciation for other's contributions, and on giving support and cooperation, making each other stronger. This dimension of HR flexibility can also include cooperative activities with external employees, such as employee collaboration with customers or suppliers. The existence of HR relational flexibility is manifest in the organisation through specific employee actions, which can be used to operationalise this

¹⁶ Social capital is broadly defined as an asset that inheres in social relations at different levels (individuals, communities, networks, societies, etc.) (Coleman, 1988; Shaw et al., 2005). At the organisational level, Leana and Van Buren (1999) proposed a definition of *organisational social capital*, as a resource reflecting the character of social relations within the firm. It refers to individual's levels of collective goal orientation and is comprised of associability (i.e. employee willingness and abilities to engage in collective actions) and trust.

concept. Employees with higher levels of relational flexibility may a) converge with their colleagues and share the same opinions, b) assist others when needed, and c) supplement the actions carried out by others (Weick and Roberts, 1993). Broadly speaking, these indicators of HR relational flexibility are linked to employees' organisational citizenship behaviours (Organ, 1988; Shore and Wayne, 1993) and include their efforts to spontaneously collaborate with and help colleagues, to communicate and to affiliate with others.

In summary, human resource relational flexibility includes collectivistic actions among employees in order to jointly work towards common goals. Collectivist employees emphasise the link between themselves and the group to which they belong and as such, they pursue the well-being of the whole group, even if this sometimes requires that their personal interests be disregarded (Van Dyne et al., 2000; Man and Lam, 2003).

3.3.4. INTERRELATIONSHIPS BETWEEN HUMAN RESOURCE FLEXIBILITY DIMENSIONS

A review of the literature on RBV and HR flexibility provides several theoretical arguments that sustain the existence of interdependencies between the dimensions of HR flexibility. In this section, I suggest a broader interpretation of the HR flexibility concept, by discussing how HR intrinsic, modification and relational flexibility are interrelated.

For instance, some authors hold that versatile employees (i.e. manifesting intrinsic flexibility) are likely to be better prepared to engage in collaborative activities (relational flexibility) (Motowidlo and Schmit, 1999). Collaboration between employees entails an extension of employee job responsibilities, since team members need to understand others' responsibilities so as to effectively contribute to the group's goals. Since employees showing intrinsic flexibility can perform several activities beyond their job descriptions, they will probably also be prepared to engage in collaborative activities, which entail combination of tasks within the same unit (Motowidlo and Schmit, 1999). In this vein, scholars such as Horwitz and Townshend (1993: 919) or Molleman and Slomp (1999: 1838) assert that that the attainment of high and diverse qualifications by employees increases their performance in team activities. Similarly,

Zammuto and O'Connor (1992: 708), when studying a specific type of compartmentalisation (incorporation of manufacturing and staff functions associated with producing a product or component in the same unit) highlights the fact that employees in such work units need to be multiskilled because of the variety of tasks performed.

However, at the same time, employees manifesting higher relational flexibility may also show a greater tendency to alter their skills and behaviours (modification flexibility). The participation of employees in teams or groups and, in general, the collaboration with other members of the organisation extends the employee vision of their own role in the organisation. Employees manifesting higher relational flexibility develop a "team-oriented mindset" (LeBlanc and McInerney, 1994), oriented towards the attainment of common goals and the coordination of individual efforts. That is to say, employees with higher relational flexibility will be likely to assume as part of their jobs a broader set of activities and competencies than those that form part of their everyday job, leading to a flexible role orientation (Parker et al., 1997). As a result of this flexible role orientation, employees assume that in order to be efficient in these activities, they need to continuously develop their pool of competences, which favours the malleability of employee skills. Furthermore, when collaborating with others, behavioural scripts often change in order to face diverse and unpredictable situations, which are the result of the social interaction within the group.

Still other authors support the existence of interrelations between the two components of HR modification flexibility (skill malleability and behavioural malleability). According to Simon (1993), continuous learning processes associated with employee skill malleability demand the adoption of new cultural values and structural mechanisms, which eventually change the viewpoint and the role of the individual in the organisation. Organisational learning values create an environment in which people widen the focus from the immediate outcomes of their performance to continuous learning by the organisation as a whole. Hence, organisational learning values might foster extra-role behaviours, because by promoting strategic thinking, individuals develop an organisational system approach, which expands their perspectives beyond their formal role (Senge, 1990, 1993). This approach may thereby lead them to invest extra efforts in the organisation as a whole by making innovative suggestions to

improve the organisation and volunteering for roles and tasks that are not obligatory, i.e., by showing higher behavioural malleability (Somech and Drach-Zahavy, 2004).

In conclusion, HR flexibility dimensions are interrelated and the interpretation of HR flexibility should be made from a wider point of view. Employees with a higher level of flexibility in one dimension are also likely to manifest better flexibility levels in other dimensions.

3.4. CHAPTER SUMMARY

According to Hesketh and Neal (1999: 47) in today's organisations employee performance should no longer be assessed in absolute terms, but rather according to people's responsiveness to changing work demands. The rapid pace of change in job requirements places employees in a situation where they constantly need to demonstrate a capacity to engage in new learning and cope with change. Hesketh and Neal (1999), when referring to this broader conception of employee performance, introduce the term "adaptive performance", also adopted by Murphy and Jackson (1999:345) and Pulakos et al. (2000). Other authors such as Lau (1999) refer to this term as "flexible performance". Regardless of its designation, it is clear that more attention should be paid to the flexibility of the workforce, by considering not only the staff's efficacy levels attained in the daily tasks that their jobs comprise but also employee's ability to cope with change. Flexibility is thus a critical component of employee performance at work, and is separate from task performance.

The purpose of this chapter is to develop a conceptualisation of human resource flexibility based on the RBV premises. In doing so, I follow the same logic used in the SHRM field to justify the competitive relevance of the organisation's workforce. Research from the SHRM literature (e.g. Wright et al., 1994) assumes that human resources contribute to the organisation's sustainable competitive advantages when they satisfy the requirements of strategic resources. Likewise, I consider that human resources are flexible when they fulfil the features of flexible resources.

Drawing from this reasoning, I conclude that HR flexibility is a multidimensional concept. Specifically, I assume that employees are flexible when they show intrinsic flexibility (i.e. they can easily move between tasks and roles), modification flexibility (i.e. they alter their skills and/or behaviours to adapt to new circumstances), and relational flexibility (i.e. they participate in collaborative activities). Furthermore, I defend the existence of interrelations between these dimensions.

The adoption of the RBV premises entails the conceptualisation of HR flexibility from an internal point of view, focusing on the potential contribution of the organisation's current workforce to the overall flexibility of the organisation. In this sense, the notion of HR flexibility resembles that of *functional flexibility* included in previous

conceptualisations of the term (e.g. in the model of the flexible firm). However, while functional flexibility has a reactive connotation, as it focuses on employee movements in response to changes, the notion of HR flexibility that I presented is wider as it introduces a proactive view of HR flexibility. This definition of HR flexibility highlights the change-initiating role of employees, whose initiative in the workplace, collaboration with others, and continuous enhancement of knowledge can allow the organisation not only to respond to, but also to anticipate external changes.

But, as previously mentioned, the study of HR flexibility from the RBV includes not only the conceptualisation of HR flexibility, but also the analysis of the HRM activities that promote it (Wright and Snell, 1998). Having addressed the first of these questions, in the next chapter I analyse the HCM activities that best contribute to the enhancement of HR flexibility.

Chapter 4. Relationships between High Commitment Management and organisational performance: the mediating role of human resource flexibility

4.0. INTRODUCTION

Throughout this dissertation, I have referred to the changes currently occurring in the way work is undertaken in modern organisations. Social factors – in particular the employee’s performance in the workplace – are a fundamental competitive factor, as are the practices implemented by organisations to manage employees. Of these practices, human resource strategies are crucial in shaping the relationships between the organisation and its employees. In the second chapter, I analysed the concept of High Commitment Management (HCM) as a specific approach for managing human resources, characterised by three dimensions or configurations: skill development, job enrichment and provision of equitable incentives.

I also introduced the strategic perspective of human resource management, which refers to the importance of HCM for organisational performance. Drawing from the review of relevant research that sets out to demonstrate the influence of high commitment strategies on the enhancement of organisational results, I concluded that advances should be made in this line of study so as to shed more light on the competitive

relevance of HCM. Specifically, a number of authors suggest the inclusion of mediating constructs between HCM and organisational performance as a way of exploring the “black box” between these variables.

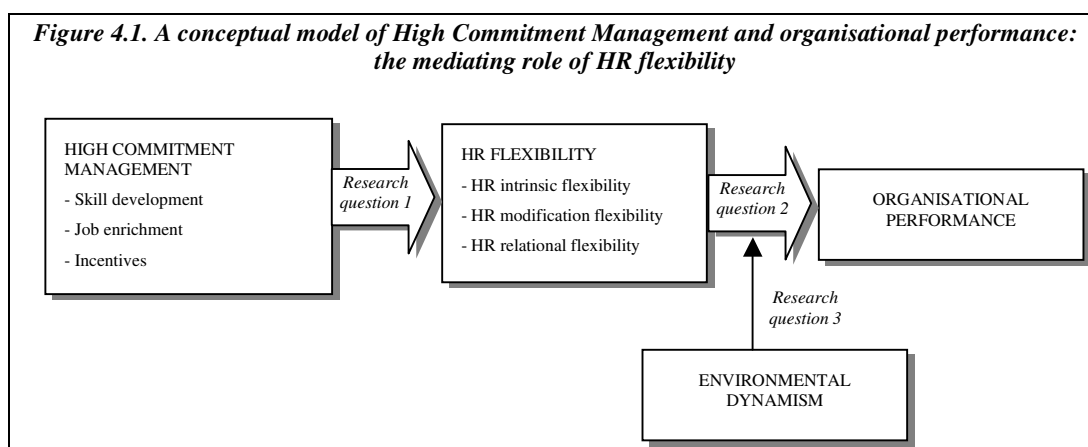
Despite the widespread opinion that such mediating variables refer to the characteristics of employees and their performance at work, to date no consensus has emerged over which and how many variables should be included as mediators between HCM and organisational outcomes. Nonetheless, some scholars state that although employee performance is as central to organisational effectiveness today as it was in the past, external changes are having a significant impact on the way human performance should be conceptualised and assessed (Ilgen and Pulakos, 1999; Frese and Fay, 2001). Employees in today’s organisations need to go beyond in-role performance (i.e. performance in their assigned duties), and show different extra-role behaviours that allow the organisation to rapidly develop a number of strategic options that facilitate its adaptation to external challenges. In order to define the components of employee flexibility, in the third chapter I adopted the premises of the resource-based view, and its application to the analysis of resource flexibility. As a result, I concluded that HR flexibility is defined according to three dimensions, namely: HR intrinsic flexibility, HR modification flexibility and HR relational flexibility.

Having analysed the content of a High Commitment Management strategy, and the meaning of HR flexibility, in this chapter I focus on the interrelationships between the two. That is, I attempt to examine the extent to which a HCM strategy encourages workforce flexibility. I also examine the contribution of these variables to organisational performance.

The chapter begins by presenting a generic conceptual model including the main research questions addressed in this study. A detailed discussion of the model is then provided, together with the hypotheses relating to the relationships in the model. First, I examine the linkages between HCM and human resource flexibility. Second, I focus on the contribution of HR flexibility to the enhancement of organisational results. Third, I integrate the previous arguments into hypotheses concerning the mediating role of HR flexibility on the HCM-organisational performance relationship. In the final section, I offer an overview of the chapter.

4.1. CONCEPTUAL MODEL FOR THE PRESENT STUDY

In this section, I present the generic conceptual model for this research (Figure 4.1). The proposed model focuses on the linkages between HCM, HR flexibility, organisational performance and environmental dynamism. This model draws on a number of theoretical perspectives discussed previously, essentially human resource management and the resource-based view of the firm. I also follow the recommendations of Dyer and Shafer (2002) in developing their model of the linkages between the human resource strategy and organisational outcomes. According to these authors, human resource management contributes to organisational performance by promoting aspects of flexibility in current employees.



Through the development of my model, I seek to provide answers to the following research questions:

Research question 1: What impact does HCM have on the flexibility of human resources?

Research question 2: What influence does human resource flexibility have on organisational performance?

Research question 3: Do environmental characteristics affect the impact of human resource flexibility on organisational performance?

The independent variable in the model (HCM configurations) derives from the human resource management literature, which has helped refine the selection of practices for inclusion in the model. The dependent variables include three components of HR flexibility (intrinsic, modification and relational flexibility), and the outcome variable of organisational performance. The model also seeks to explore whether environmental dynamism moderates the relationship between HR flexibility and organisational outcomes.

The following sections provide a detailed discussion of the model. First, I focus on the linkages between HCM and HR flexibility. Second, I analyse the relationship between HR flexibility and organisational outcomes. Third, the consideration of HR flexibility as a mediator variable between HCM and organisational performance is introduced. The hypotheses corresponding to the abovementioned research questions will be specified in their respective categories.

4.2. THE RELATIONSHIPS BETWEEN HCM AND HR FLEXIBILITY

Although High Commitment Management has been considered essential to foster the development of a flexible workforce (Guest, 1987; Sparrow, 1998), to date little effort has been made to demonstrate the linkages between HCM and human resource flexibility. I now examine this question by arguing that HCM can enhance human resource intrinsic flexibility, modification flexibility and relational flexibility.

4.2.1. HCM AND HR INTRINSIC FLEXIBILITY

In Chapter 3, I linked HR intrinsic flexibility with the concepts of “functional flexibility” and “employee versatility”, which indicate the extent to which employees can assume responsibility for multiple activities within the organisation. Several scholars (Rosenblatt and Inbal, 1999; Dyer and Shafer, 2002; Rönmar, 2004; Knox and Walsh, 2005) state that actions to foster human resource versatility should be oriented towards 1) the improvement of employees’ skills, 2) the creation of opportunities to

make full use of employees' abilities and experience in the organisation, 3) the provision of appropriate rewards.

In relation to the first question, the "skill development configuration" of a HCM strategy is likely to play a fundamental role in enhancing employees' pool of competences and favouring the abilities needed to effectively perform a variety of tasks (van Dam and Thierry, 2000). Organisations that seek to develop a versatile workforce should pay attention to the skill repertoire of workers; that is, they should shape the organisation's human capital (i.e. collective skills and abilities) in such a way that the outcome would be employee acquisition of the capacity to work across traditionally distinct occupational boundaries (Friedrich et al., 1998). When organisations take a long-term approach to training and invest money in continuous training to as many employees as possible, a climate of personal growth emerges among the workforce. Due to the rapid process of knowledge obsolescence in dynamic environments, the importance of being "ahead on the learning curve" is crucial in creating versatile employees (Dyer and Shafer, 2002).

One of the few studies to analyse the relationships between human resource strategies and employee versatility (Shafer et al., 2001) corroborates the relevance of *promoting personal growth* among the workforce, not only to enhance its performance in current assignments, but also to prepare for whatever the future might bring. It is thus envisaged that efforts to promote the development of the workforce's skills will play an important role in the increase of its versatility such that:

Hypothesis 1: The skill development configuration of the HCM strategy will have a positive effect on HR intrinsic flexibility

With regard to the second question, the enhancement of employee intrinsic flexibility depends on the opportunities the organisation offers employees to effectively use their competences at work. The discussion provided in Chapter 2 showed that job design from a HCM perspective is based on the enrichment of jobs through factors such as empowerment, teamwork, communicative activities and so forth.

Job enrichment activities can foster employee intrinsic flexibility by means of motivation, since enriched jobs may lead to a more satisfied workforce that is more

willing to be flexible (van den Berg and van der Velde, 2005). In this regard, Parker et al. (1997) found that the introduction of autonomous forms of working creates a more flexible orientation among the workforce.

In addition, job enrichment has a developmental orientation, since it allows employees to fully use and mobilise their skills and abilities in the workplace, preparing people to assume multiple responsibilities in the organisation (Friedrich et al., 1998). HCM contributes to extending the scope of jobs by pushing responsibilities to lower levels, via the empowerment of employees. From a HCM point of view, employees should have the autonomy to decide how the work is done and to participate in higher-level decisions (e.g. quality circles) (Drach-Zahavy, 2004; Patterson et al., 2004). The communication and information sharing elements of the HCM strategy promote involvement and participation in diverse organisational processes, resulting in a better understanding by the workforce about what their contribution to the success of the organisation consists of. The introduction of these practices allows employees to fully use and mobilise the skills and abilities acquired through training activities, which guarantees the consolidation of the newly acquired skills and the attainment of the workforce's full potential (Cordery et al., 1993; Friedrich et al., 1998; Bayo-Moriones and Merino-Díaz de Cerio, 2004). The HCM design of jobs rejects task simplification and promotes the full utilisation of employee competences in their daily activities. This implies that the organisation's human capital is continuously updated through on-the-job learning.

The relevance of practices aimed at enriching jobs in order to create a versatile workforce has been recognised by several authors who claim that once employees have acquired the range of skills through the developmental programmes, the organisation should encourage their participation as a way of assessing whether these versatile employees have developed effectively¹⁷ (Breu et al., 2001; Huang and Cullen, 2001). As Karuppan (2004: 535) states, "a higher degree of control allows workers to engage in a larger number and variety of tasks". This clearly contrasts with traditional HRM systems, focused on job fragmentation, automation and routine tasks, which impedes

¹⁷ The idea that autonomy facilitates learning and development is an important extension of job design research (traditionally focused on affective reaction variables such as satisfaction). As a result of active and autonomous engagement in more tasks, people develop new understandings of their roles and how they should be performed (Parker et al., 1997: 923).

employees from connecting their skills and abilities to the job they perform (Walton, 1985). I can therefore posit that:

Hypothesis 2: The job enrichment configuration of the HCM strategy will have a positive effect on HR intrinsic flexibility

Finally, some authors highlight the relevance of distributive justice (what I termed “incentive configuration”) to encourage employees’ willingness to move and reallocate as the need arises. Employees who perceive they are being treated fairly in the organisation demonstrate higher levels of commitment and are better able to adjust to the kind of adversities that can appear in the workplace (Moorman, 1991; Cobb et al., 1995). Versatile employees with high qualifications, possessing multiple and varied knowledge and abilities, and with experience in other organisations will be more interested in working in organisations that offer career progression opportunities, since this will be interpreted as appropriate support by the organisation that allows them to fully exploit their competences. In addition, fluid assignments implicit in the notion of intrinsic flexibility require considerably greater inputs from the workforce than jobs in stable conditions, and organisations should provide commensurate returns, partly in an effort to motivate desired behaviours and outcomes, and partly to create perceptions of equity to enhance retention of valuable core employees (Noe, 1996; Dyer and Shafer, 2002; van der Velde and van den Berg, 2003). Drawing from this reasoning, I posit that:

Hypothesis 3: The incentive configuration of the HCM strategy will have a positive effect on HR intrinsic flexibility

4.2.2. HCM AND HR MODIFICATION FLEXIBILITY

According to the definition of this second dimension of HR flexibility, employees are considered flexible when their skill and behaviour related characteristics are easily modified. First, *skill malleability* indicates the extent to which employee skills and abilities are quickly improved and updated. Second, *behavioural malleability* refers to modifications in employees’ behaviours at work, which are manifest in their ability to face uncertainty or to show initiative in the workplace.

a) HCM and employee skill malleability

Regarding the skill malleability of human resources, some scholars agree that the workforce's willingness to develop broader skills depends on two factors: 1) the employees' previous knowledge and 2) the breadth of their role in the organisation (Cordery et al., 1993; Wright and Snell, 1998).

First, employees are keen to increase their current pool of skills and abilities when they possess a valid educational basis, since proficiency in certain areas gives them the confidence to master and apply new skills (Wright and Snell, 1998). Once again, the emphasis that HCM places on employees' skill development is a central point in my argumentation. Training and developmental activities in the organisation provide a firm with a skilled workforce capable of ongoing learning (Batt, 2002). As employees learn, they generate knowledge that potentially forms a foundation for continuous learning and knowledge accumulation (Youndt and Snell, 2004: 339). Thus, activities included in the skill development configuration of a HCM are likely to generate in employees the motivation needed to adjust their abilities in the direction indicated by new situations. It is therefore posited that:

Hypothesis 4: The skill development configuration of the HCM strategy will have a positive effect on HR skill malleability

Second, employees' readiness to learn and improve their competences depends on the importance they ascribe to these new competences for their work. When employees assume that their responsibilities in the organisation exceed the formal description of their jobs, the range of skills they judge important for their performance becomes wider (Parker, 1998). This type of employee is more willing to develop their pool of skills than those with a narrow vision of their role in the organisation (Wright and Snell, 1998).

HCM practices related to job design take on a major importance in shaping the employee's perceived role in the organisation¹⁸. As stated above, the job design implicit in a HCM strategy expands the range of activities for which employees are responsible,

¹⁸ Role orientation or role perception refer to the set of "problems, tasks and competencies an individual sees as relevant to his or her work role and effective performance of that role" (Parker et al., 1997: 904).

generating a sense of “extra-role” objectives and standards. Employees whose jobs are expanded must feel capable of carrying out a set of tasks beyond the prescribed technical requirements defined in their job descriptions. Thus, a wider range of knowledge is considered important to job performance, which constitutes a strong motivation for employees to continuously learn and update their knowledge (Parker et al., 1997; Parker, 1998). The job enrichment literature proposes that designing jobs with greater job autonomy, control, and varied skill requirements provides multiple and uncertain paths towards meeting job goals and therefore stimulates workers’ affective and motivational systems (Campbell and Campbell, 1988; Griffin et al., 2001; Dwyer and Fox, 2000). In particular, enriched jobs create higher-level mental challenges that require skill and training from job incumbents (Drach-Zahavy, 2004). Therefore, it is posited that:

Hypothesis 5: The job enrichment configuration of the HCM strategy will have a positive effect on HR skill malleability

b) HCM and employee behavioural malleability

Despite the relevance of initiative and change-oriented behaviours in modern organisations, scant research has been conducted to examine which factors best promote a workforce that easily alters its behaviours under changing circumstances¹⁹. Practices oriented towards job enrichment are believed to prevent workforce passivity (Karasek and Theorell, 1990; Amabile et al., 1996; Frese et al., 1996). Greater self-management at work has been proved to be essential in promoting change-oriented employees. Several reasons may explain why employees with challenging and enriched jobs are more amenable to alter their routines and thus to show higher behavioural malleability.

Some authors consider that complex jobs constitute a means to help employees use their creative potential at work, which in turn can influence their initiative and proactivity. Practices such as empowerment increase employees’ control over their jobs, which fosters the idea among the workforce that the environment is controllable, resulting in

¹⁹ Some of the existing research in this line comes from the field of psychology and has considered initiative and proactivity as stable traits of employee personality, not as a work outcome (Bateman and Crant, 1993).

their being motivated to try out new ways of doing things (Wood and Bandura, 1989; Parker, 1998).

An alternative explanation is that the effect of job enrichment in the broadening of skills and competences allows employees to conceive alternative methods of carrying out their jobs, also fostering a long-term perspective and creativity in the workforce (Frese et al., 1996; Parker and Axtell, 2000).

Finally, scholars such as Aktouf (1992) and Parker et al. (1997) claim that the effect of job autonomy on the way employees conceive their roles in the organisation is the driving force behind increased workforce initiative. From this point of view, employees will more easily modify their ways of acting – that is, they will show higher behavioural malleability – when they have a broad perception of their role and the effectiveness requirements in the organisation (Parker, 2000). As noted for skill malleability, job design-related variables such as job autonomy or complexity have been shown to be important in shaping such perceptions (Unsworth and Parker, 2003: 184). It is believed that jobs with low levels of autonomy engender a narrow perspective in employees because a state of inertia is created that employees try to maintain. In contrast, employees with flexible roles assume that key competences at work are multiple, and the scope of problems that employees feel responsible for is wider (Parker, 2000). I can state the hypothesis in the following terms:

Hypothesis 6: The job enrichment configuration of the HCM strategy will have a positive effect on HR behavioural malleability

A further component of HCM that may impact the behavioural malleability of employees is the provision of appropriate monetary and non-monetary rewards (e.g. feedback, promotions). The use of these practices can motivate employees to engage in effective discretionary decision making and behaviour in response to a variety of internal and external contingencies (MacDuffie, 1995; Wright and Snell, 1998). According to Unsworth and Parker (2003), higher initiative at work can involve a greater workload, which may produce stress and anxiety in employees if these efforts are not reinforced by equitable rewards and career progression. Fair rewards provide employees with the confidence to take initiative at work, since they are aware that the

organisation will recognise their efforts in proposing creative solutions to new problems (Frenkel et al., 1999). A fair, balanced exchange relationship with the organisation enhances feelings of certainty about gaining fair rewards for substantial innovative efforts (Williams et al., 2002). Thus, I can hypothesise that:

Hypothesis 7: The incentive configuration of the HCM strategy will have a positive effect on HR behavioural malleability

4.2.3. HCM AND HR RELATIONAL FLEXIBILITY

The third dimension of human resource flexibility is related to collaborative actions among employees and I linked this term with the idea of social capital. According to Leana and Van Buren (1999), social capital and relationships between individuals within an organisation are supported and defined by the organisation's human resource practices. Specifically, there is a growing consensus among researchers that building social capital requires a collaborative organisational environment in which knowledge and information can flow freely (Youndt and Snell, 2004).

In this vein, it is important to foster egalitarian organisations with minimal power distances between employees. Certain human resource practices can help move organisations in this direction, especially those related to job enrichment. The minimisation of job classifications should create an environment where people move about and communicate much more freely. Also, by giving employees autonomy and decision-making authority, organisations increase employee involvement in organisational activities which, in turn, may lead to a greater willingness to share and transfer information and knowledge (Youndt and Snell, 2004). The organisation of jobs around teams helps to generate permeability in the organisational structure, providing opportunities for employees to interact with each other and with other parts of the organisation. Teamwork generates a climate of cooperation within the organisation, enabling integration among individual actions to emerge as needed (Gunasekaran, 1999; Breu et al., 2001). Hence I hypothesise:

Hypothesis 8: The job enrichment configuration of the HCM strategy will have a positive effect on HR relational flexibility

However, not all the components of HCM are beneficial for HR relational flexibility. In particular, some authors have posited the inappropriateness of the incentive component of HCM to promote a collaborative climate in the organisation. Despite the equitable rewards orientation of a HCM strategy, decisions about compensation and promotion tend to be based on the level of employee performance at work, rather than on the achievements of the whole group. Human resource practices that focus on gathering individual achievements at work fail to take into account the social embeddedness of individual contribution (Nahapiet and Ghoshal, 1988). In this regard, Campbell et al. (1998) assert that compensation practices that reward individual achievement may be inappropriate in environments where team production occurs. According to this reasoning, I formulate the following hypothesis:

Hypothesis 9: The incentive configuration of the HCM strategy will have a negative effect on HR relational flexibility

4.3. THE CONSIDERATION OF HR FLEXIBILITY AS A COMPETITIVE FACTOR

According to the discussion presented in Chapter 2, sufficient empirical evidence exists to affirm that human resources contribute to organisational performance when they meet the requirements of strategic resources (i.e. valuable, rare, non-imitable and non-substitutable) (Wright et al., 1994). However, less attention has been paid to the competitive relevance of human resources as flexible resources. In this section, I analyse this question, by first reviewing the theoretical arguments that sustain the existence of relationships between the dimensions of human resource flexibility and organisational performance. Furthermore, from a RBV perspective, different environments imply different resource valuation. For this reason, environmental characteristics should be taken into consideration when analysing the contribution of firm resources to performance (Penrose, 1959). Accordingly, in the second part of the section I discuss the extent to which environmental dynamism can affect the influence of HR flexibility on organisational performance.

4.3.1. THE IMPACT OF HR FLEXIBILITY ON ORGANISATIONAL PERFORMANCE

Empirical evidence on the contribution of employee performance to the organisation's success has primarily centred on the relevance of employee productivity or efficiency at work (e.g. number of product units produced per hour) for organisational outcomes. However, few studies have questioned the relevance that flexible employees may have for organisational competitiveness. I now analyse the extent to which a workforce that meets the requirements of flexible resources (intrinsic, modification and relational flexibility) might be relevant for organisational performance.

4.3.1.1. The relationships between HR intrinsic flexibility and organisational performance

Underlying the definition of HR intrinsic flexibility are the competences the workforce possesses. It is the employee's pool of skills and abilities that determine his or her capacity to be responsible for several activities in the organisation (Rönmar, 2004). A major part of the HRM literature – mostly studies on human capital theory – considers that employees with a broad knowledge base contribute to the organisation's competitive advantage. As Wright et al. (1994) suggest, higher levels of human capital lead to greater capabilities to develop more efficient means of accomplishing task requirements. The "human capital advantage" has been considered as a key success factor in today's organisations (Boxall, 1999; Hitt et al., 2001; Boxall and Purcell, 2000).

Apart from the benefits stemming from the human capital inherent in versatile employees, workforce intrinsic flexibility can enhance the organisation's outcomes in a variety of ways. On the one hand, some scholars assume that higher intrinsic flexibility leads to more satisfied and motivated employees and thus to higher labour productivity (Cordery et al., 1993; Rosenblatt and Inbal, 1999) and lower employee turnover (Kelliher and Riley, 2003). Also, versatility decreases the number of line managers (supervisors), thus reducing administrative levels and associated costs (Valverde et al., 2000). Furthermore, it is believed that versatile employees maintain profitable

relationships with customers, contributing to satisfying their needs and enhancing their satisfaction (Youndt and Snell, 2004). Therefore, it is proposed that:

Hypothesis 10: The organisation's level of HR intrinsic flexibility will have a positive effect on organisational performance

4.3.1.2. The relationships between HR modification flexibility and organisational performance

In line with previous sections, to analyse the possible effects of HR modification flexibility for organisational performance I will differentiate between the concepts of skill malleability and behavioural malleability.

In relation to the workforce's skill malleability, efforts to understand how organisations generate, leverage and integrate knowledge have moved to the forefront of the HRM field. This literature has been concerned with the quality of the learning processes developed in the firm over time, as they represent a vital pillar to sustain organisations' competitive advantage (Teece et al., 1997; Kamoche and Mueller, 1998).

According to Lado and Wilson (1994)²⁰, as employees learn, they are able to respond in better ways to stimuli that have previously appeared. When employees show high skill malleability, continuously improving their pool of knowledge, employee performance variability reduces over time, increasing productivity. Over time, employees develop a deeper understanding of specific tasks, duties and responsibilities and as a result, they gain expertise at work and perform their tasks in a cost-effective manner. From this point of view, a workforce with modifiable competences can better detect performance deviations and make incremental adjustments to achieve congruence with pre-established levels of organisational performance. Due to the crucial role of a workforce willing to learn for the organisational competitiveness, the following proposition is made:

²⁰ This component of HR flexibility can be related to the idea of *transformational competences*, specifically competences that foster organisational learning, in Lado and Wilson's (1994) framework. The contribution of such competences for the generation of sustainable competitive advantage rests on their value to "advantageously convert inputs into outputs" (Lado et al., 1992: 85).

Hypothesis 11: The organisation's level of HR skill malleability will have a positive effect on organisational performance

Behavioural malleability has also been considered as a source of sustainable competitive advantage (Lado and Wilson, 1994). Behavioural malleability permits organisation members to question and reassess the relevance of existing performance standards, work norms, and underlying assumptions and beliefs. It encourages organisation members to improvise and think of new ideas, to question and reflect on their actions, and to make sense of and generate new understandings from those actions. For instance, malleable employees can contribute to diminishing production and service delivery costs by developing new process innovations that eliminate costly steps or reduce inputs (Youndt and Snell, 2004). Some empirical studies have demonstrated the impact of proactive employees on job performance (Crant, 1995), job satisfaction (Seibert et al., 1999), productivity, customer service and commitment (Kirkman and Rosen, 1999), all of which can result in better organisational results. Hence, it is posited that:

Hypothesis 12: The organisation's level of HR behavioural malleability will have a positive effect on organisational performance

4.3.1.3. The relationships between HR relational flexibility and organisational performance

Several reasons justify the impact of HR relational flexibility on organisational performance. Leana and Van Buren (1999) provide three different explanations for this linkage. Firstly, these authors argue that collaborative actions in the organisation provide employees with a rationale for deferring their individual interests in favour of group and organisational objectives. Secondly, social capital may constitute a mechanism for managing collective action, reducing the need for formal contracts and monitoring mechanisms that control employees' actions. Finally, higher levels of HR relational flexibility foster the development of intellectual capital in the organisation. In this regard, collaboration between the workforce emerges as a vehicle for disseminating information (e.g. through shared language) that is more effective than formal

mechanisms. Consequently, a climate of combination and exchange of information that favours learning is likely to emerge (Nahapiet and Ghoshal, 1998). The transfer of knowledge through collaborative actions allows organisations to coordinate diverse production skills and integrate multiple streams of technology, as well as to leverage knowledge from one part of the organisation to another. All of these activities enable organisations to more efficiently utilise their knowledge base by leveraging it across the entire organisation. Stated differently, social capital should help reduce redundancies and effort duplication in multiple parts of organisations. But as Youndt and Snell (2004) state, efficiency in the transmission of information is also beneficial from an economic point of view, since it also eliminates costly information flows up and down hierarchical levels.

On the other hand, teams and networks of employees, customers, suppliers, and the like should be able to better identify and satisfy customer needs. That is, external HR relational flexibility – e.g. between employees and customers – aids in identifying idiosyncratic customer needs and also facilitates the development of novel solutions to address those needs (Youndt and Snell, 2004). In addition, the knowledge tied up in relationships between employees leads to process innovation and better problem solving, which in turns benefit production and service delivery (Youndt and Snell, 2004).

Stemming from this reasoning, I formulate the following hypothesis:

Hypothesis 13: The organisation's level of HR relational flexibility will have a positive effect on performance

4.3.2. THE MODERATING ROLE OF ENVIRONMENTAL DYNAMISM ON THE CONTRIBUTION OF HR FLEXIBILITY TO ORGANISATIONAL PERFORMANCE

As argued above, a flexible workforce may provide several benefits to the organisation in terms of improvements in firm performance. In this section, I complement this argumentation by including the characteristics of the external environment in the analysis and reasoning how they can determine the strength of the impact of human resource flexibility on performance.

A stream of research in the RBV literature has examined market conditions as variables that affect the value of different organisational resources (Barney, 2001; Aragón-Correa and Sharma, 2003). According to various scholars, the fact that organisational resources may turn into competitive advantages depends on a number of external factors, such as industry structure or growth, which means that some resources are more valuable in specific conditions (Miller and Shamsie, 1996; Cui and Lui, 2005). Following this logic, I aim to analyse whether the flexibility of human resources is more relevant for organisations facing dynamic environments than for companies operating in stable and predictable contexts. That is, I introduce environmental dynamism as a moderator variable in the linkage between human resource flexibility and organisational performance.

4.3.2.1. Moderation of environmental dynamism between HR intrinsic flexibility and organisational performance

A versatile workforce has been considered a relevant factor under dynamic environments because it allows the organisation to develop flexible responses to unexpected events (Wright et al., 1994; MacDuffie, 1995; Riley and Lockwood, 1997). Due to the high rate of change in dynamic external events, organisations cannot precisely pre-specify the responses expected from employees. Under these conditions, jobs become unique with respect to the tasks performed; that is, employees' responsibilities in a certain period of time greatly differ from the responsibilities of other employees in the same period, and from those tasks that will be performed in the near future (Motodwidlo and Schmit, 1999). Consequently, the organisation will benefit

from employees that can be easily assigned to the appropriate tasks as the need emerges (Tüselmann, 1996; Sparrow, 1998; Storey et al., 2002). Moreover, HR intrinsic flexibility contributes to the reduction of hierarchical levels, facilitating agile communications and better ability to react quickly (Albizu, 1997; Valverde et al., 2000). In general, organisations with a versatile workforce have more freedom to modify their strategies, and thus become more competitive when operating in dynamic environments (Riley and Lockwood, 1997). Thus, the following is posited:

Hypothesis 14: The strength of the relationship between HR intrinsic flexibility and organisational performance will be higher in dynamic environments than in stable environments

4.3.2.2. Moderation of environmental dynamism between HR modification flexibility and organisational performance

The HR modification flexibility dimension takes on special relevance in situations in which the smooth running of the organisational depends on employees responsible for tasks that require additional abilities and whose performance requirements continuously change (Rosenblatt and Inbal, 1999). Organisations whose workforce easily alters its skills and behaviours can have access to a variety of appropriate solutions to new problems, as this type of employee can develop new abilities and routines to respond to novel circumstances. Drawing from this reasoning, HR modification flexibility is likely to constitute a source of competitiveness in dynamic environments, as organisations can gain access to a number of strategic options through the development of new resources stemming from existing ones (Sanchez, 1995, 1997). For example, Batt (2002: 588) suggest that in markets in which intense competition and the proliferation of new products lead to constant change in marketing, pricing and packaging, employees need to integrate new product and sales information into their existing knowledge and to explain these changes to customers.

One of the features of dynamic environments is that new external events do not conform to previous solutions. For this reason, employees with malleable characteristics may be more valuable in a dynamic context since they accomplish novel tasks through the creative use of available resources (Dyer and Ericksen, 2005). To quote Wright and

Snell (1998: 764): “the speed with which individuals learn to perform new tasks is becoming increasingly important in today’s environment of rapid technological change”. In addition, following Lado and Wilson (1994), behavioural malleability may enhance organisational flexibility by enabling members to think and respond divergently to changes in the internal and external work environment. By developing new abilities and altering their behaviours, employees can more easily recognise change opportunities and threats when they emerge and have the confidence to respond to them adequately (Tierney, 1999: 122). According to Crant (2000: 435), as work becomes more dynamic, proactive behaviour and initiative become even more critical determinants of organisational success.

In this vein, Parker (2000: 464) recognises the moderating role of the environment in the contribution of modifiable employees’ characteristics to the organisation’s outcomes, by stating: “It is likely that proactivity will be especially important for performance in highly uncertain and interdependent environments, but that it will be less important or even unimportant in other situations such as highly routinised and stable contexts”. In sum, when the organisation’s human capital (i.e. employees’ skills and abilities) can be quickly improved and updated, and when employees show novel behaviours in new circumstances, the organisation’s workforce is better prepared to handle future states that require changes in their responsibilities. I can thus expect that:

Hypothesis 15: The strength of the relationship between HR skill malleability and organisational performance will be higher in dynamic environments than in stable environments

Hypothesis 16: The strength of the relationship between HR behavioural malleability and organisational performance will be higher in dynamic environments than in stable environments

4.3.2.3. Moderation of environmental dynamism between HR relational flexibility and organisational performance

Despite the fact that HR relational flexibility may entail certain rigidities in the organisation, for example, the strong norms and mutual identification may limit the openness of the group to alternative ways of doing things or quick decision making

processes (Coleman, 1990; Nahapiet and Ghoshal, 1998), a number of authors state that HR relational flexibility includes patterns of interrelated activities that integrate various sources of expertise, which in turn facilitates the detection and management of the complexity that derives from external changes (Weick and Robers, 1993; LeBlanc and McInerney, 1994; Bayo-Moriones and Merino-Díaz de Cerio, 2004). In this vein, Zammuto and O'Connor (1992) emphasise coordination as a central element of organisations operating in dynamic environments because it enhances the speed with which the organisation can detect and respond to unforeseen problems and opportunities. For the same reason, comprehension of external events and implementation of adequate actions to face them also increase when employees are keen to collaborate with external agents. This facilitates communication between different specialists and ensures that the organisation absorbs knowledge from external sources (Cohen and Levinthal, 1990).

Organisations with higher levels of HR relational flexibility may be more ready to adapt quickly to changes in their dynamic environment since they make more use of team-based work assignments, with individual team members exercising greater control over what specific task they perform. The team can adjust to rapidly changing circumstances by performing different sets of tasks as dictated by changes in the availability and nature of raw materials, change in technological developments, and changes in customer needs and preferences (Motodwidlo and Schmit, 1999: 68). Hence, the following hypothesis is formulated:

Hypothesis 17: The strength of the relationship between HR relational flexibility and organisational performance will be higher in dynamic environments than in stable environments

4.4. THE MEDIATOR ROLE OF HR FLEXIBILITY IN THE RELATIONSHIP BETWEEN HCM AND ORGANISATIONAL PERFORMANCE

The review provided in Chapter 2 revealed that sufficient empirical evidence exists to justify an association between the adoption of a HCM strategy and firm performance. The relevance of the various HCM configurations (skill development, job enrichment and incentive) for organisational success was first defended by MacDuffie (1995) and Guest (1997), among others, who stated that employees manifest higher performance and therefore contribute to the organisation's results when they are motivated, have the necessary skills and abilities, and an appropriate role and understanding of that role. Studies such as Russell et al. (1985) and Becker and Huselid (1992) demonstrated the positive influence of activities related to the development of employee skills (i.e. training and staffing practices) for firm performance. This relationship was also corroborated by research from human capital theory (Boxall, 1998; Hitt et al., 2000). Furthermore, job enrichment has been considered a critical determinant of the organisation's success because it allows skilled employees to become more involved in determining what is done and how it is to be performed (Delaney and Huselid, 1996). The incentive configuration of HCM, linking pay to actual employee performance, will elicit greater discretionary effort from employees (Gerhart and Milkovich, 1992). In addition, an equitable rewards strategy positively affects employees' work productivity because they are paid more than they might expect to earn in comparable jobs in other companies. Many empirical studies from the universalistic, contingent and configurative perspectives in the human resource management literature have added to the empirical evidence on the positive linkage between HCM and various indicators of organisational performance (e.g. Huselid, 1995; Koch and McGrath, 1996; Hoque, 1999; Cappelli and Newmark, 2001).

However, as I also discussed in previous chapters, a call has recently appeared for empirical studies to examine the mechanisms between HCM and organisational performance (Becker and Huselid, 1998; Ostroff and Bowen, 2000; Wright, 2003). This refers to the inclusion of intermediate results that are affected by HCM and that may, in turn, influence firm results. In this chapter, I have hypothesised that HCM can

contribute to developing a flexible workforce (hypotheses 1 to 9) and that flexible employees are likely to influence organisational performance (hypotheses 10 to 13). By integrating the previous arguments, I can now put forward a set of hypotheses that consider that the influence HCM may have on organisational results is explained by the impact of the former on the flexibility of the workforce, such that:

Hypothesis 18: Intrinsic flexibility will mediate the relationships between skill development, job enrichment and incentive HCM configurations and organisational performance

Hypothesis 19: Skill malleability will mediate the relationships between skill development and job enrichment HCM configurations and organisational performance

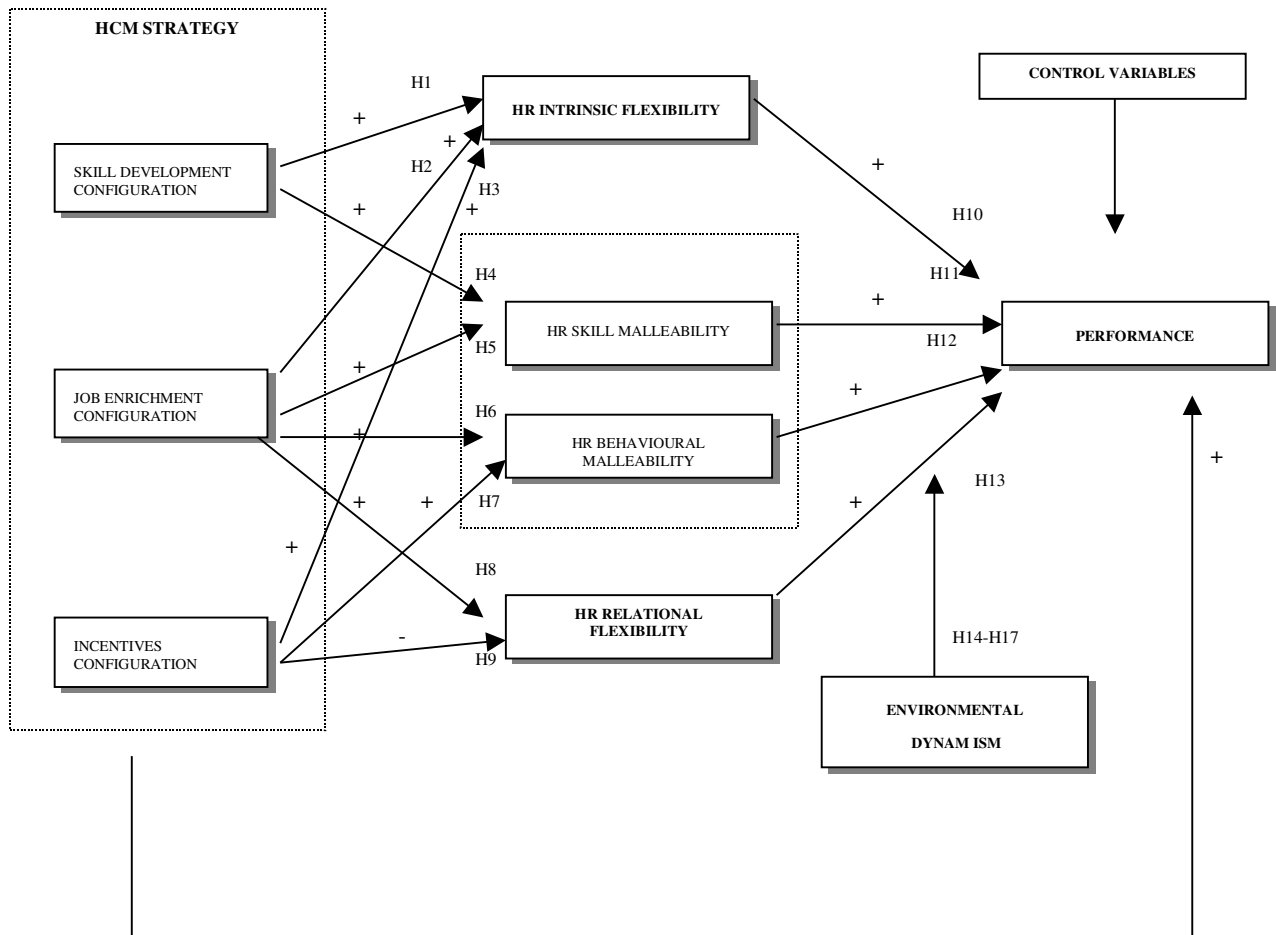
Hypothesis 20: Behavioural malleability will mediate the relationships between job enrichment and incentive HCM configurations and organisational performance

Hypothesis 21: Relational flexibility will mediate the relationships between incentive and job enrichment HCM configurations and organisational performance

The purpose of these hypotheses is to examine the contents of the “black box” between the HCM strategy and higher organisational results. The consideration of employee flexibility as the mediator variable can facilitate the analysis of the proportion of HCM influence on overall performance that is explained by the employee flexibility.

The generic model presented at the beginning of this chapter (Figure 4.1) is now developed into a more complex model, to include the hypotheses formulated throughout the chapter (Figure 4.2).

Figure 4.2. A summary of the conceptual model hypotheses



4.5. CHAPTER SUMMARY

This chapter seeks to formulate a model that describes the impact of HCM on human resource flexibility and organisational performance, by drawing on salient elements of the human resource management and resource-based view literature.

The chapter begins by presenting a generic model of the relationship between HCM and organisational performance, which includes HR flexibility as a mediator variable. The development of the model was guided by three research questions. I then focus on each of these questions in greater detail. First, I analyse how HCM can impact employee flexibility. Following this, the potential contribution of HR flexibility to organisational results and the moderator role of environmental dynamism are examined.

Through the analysis of these relationships, I attempt to determine the extent to which the HCM strategy helps to solve the tensions that need to be managed as organisations wrestle to achieve favourable returns in the current context while making the appropriate preparations for the challenges of the next one (Evans and Genadry, 1999).

The following chapter operationalises the conceptual model by describing the method, measures, and procedures used to empirically assess the hypothesised relationships specified in the research model.

Section II

Empirical Research

Chapter 5. The empirical research methodology

5.0. INTRODUCTION

Having defined the research hypotheses, in this chapter I introduce the design of the empirical research that allowed me to obtain information about the relevant variables in the hypotheses. According to Sapsford and Jupp (1996: xx), design issues are bound up with how data are collected and analysed, covering questions such as selection of statistical techniques, design of questionnaires or determination of information sources.

This study is quantitative, as I obtained data through questionnaires administered to company managers. In the first section of this chapter I expose the criteria used to select companies for my sample and I discuss the appropriateness of the selected unit of analysis for the purposes of this research. In addition, I describe the data collection strategy followed to obtain information from respondents in these companies.

Moreover, the design of the questionnaires requires items that measure the theoretical constructs of interest to be defined. The second section covers this question by discussing the selection of measurement scales for the theoretical concepts included in the hypotheses.

Finally, in the third section I specify the statistical procedure that I used to analyse data in order to draw conclusions about the causal linkages between the variables. Here, I justify the suitability and benefits of Structural Equation Modelling (SEM) for this research. I also review some specific SEM techniques and models necessary to test the research hypotheses.

5.1. SAMPLE AND DATA COLLECTION

In this section, I detail the procedure used to obtain data on the variables included in this study. In doing so, I first deal with the unit of analysis of the present research, by specifying what type of companies and units within each company were considered in the study. Secondly, the data collection strategies and the technical details of the empirical research are described.

5.1.1. DESCRIPTION OF THE UNIT OF ANALYSIS

The delimitation of the scope for empirical studies in the HRM field should be in accordance with the objectives and research model that the researcher formulates. In the words of Wright and Gardner:

No right or wrong level of analysis exists for studying the HR practice-firm performance relationship. Each level provides answers to unique questions, and each has a set of relative advantages and disadvantages. This suggests that researchers need to be quite deliberate in their choice of level of analysis, given a particular research question; or deliberate in their choice of a research question, given a level of analysis (Wright and Gardner, 2003: 316).

In this research, I aim to provide answers to three questions: a) to what extent companies that implement a HCM strategy have a more flexible workforce; b) whether human resource flexibility impacts organisational performance and c) how environmental dynamism moderates this relationship.

Based on these objectives, the empirical study comprises companies belonging to different sectors in an attempt to identify firms with varying degrees of HCM implementation. This type of firm population allows to compare levels of HR flexibility and performance according to the relative use of a HCM strategy, and at the same time to generalise the results of the research. In addition, with a multi-sectorial sample of companies it is possible to contrast the degree of environmental dynamism that firms face and thus, to examine the relevance of external conditions as moderators of the relationship between HR flexibility and organisational performance.

I have also considered the size of the companies in order to delimit the firm population. In the HRM field, it is believed that a minimum firm size is required in order to identify companies with an explicit or formalised human resource strategy (Lepak and Snell,

2002). In line with previous research, I took the number of employees as an indicator of firm size, and only companies with 100 or more employees were considered, following the most widespread criterion in this literature (e.g. Huselid, 1995; Guthrie, 2001; Youndt and Snell, 2004).

I selected organisations that meet these criteria from the 2005 ARDAN directory of Spanish companies (www.ardan.es). The population of companies for the present research was defined according to the two digit-SIC code²¹ - including both industrial (SIC 20 to 39) and service companies (SIC 70 to 89) - and to the number of employees (above 100). According to the ARDAN directory, the universe studied comprises 3,427 firms.

The unit of analysis in this study is the marketing and commercial departments of the companies. That is, I am interested in analysing linkages between the HCM strategies pertinent to this area, the flexibility shown by these employees, and how this could impact performance. I consider that the limitation of the study to this area provides several benefits to the research.

First, as the HCM strategy refers only to one group of employees in the firm (marketing and commercial area), some improvements in the reliability of the HCM measurement can be made. Several scholars have suggested that human resource practices vary with respect to location, type of employee, or business unit (Jackson et al., 1989; Gerhart et al., 2000; Melián-González and Verano-Tacorante, 2004). In this regard, Tsui et al. (1997) provided strong evidence that organisations use different human resource practices for employees in different jobs. Consequently, one informant is unlikely to provide an accurate definition of the human resource practices that correspond to different jobs (Wright and Gardner, 2003). For the same reason, a general assessment of the human resource practices for the whole workforce would not be appropriate (Lepak and Snell, 1999). In order to avoid these problems, some studies have recommended focusing on specific jobs or a group of similar jobs (Delery, 1998)²².

²¹ The two-digit SIC code has commonly been taken as a sectorial selection criterion in the HRM literature (see for example, Youndt et al., 1996 or Fey et al., 2000).

²² Many empirical studies have centred on specific organisational areas to examine human resource strategies. For example, Youndt et al. (1996) differentiate between human resource strategies used for employees in four organisational functions: operations, quality, production and human resource management. In Huselid and Becker's (2000) study, questions pertaining to human resource practices were asked separately for two categories of employees: exempt and non-exempt employees. Gerhart et al.

Second, by focusing on a specific group of employees, a better understanding of the employee responses to the HCM strategy can be obtained. This is particularly relevant to examine variations in employee flexibility (the mediator variable) depending on the degree of HCM that applies to their jobs. Some previous studies that have included intermediate variables between HCM and organisational performance have also constrained the analysis to a specific job or group of jobs. For instance, Moynihan et al. (2002) centres on three groups of employees (sales associates, warehouse representatives, and drivers) to study the extent to which the commitment and customer orientation of these employees mediates between HCM and customer satisfaction.

Thirdly, employees in the commercial and marketing areas are increasingly relevant to competition in current environments. As Slater and Olson (2000: 815) state, “over the past two decades the development of strong and enduring relationships with key customers has become accepted as a foundation for competitive advantage”. The marketing and commercial workforce determines the degree of interdependence between the firm and its customers, distributing information and determining the nature of the relationships (e.g. in terms of temporal length or trust). This allows organisations to gain understanding of the customers’ needs, and thus to develop new products or services before their competitors (Slater and Olson, 2000). Since employees in commercial and marketing areas are crucial in current environments, the study of the human resource practices relevant to this group of employees, together with the responses of these employees to such practices (in terms of flexibility) can provide greater insight into how organisations can gain competitiveness through the workforce.

5.1.2. PROCEDURE FOR DATA COLLECTION

Data collection was carried out through the administration of structured questionnaires to the managers in the sample companies (via electronic mail or personally). The nature of the data collection procedure was mixed in terms of the number of informants per firm. Specifically, I designed three different questionnaires (Figure 5.1):

(2000) differentiate between human resource practices for hourly and managerial-professional categories. Guthrie (2001) distinguishes two categories of employees: a) production, maintenance, services and clerical employees, and b) executive, managers, supervisors, professional and technical employees.

Questionnaire 1: The first questionnaire contained information on all the variables included in this research: high commitment management, human resource flexibility, environmental dynamism, organisational performance and control variables²³. This questionnaire was addressed to the commercial or marketing managers in the company sample.

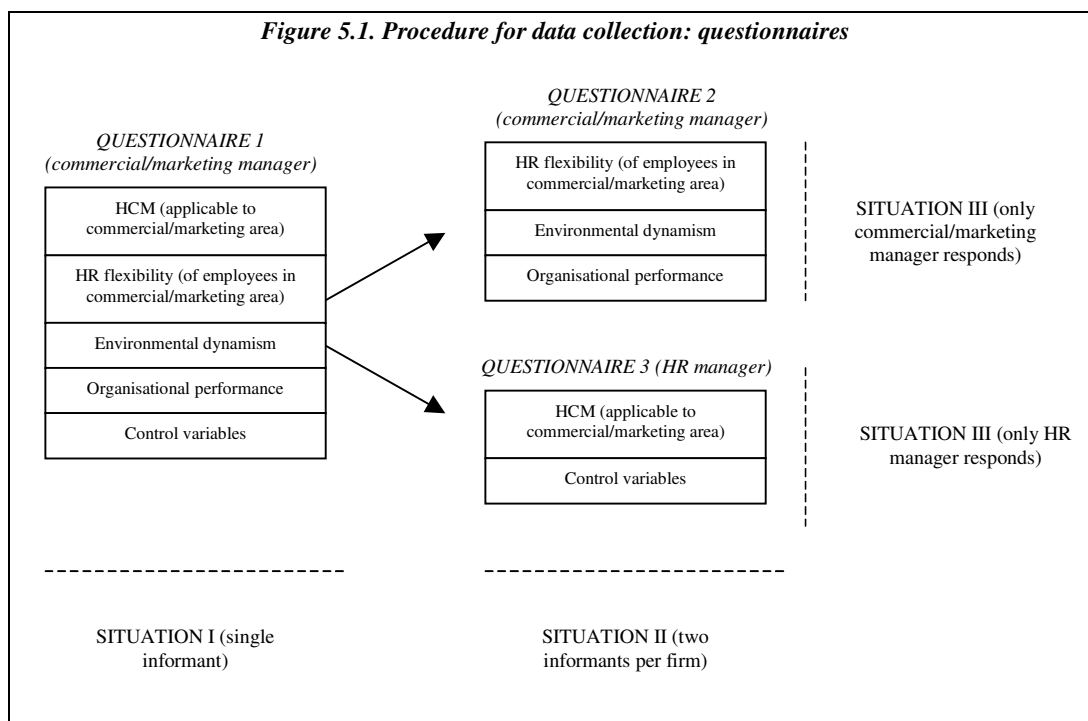
However, in companies in which access to two informants was initially possible (human resource manager and commercial/marketing manager), two different questionnaires were created by splitting questionnaire 1 into two parts. I considered it appropriate to ask different questions to each manager.

Questionnaire 2: This questionnaire was addressed to the commercial or marketing managers and contained questions about human resource flexibility, environmental dynamism and organisational performance.

Questionnaire 3: This survey was sent to the human resource manager and was made up of questions about high commitment practices used in the company to manage employees in the commercial/marketing department. Questions about organisational characteristics were also included, such as size and organisational strategy, which were taken as control variables in the analyses.

I consider that this data-collection approach helps to avoid common method variance bias that may appear when a single person provides all the information on human resource management practices and organisational performance. According to Wall and Wood (2005: 441) “measures of the dependent variable (performance) minimally should come from a different source from that used to measure HRM practices”. These authors suggest that when a single person provides information on human resource practices and organisational performance, the measurement of the independent variable can be contaminated by knowledge of the final outcome. In this study (Situation II in Figure 5.1), it is the commercial or marketing manager who provides information about employee outcomes (human resource flexibility) and organisational outcomes, while the human resource manager responds to questions on the high commitment management strategy.

²³ I provide a detailed description of the items included in the questionnaires in the following section.



The fieldwork took place during the period May-October 2005. The following table shows the rate of response, classified by the number of respondents in each firm. As observed in Figure 5.1, only for situations No. I and II the complete information necessary to test the hypotheses was obtained (N=188). Situation No. III refers to the cases in which only one of the two managers returned the completed questionnaire, either the human resource manager (N=16) or the commercial/marketing manager (N=22).

Table 5.1. Distribution of respondents

Situations	Number of respondents	Number of completed returned questionnaires	Percentage
I.	Single informant (questionnaire 1)	156	69%
II.	Two informants (questionnaires 2 & 3)	32	14.2%
III.	One informant out of two (questionnaire 2 or 3)	38	16.8%
Total		226	100%

The data collection strategy followed in this research led to missing data in Situation No. III, when information was obtained from only one respondent (either human resource manager or commercial manager). Nearly 17% of the data was incomplete

(Table 5.1) and the data shows a particular pattern of missing values (information from questionnaire 2 but not questionnaire 3 or *vice versa*). For this reason, special attention is paid to the treatment of missing data in the present study.

In this research, a *list-wise* procedure would result in the loss of around 17% of the sample. Far more efficient methods are now available to researchers. SEM offers two ways to analyse incomplete data that complement traditional procedures to handle missing observations²⁴. SEM techniques for dealing with missing data do not require the deletion of records as happens, for instance, with the pair-wise deletion (PD) and list-wise deletion (LD) methods.

The first option afforded by SEM is to estimate a model across *multiple groups*, one with complete data on all variables and the others with particular patterns of missing observations. To test whether these estimates are equal across the complete and incomplete samples, a comparison is made of the fits of a model with and without these parameters constrained to be equal across the groups. If the fits of these models are not appreciably different and the overall fit of the constrained model is acceptable, then the proposed model is assumed to be invariant across the complete and incomplete groups. However, the multiple group SEM approach to analyse incomplete data is not practical if either the total sample size is small or there are few cases for each pattern of missing data (Kline, 1998).

An alternative approach is to use a modification of standard *ML estimation* that handles incomplete raw data (Muthén et al., 1987; Bentler, 1990). In practice, this procedure can only be used when the distinct patterns of missing data are few (Arbuckle, 1996), when the rate of missing observations is relatively high in comparison with the total sample (Kline, 1998), and when the complete database is not very large (Winkler and McCarthy, 2005). My database fulfilled these requirements. The ML estimator procedure does not discard partially complete cases but incorporates them into the estimation process. One specific approach to obtain ML estimation is the expectation-maximisation (EM) algorithm (Jamshidian and Bentler, 1999), which is the best methodology to date for analysing models computable in the EQS software (Bentler,

²⁴ As I detail in the following sections, the statistical procedure used in this research is based on Structural Equation Modelling (SEM). For a revision of approaches to the treatment of missing data in SEM see, for example Brown (1994), Arbuckle (1996) or Kline (1998).

1995). The EM algorithm uses the information contained in cases with and without missing data to compute a maximum likelihood covariance matrix and therefore, it makes more efficient use of the available data than standard missing data techniques (Patterson et al., 2005). Graham et al. (1996) demonstrated that parameter estimates based on the analysis of the EM covariance matrix are excellent in that they are unbiased and efficient.

Through the application of the EM algorithm, I substituted the missing data in Situation No. III with an EM estimation. Thus, 226 valid responses were included in the subsequent analyses. Of these companies, 37% were from service sectors and 63% from industrial sectors. Regarding organisational size, 49% of companies were medium-sized (100 to 249 employees) and 51% were large companies (250 employees or more). The average size of the commercial/marketing departments in these companies was 30.20 employees (SD=54.417), and the average age of employees working in this organisational area was 35.64 years old (SD= 5.973)²⁵.

Table 5.2 summarises the technical details of the empirical research. The sample error is relatively high, but this is a typical situation in research conducted in Spain, where collaboration between companies and universities is difficult (Valle et al., 2000; Camelo et al., 2004).

Table 5.2. Technical details of the empirical research

UNIVERSE	3,427 firms in different sectors
SAMPLE SIZE	226 firms
SAMPLE ERROR	± 6.3%
CONFIDENCE LEVEL	95% for the worst case scenario (p=q= 50 %)
SAMPLE SELECTION	Random
DATA COLLECTION PROCEDURE	Questionnaire sent via electronic mail or personally to the managers in the companies
DATA OF THE EMPIRICAL RESEARCH	May-October 2005

²⁵ Descriptive analyses corresponding to the commercial/marketing departments were made for 205 companies, as I did not have information on these questions for the whole sample.

5.2. MEASUREMENTS

Valid measures for the theoretical constructs must be developed in order to carry out the statistical treatment of the data. The theoretical constructs discussed in previous chapters are translated into measures that allow respondents to evaluate HCM, HR flexibility, environmental dynamism, organisational performance and organisational characteristics (control variables). In this section I present the criteria used to select items for each concept and a discussion of the scale content.

5.2.1. MEASUREMENT OF HIGH COMMITMENT MANAGEMENT

Although a number of empirical studies have looked at the impact of High Commitment Management on firm performance, there is a lack of agreement over how to operationalise this strategy (Roche, 1999). The discussion provided in Chapter 2 presented a conceptualisation of HCM from a system-based perspective, according to which the components of a HCM strategy are grouped into a set of dimensions. In this section, I address two questions: a) the procedure used to select the HCM measures, and b) the operationalisation of the HCM dimensions through a latent variable approach.

5.2.1.1. Description of the HCM measures

Proponents of the AMO model state that the components of the HCM strategy are grouped into three dimensions. The first dimension refers to activities aimed at developing the employees' skill pool. The second dimension includes actions oriented towards job enrichment. The third dimension comprises motivation-enhancement practices related to the provision of fair rewards and incentives (Bailey, 1993; Delaney and Huselid, 1996; Guest, 1997; Applebaum et al., 2000; Gardner et al., 2001). A review of some of the most relevant studies to adopt the AMO framework (Table 5.3) allowed me to determine the areas that should be addressed in each dimension of the HCM strategy. As can be observed in the table, the skill development configuration in this framework refers to both staffing activities and training initiatives. These two areas, focused on the improvement of the organisation's human capital, have been treated as complementary in the HRM literature (e.g. MacDuffie, 1995; Youndt et al., 1996) and

many authors have used a composite scale including practices in the training and staffing areas (Skaggs and Youndt, 2004). The second dimension comprises activities linked to the definition of jobs, such as empowerment or teamwork. Finally, the incentive dimension includes practices used to determine employee rewards (e.g. performance appraisal systems), internal promotions and equitable rewards.

Having reviewed the areas to be covered in each dimension of the HCM strategy, I then extracted a set of items from published scales in the human resource literature. Specifically, I combined items from two HCM scales (Snell and Dean, 1992 and Wood and Albanese, 1995). Appendix 1 shows the items used to measure HCM.

Table 5.3. A revision of the components of the AMO framework

	Delaney and Huselid (1996)	Guest (1997)	Bailey et al. (2001)	Gardner et al. (2001)	Batt (2002)	Guest et al. (2004) ²⁶
Skill development	Staffing selectivity Training extensiveness	Selection Socialisation Training and development Quality improvement programmes	Level of formal education of employees	Pre-hire selection Post-hire training	Number of years of formal education of a typical employee Number of years of training needed for a new employee to become efficient	Use of psychometric tests in selection Training and development
Job enrichment	Decentralised decision making Internal labour market Vertical hierarchy	Communication Employee involvement Team working Job design Flexible job descriptions	Autonomy in decision making Self-directed teams Offline team membership Communication	Participation Communication	Discretion over work methods Team participation	Keeping employees well-informed Interesting and varied jobs Teamwork Attitude surveys
Incentives	Incentive compensation Grievance procedure	Single status Job security Internal promotions Individualised reward systems	Pay for performance High wages	Performance evaluation Pay for performance Promotion	Ongoing training Employment security Pay level Electronic performance monitoring (-)	Employees involved in workplace decisions Regular use of performance appraisal Reward based on performance

Many different approaches have been adopted in the literature regarding the specificity with which human resource practices should be measured, that is, the level of description of each practice (Wright and Gardner, 2003). Some authors have asked

²⁶ These authors propose a fourth dimension termed “commitment”, whose components are: internal promotion, stated policy of deliberately avoiding compulsory redundancies, active implementation of equal opportunities practices, family-friendly practices, works council or consultative processes.

about the percentage of employees covered by the practice (e.g. Huselid, 1995) while other scholars have developed questions to objectively assess the presence/absence of the practice, using dichotomous variables (MacDuffie, 1995; Ichniowski et al., 1997). A third approach uses Likert-type scales to assess the extent or importance of the practice in the organisation (e.g. Delery and Doty, 1996).

In general, the tendency has been towards the use of generic measures; for instance, many studies ask about the extent to which organisations utilise formal performance appraisals. However, the use of formal performance appraisals can mean very different things in different human resource strategies and organisational contexts (Ferris et al., 1999: 394). In this study, whenever possible I have attempted to measure HCM practices through objective scales, thus leaving less room for ambiguity on the part of the rater (Huselid and Becker, 2000: 845). As measures of human resource practices become more precise, it is easier to verify the impact of the real human resource strategy on performance (Wright and Gardner, 2003: 324).

However, it should be noted here that the contrast between questions on for instance, payment systems, where the information can be objectively verified, and questions on job design (which ask about levels of autonomy or responsibility), with a strong subjective element, is potentially very considerable. There is therefore a need to balance the desire to be inclusive with the need to collect accurate information. As Wright and Gardner (2003) state, too much emphasis on objective measurement runs the risk of omitting some practices that are central in the HRM strategy. On the other hand, too much scope for personal judgement risks reducing the reliability of responses (Wright and Gardner, 2003).

In line with the previous reasoning, the scales in the questionnaire ranged from 1 to 7, but the anchors varied depending on the question. For example, the response for the training item: “What percentage of employees in your department has received training this past year?” ranged from 1=0% (of employees) to 7=100% (of employees). For the staffing comprehensiveness item: “How extensive is the employee selection process for a job in this department?”, the measurement scale ranged from 1= not extensive (use of few staffing techniques) to 7=very extensive (use of many different techniques). A more generic approach has been adopted in the job design variables such as “In this

department, there is an explicit policy of designing jobs to ensure the full use of workers' skills and abilities", ranging from 1=completely disagree to 7=completely agree (see Appendix 1). It is important to highlight the fact that when asking managers about high commitment practices, special emphasis was made to indicate that only information about practices applied to employees in the commercial/marketing should be provided. Covering letter or electronic mails sent to managers specified this issue. In addition, every question included in the questionnaires used expressions such as "in this department" or "applied to the employees in this department".

5.2.1.2. Operationalisation of HCM configurations

As described in Chapter 2, a human resource configuration or bundle is a distinctive coherent combination of practices built around an organisational logic (Guest et al., 2004: 81). The notion of human resource bundles (also known as systems or dimensions) are the main concept in the *internal fit* approach of the human resource strategy, and it is based on the idea that practices within bundles are internally consistent (MacDuffie, 1995: 204). Several approaches have been adopted to operationalise the internal fit between sets of practices²⁷. Some authors have studied consistency through the idea of "fit as gestalt", based on cluster analyses (e.g. Arthur, 1992). Other scholars have dealt with consistency according to the idea of "fit as profile deviation" based on the deviation from the ideal configuration (e.g. Delery and Doty, 1996). Another approach is to assign practices to bundles following theoretical assumptions, and then to verify the reliability of the scales through indicators such as Cronbach's alpha (e.g. Lepak and Snell, 2002). Other studies adopt the idea of "fit as covariation" based on factor analysis (Venkatraman 1989), either with an exploratory (e.g. Huselid, 1995) or a confirmatory character (e.g. MacDuffie, 1995) (Table 5.4).

Of all the previous approaches, Wood (1996a: 45) asserts that "an appropriate statistical method for seeing if the HCPs [high performance practices] in the chosen collection do form a unity is latent variable analysis". In this study, I operationalise the HCM bundles or systems from a latent variable perspective. This approach to treating the internal fit of

²⁷ For an overview of these approaches, see Delery (1998), Roche (1999), Wright and Gardner (2003) and Guest et al. (2004)

the HCM strategy considers that the human resource practices used in the organisation are chosen because of an underlying management approach. In other words, the shared variance of a set of human resource practices could represent the latent, underlying architecture, philosophy, or character that ties a set of human resource practices together (Dorenbosch et al., 2005). According to this conception of internal fit, the skill development, job enrichment and incentive configurations in the HCM strategy are underlying orientations that determine the use of certain practices. These three dimensions are treated in this study as latent factors, which explain the correlation between the practices falling into each category (De Menezes and Wood, 2006). Other studies in the HRM literature have adopted a latent variable approach (e.g. Howard and Foster, 1999; Rogg et al., 2001).

In sum, according to my conceptualisation of HCM, the strategy comprises three first-order factors, each corresponding to a HCM dimension: skill development, job enrichment and incentive configurations. A Confirmatory Factor Analysis (CFA) will be used to operationalise the HCM dimensions, described in the following sections.

Table 5.4. A revision of empirical studies extracting bundles of human resource practices

Study	No.practices	Procedure	Resultant dimensions
1. Arthur (1992)	10	Cluster analysis	<ul style="list-style-type: none"> ▪ Cost reducers (pure type) ▪ Conflictors ▪ Inducers ▪ Collective bargainers ▪ Involvers ▪ Commitment maximisers (pure type)
2. Huselid (1995)	13	Exploratory factor analysis	<ul style="list-style-type: none"> ▪ Employee skills and organisational structures ▪ Employee motivation
3. MacDuffie (1995)	14	Confirmatory factor analysis	<ul style="list-style-type: none"> ▪ Use of buffers ▪ Work systems ▪ HRM policies
4. Wood and Albanese (1995)	18	Confirmatory factor analysis	<ul style="list-style-type: none"> ▪ High Commitment Management²⁸
5. Delery and Doty (1996)	7	Theoretical assumptions (ideal profiles) ²⁹	<ul style="list-style-type: none"> ▪ Market-type system ▪ Internal system
6. Youndt et al. (1996)	18	Confirmatory factor analysis	<ul style="list-style-type: none"> ▪ Administrative HR system ▪ Human-capital enhancing HR system
7. Tsui et al. (1997)	7	Exploratory factor analysis	<ul style="list-style-type: none"> ▪ Human resource practices focusing attention on unit ▪ Human resource practices indicating employer's investments in employee
8. Hoque (1999)	22	Number of practices used by the firms	<ul style="list-style-type: none"> ▪ Strategic HRM ▪ Non-strategic HRM ▪ Low-HRM
9. Gardner et al. (2001)	12	Theoretical assumptions	<ul style="list-style-type: none"> ▪ Skill-enhancing HR practices ▪ Motivation-enhancing HR practices ▪ Empowerment-enhancing HR practices
10. Lepak and Snell (2002)	46	Theoretical assumptions	<ul style="list-style-type: none"> ▪ Commitment-based HR configuration ▪ Productivity-based HR configuration ▪ Compliance-based HR configuration ▪ Collaborative HR configuration
11. Paul and Anantharaman (2003)	70	Exploratory factor analysis	<ul style="list-style-type: none"> ▪ Selectivity in hiring ▪ Valued-based induction ▪ Comprehensive training ▪ Team-based job design ▪ Total approach to compensation ▪ Employee-friendly work environment ▪ Development-oriented appraisal ▪ Career development ▪ Employee ownership
12. Rodríguez y Ventura (2003)	46	Exploratory factor analysis	<ul style="list-style-type: none"> ▪ Development practices ▪ Compensation practices
13. Chan et al. (2004)	13	Exploratory factor analysis	<ul style="list-style-type: none"> ▪ Employee skills and organisational structure ▪ Employee motivation and communication
14. Den Hartog and Verburg (2004)	14	Exploratory factor analysis	<ul style="list-style-type: none"> ▪ Factor 1³⁰ ▪ Factor 2
15. Youndt and Snell (2004)	19	Theoretical assumptions	<ul style="list-style-type: none"> ▪ Acquisition HR configuration ▪ Developmental HR configuration ▪ Egalitarian HR configuration ▪ Collaborative HR configuration ▪ Documentation HR configuration ▪ Information technology HR configuration

²⁸ Although the initial number of practices is 18, in light of the adjustments in the confirmatory factor analysis, only 14 practices were considered by the authors in subsequent analyses

²⁹ Each ideal employment system is specified in this study as plus or minus one standard deviation from the mean of each variable

³⁰ These authors do not label the factors extracted from their analyses

5.2.2. MEASUREMENT OF HUMAN RESOURCE FLEXIBILITY

In order to measure the flexibility of human resources, I selected published scales to cover all the dimensions of this concept. Regarding human resource intrinsic flexibility, I adapted the measurement scales proposed by Volberda (1998) and Verdú (2002) to evaluate the extent to which employees reallocate in the organisation. In this scale, not only movements between jobs are considered, but also employee responsibilities over multiple tasks. Concerning human resource modification flexibility, I differentiated between skill and behavioural malleability, as presented in the conceptualisation of human resource flexibility (Chapter 3). First, to measure employee skill malleability, I followed the suggestions provided by Pulakos et al. (2000) to develop a 5-item scale designed to assess the facility with which employees alter their skill base. In this scale, questions such as employee efforts to update their skills and speed with which they learn new procedures at work are covered. Second, I measured behavioural malleability through a set of items used by Frese et al. (1996) to assess job initiative. These items capture the proactive side of employee behaviour, considering questions about staff's abilities to react to and anticipate changes. Finally, the human resource relational flexibility scale corresponds to the scale of social capital used by Youndt and Snell (2004). This is a four-item scale that measures both internal collaboration (between work colleagues) and external cooperation (between employees and customers, suppliers, etc.). All the items are detailed in Appendix 1.

The wording of these items was based on suggestions provided by Delery (1998) when considering human resource characteristics as mediating variables. According to this author, items to evaluate the features of the workforce can be assessed by a key respondent whose position in the organisation allows him or her to rate the level of the mediating variable. This approach has been adopted by previous studies, such as Wright et al. (1995), with NCAA basketball coaches rating the level of skills possessed by their teams, Huselid et al. (1997), considering the opinion of the HRM executives of workforce characteristics, or the research conducted by Farrell and Hakstian (2001), in which salesperson performance is evaluated through the supervisors' ratings.

In this research, items corresponding to the human resource flexibility dimensions were addressed to the commercial/marketing managers so that they could assess the degree of

flexibility shown by the employees for whom they were responsible. Following Huselid et al. (1997), items in the questionnaires asked these managers the *extent to which employees in this department currently possess the capabilities and attributes listed*, using a scale ranging from 1 (applies to very few employees) to 7 (applies to most of the employees).

Items corresponding to each HR flexibility dimension will be treated as indicators of a latent factor in this study. Thus, the components of human resource flexibility are represented as latent variables that explain the association existing between the items in each category.

5.2.3. MEASUREMENT OF ENVIRONMENTAL DYNAMISM

Different approaches have been adopted in the HRM literature to measure environmental dynamism. In general terms, there has been a propensity to use objective indicators of environmental dynamism (e.g. Youndt et al., 1996; Lepak and Snell, 2002). For example, Datta et al. (2005) use a two-step procedure to calculate the level of dynamism (Keats and Hitt, 1988). In the first step, the natural logarithm of sales for each industry is regressed against time; in the second step, the antilogarithms of the standard errors from these models are calculated and taken as an index of environmental dynamism.

However, in this research I used a subjective measure of environmental dynamism. As Sutcliffe and Huber (1998) argue, it is managers' perceptions of the environment that determine strategic decisions and actions in the organisation. Furthermore, these scholars demonstrated that there is no discrepancy between the perceptions of similar environmental characteristics among managers belonging to different organisations or industries. That is, managers' perceptions of the environment can be taken as an approximation of the actual environmental features that the organisation faces. To measure dynamism, I adopted the scale proposed by Sutcliffe and Huber (1998). This scale comprises five items, including the extent to which customer demands and preferences are stable, or the need to introduce changes in technology to keep up with competitors (Appendix 1). All these questions were assessed on a Likert-type scale, ranging from 1 (completely disagree) to 7 (completely agree). As for the previous

scales, these indicators will be considered as a consequence of the level of environmental dynamism faced by the organisation, which will be treated as a latent factor.

5.2.4. MEASUREMENT OF ORGANISATIONAL PERFORMANCE

Initial studies on the linkages between HRM and performance showed a tendency towards the use of financial results to measure organisational performance (Russell et al., 1985; Borman, 1991; Terpstra and Rozell, 1993). However, subsequent studies proposed the inclusion of multiple performance indicators; Huselid (1995) and MacDuffie (1995) made one of the first attempts to broaden the concept of organisational performance in the HRM literature. Since then, the range of performance indicators considered in the empirical studies has expanded and three categories of performance criteria can now be differentiated (Dyer and Reeves, 1995; Paawe and Richardson, 1997; Rogers and Wright, 1998): a) human resource performance indicators, such as rotation, absenteeism or job satisfaction (Arthur, 1994; Delaney and Huselid, 1996; Youndt et al., 1996), b) operative or intermediate performance indicators, such as productivity, quality, production flexibility, etc. (Delaney and Huselid, 1996; Youndt et al., 1996), c) financial performance indicators (ROA, ROE, benefits, sales, etc.)³¹ (Delery and Doty, 1996; Truss, 2001). In addition, the range of performance criteria has grown with the introduction of the balanced scorecard in the HRM literature (Kaplan and Norton, 1992). The balanced scorecard seeks to widen the range of performance measures in order to capture the expectations of all interest groups in the organisation (Ulrich, 1997; Ferris et al., 1999). The following table contains a summary of the performance indicators included in some relevant empirical studies on the contribution of HCM to organisational success.

³¹ Within this latter category, Dyer and Reeves (1995) and Rogers and Wright (1998) differentiate between financial accounting measures (e.g. ROE) and financial market measures (e.g. stock price).

Table 5.5. A revision of performance criteria in the HCM literature

	Arthur (1994)	Huselid (1995)	Delaney and Huselid (1996)	Delery and Doty (1996)	Youndt et al (1996)	Wright et al (1999)	Truss (2001)
Human resource	Turnover	Turnover	Employee retention Management-employee relationship Relationships between employees			Motivation Participation Abilities	
Operative	Productivity Raw material rate	Productivity	Product quality Product innovation Marketing Customer satisfaction		Productivity Equipment efficiency Customer alignment		
Financial		Q Tobin GRATE	Sales improvement Profitability Market share	ROA ROE		Benefit margin Benefit improvement Sales improvement	ROA Benefits per employee

In sum, there has been a considerable diversity of performance indicators considered in empirical studies into the impact of human resource management on performance. However, according to Becker and Gerhart (1996: 791), “the appropriate dependent variable will vary with the level of analysis, but in each case the focus should be on variables that have inherent meaning for a particular context”. According to the description of the unit of analysis in this study (subsection 5.1.1), I focus on HCM strategies and employee reactions to those strategies in the commercial/marketing department. Consequently, in the present research I included performance indicators that are more directly related to this organisational area. Specifically, considering the close interaction between employees in this area and the organisation’s customers, I considered two measures of performance.

The first measure of performance (“customer service effectiveness”) refers to the extent to which relationships with customers are efficient and customers’ needs and expectations are fulfilled. This concept has been adopted by previous studies under different denominations, such as employee service performance (Borucki and Burke, 1999; Liao and Chuang, 2004) or customer alignment (Youndt et al., 1996). Drawing from these studies, together with the research conducted by Volberda (1998), I

developed a five-item scale to measure *customer service effectiveness*³². This scale evaluates questions such as the range of services provided to customers or the organisation's capacity to influence future customer demands (Appendix 1).

The second measure considered is "customer satisfaction". Several studies that attempt to demonstrate the relevance of HRM to organisational success have adopted this performance criterion (e.g. Delaney and Huselid, 1996; Rogg et al., 2001; Gelade and Ivery, 2003; Challis et al., 2005), since it is a key factor contributing to organisational success in modern organisations (Grönroos, 1994; Bowen and Ford, 2002). In this study, I adopted the customer results scale proposed by Escrig-Tena and Bou-Llusar (2005), which includes indicators related to customer retention, improvement in communication with customers or reduction in the number of customer complaints.

Similarly to previous studies in the HRM field (e.g. Youndt et al., 1996; Delaney and Huselid, 1996), the performance measures used in this research are relative (or benchmarked), since I asked informants to assess organisational performance over the past three years in comparison with the performance of the firm's competitors. The use of perceptual data introduces certain limitations through increased measurement error and the potential for mono-method bias. However, as Delaney and Huselid (1996) affirm, research has found that measures of organisational performance correlate positively with objective measures of performance (Dolliger and Golden, 1992; Powell, 1992).

5.2.5. MEASUREMENT OF CONTROL VARIABLES

The analysis of the relationships between HRM and organisational performance should consider control variables that may account for an association between HRM and performance (Gerhart et al., 2000; Wall and Wood, 2005). Control variables are used because they are related to both the independent and dependent variables. A lack of control for such variables could lead to the observation of spurious relationships (i.e. observed relationships that are due to both variables covarying with the control) or suppression (when no observed relationships appear between the independent and

³² I slightly modified the denomination of the scale to differentiate it from a more behavioural-oriented perspective that underlies the studies by Borucki and Burke (1999) and Liao and Chuang (2004).

dependent variable because one of the variables has a negative relationship with the control) (Rogers and Wright, 1998: 319). In sum, control variables may help researchers to isolate the impact of the main independent variable on the dependent variable.

While certain studies include controls by their very design (e.g. single-country industries control for institutional characteristics and labour market traits), other research needs to collect data on indicators that can act as control variables (Boselie et al., 2005). Even though the variables controlled in previous studies into linkages between HRM and organisational performance have varied considerably³³, size and sector appear in the majority of empirical studies (e.g. Arthur, 1994; Huselid, 1995; Koch and McGrath, 1996; Youndt et al., 1996; Batt, 2002; Ahmad and Schroeder, 2002). Other commonly considered variables are age, location, strategy and unionisation (Rogers and Wright, 1998).

In this study, I included four control variables, namely: size, sector, nature of the organisation's activities and organisational strategy. Size was assessed by the number of employees in the firm. This information was used to create two groups of companies: medium-size companies (100-249 employees) and large companies (250 employees or more)³⁴. Regarding sector, I differentiated between industrial and service companies (according to the SIC code), and then created a dichotomous variable, where 1 corresponds to industrial sector companies and 2 to service firms. Furthermore, to analyse the characteristics of the sector in greater detail, I complemented the information provided by the SIC code with an alternative measure of the type of activities performed by the organisation. This question, assessed on a 7-point Likert scale, refers to the degree of interaction between employees and customers required in the main organisational activity. The measurement of organisational strategies was based on Miles and Snow's (1978) strategy typology, which differentiates between defenders, prospectors, analysers and reactors. This variable was assessed by managers

³³ For a review of control variables in the HRM literature, see Boselie et al. (2005). According to Wall and Wood (2005) variability of the variables to be included is largely consistent with the nature of the study (e.g. controls for sector in heterogeneous samples).

³⁴ In 1996, the European Commission specified the criteria to determine organisational size according to the number of employees (European Commission, 1996). Following these suggestions, small firms have 10 to 49 employees; medium-sized firms have between 50 and 249 employees, and large firms have 250 or more employees. However, as detailed in the first section of the chapter, only organisations with 100 or more employees were considered in this research. Consequently, no small companies appear in the sample, and the group corresponding to medium-size firms ranges from 100 to 249 employees.

through the paragraph method, which consists of showing respondents paragraphs with a short description of each strategy type and then asking them to identify the strategy that best describes their firm's strategic orientation. Therefore, this variable was also dichotomous, with four categories, each corresponding to a strategy type in Miles and Snow's (1978) classification.

5.3. STATISTICAL PROCEDURE

The testing of the hypotheses was carried out through Structural Equation Modelling (SEM) using the statistical programme EQS 6.1 for Windows (Bentler, 1995). I now briefly describe some of the benefits of this statistical procedure and provide a review of some SEM techniques and models that are relevant for this research.

5.3.1. DESCRIPTION OF STRUCTURAL EQUATION MODELLING

The utilisation of Structural Equation Modelling provides two main advantages to quantitative research. On the one hand, SEM allows the distinction to be made between observed and latent variables and thus enables variables that are not directly observable to be included (Mueller, 1996; Kline, 1998). In this research, measures of HCM, HR flexibility, organisational performance and environmental dynamism are latent variables, while control variables (size, sector, nature of organisational activities and organisational strategy) are observed variables. On the other hand, in SEM models simultaneous equations can be estimated, obtaining information about indirect effects (when mediator variables are included), total effects (sum of direct and indirect effects) or moderation effects (Bollen, 1989; Mueller, 1996).

In general terms, SEM models consider that the covariance matrix of the observed variables in a model (Σ) has a specific structure which can be expressed in terms of a set of parameters that derive from that model (Bollen, 1989), as follows:

$$\Sigma = \Sigma(\theta)$$

where Σ : covariance matrix of the observed variables for the population

θ : vector containing the parameters of the model

$\Sigma(\theta)$: covariance matrix in terms of the parameters of the model

Since the covariances for the whole population are not known (Σ) nor the parameter covariances (θ), it is necessary to use the variance and covariance matrix for the sample (S)³⁵, which is a consistent estimator of the matrix corresponding to the population. A SEM model is estimated by adjusting S to $\Sigma(\theta)$. In sum, SEM seeks to minimise the differences between the covariances for the sample and the covariances that the model predicts (Bollen, 1989).

The methodology underlying the use of SEM is based on four steps (Kline, 1998). The first step (*specification*) consists of the definition of the research hypotheses, either by drawing a diagram of the model, or by formulating a series of equations. These equations define the model's parameters and they correspond to presumed relations between observed or latent variables.

The second step is to determine whether the model is *identified*, i.e. if it is possible to derive a unique estimate of each model parameter. A model is identified when there are more equations than parameters to be estimated. If a model fails to meet requirements for its identification, attempts to estimate it may not be successful.

Thirdly, an *analysis* of the model should be carried out, by obtaining estimates of the model's parameters. Although the most frequently used estimation method is maximum likelihood (ML), this procedure assumes multivariate normality in the variables. Robust estimators are recommendable when the study deals with non-normal variables.

A subsequent step consists of *evaluating* the model fit, which involves determining how adequately the model accounts for the data. Analysis of the model fit can be carried out through the chi-square value. The chi-square will be non-significant if the hypothesised model has a good fit ($p \geq 0.05$). In addition, researchers can use other fit indicators. Because there is no "best" fit index, researchers are advised to use a variety of qualitatively different indices (Bollen and Long, 1993). In this research, I considered the most commonly used and recommended indices of fit. Of indicators of absolute fit, I considered the goodness-of-fit index: GFI (Bentler and Bonett, 1980) and the adjusted goodness-of-fit index: AGFI (Bagozzi and Yi, 1988). These two indices measure the relative amount of variance and covariance explained by the model and their values should be as close to unity as possible. I also employed various comparative fit indices,

³⁵ See Appendix 3.

such as the Bentler-Bonnet non-normed fit index: BBNNFI (Bentler and Bonett, 1980), which reflects the proportion by which the model fit improves compared to a null model (random variables), the comparative fit index: CFI (Bentler, 1990), which is an index resistant to errors associated with sample size, and the root mean square error: RMSEA (Steiger, 1990), which estimates the difference between the original and reproduced covariance matrices in the population. Values for the BBNNFI and CFI should be close to 1, while in the case of the RMSEA, values inferior to 0.1 are considered a good fit. Finally, I considered the parsimony index normed chi-square: NC (χ^2/df), which accounts for the degrees of freedom necessary to achieve the fit (Jöreskog, 1969). Values of NC up to 1 or 2 are acceptable.

In the following subsections, I will address specific SEM models relevant to the present research, such as Confirmatory Factor Analysis (CFA), SEM models with mediator variables and SEM models with moderator variables.

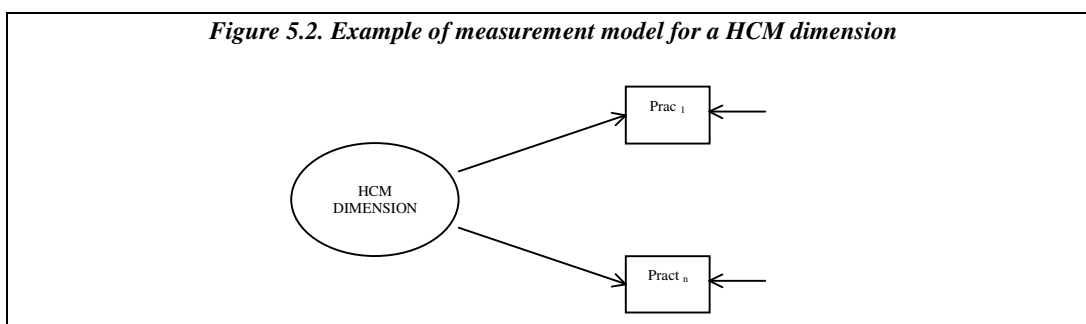
5.3.2. AN OVERVIEW OF SOME SEM MODELS

The use of SEM entails two interrelated steps. First, the estimation of the *measurement model*, which refers to the relationships between latent and observable variables. Second, the estimation of the *structural model*, specifying linkages between different latent variables (Bollen, 1989).

5.3.2.1. Measurement models and confirmatory factor analysis

The purpose of a measurement model is to describe how well the observed indicators serve as a measurement instrument for the latent variables. Indicators in measurement models can be viewed as endogenous variables, and the latent factors as exogenous variables. The associated procedure to assess the properties of measurement models is known as Confirmatory Factor Analysis (CFA). CFA models have two main features (Kline, 1998). First, each indicator in the CFA model is represented as having two causes: the latent factor that the indicator is supposed to measure, and all other sources of variance, which are represented by the measurement error term. Second, the measurement error terms are independent of each other and of the latent factors.

The specification of a CFA model (for the case of a single latent factor) involves establishing relationships between the indicators and the latent variable that they measure. In this regard, AFC models require the factor loading of one indicator to be fixed to 1.00 in order to give the latent variable the same metric as the indicators. In this study, all the variables (except for control variables) are considered latent factors. For example, for the case of HCM, each of its dimensions is represented as a latent factor whose indicators are a set of human resource practices (Figure 5.2). Similarly, HR flexibility dimensions are latent constructs that explain the correlation between different indicators of flexibility, and so on.



The principal application of CFA is the testing of the scale construct validity (Mueller, 1996). Once the four requirements inherent in SEM methodology (specification, identification, analysis and evaluation) have been verified, CFA models should include an interpretation of factor loadings (which represent regression coefficients estimating the direct effects of the factors on the indicators) as well as their statistical significance (Kline, 1998). It should be noted here that CFA models can include either a single latent factor, higher-level latent factor (e.g. second-order latent variables) or several latent factors. In this latter case, correlations between latent factors should also be estimated, together with the comparison of a multiple factor model with alternative models. In the following chapter I describe the specific nature of the CFA models estimated in this research.

5.3.2.2. Structural models

The specification of structural models allows the testing of hypotheses on the causal effects between different latent variables. In these models, exogenous latent variables represent independent latent factors that are not predicted by any variable within the model. On the other hand, latent endogenous variables are determined by other variables and have a disturbance term that reflects the unexplained variance in this variable due to all unmeasured causes.

Estimation of structural models consists of two steps (Anderson and Gerbing, 1988). The first step entails assessing the fit of the proposed model to the observed data. If the model does not acceptably fit the data, individual hypotheses cannot be examined. In the second step, the statistical significance and magnitude of the structural parameters are evaluated (corresponding to the causal relationships between variables), together with the reliability of the structural equations (through the coefficient of determination R^2).

In this study, structural models with direct causal effects between latent variables will be estimated to analyse the impact of HCM on HR flexibility (hypotheses 1 to 9) and to examine the influence of HR flexibility on performance (hypotheses 10 to 13). However, for the remaining hypotheses, specific types of structural models are required. Firstly, models including moderating effects are necessary to estimate the extent to which environmental dynamism strengthens the influence of HR flexibility on organisational performance (hypotheses 14 to 17). Secondly, models including mediator variables between the dependent and the independent variables will allow to examine the intermediate role of HR flexibility on the HCM-performance relationship (hypotheses 18 to 21). I now describe in greater detail the procedures associated to these SEM models.

a) Structural models for tests of moderation

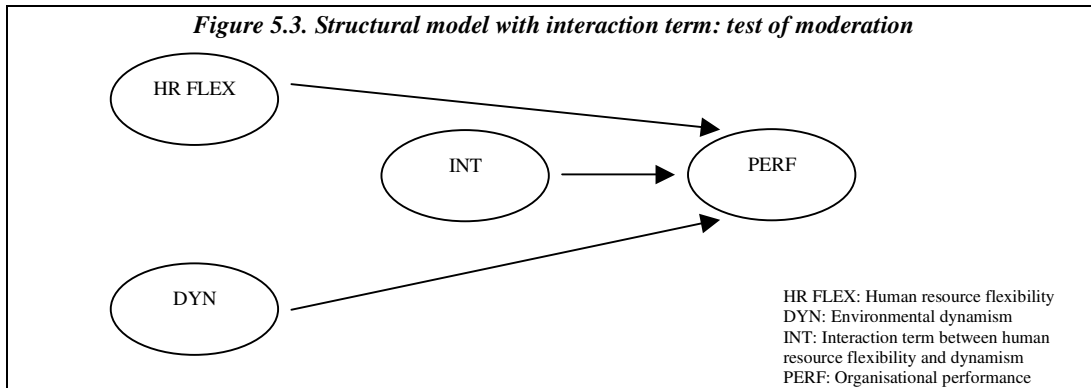
Many different approaches have recently been developed to test the existence of interaction effects between latent variables, including multiple-group analysis (Yang et al., 2001), two-stage least squares (TSLS) (Bollen, 1995, 1996; Bollen and Paxton, 1998), product indicant methods (using maximum likelihood and asymptotically

distribution-free procedures) (Jaccard and Wan, 1995; Jöreskog and Yang, 1996), and the latent variable score approach (Jöreskog et al., 1999; Jöreskog, 2000).

In this study, I adopt the latent variable scores approach (Jöreskog et al., 1999; Jöreskog, 2000) to test the interaction effect between human resource flexibility and dynamism on performance. This method is based on the calculation of the latent variable scores for every individual in the sample. Latent variable scores satisfy the same relationships as the latent variables themselves (Jöreskog, 2000). They are unbiased and produce the same mean and covariance matrix as the latent variables (Jöreskog, 2000). The latent interaction variable is created by multiplying the latent variable scores of the latent independent variables. This is a full information method, but it neither requires the introduction of products of observed variables, nor the imposition of nonlinear constraints (Schumacker, 2002). Therefore, this method is easy to implement and is also useful when testing more complex structural equation interaction models.

To test for moderation effects it is first necessary to adjust a structural model without the latent interaction term (Bollen and Paxton, 1998)³⁶. In this study, HR flexibility and dynamism are considered determinants of organisational performance. In a further step within this procedure, the latent variable scores for these variables are obtained in order to calculate the product interaction term directly from these variables. Finally, a structural model to test for the direct effect of the interaction term on the dependent variable should be estimated. In the present research, HR flexibility, environmental dynamism and the product term between these variables are included as predictors of organisational performance (Figure 5.3). A statistically significant coefficient corresponding to the effect of the interaction term on the dependent variable would confirm that dynamism moderates the relationship between human resource flexibility and performance.

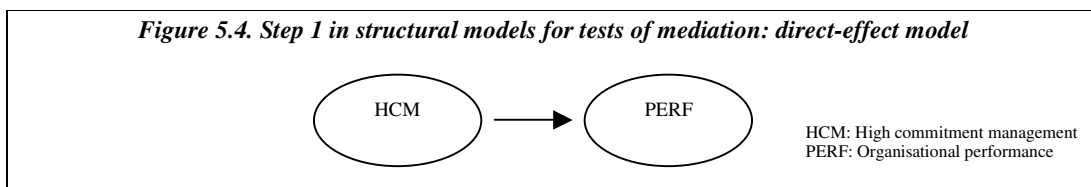
³⁶ Results obtained from full information methods to estimate interaction effects can be affected by misspecified relationships in the structural model, since they estimate all parameters simultaneously. For this reason, the adjustment of a structural model without the latent interaction term is of critical importance.



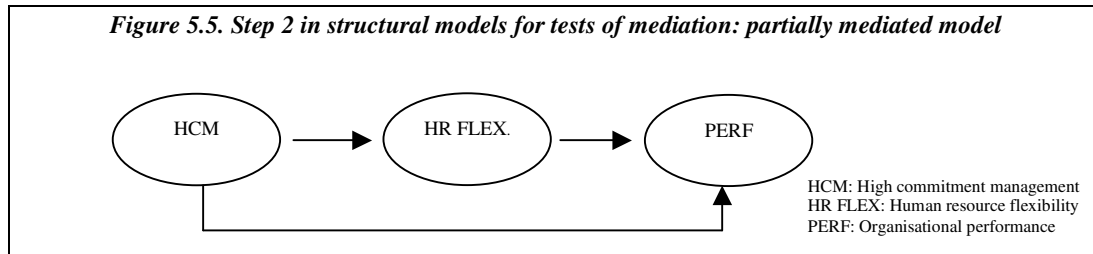
b) Structural models for tests of mediation

SEM allows the testing of mediation effects because both the direct and indirect effects can be simultaneously estimated (Baron and Kenny, 1986). In the present research, this procedure will allow to verify whether HR flexibility mediates the linkage between HCM and organisational performance (Hypotheses 18 to 21). According to Holmbeck (1997), three models must be estimated to test for mediation effects in SEM.

The first step consists of estimating a *direct-effect* model that tests the effect of the predictors on the dependent variables. In the context of this research, the direct effect of HCM on organisational performance should be estimated (Figure 5.4). For mediation to exist, the path coefficients in the direct-effect model (i.e. the direct influence of HCM on organisational performance) must be significant in order to continue to test the mediation effect. If the structural coefficients in this model were not significant, no mediation effect could exist (Wei et al., 2003).



In the second step, a *partially mediated* structural model is estimated. In the present study, this model includes the effects of HCM on HR flexibility, the influence of HR flexibility on organisational performance, and the direct effect of HCM on organisational performance (Figure 5.5).



The third step is to compare the partially mediated model with the *fully mediated* model, in which the direct effect from the independent variable (HCM) on the dependent variable (organisational performance) is constrained to zero. A significant difference between the partially and the fully mediated models indicates the best fit model. An alternative procedure to determine the nature of the mediation effect (partial versus full mediation) is to analyse the decomposition solution that is available in many statistical programmes. According to the decomposition of effect results, the total effect of an independent variable on a dependent variable is broken down into its direct and indirect effects (Tabachnick and Fidell, 1996; Brown, 1997). A significant indirect effect indicates that a certain amount of the independent variable's total effect on the dependent variable occurs through the mediator. Moreover, the significance or non-significance of the direct effect in this model can be used to determine whether it is a full or partial mediation.

5.4. CHAPTER SUMMARY

The purpose of this chapter is to describe the research design underlying my fieldwork. In doing so, I first present the selection of the company sample and the data collection strategies. The sample in this study consists of companies belonging to both service and industrial sectors and within each firm, I focus on the commercial/marketing area. Through the administration of structured questionnaires, I collected information about HCM practices applicable to employees in the commercial/marketing department, the flexibility shown by the employees in this organisational area, environmental dynamism and organisational performance indicators. A total of 226 valid responses constitute the final sample.

The elaboration of the questionnaires administered to managers required the development of measurement scales for each theoretical concept. Thus, in the second section I describe the selection of indicators for each construct. Details of all these measures are shown in Appendix 1.

Finally, the third section of the chapter refers to the statistical procedure that will be used to test the hypotheses in the next chapter. Specifically, I focus on Structural Equation Modelling (SEM). Here, I discuss the suitability of SEM for the research and review some specific SEM models required to verify the causal relationships included in the hypotheses.

In the following chapter, the application of SEM to the data will allow to draw some conclusions about the causal relationships proposed in the hypotheses.

Chapter 6. Results of the empirical research

6.0. INTRODUCTION

In this chapter, I present the quantitative treatment of the data and a discussion of the main results. With the use of Structural Equation Modelling methodology I attempt to achieve two objectives: a) to verify the validity of the measurement scales corresponding to the constructs included in this study (High Commitment Management, human resource flexibility, environmental dynamism and organisational performance), and b) to contrast the research hypotheses stated in Chapter 4.

In the first section of the chapter, I present the results of several tests to check the construct validity of the scales used to measure the various concepts of this research. Specifically, I conducted tests of dimensionality, reliability and validity.

In the second section, I report the results of the estimation of the structural models. These models include the causal relationships that correspond to the hypotheses formulated in Chapter 4. The first group of hypotheses (H1-H9) refers to the impact of the various HCM components on human resource flexibility. The second group of hypotheses focuses on the relevance of human resource flexibility to organisational performance (H10-H13), and also introduces the role of environmental dynamism as a moderator variable in this relationship (H14-H17). Finally, hypotheses H18 to H21 centre on the mediating role of human resource flexibility between HCM and organisational performance. The final section summarises the main findings of the chapter.

6.1. CONSTRUCT VALIDITY OF THE MEASUREMENT SCALES

In this section, I report the results of the analyses performed to verify the appropriateness of the selected scales to measure their underlying theoretical constructs i.e., their construct validity. According to Schwab (1980: 6), construct validity indicates the correspondence between a construct (conceptual definition of a variable) and the operational procedure to measure or manipulate that construct. The construct validation process consists of several steps such as analyses to define the referent construct, demonstration of the internal consistency of the measure and analysis of both the measure's convergence with other measures of the construct and divergences from measures of other constructs (Rogers and Wright, 1998: 313). Specifically, I conducted tests of dimensionality, reliability and validity for each scale in this study.

Analyses of a scale's *dimensionality* consist of verifying whether the available data confirm the existence of the theoretical dimensions defined for a construct. These analyses can be performed by estimating several measurement models through CFA. By studying the model's fit, factor loadings and their statistical significance, conclusions on the appropriateness of the indicators to measure the associated latent variable can be drawn.

Reliability refers to consistency of test scores i.e., whether the application of a specific measure in different moments and contexts would provide the same results. Reliability indicators include Cronbach's alpha, as well as an index of composite reliability for research using SEM.

Validity tests include three different aspects. First, content validity, which reveals whether indicators associated to a construct are representative of the domain they are supposed to measure. The evaluation of content validity is not a statistical matter, but rather it depends on the researcher's opinion. Convergent validity denotes whether different indicators measuring the same concept are highly intercorrelated. Discriminant validity refers to the distinctiveness of the factors measured by different sets of indicators.

This section is divided into four sub-sections, each corresponding to a different scale (HCM, HR flexibility, organisational performance and environmental dynamism). For

each sub-section I will describe the results of the three tests included in the construct validation process (dimensionality, reliability and validity).

6.1.1. CONSTRUCT VALIDITY OF THE HCM SCALE

Drawing from the reasoning provided in Chapter 2, this study conceptualises the High Commitment Management (HCM) strategy following the AMO Model structure - Abilities, Motivation, Opportunity - (Bailey, 1993; Delaney and Huselid, 1996; Guest, 1997; Applebaum et al., 2000; Gardner et al., 2001). This conceptualisation considers HCM as a multidimensional concept, whose human resource practice components are grouped into three dimensions, namely: skill development, job enrichment and incentives.

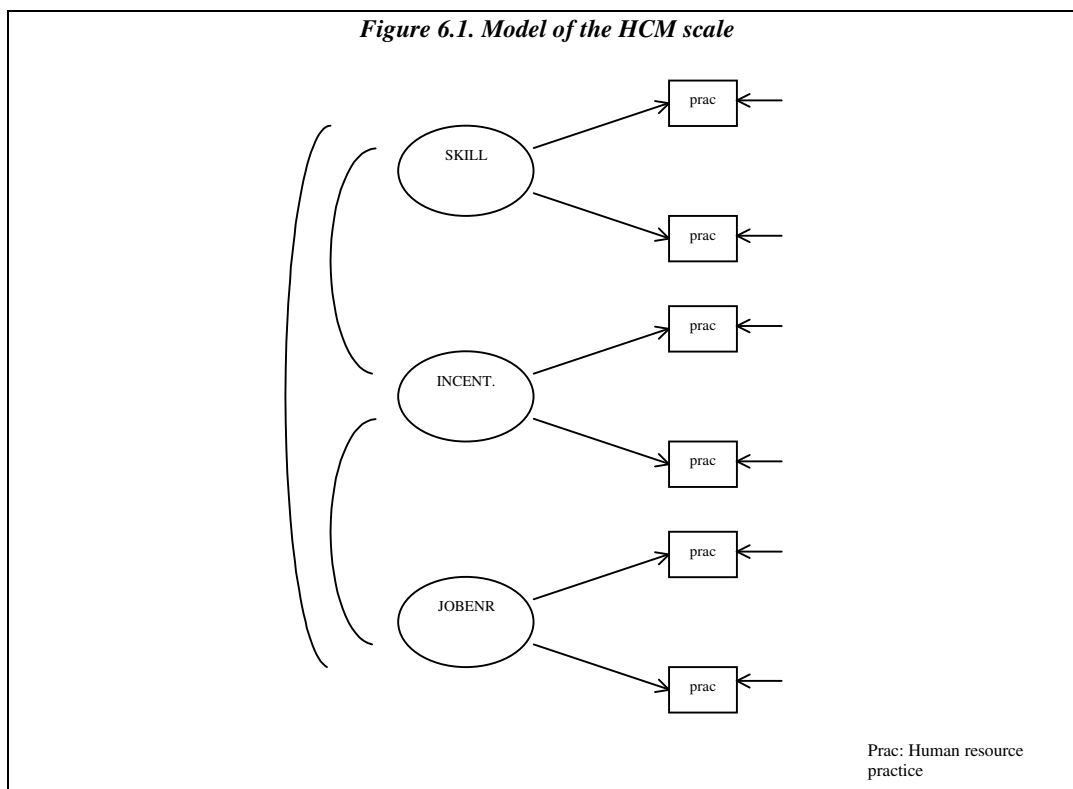
6.1.1.1. Dimensionality of the HCM scale

As discussed in the previous chapter, the three HCM dimensions are considered in this study as interrelated latent factors, whose indicators are a set of human resource practices (Figure 6.1). The analysis of the dimensionality of this scale was carried out in two steps. In the first step, I verified the unidimensionality of each component of the HCM. In the second step, I tested a three-factor model comprising all the dimensions of the HCM strategy as correlated factors.

In order to confirm the unidimensionality of the three dimensions (i.e. that all the items are indicators of a same concept), I performed three Confirmatory Factor Analyses (CFA), one for each HCM first order factor: skill development (SKILLS), job enrichment (JOBENRICH), and incentives (INCENTIVE). In the first estimation of the unidimensional models, I eliminated some indicators, in accordance with the values of the fit indices and the parameter reliability³⁷. In particular, two items related to the organisational reward system were eliminated. Previous studies that analyse the components of the HCM have also ignored rewards in their conceptualisation of HCM, arguing that the reward structure is not a critical element to foster workforce commitment, but rather a reinforcing factor that encourages employee performance

³⁷ See Appendix 1

once other motivational elements, such as empowerment, have been introduced in the workplace (e.g. Wood, 1996a, 1996b).



The overall χ^2 for the adjusted models was not statistically significant³⁸ ($p \geq 0.05$) and the values of the fit indices fell within the commonly accepted limits³⁹ (Table 6.1). Since scales corresponding to INCENTIVE and JOBENRICH included only three indicators, these models were saturated (0 d.f.) and the fit was perfect. To provide a more accurate interpretation of this fit, I also estimated a two-factor model where these dimensions were considered to be interrelated factors (INC_JOB).

Table 6.1. Fit indices for the unidimensional models of HCM

Model	χ^2_{SB}	d.f.	p	BBNNFI	CFI	RMSEA	GFI	AGFI	NC
SKILL	4.1087	5	0.53388	1	1	0.000	0.991	0.973	0.82
INCENTIVE	-	0	-	1					
JOBENRICH	-	0	-	1					
INC_JOB	13.2583	8	0.10327	0.936	0.966	0.054	0.973	0.930	1.66

³⁸ I used the Satorra Bentler chi-square (χ^2_{SB}) due to the non-normality of the variables

³⁹ See Chapter 5, section 5.3

Having verified the unidimensionality of the three scales, I performed a three-factor CFA to corroborate the proposed dimensionality of the HCM scale, as depicted in Figure 6.1. This model consisted of three interrelated first-order latent factors with each indicator loading onto one of the three latent factors. I did not allow error variances to correlate and, for each latent factor, I constrained the path from one item to 1.00 for purposes of statistical identification. Results indicated that the model provided a good fit to the data (Table 6.2).

Table 6.2. Fit indices for the proposed HCM model

Model	χ^2_{sb}	d.f.	p	BBNNFI	CFI	RMSEA	GFI	AGFI	NC
HCM three factor	54.1368	40	0.06708	0.930	0.949	0.040	0.949	0.916	1.35

Item loadings and factor correlations are presented in Table 6.3. All item loadings are statistically significant. As can be observed, the overall fit of the model required the introduction of an additional relationship, which refers to the consideration of item V11 as an indicator of the first HCM dimension (SKILL). According to MacDuffie (1995) and Guest et al. (2004), since the whole human resource system of the organisation is made up of overlapping and interdependent practices, clear factors are unlikely to emerge. In this research I consider that the initiatives to promote employee participation (V11) reflect not only job enrichment, but also the emphasis that the organisation places on workforce development. This is consistent with the conceptualisation of the skill development provided, for instance, by Guest (1997). Nonetheless, the relative importance of this indicator is higher for the JOBENRICH dimension, according to the value of the item loading corresponding to variable V11 (0.559).

Table 6.3. Standardised solution for the proposed HCM model

Item	SKILL	INCENTIVE	JOBENRICH	Errors
V1	0.591			0.807
V2	0.620			0.784
V3	0.694			0.720
V4	0.539			0.842
V5	0.429			0.903
V6		0.566		0.824
V7		0.618		0.786
V8		0.575		0.818
V9			0.665	0.747
V10			0.632	0.775
V11	0.226		0.559	0.789
Factor correlations				
SKILL	1			
INCENTIVE	0.511	1		
JOBENRICH	0.056	0.613	1	

In addition, scale dimensionality tests can be complemented with a set of comparisons with nested models (hierarchical analysis). Nested models include parameter restrictions as compared to a full model. Chi-square difference tests measure the significance of the difference between nested and full models. When the p values associated to the chi-square difference test are inferior or equal to 0.05, the compared SEM models are statistically different.

In this study, the three-factor model of HCM was compared to four alternative (nested) models. First, I estimated a unidimensional model in which all the variables were indicators of a single factor. This conceptualisation of the HCM interprets HCM as a single concept (first-order latent factor) that underlies the use of all the high commitment practices (Wood and Albanese, 1995). Second, I estimated a three-factor model in which the HCM dimensions were not correlated. A good fit of this model would indicate that the adoption of some practices in one of the HCM dimensions does not imply that the organisation follows certain practices in other areas; that is, there is no horizontal fit or internal congruence in the definition of the high commitment strategy. Finally, I estimated two additional models in which the indicators of the two factors showing higher correlations (with the values in Table 6.3 taken as a reference) were indicators of a single factor, which was correlated with the third factor. With these final models, I attempted to show that the HCM strategy dimensions measure different concepts, despite being correlated. Chi-square difference tests indicated that the three-

factor structure, with correlated factors, was the solution that showed the best fit (Table 6.4).

Table 6.4. Fit indices for proposed and alternative HCM models

Model	χ^2_{SB}	d.f.	p	BBNNFI	CFI	RMSEA	GFI	AGFI	NC	$\Delta\chi^2$	Δdf
HCM three factor (proposed model)	54.1368	40	0.067	0.930	0.949	0.040	0.949	0.916	1.35	-	-
Alt 1: Single factor	162.6298	44	0.000	0.464	0.572	0.109	0.820	0.731	3.69	108.493	4
Alt 2: Three factor (uncorrelated factors)	144.1921	44	0.000	0.683	0.746	0.084	0.898	0.848	3.28	90.055	4
Alt 3: Two factor (JOBENRICH&INCENTIVE combined)	82.4397	43	0.000	0.818	0.858	0.064	0.916	0.871	1.92	28.3029	3
Alt 4: Two factor (SKILL&INCENTIVE combined)	144.504	43	0.000	0.706	0.770	0.102	0.885	0.824	3.36	90.3672	3

Note: $\Delta\chi^2$ refers to the difference in chi-square between the proposed model and the alternative model; Δdf refers to the difference in degrees of freedom between the proposed model and the alternative model.

Thus, my data confirm that HCM is structured according to the premises of the AMO model (Bailey, 1993; Delery and Doty, 1996; Guest, 1997). Consequently, I defend the existence of three interrelated dimensions in the HCM strategy. The first dimension refers to the importance that the organisation places on the development of its workforce, by carefully selecting the future workforce and by providing exhaustive training and developmental activities. The second dimension (job enrichment) is measured in this study through several indicators that reflect the provision of challenging and interesting jobs, covering measures of teamwork, participatory programmes and job design focused on the full utilisation of employee abilities. Finally, the third dimension (incentives) is a latent factor that captures the correlations between performance assessment and internal promotion practices. Items corresponding to the reward system of the organisation were eliminated from this scale.

6.1.1.2. Reliability of the HCM scale

To test the reliability of the proposed HCM scale, the Cronbach's alpha and a measure of the composite reliability of the scales were analysed. The values of the Cronbach's alpha were 0.695 for the SKILLS dimension, 0.608 for the INCENTIVE dimension and 0.650 for the JOBENRICH dimension. The reliability of these scales is similar to that obtained by previous studies measuring human resource systems or bundles, such as those of Huselid (1995), who obtained alphas of 0.66 and 0.67 for his human resource

scales, Delaney and Huselid (1996), who reported alphas ranging from 0.66 to 0.88 or Ramsay et al. (2000), whose scales show reliabilities of 0.65, 0.60 and 0.54.

The composite reliability index takes into account the relative importance of each indicator in the factor to which it belongs. The composite reliability of the scales were 0.714 (SKILL), 0.611 (INCENTIVE) and 0.659 (JOBENRICH). These values are close to 0.7, which is the commonly accepted value, except for the INCENTIVE scale. Although this scale shows a lower reliability, the elimination of additional indicators would negatively affect the content validity of the scale.

6.1.1.3 Validity of the HCM scale

a) Content validity

From the review of the AMO studies in Chapter 5, I identified the areas of the human resource strategy that should be included in each dimension (Delery and Doty, 1996; Guest, 1997; Bailey et al., 2001; Gardner et al., 2001; Batt, 2002; Guest et al., 2004). In order to cover the content of these areas, I adopted items included in previous scales (Snell and Dean, 1992; Wood and Albanese, 1995), which have been published and empirically validated in subsequent research (e.g. Hoque, 1999; Whitener, 2001). For example, to measure the skill configuration of the HCM strategy, I considered practices associated to the provision of training (V1 – V4) and to the exhaustiveness of staffing processes (V5). This review of the literature allows me to verify that the scales developed to measure the HCM capture all the aspects of this concept.

b) Convergent and discriminant validity

In order to test the convergent validity of this scale, the Bentler-Bonett coefficient (BBNNFI) was analysed. Values over 0.9 indicate the convergent validity of the scale. As shown in Table 6.1, the Bentler-Bonett index was higher than 0.9 for the three scales of the HCM model. In addition, authors such as Bollen (1989) recommend the study of the factor loadings as an additional test of convergent validity. Statistically significant factor loadings would also reflect the convergent validity of a scale. All the t values of the factor loadings (Table 6.3) were above the critical value of 1.96. I can therefore

conclude that the scales to measure the different HCM aspects show convergent validity.

The analysis of the model's discriminant validity was carried out by formulating CFA with pairs of dimensions. The first CFA included two correlated dimensions. The second CFA set the correlation between the dimensions at 1.00. Discriminant validity can be determined by performing a chi-square difference test between the two models. A significant chi-square difference would imply that the model in which the correlation is set at 1.00 does not appropriately fit the data; that is, that the indicators of both dimensions are not appropriate to measure the same factor and as such, they show discriminant validity.

The results of these analyses are shown in Table 6.5. The first value in each cell corresponds to the chi-square value and the degrees of freedom of the model in which the two dimensions are correlated. The second value indicates the chi-square value and degrees of freedom for the model in which the correlation is set at 1.00. Finally, the correlation between the dimensions is shown in brackets. By performing a chi-square difference test between each pair of dimensions, I verified that the differences in the chi-square of the three models were statistically significant; that is, despite correlation between the HCM dimensions, each of them represents a distinct concept.

Table 6.5. Discriminant validity test for HCM dimensions

	SKILL	INCENTIVE
INCENTIVE	26.827 (19) 36.693 (20) (0.538*)	
JOBENRICH	24.356 (19) 45.826 (20) (0.158)	13.2583 (8) 16.9910 (9) (0.761*)

*p<0.05

6.1.2. CONSTRUCT VALIDITY OF THE HUMAN RESOURCE FLEXIBILITY SCALE

The human resource flexibility concept presented in Chapter 3 comprises four dimensions, namely: intrinsic flexibility (IF), skill malleability (SM), behavioural malleability (BM) and relational flexibility (RF). These dimensions are considered interrelated latent factors. As for the HCM scale, the construct validity of the human

resource flexibility scale was conducted through three analyses: a) dimensionality, b) reliability and c) validity.

6.1.2.1. Dimensionality of the human resource flexibility scale

To test the dimensionality of the human resource flexibility scale, I firstly examined the unidimensionality of each HR flexibility component by assessing the fit indices, parameter validity and statistical significance of four single-factor CFAs. Some of the items were eliminated, attending to their statistical significance and the results of the LM Test. In particular, I deleted one item from the skill malleability scale, due to its non-statistical significance. This item referred to the proactive role of employees in improving their competences. I do not consider that the elimination of this indicator alters the core meaning of the skill malleability scale, as other variables, such as V15 (“employees in this department try to update their skills and abilities continuously”) or V17 (“employees in this department anticipate future skill requirements that may be needed to perform their jobs”) measure the employees’ efforts to learn. I also deleted an item from the relational flexibility scale. Although this indicator was included in the original scale of social capital proposed by Youndt and Snell (2004), I consider that the external and internal aspects of employee relational flexibility are covered by the remaining items (V23-V25).

Table 6.6 presents the fit indices for the modified models. Since the scales corresponding to intrinsic flexibility (IF) and relational flexibility (RF) had only three items, the model was saturated (0 d.f.) and it showed a perfect fit. In order to analyse the fit of these models in greater detail, I formulated an additional CFA in which these two dimensions were correlated first-order latent factors (IF_BM). As can be observed in Table 6.6., none of the chi-square values corresponding to these models was statistically significant. Fit indices also verified the unidimensionality of the four scales.

Table 6.6. Fit indices for the unidimensional models of human resource flexibility

Model	χ^2_{SB}	d.f.	p	BBNNFI	CFI	RMSEA	GFI	AGFI	NC
IF	-	0	-	1					
SM	1.7918	2	0.40824	1	1	0.000	0.988	0.941	0.89
BM	0.1787	2	0.92509	1	1	0.000	1	0.998	0.09
RF	-	0	-	1					
IF_RF	14.3039	8	0.07418	0.936	0.966	0.059	0.974	0.932	1.79

Furthermore, I evaluated a general model of HR flexibility, including the four intercorrelated factors, as depicted in Figure 6.2. For this model, the Satorra-Bentler chi-square was not statistically significant, and the values of the fit indices were within the generally accepted values (Table 6.7). These results support the proposed dimensionality of the HR flexibility measure.

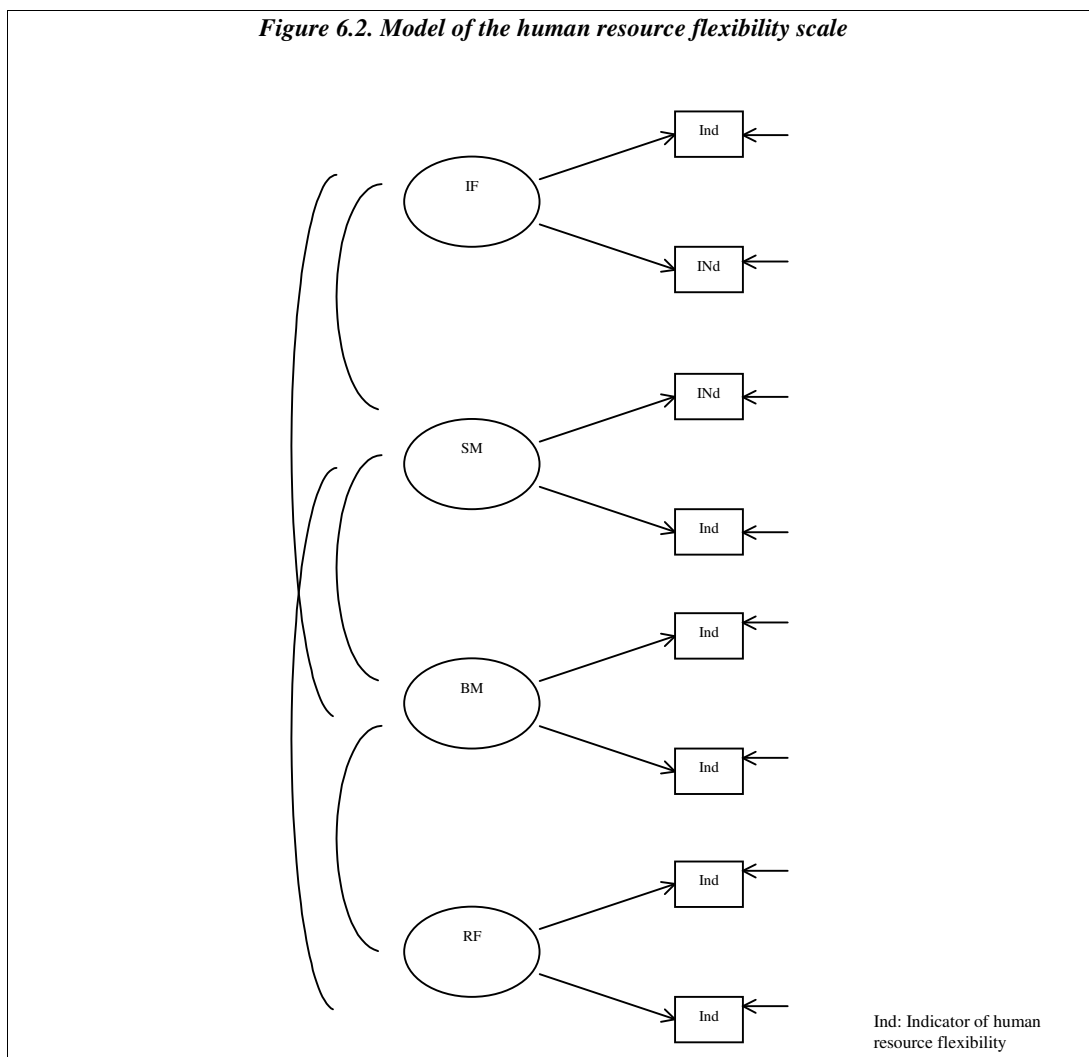


Table 6.7. Fit indices for the proposed human resource flexibility model

Model	χ^2_{sb}	d.f.	p	BBNNFI	CFI	RMSEA	GFI	AGFI	NC
HR flexibility four factor	82.0784	71	0.17346	0.981	0.985	0.026	0.922	0.885	1.16

The factor correlations were all statistically significant, as were the item loadings, which ranged from 0.506 to 0.855. Table 6.8 shows the standardised solution of the complete HR flexibility model.

Table 6.8. Standardised solution for the proposed human resource flexibility model

Item	IF	SM	BM	RF	Errors
V12	0.666				0.746
V13	0.807				0.590
V14	0.653				0.758
V15		0.764			0.645
V16		0.850			0.527
V17		0.675			0.738
V18		0.855			0.518
V19			0.668		0.744
V20			0.506		0.863
V21			0.669		0.743
V22			0.744		0.668
V23				0.681	0.733
V24				0.698	0.716
V25				0.650	0.760

Factor correlations					
IF	1				
SM	0.701	1			
BM	0.584	0.807	1		
RF	0.404	0.600	0.808	1	

In addition, I compared the four-factor model of HR flexibility with four alternative models. The first model considered that all the variables (V12-V25) were indicators of a single latent factor, thus assuming that human resource flexibility is a single concept explaining the observed flexibility of employees in all its aspects. The second alternative model included the four dimensions of HR flexibility as non-correlated factors. If this model showed a better fit than the proposed model, it would imply that employees that show flexibility in one of the dimensions will not necessarily do so in the other dimensions. The remaining four alternative models considered the possibility that dimensions showing stronger correlations (see Table 6.8) were, in fact, part of a single dimension. In this consideration, I included the items from the two dimensions showing higher correlation as indicators of a single factor that was correlated with the other two dimensions.

For the alternative models, the fit indices indicated a poor fit (Table 6.9), except for the alternative models 4 and 6 for which the value of the χ^2 is close to acceptable (at a level

of 10%). However, a chi-square difference test comparing the fit of the alternative models with the proposed model indicated the superiority of the latter.

Table 6.9. Fit indices for proposed and alternative human resource flexibility models

Model	χ^2_{SB}	d.f.	p	BBNFI	CFI	RMSEA	GFI	AGFI	NC	$\Delta\chi^2$	Δdf
HR flexibility four factor (proposed model)	82.0784	71	0.173	0.981	0.985	0.026	0.922	0.885	1.16	-	-
Alt 1: Single factor	167.1213	77	0.000	0.857	0.879	0.072	0.816	0.748	2.17	85.0429	6
Alt 2: Four factor (uncorrelated factors)	289.5767	77	0.000	0.663	0.715	0.111	0.764	0.678	3.76	207.4983	6
Alt 3: Three factor (IF&SM combined)	114.1270	74	0.002	0.934	0.946	0.049	0.893	0.848	1.54	32.0486	3
Alt 4: Three factor (SM&BM combined)	104.6112	74	0.011	0.950	0.959	0.043	0.880	0.830	1.41	22.5328	3
Alt 5: Three factor (SM&RF combined)	135.6440	74	0.000	0.898	0.917	0.061	0.862	0.805	1.83	53.5656	3
Alt 6: Three factor (BM&RF combined)	100.2515	74	0.023	0.957	0.965	0.040	0.908	0.818	1.35	18.1731	3

Note: $\Delta\chi^2$ refers to the difference in chi-square between the proposed model and the alternative model; Δdf refers to the difference in degrees of freedom between the proposed model and the alternative model.

These results support the conceptualisation of HR flexibility from a RBV perspective. According to this approach, HR flexibility is a multidimensional concept, referring to both the current capacities of employees to show flexibility and their willingness to change and to collaborate with others. The fit of the four-factor model confirms that HR flexibility dimensions are interrelated latent factors that underlie the observable flexibility characteristics of the workforce. First, HR intrinsic flexibility refers to the current potential of employees to move and reallocate in the organisation. The present study measures this concept with three indicators that capture horizontal and vertical movements between jobs, and employee capabilities to assume responsibility for multiple tasks. Second, HR flexibility can be interpreted as the extent to which people change in order to adapt to novel circumstances (i.e. modification flexibility). Regarding this second HR flexibility dimension, I differentiate between skill malleability and behavioural malleability, as two different latent factors. I measured skill malleability through four items that reflect employee readiness to improve their abilities, to anticipate future skill requirements or to quickly assimilate new procedures at work. Behavioural malleability indicators measure the proactive side of employee actions at work, referring to their capacity to improvise and react as circumstances change. Finally, HR relational flexibility comprises three indicators of the employees' collaborative actions, either within the organisation or with external agents.

6.1.2.2. Reliability of the human resource flexibility scale

As for the HCM scale, reliability of the HR flexibility scale was analysed attending to the values of the Cronbach's alpha and the composite reliability index. All the scales showed high reliability, since the values of the Cronbach's alphas and the composite reliability indices were above 0.7 (Table 6.10).

Table 6.10. Reliability tests of the human resource flexibility scale

Scale	Cronbach's alpha	Composite reliability index
IF	0.736	0.753
SM	0.860	0.868
BM	0.722	0.745
RF	0.701	0.717

6.1.2.3. Validity of the human resource flexibility scale

a) Content validity

As I discussed in Chapter 3, very few studies have operationalised the human resource flexibility concept. Due to the absence of published scales, I attempted to identify items that could cover the meaning of the human resource flexibility concept and its dimensions, as detailed in Chapter 5. In doing so, I first performed a comprehensive review of the RBV literature, in order to identify which organisational resource characteristics are indicators of their flexibility. Following this, I reviewed literature from the field of organisational behaviour and human resource management that measured related concepts. For example, regarding the first dimension of HR flexibility (intrinsic flexibility), RBV scholars suggest that flexible resources are characterised by their applicability to different uses (Sanchez, 1995; 1997). Following this, and drawing from the scales of Volberda (1998) and Verdú (2002), I considered several items to measure employee mobility between jobs and tasks. A similar process was followed for the remaining HR flexibility dimensions, adapting items from published scales to capture the meaning of employee flexibility. The use of items from published scales to capture the meaning of human resource flexibility allows to affirm the content validity of the human resource flexibility concept scales. However, future research should further investigate the appropriateness of the proposed scales.

b) Convergent and discriminant validity

Due to the novelty of the HR flexibility scale used in this study, I collected information on an alternative measure of the human resource flexibility dimensions for some of the companies in the sample (N=170). This alternative measure consisted of four general statements that allowed managers to assess employee levels of intrinsic flexibility, skill malleability, behavioural malleability and relational flexibility (Appendix 2).

The analysis of the convergent and discriminant validity of the human resource flexibility scale was then conducted through a multitrait-multimethod (MTMM) matrix, as proposed by Campbell and Fiske (1959). These authors suggest the validity of measures should be assessed by means of a comparison of correlations in a MTMM matrix that requires the measurement of multiple traits through various methods (Corten et al., 2002). Thus, the MTMM matrix in this study comprises four traits (IF, SM, BM and RF) and two methods (Likert scale and general assessment) (Table 6.11).

Table 6.11. Multitrait-multimethod matrix for the human resource flexibility scale (N=170)

	METHOD1 (LIKERT)				METHOD 2 (GENERAL ASSESSMENT)				
	TRAITS	IF1	SM1	BM1	RF1	IF2	SM2	BM2	RF2
METHOD 1 (LIKERT)	IF1								
	SM1	<i>0.546</i>							
	BM1	<i>0.478</i>	<i>0.721</i>						
	RF1	<i>0.322</i>	<i>0.533</i>	<i>0.588</i>					
METHOD 2 (GENERAL ASSESS.)	IF2	0.662	0.622	0.552	0.373				
	SM2	<u>0.530</u>	0.826	0.628	0.396	<i>0.626</i>			
	BM2	<u>0.478</u>	<u>0.581</u>	0.725	0.554	<i>0.554</i>	<i>0.487</i>		
	RF2	<u>0.314</u>	<u>0.506</u>	<u>0.505</u>	0.557	<i>0.415</i>	<i>0.518</i>	<i>0.481</i>	

In this matrix, the values of the heterotrait-monomethod triangles are shown in italics. The values of the heterotrait-heteromethod triangle are underlined. Finally, the values in bold type are the monotrait-heteromethod values (i.e. validity diagonal).

These results meet the requirements set by Campbell and Fiske (1959). First, the analysis of convergent validity was carried out by analysing the validity diagonals. The coefficients on the validity diagonals (numbers in bold) should be significantly different from zero and high enough to warrant further investigation. All of the correlations meet these criteria (ranging from 0.557 to 0.826) and they can be interpreted as evidence of convergent validity. Additionally, to test the convergent validity of the scales, I

considered the Bentler-Bonett coefficient, as for the HCM scale. This coefficient compares the chi-square of the proposed model with the chi-square of an alternative model, in which the indicators are not correlated. As can be observed in Table 6.6, the BBNNFI coefficient is above 0.9 (the minimum required) for all the dimensions of HR flexibility.

Second, to test the discriminant validity of the scales (i.e. whether measures of theoretically different constructs do not correlate highly with each other), the validity coefficients need to be higher than all the values in the column and row in which they are located. This is true in all cases in the sample. Additionally, validity coefficients (numbers in bold) should be higher than all the coefficients in the heterotrait-monomethod blocks (numbers in italics). This emphasises that trait factors should be stronger than method factors. In the present study, this is not true for the relational flexibility dimension, whose validity coefficient (0.557) is inferior to values in the heterotrait-monomethod triangles corresponding to SM1-BM1 (0.721), BM1-RF1 (0.588) and IF2-SM2 (0.626). These results may suggest a common method variance problem in the data set for this dimension of HR flexibility; that is, that the variance in this dimension is attributable to the measurement method rather than to the construct the measure represents (Podsakoff et al., 2003)⁴⁰.

To analyse the discriminant validity of this dimension in greater detail, I proposed an alternative test based on the comparison of the “relational flexibility” dimension with the other dimensions of the HR flexibility concept. First, I formulated the model considering the possibility that these two dimensions may be correlated. Second, I formulated a model in which this correlation was set at 1. Following this, a chi-square difference test between the two models was performed. A statistically significant difference between the two models (d.f.=1) would imply the existence of discriminant validity. Table 6.12 shows the results of this analysis. The chi-square difference test confirmed the discriminant validity of the HR relational flexibility scale. That is, the model in which the two dimensions were different factors provided a better fit than the model in which the indicators of the two dimensions belonged to a single concept.

⁴⁰ Common method variance is one of the main sources of measurement error and it may threaten the validity of the conclusions on the relationships between measures (Bagozzi and Yi, 1991).

Table 6.12. Alternative test of discriminant validity for the relational flexibility dimension

	IF	SM	BM
RF	14.3039 (8) 31.6510 (9) (0.396*)	5.6226 (13) 23.3400 (14) (0.600*)	15.8338 (13) 44.1035 (14) (0.814*)

*p<0.05

6.1.3. CONSTRUCT VALIDITY OF THE ORGANISATIONAL PERFORMANCE SCALE

The measurement of organisational performance in this research includes two scales, as introduced in Chapter 5. The first of these corresponds to customer service effectiveness (CUSTEFF). The second scale evaluates the satisfaction of the organisation's customers (CUSTSAT). The analysis of the construct validity for these scales was performed following the same structure used for the previous constructs.

6.1.3.1. Dimensionality of the organisational performance scale

To test the unidimensionality of the organisational performance scales, two CFAs were conducted. The first estimation of these models showed a poor fit. From the information provided by the LM test, one indicator was eliminated, corresponding to the CUSTSAT scale, specifically the item on the reduction in the number of customer complaints. The modified estimation of the models provided an appropriate fit with the data, according to the statistical significance of the χ^2 and the values of the different fit indices. Following this, a joint model was formulated, in which the two dimensions were correlated factors (EFF_SAT) (Table 6.13). The factor loadings were all statistically significant (Table 6.14) and the two factors showed a correlation of 0.839.

Table 6.13. Fit indices for the unidimensional models of organisational performance

Model	χ^2_{SB}	d.f.	p	BBNNFI	CFI	RMSEA	GFI	AGFI	NC
CUSTEFF	5.6396	5	0.34288	0.993	0.997	0.024	0.981	0.944	1.12
CUSTSAT	-	0	-	1					
EFF_SAT	11.4138	19	0.90914	1	1	0.000	0.979	0.961	0.60

Table 6.14. Standardised solution for the organisational performance scales

Item	CUSTEFF	CUSTSAT	Errors
V26	0.534		0.846
V27	0.637		0.771
V28	0.667		0.745
V29	0.678		0.735
V30	0.640		0.769
V31		0.793	0.609
V32		0.803	0.803
V33		0.809	0.588

6.1.3.2. Reliability of the organisational performance scale

The reliability of the organisational performance scales was tested using the values of the Cronbach's alpha and a composite reliability index that takes into account the relative importance of each indicator in the factor to which it belongs. These analyses revealed scale reliability, with values over 0.7 in both cases (Table 6.15).

Table 6.15. Reliability tests of the organisational performance scales

Scale	Cronbach's alpha	Composite reliability index
CUSTEFF	0.766	0.769
CUSTSAT	0.842	0.809

6.1.3.3. Validity of the organisational performance scale

a) Content validity

The organisational performance measures employed in this study were extracted from previous published studies. For the case of customer service effectiveness (CUSTEFF), an adaptation of two scales (Volberda, 1998, Liao and Chuang, 2004) was used. This scale comprises several items that cover different aspects of efficiency in relationships with customers (e.g. variety of services or ability to predict future customers' demands). To measure customer satisfaction (CUSTSAT), I employed the scale proposed by Escrig-Tena and Bou-Llusar (2005). The empirical validation of these scales and their appropriateness to the theoretical constructs in this study indicate that their content validity can be defended.

b) Convergent and discriminant validity

The test for convergent validity was performed by means of the Bentler-Bonett coefficient, which was above 0.9 in the two scales. This can be interpreted as evidence of the scales' convergent validity.

Discriminant validity was tested by performing a chi-square difference test between two CFA. In the first model, I proposed that the two scales of organisational performance were correlated factors. In the second model, I set this correlation at one. The chi-square difference test revealed a significant difference between the fit of the two models, thus verifying that the two scales measure different constructs (i.e. they have discriminant validity) (Table 6.16).

Table 6.16. Test of discriminant validity for the organisational performance scales

	CUSTEFF
CUSTSAT	11.4138 (19)
	28.6982 (20)

6.1.4. CONSTRUCT VALIDITY OF THE ENVIRONMENTAL DYNAMISM SCALE

I measured environmental dynamism using the scale developed by Sutcliffe and Huber (1998). These authors proposed five items to assess managers' perceptions of the dynamism of the context in which the organisation operates.

6.1.4.1. Dimensionality of the environmental dynamism scale

In order to consider all the variables of Sutcliffe and Huber's (1998) scale as indicators of a single concept corresponding to environmental dynamism, I first conducted a CFA to verify the unidimensionality of this scale.

Because a CFA with the five indicators showed a poor fit, I carried out an exploratory factor analysis to extract possible sub-dimensions within this scale. This exploratory analysis revealed the existence of two different factors (Table 6.17). The first factor corresponds to an external interpretation of dynamism, and it refers to actions carried out by customers, competitors or suppliers (e.g. instability of customer demands). The

second factor is of an internal nature and it consists of two items that evaluate the organisation's actions to counteract external pressures (e.g. technological changes in the organisation).

Table 6.17. Exploratory factor analysis of the environmental dynamism scale (oblimin solution)

Item	F1	F2
V34	0.740	-0.009
V35	0.775	-0.044
V36	0.669	0.052
V37	0.217	0.769
V38	-0.179	0.856

In the subsequent analyses, I only considered the first dimension of the environmental dynamism scale (V34-V36). My interest in this study is to analyse how far the conditions under which the organisation operates determine the relative importance of employee flexibility for organisational performance. The characteristics of the external environment are what make employee flexibility more or less valuable for the organisation's success.

A first-order latent variable with only three indicators is saturated and shows a perfect fit. To analyse the fit of this model in greater detail, I formulated a CFA in which the two previous dimensions (F1 and F2) were correlated factors. The values in Table 6.18 indicate an appropriate fit of the model. The factor loadings are shown in Table 6.19.

Table 6.18. Fit indices for the two-factor model of dynamism

Model	χ^2_{sb}	d.f.	p	BBNNFI	CFI	RMSEA	GFI	AGFI	NC
Dynamism two factor	8.9835	5	0.10973	0.847	0.930	0.060	0.981	0.944	1.79

Table 6.19. Standardised solution for the two-factor model of dynamism

Item	F1	F2	Errors
V34	0.554		0.832
V35	0.646		0.764
V36	0.539		0.842
V37		0.980	0.199
V38		0.338	0.941

6.1.4.2. Reliability of the environmental dynamism scale

In order to assess the reliability of this scale, I consider both the Cronbach's alpha and an index of composite reliability, as for previous scales. The value of Cronbach's alpha

is 0.596, and the composite reliability index is 0.604. Although these values are relatively low, the empirical validation of this scale in empirical studies (e.g. Roca et al., 2005) allows to consider it as an appropriate measure of environmental dynamism.

6.1.4.3. Validity of the environmental dynamism scale

a) Content validity

Environmental dynamism refers to the rate of unpredictability of change in a firm's external environment. In Chapter 1 I concluded that dynamism in current environments is a consequence of both primary uncertainties (e.g. changes in customer preferences) and competitive uncertainties (i.e. actions carried out by competitors). In my opinion, the adaptation of Sutcliffe and Huber scale (1998) used in this study covers the main sources of uncertainty in modern organisations. Thus, variable V34 refers to instability of customers' preferences, V35 considers actions carried out by suppliers and V36 captures competitive uncertainties (in terms of changes in sales volume for firms in the industry). For this reason, I defend the content validity of the environmental dynamism scale.

b) Convergent validity

In order for a scale to show convergent validity, all the items measuring the same concept must be highly correlated. The criterion adopted in this research to evaluate convergent validity was the BBNNFI coefficient, which should show values over 0.9. However, only three indicators make up the environmental dynamism scale. This model is saturated (0 d.f.) and therefore the BBNNFI cannot be computed. An alternative test for convergent validity is to evaluate the statistical significance of the factor loadings. As observed in Table 6.19 all these factor loadings are statistically significant, with values ranging from 0.539 to 0.646.

An additional test of convergent validity could be carried out by formulating a MTMM matrix. This methodology would also allow to corroborate the discriminant validity of the scale, in comparison to similar constructs. Nonetheless, the use of MTMM methods requires obtaining information on alternative measures of the same concept and on

related concepts. For reasons of simplicity in the questionnaires, I did not include alternative measures of environmental dynamism and related terms, so the MTMM methodology cannot be used in this study.

In conclusion, the construct validity tests for the scales demonstrate the appropriateness of the selected items to measure the theoretical constructs of this research. Therefore, these scales can be used in subsequent analyses for testing the theoretical linkages predicted in the hypotheses.

6.2. ANALYSIS OF THE STRUCTURAL MODELS

In this section, I focus on the parameters of the structural models, as a means to verify the causal relationships included in the hypotheses. This section is organised according to the research hypotheses posited in Chapter 4. First, the impact of the different HCM components on human resource flexibility is analysed. Second, the influence of human resource flexibility on performance is examined, by analysing a) the direct effect of HR flexibility on measures of organisational performance and b) the moderator role of the environmental dynamism in this relationship. Thirdly, I focus on the hypotheses corresponding to the consideration of human resource flexibility as a mediator variable between HCM and performance.

6.2.1. RELATIONSHIPS BETWEEN HCM AND HUMAN RESOURCE FLEXIBILITY

In Chapter 4 I argued that High Commitment Management may be a determinant of the flexibility shown by the organisation's workforce. HCM shapes the nature of the relationship between the organisation and its employees and therefore it may encourage flexible staff performance. The discussion provided in Chapter 4 led to the formulation of several hypotheses that established causal relationships between the components of the HCM strategy and the human resource flexibility dimensions. These hypotheses were established as follows:

Hypothesis 1: The skill development configuration of the HCM strategy will have a positive effect on HR intrinsic flexibility

Hypothesis 2: The job enrichment configuration of the HCM strategy will have a positive effect on HR intrinsic flexibility

Hypothesis 3: The incentive configuration of the HCM strategy will have a positive effect on HR intrinsic flexibility

Hypothesis 4: The skill development configuration of the HCM strategy will have a positive effect on HR skill malleability

Hypothesis 5: The job enrichment configuration of the HCM strategy will have a positive effect on HR skill malleability

Hypothesis 6: The job enrichment configuration of the HCM strategy will have a positive effect on HR behavioural malleability

Hypothesis 7: The incentive configuration of the HCM strategy will have a positive effect on HR behavioural malleability

Hypothesis 8: The job enrichment configuration of the HCM strategy will have a positive effect on HR relational flexibility

Hypothesis 9: The incentive configuration of the HCM strategy will have a negative effect on HR relational flexibility

In the analyses, each structural model establishes the existence of a causal relationship between certain elements of HCM and a specific human resource flexibility dimension. Consequently, nine structural models were estimated (Table 6.20). A significant γ coefficient would indicate that a causal relationship exists between the variables. The magnitude of this relationship can be observed from the value of this coefficient.

Table 6.20. Structural equations for the hypotheses relating HCM to HR flexibility

H ₁ : IF = γ SKILLS + D	H ₆ : BM = γ JOBENRICH + D
H ₂ : IF = γ JOBENRICH + D	H ₇ : BM = γ INCENTIVE + D
H ₃ : IF = γ INCENTIVE + D	H ₈ : RF = γ JOBENRICH + D
H ₄ : SM = γ SKILLS + D	H ₉ : RF = $-\gamma$ INCENTIVE + D
H ₅ : SM = γ JOBENRICH + D	

The estimated models show a good fit, as shown by the fit indices and the significance of the χ^2 (Table 6.21). All the parameters of the corresponding measurement models were statistically significant.

Table 6.21. Fit indices for the structural models of the relationships between HCM and human resource flexibility

Model	χ^2_{sb}	d.f.	p	BBNNFI	CFI	RMSEA	GFI	AGFI	NC
SKILLS→IF (H ₁)	27.9897	19	0.08363	0.938	0.958	0.046	0.968	0.940	1.47
JOB→IF (H ₂)	4.0352	8	0.85394	1	1	0.000	0.992	0.980	0.50
INC→IF (H ₃)	5.01088	8	0.75642	1	1	0.000	0.991	0.976	0.63
SKILLS→SM (H ₄)	25.0373	26	0.51687	1	1	0.000	0.970	0.948	0.96
JOBENRICH→SM (H ₅)	13.5843	13	0.40376	0.997	0.998	0.014	0.976	0.949	1.04
JOBENRICH→BM (H ₆)	4.7554	13	0.98019	1	1	0.000	0.993	0.985	0.37
INCENTIVE→BM (H ₇)	17.7066	13	0.16898	0.960	0.975	0.040	0.976	0.949	1.36
JOBENRICH→RF (H ₈)	4.6134	8	0.79798	1	1	0.000	0.992	0.979	0.56
INCENTIVE→RF (H ₉)	5.9788	8	0.64961	1	1	0.000	0.990	0.974	0.75

Having verified the fit of the proposed structural models, the coefficients that reflect the impact of the different HCM components on human resource flexibility can be analysed. Table 6.22 shows the structural parameters (γ) and the R² coefficient, which is an indicator of the reliability of the structural equation.

Table 6.22. Structural parameters of the hypotheses linking HCM with human resource flexibility

Model	Structural coefficient (γ)	R ²
SKILLS→IF (H ₁)	0.255 (2.257)	0.07
JOB→IF (H ₂)	0.433 (3.199)	0.19
INC→IF (H ₃)	0.296 (2.707)	0.09
SKILLS→SM (H ₄)	0.132 (1.055)	0.02
JOBENRICH→SM (H ₅)	0.471 (3.749)	0.22
INCENTIVE→BM (H ₆)	0.034 (0.391)	0.01
JOBENRICH→BM (H ₇)	0.476 (3.607)	0.23
JOBENRICH→RF (H ₈)	0.223 (1.830)	0.05
INCENTIVE→RF (H ₉)	-0.146 (1.311)	0.02

Note: t values are shown in brackets

These results corroborate all the proposed relationships, except for the influence of skill development on skill malleability (H4), and the effect of the incentive configuration on both human resource behavioural malleability (H6) and relational flexibility (H9). For these hypotheses the structural parameter is not statistically significant ($t < 1.96$). I now analyse in greater detail the conclusions that can be inferred from these results.

a) HCM and human resource intrinsic flexibility

Regarding the first component of human resource flexibility, the results of Table 6.22 (H1-H3) show that the three dimensions of HCM have a positive effect on the workforce's intrinsic flexibility or versatility.

The fact that the skill configuration affects employee versatility (0.255) indicates that when the organisation ensures that employees are given appropriate training and development, their abilities to reallocate between jobs and tasks increase. This result is consistent with previous studies, such as Skaggs and Youndt (2004), who demonstrated the importance of investing in human capital for organisations facing high variance in customer demands. According to their conclusions, the better the organisation's human capital, the more capable employees are to deal with the potential variance in customer demands.

Furthermore, the results confirm the importance of providing appropriate incentives to compensate the need to reallocate in the organisation, together with the importance of the job enrichment configuration in the promotion of a versatile workforce. The job enrichment HCM configuration has the highest impact on employee versatility, with a coefficient of 0.433. Jobs that encourage employee autonomy and participation provide the opportunity to apply newly acquired skills on a day-to-day basis and thus, to increase employees' abilities to perform efficiently in a number of different duties (Friedrich et al., 1998). In addition, more challenging jobs may improve employee commitment and satisfaction and thus, willingness to show flexibility (van den Berg and van der Velde, 2005). These results are similar to the conclusions in the study by Parker et al. (1997), which demonstrates the relevance of job design in the promotion of versatile employees.

Nonetheless, as can be observed in Table 6.22, the R^2 coefficients are relatively low, which reflects the limited predictive capacity of the models; that is, other variables that can determine the intrinsic flexibility of the workforce were not taken into account in the present study. To investigate these results further, I formulated a global model in which all the components of HCM are included as determinants of human resource intrinsic flexibility. As discussed at the beginning of the chapter, HCM configurations are not independent from each other; rather, they respond to a global conception of the HCM strategy. By including the three configurations of HCM as interrelated factors that affect intrinsic flexibility, the relative importance of each HCM component in promoting employee versatility can be analysed.

This model shows a good fit, according to the values in Table 6.23. The structural parameters (Table 6.24) reveal that when all the dimensions of HCM are included as determinants of human resource intrinsic flexibility, only the skill and job enrichment configurations affect workforce versatility, with job enrichment being more relevant, as seen from the magnitude of its structural coefficient (0.512). In addition, it can be observed that, in comparison with the results shown in Table 6.22, the R^2 coefficient increases (0.25), thus showing an improvement in the predictive capacity of the model. According to Ostroff and Bowen (2000), the more consistent the human resource strategy is, the stronger its impact may be on employee performance. By adopting a global vision of the HCM strategy that includes the intercorrelations between its dimensions, it is easier to understand changes in the intrinsic flexibility of the workforce when a HCM strategy is adopted in the organisation.

Table 6.23. Fit indices for the global model of the determinants of human resource intrinsic flexibility

Model	χ^2_{SB}	d.f.	p	BBNNFI	CFI	RMSEA	GFI	AGFI	NC
Determinants of IF	90.3538	71	0.06043	0.940	0.953	0.035	0.935	0.903	1.27

Table 6.24. Structural parameters for the global model of the determinants of human resource intrinsic flexibility

Determinants of IF	Structural coefficient (γ)	R^2
SKILLS→IF (γ_1)	0.279 (1.901)	0.25
INCENTIVE→IF (γ_2)	0.185 (0.803)	
JOBENRICH→IF (γ_3)	0.512 (2.323)	

Note: t values are shown in brackets

b) HCM and human resource skill malleability

To return to the results shown in Table 6.22 (H4-H5), it is possible to observe that only the job enrichment configuration impacts employee skill malleability (0.471). In this regard, the results confirm the importance of a broad vision of the job for the improvement of the workforce's competencies. When employees work in a context of enriched jobs, they develop a broader interpretation of their role in the organisation and as a result, of the competencies that they judge necessary for their jobs (Parker, 1998). The employees' learning orientation is thus likely to be higher when the organisation provides challenging jobs. However, contrary to my expectations, the coefficient corresponding to the skill configuration is not statistically significant, which does not lend support to the idea that training and development motivate employees to continuously improve their pool of skills (Wright and Snell, 1998).

The global model of the determinants of this human resource flexibility component shows a good fit, according to the fit indices and the χ^2 statistical significance (Table 6.25).

Table 6.25. Fit indices for the global model of the determinants of human resource skill malleability

Model	χ^2_{SB}	d.f.	p	BBNNFI	CFI	RMSEA	GFI	AGFI	NC
Determinants of SM	57.2618	51	0.25407	0.983	0.987	0.023	0.953	0.929	1.12

Table 6.26. Structural parameters for the global model of the determinants of human resource skill malleability

Determinants of SM	Structural coefficient (γ)	R ²
SKILLS→SM (γ_1)	0.057 (0.517)	
JOBENRICH→SM (γ_2)	0.463 (3.698)	
		0.23

Note: t values are shown in brackets

c) HCM and human resource behavioural malleability

Results on the determinants of employee behavioural malleability, shown in Table 6.22 (H6-H7), reveal that only the job enrichment configuration has a significant impact on this human resource flexibility dimension. This result is consistent with previous studies, such as the research by LePine and Van Dyne (1998), which demonstrated that employees with higher control over their jobs better contributed to challenging the

status quo of the organisation. Similarly, findings by Axtell et al. (2000) showed that autonomy enhances the probability of employees making suggestions at work.

Even though the incentive configuration does not affect behavioural malleability in the individual models (Table 6.22), the estimation of a global model of the determinants of behavioural malleability (Tables 6.27 and 6.28) shows that the consideration of the incentive configuration together with the job enrichment component of HCM derives in a negative impact of the former on behavioural malleability. This is an interesting finding, since the focus of the incentive configuration on individual achievements and employees' past performance can inhibit their proactivity. In this global model, it is possible to observe the importance of creating challenging jobs for employee behavioural malleability, which presents a coefficient of 0.822.

Thus, when compared with the results of the individual models (Table 6.22), the inclusion of interrelations between the HCM components not only helps to improve the predictive capacity of the model ($R^2=0.36$), but also the understanding of the relative importance of the HCM dimensions in improving HR behavioural malleability. It is of note that the coefficient corresponding to the job enrichment configuration effect on employee behavioural malleability increases by two (to 0.822) when I control for the incentive configuration effect. The suppressing effect of this latter HCM component is isolated in the global model, which allows to appreciate the actual effect of the job enrichment dimension on employee proactivity at work.

Table 6.27. Fit indices for the global model of the determinants of human resource behavioural malleability

Model	χ^2_{SB}	d.f.	p	BBNNFI	CFI	RMSEA	GFI	AGFI	NC
Determinants of BM	34.5613	32	0.34645	0.989	0.992	0.019	0.966	0.941	1.08

Table 6.28. Structural parameters for the global model of the determinants of human resource behavioural malleability

Determinants of BM	Structural coefficient (γ)	R^2
INCENTIVE→BM (γ_1)	-0.501 (2.034)	
JOBENRICH→BM (γ_2)	0.822 (3.069)	
		0.36

Note: t values are shown in brackets

d) HCM and human resource relational flexibility

Finally, from the coefficients in Table 6.22, I can conclude that the job enrichment configuration encourages collaborative actions between employees (0.223). By reducing job delimitations and supporting discretionary actions, a climate of cooperation may emerge in the workforce. These results are consistent with the findings of Youndt and Snell (2004), who conclude that the job design-related variables affect the organisation's social capital. However, according to these results, no significant relationship exists between the incentive configuration of HCM and this component of HR flexibility.

Some variation in these results can be observed when a global model of the determinants of HR relational flexibility is formulated (Tables 6.29 and 6.30). By considering the interrelationships between the job enrichment and the incentive configuration of the HCM strategy, a negative impact of the incentive configuration on HR relational flexibility is observed. As predicted in Chapter 4, compensation practices that reward individual achievement may be inappropriate in environments where cooperation among employees is necessary (Campbell et al., 1998). In addition, when controlling for the effect of incentives in the dependent variable, the coefficient corresponding to the job enrichment configuration increases to 0.567, in comparison with results in Table 6.22.

Table 6.29. Fit indices for the global model of the determinants of human resource relational flexibility

Model	χ^2_{sb}	d.f.	p	BBNNFI	CFI	RMSEA	GFI	AGFI	NC
Determinants of RF	25.0899	24	0.40089	0.993	0.996	0.014	0.970	0.944	1.05

Table 6.30. Structural parameters for the global model of the determinants of human resource relational flexibility

Determinants of SM	Structural coefficient (γ)	R ²
JOBENRICH→RF (γ_1)	0.567 (2.484)	0.19
INCENTIVE→RF (γ_2)	-0.496 (2.277)	

Note: t values are shown in brackets

To summarise, the structural models estimated in this section corroborate that a HCM strategy determines workforce flexibility in my sample of companies (Guest, 1987; Sparrow, 1998). Regarding intrinsic flexibility, the data confirm the significant impact of the skill and job enrichment configurations on employee versatility. Concerning skill malleability, I found that only the job enrichment dimension affects employee willingness to learn. On the other hand, both job enrichment and incentive configurations are critical determinants of behavioural malleability. In this regard, employee proactivity improves when the organisation provides challenging jobs, but diminishes with incentives focused on past performance. Finally, as predicted, while incentives in the HCM strategy negatively impact the relational flexibility of the workforce, the provision of enriched jobs encourages cooperation among employees.

Another significant conclusion of these analyses is the convenience of adopting a global conception of the HCM strategy when analysing changes in employee flexibility. In comparison with individual models that relate single HCM dimensions with HR flexibility, global models that introduce the intercorrelations between the HCM components improve the predictive capacity of the models. In addition, when all the HCM configurations are taken simultaneously as determinants of a HR flexibility dimension, it is easier to understand the suppressive and reinforcing effects between the HCM components and consequently, the relative importance of these components to predict employee flexibility.

6.2.2. CONSIDERATION OF HR FLEXIBILITY AS A COMPETITIVE FACTOR

The second group of hypotheses in this research refers to the consideration of HR flexibility as a competitive factor in organisations. On this question, I predicted that: a) HR flexibility may impact organisational performance (hypotheses 10 to 13); b) the environmental dynamism faced by the organisation may moderate this impact (hypotheses 14 to 17). I now present the results obtained from the estimation of the structural models corresponding to these hypotheses.

6.2.2.1 Impact of HR flexibility on organisational performance

Flexible employees have been considered as competitive factors for organisations during recent years and it is increasingly believed that employee proficiency in a restricted number of duties is no longer sufficient to sustain organisational competitiveness (Ilgen and Pulakos, 1999). In Chapter 4 I argued that the components of human resource flexibility are likely to improve organisational results, such that:

Hypothesis 10: HR intrinsic flexibility will have a positive effect on organisational performance

Hypothesis 11: HR skill malleability will have a positive effect on organisational performance

Hypothesis 12: HR behavioural malleability will have a positive effect on organisational performance

Hypothesis 13: HR relational flexibility will have a positive effect on organisational performance

The structural equations corresponding to the above hypotheses are shown in Table 6.31. The dependent variable in these models is organisational performance. Since the definition of performance in this study includes two concepts, namely: customer service effectiveness (CUSTEFF) and customer satisfaction (CUSTSAT), I estimated two models for each hypothesised relationship, each corresponding to a performance indicator. I included the human resource flexibility dimensions as independent variables, together with a set of control variables that may impact the dependent variable. These control variables, detailed in Chapter 5, are: sector (SEC), nature of the organisational activities (ACT), organisational strategy (STR) and organisational size (SIZE).

Table 6.31. Structural equations for the hypotheses relating HR flexibility to organisational performance

$$H_{10}: \text{PERF} = \gamma_1 \text{IF} + \gamma_2 \text{SEC} + \gamma_3 \text{ACT} + \gamma_4 \text{STR} + \gamma_5 \text{SIZE} + D$$

$$H_{11}: \text{PERF} = \gamma_1 \text{SM} + \gamma_2 \text{SEC} + \gamma_3 \text{ACT} + \gamma_4 \text{STR} + \gamma_5 \text{SIZE} + D$$

$$H_{12}: \text{PERF} = \gamma_1 \text{BM} + \gamma_2 \text{SEC} + \gamma_3 \text{ACT} + \gamma_4 \text{STR} + \gamma_5 \text{SIZE} + D$$

$$H_{13}: \text{PERF} = \gamma_1 \text{RF} + \gamma_2 \text{SEC} + \gamma_3 \text{ACT} + \gamma_4 \text{STR} + \gamma_5 \text{SIZE} + D$$

The eight estimated models show a good fit with the data, as can be observed in Table 6.32. The χ^2 is not statistically significant and the fit indices are within the commonly accepted limits. The structural coefficients corresponding to these models are shown in Table 6.33.

Table 6.32. Fit indices for the structural models of the relationships between human resource flexibility and organisational performance

Model	χ^2_{SB}	d.f.	p	BBNNFI	CFI	RMSEA	GFI	AGFI	NC
IF→CUSTSAT (H10 _a)	51.5885	34	0.02710	0.944	0.958	0.048	0.948	0.916	1.52
IF→CUSTEFF (H10 _b)	69.1611	53	0.06720	0.948	0.959	0.037	0.944	0.918	1.30
SM→CUSTSAT (H11 _a)	55.4730	43	0.09617	0.973	0.979	0.036	0.949	0.921	1.29
SM→CUSTEFF (H11 _b)	73.5829	64	0.19315	0.980	0.984	0.026	0.943	0.919	1.15
BM→CUSTSAT (H12 _a)	38.9261	43	0.64856	1	1	0.000	0.965	0.946	0.91
BM→CUSTEFF (H12 _b)	77.0029	64	0.12764	0.959	0.967	0.030	0.942	0.917	1.20
RF→CUSTSAT(H13 _a)	50.6714	34	0.03286	0.939	0.954	0.047	0.948	0.916	1.49
RF→CUSTEFF (H13 _b)	62.2230	53	0.18076	0.964	0.971	0.028	0.947	0.922	1.17

Table 6.33. Structural parameters of the hypotheses linking human resource flexibility with organisational performance

Model	HR FLEX (γ_1)	SEC (γ_2)	ACT (γ_3)	STR (γ_4)	SIZE (γ_5)	R ²
IF→CUSTSAT (H10 _a)	0.177 (2.085)	-0.089 (1.294)	0.131 (1.758)	0.014 (0.310)	-0.099 (1.443)	0.07
IF→CUSTEFF (H10 _b)	0.344 (3.754)	-0.099 (1.412)	0.172 (2.250)	0.050 (1.148)	-0.051 (0.765)	0.16
SM→CUSTSAT (H11 _a)	0.369 (4.915)	-0.081 (1.226)	0.067 (0.951)	0.032 (0.949)	-0.105 (1.546)	0.16
SM→CUSTEFF (H11 _b)	0.483 (4.926)	-0.090 (1.346)	0.096 (1.289)	0.080 (2.685)	-0.047 (0.708)	0.26
BM→CUSTSAT (H12 _a)	0.292 (2.849)	-0.093 (1.340)	0.112 (1.517)	0.031 (0.911)	-0.067 (0.967)	0.11
BM→CUSTEFF (H12 _b)	0.391 (3.119)	-0.106 (1.493)	0.149 (1.943)	0.073 (2.327)	0.002 (0.027)	0.19
RF→CUSTSAT (H13 _a)	0.067 (0.805)	-0.094 (1.336)	0.133 (1.751)	0.023 (0.559)	0.072 (1.041)	0.04
RF→CUSTEFF (H13 _b)	0.073 (0.732)	-0.108 (1.485)	0.178 (2.322)	0.062 (1.630)	0.004 (0.058)	0.05

Note: t values are shown in brackets

According to the structural parameters corresponding to these models (Table 6.33), while hypotheses 10 to 12 are corroborated, the influence of the relational flexibility dimension on performance is not significant (H13). Some conclusions can be drawn from these results.

First, the results confirm that, once the control variables have been introduced in the equations, intrinsic flexibility and the two components of human resource modification flexibility (skill malleability and behavioural malleability) improve organisational performance. The structural coefficients corresponding to these equations show t values above the critical value of 1.96.

On the one hand, the relevance of employee intrinsic flexibility or versatility to the firm's results is consistent with previous empirical studies, such as research by Michie

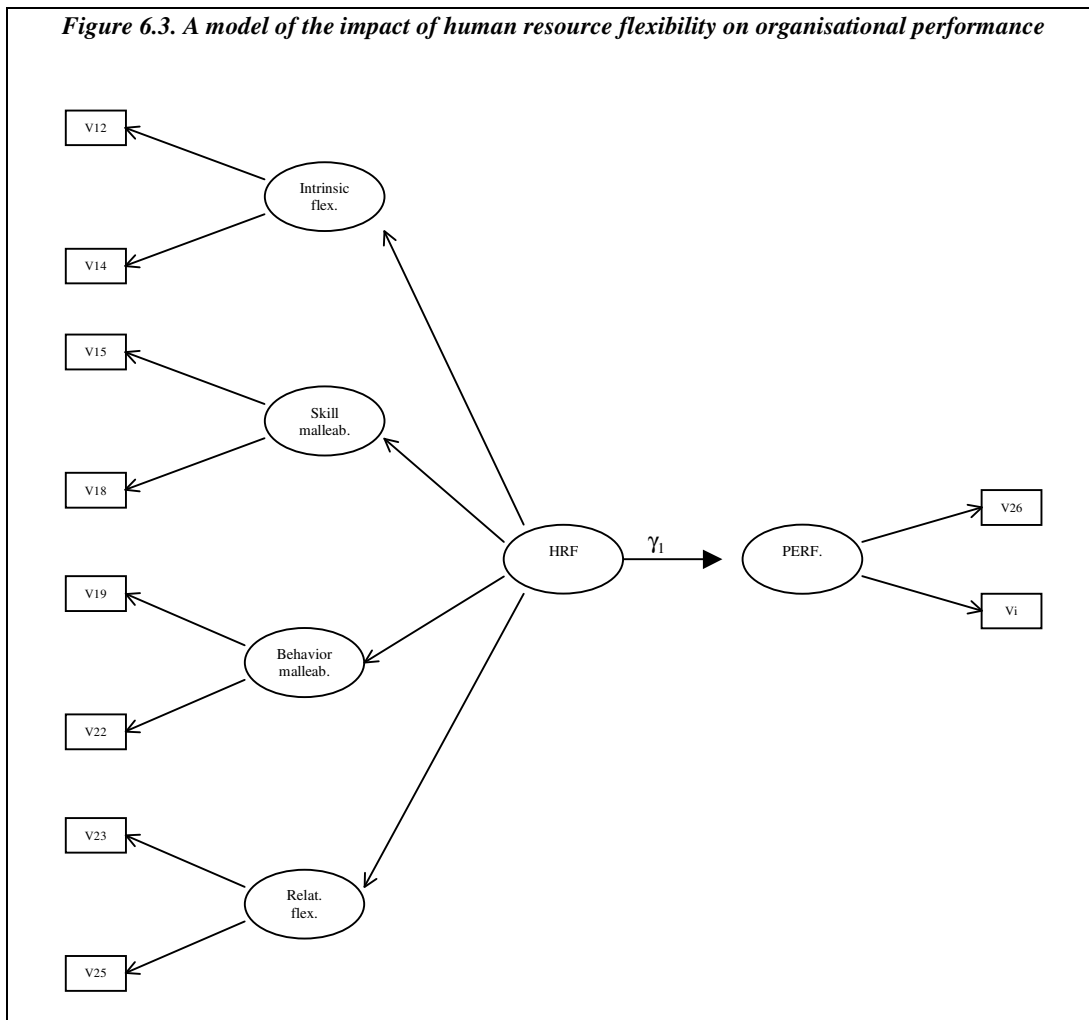
and Sheehan-Quinn (2001), whose conclusions show that this component of HR flexibility is positively correlated to both innovation and financial performance.

On the other hand, the results corroborate that employees' abilities to improve their skills or to alter their behaviours as the circumstances change are a critical determinant of performance. In other words, not only the immediate employee abilities to reallocate and perform multiple tasks (i.e. intrinsic flexibility) are relevant to the organisation's success, but also employees' change-initiating role in terms of willingness to modify their skills and behaviours. These proactive components of human resource flexibility emerge as relevant antecedents of both customer service effectiveness and customer satisfaction indicators.

Second, attending to the value of the structural coefficients in Table 6.33, human resource flexibility has a greater impact on customer service effectiveness than on customer satisfaction (i.e. higher structural coefficient). This may indicate that when performance variables that are closer to the employees' activities in the organisation are considered, a more realistic picture of the impact of employee performance on the organisation's overall success emerges. However, this has not been the general tendency in the human resource management literature, in which the vast majority of studies consider the impact of employee performance on overall performance indicators (such as organisational financial performance). By moving back from these longer-distance performance indicators a means to understand the relevance of various aspects of employee performance to firm results can be provided.

However, the impact of human resource flexibility on organisational performance should also consider the interrelationships between the components of human resource flexibility. As discussed in Chapter 3, intrinsic flexibility, skill malleability, behavioural malleability and relational flexibility are not independent concepts, but rather they reinforce each other. To examine the joint impact of the human resource flexibility dimensions on organisational performance, I formulated a model in which a second-order latent factor (HRF) capturing the correlations between the four human resource flexibility dimensions predicted organisational performance (Figure 6.3).

A significant structural coefficient (γ_1) would confirm that consistency between the human resource flexibility components (i.e. their covariation) is the explicative variable of organisational performance.



Previous to the analysis of the structural coefficient relating HRF and performance, the measurement model corresponding to the second-order latent factor of HRF was evaluated. Table 6.34 indicates the good fit of this model, according to the fit indices and chi-square values. Furthermore, all the factor loadings are statistically significant, which confirms that the four dimensions of human resource flexibility are indicators of an underlying concept of human resource flexibility (Table 6.35). In other words, HRF is the underlying factor that explains the correlations between employee intrinsic flexibility, skill malleability, behavioural malleability and relational flexibility.

Table 6.34. Fit indices for the second-order latent factor of HRF

Model	χ^2_{SB}	d.f.	p	BBNNFI	CFI	RMSEA	GFI	AGFI	NC
Latent model of HRF	91.5344	73	0.07016	0.969	0.975	0.034	0.909	0.870	1.25

Table 6.35. Standardised solution for the second-order latent factor of HRF

Item	IF	SM	BM	RF	HRF	Errors
V12	0.670					0.743
V13	0.809					0.587
V14	0.647					0.763
V15		0.768				0.640
V16		0.851				0.526
V17		0.676				0.736
V18		0.851				0.525
V19			0.669			0.743
V20			0.491			0.871
V21			0.659			0.752
V22			0.758			0.652
V23				0.708		0.706
V24				0.684		0.730
V25				0.636		0.772
IF					0.690	0.724
SM					0.875	0.484
BM					0.940	0.341
RF					0.748	0.663

After verifying the suitability of a second-order latent factor of HRF to capture the interrelationships between all the components of human resource flexibility, the structural models corresponding to Figure 6.3 were estimated. These models show an appropriate fit, as can be observed in the following table. Even though some of the fit indices do not achieve the minimum value of 0.9, they are very close to the acceptance limit.

Table 6.36. Fit indices for the structural model of the influence of HRF on organisational performance

Model	χ^2_{SB}	d.f.	p	BBNNFI	CFI	RMSEA	GFI	AGFI	NC
HRF→CUSTSAT	141.3351	113	0.03669	0.967	0.972	0.033	0.894	0.857	1.25
HRF→CUSTEFF	180.7224	147	0.03061	0.962	0.968	0.032	0.886	0.853	1.23

The structural parameters corresponding to previous models (Table 6.37) confirm the proposed relationship. In this case, it is not the individual dimensions of human resource flexibility that are relevant to explain organisational performance, but rather their consistency. That is, organisations whose employees manifest coherent flexible

performance in all four dimensions of human resource flexibility will attain better results.

Table 6.37. Fit indices for the structural models of the global influence of human resource flexibility on organisational performance⁴¹

Model	HRF (γ_1)	R ²
HRF→SATCLI	0.336 (3.521)	0.11
HRF→ADAPCLI	0.472 (4.027)	0.22

Note: t values are shown in brackets

6.2.2.2. The moderating role of environmental dynamism on the contribution of HR flexibility to organisational performance

Having verified the relevance of human resource flexibility to organisational performance, the effect that environmental dynamism may have on this relationship is analysed. That is, I sought to verify whether human resource flexibility is more valuable in organisations facing challenging external conditions than in firms operating in a stable environment. The moderating role of environmental dynamism in the linkage between human resource flexibility and performance was hypothesised in Chapter 4 as follows:

Hypothesis 14: The strength of the relationship between HR intrinsic flexibility and organisational performance will be higher in dynamic environments than in stable environments

Hypothesis 15: The strength of the relationship between HR skill malleability and organisational performance will be higher in dynamic environments than in stable environments

Hypothesis 16: The strength of the relationship between HR behavioural malleability and organisational performance will be higher in dynamic environments than in stable environments

Hypothesis 17: The strength of the relationship between HR relational flexibility and organisational performance will be higher in dynamic environments than in stable environments

⁴¹ The estimation of this model with control variables provided almost identical results. Therefore, for reasons of simplicity in the subsequent models presented in the chapter, results of model estimation with control variables are omitted.

As detailed in Chapter 5, this study adopts the latent variable scores approach (Jöreskog et al., 1999; Jöreskog, 2000) to test the interaction effect between human resource flexibility and dynamism on performance. The first step within this procedure is to verify the fit of a structural model without the latent interaction term (Bollen and Paxton, 1998). In doing so, I estimated five structural models (one for each HR flexibility dimension and a fifth model corresponding to the second order factor of HRF) which included all the variables in the model, but not the latent interaction term. Each of these structural models comprises three latent factors: HR flexibility dimension and environmental dynamism (as independent variables) and performance (as the dependent variable). Table 6.38 shows the fit indices of these models. As can be observed, the chi-square statistical significance and values of the fit indices guarantee that problems associated with mis-specification in the structural models will not appear.

The second step in SEM models for tests of moderation is to obtain the latent variable scores for the variables included in the analysis and to calculate the product interaction term (between HR flexibility and dynamism) directly from these factor scores (INT). I obtained the factor scores corresponding to these variables with the EQS software. Following this, I estimated a regression equation that computes the coefficients for the direct effects and the interaction effect on organisational performance (Table 6.39). A statistically significant coefficient corresponding to the interaction term (γ_3) would confirm that dynamism moderates the relationship between human resource flexibility and performance.

Table 6.38. Fit indices for the hypotheses relating HR flexibility and dynamism to organisational performance

Model	χ^2_{SB}	d.f.	p	BBNNFI	CFI	RMSEA	GFI	AGFI	NC
Model 1a (influence of IF and dynamism on CUSTSAT)	27.9403	25	0.31061	0.989	0.993	0.023	0.966	0.938	1.12
Model 1b (influence of IF and dynamism on CUSTEFF)	54.9786	42	0.08643	0.958	0.968	0.037	0.950	0.921	1.31
Model 2a (influence of SM and dynamism on CUSTSAT)	32.0374	33	0.51487	1	1	0.000	0.962	0.937	0.97
Model 2b (influence of SM and dynamism on CUSTEFF)	46.8133	52	0.67745	1	1	0.000	0.958	0.937	0.90
Model 3a (influence of BM and dynamism on CUSTSAT)	31.2627	33	0.55376	1	1	0.000	0.970	0.949	0.95
Model 3b (influence of BM and dynamism on CUSTEFF)	63.1047	52	0.13915	0.966	0.973	0.031	0.947	0.921	1.21
Model 4a (influence of RF and dynamism on CUSTSAT)	28.5111	25	0.28487	0.982	0.987	0.025	0.967	0.940	1.14
Model 4b (influence of RF and dynamism on CUSTEFF)	33.6943	42	0.81591	1	1	0.000	0.964	0.943	0.80
Model 5a (influence of HRF and dynamism on CUSTSAT)	189.5695	163	0.07566	0.972	0.976	0.027	0.890	0.858	1.16
Model 5b (influence of HRF and dynamism on CUSTEFF)	234.3297	203	0.06500	0.969	0.972	0.026	0.883	0.854	1.15

Table 6.39. Structural equations for the hypotheses including the interaction term between human resource flexibility and dynamism

$$\text{Model 1 : PERF} = \gamma_1\text{IF} + \gamma_2\text{DYN} + \gamma_3\text{INT} + \text{D}$$

$$\text{Model 2 : PERF} = \gamma_1\text{SM} + \gamma_2\text{DYN} + \gamma_3\text{INT} + \text{D}$$

$$\text{Model 3: PERF} = \gamma_1\text{BM} + \gamma_2\text{DYN} + \gamma_3\text{INT} + \text{D}$$

$$\text{Model 4 : PERF} = \gamma_1\text{RF} + \gamma_2\text{DYN} + \gamma_3\text{INT} + \text{D}$$

$$\text{Model 5 (global): PERF} = \gamma_1\text{HRF} + \gamma_2\text{DYN} + \gamma_3\text{INT} + \text{D}$$

The results of the regression analyses are shown in Table 6.40. These results confirm that when customer service effectiveness is taken as the dependent variable, environmental dynamism moderates the influence of human resource flexibility on performance, except for the intrinsic flexibility dimension. However, when the focus is

posited on customer satisfaction, the environmental conditions do not increase the impact of human resource flexibility on the dependent variable. These results are now commented on.

First, I observe that employee intrinsic flexibility is beneficial to the companies in my sample regardless of the external conditions in which the organisation operates. The expansion of employee skills and abilities that underlies the notion of intrinsic flexibility (i.e. human capital) and therefore employees' competencies to assume multiple roles in the organisation, are critical success factors in any type of organisation. These results confirm that the extension of employees' performance beyond their job descriptions should be considered as a new definition of labour productivity.

Second, environmental dynamism moderates the impact of the more proactive elements of human resource flexibility (SM, BM, RF), on customer service effectiveness. These components of human resource flexibility that refer not to employees' current abilities, but to the transformation of the workforce's features have a stronger impact on customer service effectiveness when the organisation is operating in a challenging and unpredictable context. In other words, employees who easily alter their knowledge base or modify their behaviours provide new ways of managing relationships with customers, which is a critical factor in dynamic environments. Additionally, when members of the organisation adopt a collective mind (i.e. show higher relational flexibility) and integrate their actions and knowledge with that of their work colleagues and external agents, they are likely to detect external changes more easily and to develop appropriate solutions to new challenges. Regarding this last component of human resource flexibility, the results confirm that HR relational flexibility is only beneficial to organisations operating in dynamic environments. Analyses that did not consider the environmental characteristics revealed that relational flexibility *per se* does not exert a significant effect on performance (see Table 6.33).

Third, when customer satisfaction is taken as the dependent variable, the interaction parameter is not statistically significant ($t < 1.96$), which suggests that all the human resource flexibility dimensions (except for RF) influence customer satisfaction, regardless of the external environment conditions. In subsequent sections of this chapter, I will also introduce the relationships between the two performance indicators

in order to verify whether the relevance of human resource flexibility on customer satisfaction is explained by the impact of the former on customer service effectiveness. These analyses will provide additional information about the moderation of dynamism in the impact of HR flexibility on customer satisfaction.

Finally, these results verify that dynamism also moderates the effect of the HRF global model (second-order latent variable) on performance. Employees showing a consistent pattern of flexibility in all its aspects will have a greater effect in organisations facing unpredictable changes.

Table 6.40. Structural parameters of the models including the interaction term between human resource flexibility and dynamism

Model	HR FLEX (γ_1)	DYN (γ_2)	INT (γ_3)	R²
Interaction between IF and dynamism on CUSTSAT	0.152 (2.187)	-0.071 (1.145)	-0.006 (0.098)	0.03
Interaction between IF and dynamism on CUSTEFF	0.291 (4.186)	-0.195 (1.730)	0.001 (0.023)	0.10
Interaction between SM and dynamism on CUSTSAT	0.157 (2.238)	-0.060 (0.998)	0.046 (0.786)	0.03
Interaction between SM and dynamism on CUSTEFF	0.420 (7.669)	-0.057 (1.068)	0.109 (2.222)	0.19
Interaction between BM and dynamism on CUSTSAT	0.254 (3.731)	-0.042 (0.723)	0.096 (1.353)	0.07
Interaction between BM and dynamism on CUSTEFF	0.332 (4.930)	-0.055 (0.971)	0.172 (2.584)	0.13
Interaction between RF and dynamism on CUSTSAT	0.090 (1.317)	-0.072 (1.156)	0.078 (1.285)	0.02
Interaction between RF and dynamism on CUSTEFF	0.103 (1.339)	-0.102 (1.725)	0.119 (1.824)	0.03
Interaction between HRF ⁴² and dynamism on CUSTSAT	0.282 (4.443)	-0.051 (0.878)	0.074 (1.316)	0.09
Interaction between HRF and dynamism on CUSTEFF	0.375 (5.841)	-0.070 (1.248)	0.133 (2.490)	0.16

Note: t values are shown in brackets

To summarise, the structural models estimated throughout this section confirm the consideration of HR flexibility as a competitive factor. According to these results, HR flexibility dimensions have a positive impact on organisational performance. In addition, the results partially verify that environmental dynamism moderates these relationships. That is, HR flexibility is more valuable (in terms of its impact on performance) when the organisation faces continuous external changes.

⁴² Since it is not possible to compute the factor scores of second-order latent variables with the EQS software, I substituted the four first-order factors corresponding to the human resource flexibility dimensions (IF, SM, BM, RF) with their factor scores. As a result, the global model of HRF is a first-order latent variable with four indicators (the IF, SM, BM and RF factor scores).

6.2.3. THE MEDIATING ROLE OF HUMAN RESOURCE FLEXIBILITY ON THE RELATIONSHIP BETWEEN HCM AND ORGANISATIONAL PERFORMANCE

While previous hypotheses capture the relationships between HCM, HR flexibility and organisational performance, I now integrate the above arguments to formally test the mediating role of HR flexibility in the HCM–performance link. Thus, a final set of hypotheses was presented in Chapter 4:

Hypothesis 18: Intrinsic flexibility will mediate the relationships between skill development, job enrichment and incentive HCM configurations and organisational performance

Hypothesis 19: Skill malleability will mediate the relationships between skill development and job enrichment HCM configurations and organisational performance

Hypothesis 20: Behavioural malleability will mediate the relationships between job enrichment and incentive HCM configurations and organisational performance

Hypothesis 21: Relational flexibility will mediate the relationships between job enrichment and incentive HCM configurations and organisational performance

The procedure for testing mediation effects in SEM models was exposed in Chapter 5. According to the suggestions provided by Holmbeck (1997), prior to the testing of the mediator effects, a direct-effect model should be estimated. This model tests the effects of the independent variable (in this study, HCM) on the dependent variables. Hence, I analysed the impact of the skills, job enrichment and incentive configurations on the two performance indicators considered in this research. The estimation of these models is based on the assumption that HCM components can have a direct effect on performance through variables that were not included in this study (e.g. labour productivity, turnover, etc.). The comparison of the structural coefficients corresponding to these models with the coefficients in which human resource flexibility dimensions are also considered will allow to draw conclusions about the mediating effect of HR flexibility.

Table 6.41 shows the fit indices for the models that include the direct effect of HCM on performance. All the models show a good fit. The structural parameters (Table 6.42) show that, after introducing the control variables in the equations, all the HCM components positively affect the performance indicators (except for the impact of the skills configuration on customer service effectiveness). As Wei et al. (2003) affirm, without significant coefficients in the direct-effect models, no mediation effect could exist between the dependent and the independent variables. Therefore, it is possible to continue with the following steps in the test for mediation effects.

Table 6.41. Fit indices of the structural models of the influence of HCM on performance

Model	χ^2_{SB}	d.f.	p	BBNNFI	CFI	RMSEA	GFI	AGFI	NC
SKILLS→CUSTSAT	68.8397	53	0.07068	0.948	0.958	0.037	0.948	0.924	1.30
SKILLS→CUSTEFF	98.4974	75	0.03581	0.924	0.937	0.037	0.939	0.914	1.31
JOBENRICH→CUSTSAT	40.0139	34	0.22063	0.977	0.983	0.028	0.963	0.940	1.18
JOBENRICH→CUSTEFF	60.5060	53	0.22324	0.972	0.977	0.025	0.953	0.930	1.41
INCENTIVE→CUSTSAT	45.1322	34	0.09601	0.955	0.966	0.038	0.959	0.934	1.33
INCENTIVE→CUSTEFF	71.7296	53	0.04423	0.926	0.940	0.040	0.945	0.919	1.35

Table 6.42. Structural parameters of the influence of HCM on performance

Model	HCM (γ_1)	SEC (γ_2)	ACT (γ_3)	EST (γ_4)	TAM (γ_5)	R2
SKILLS→CUSTSAT	0.177 (1.983)	-0.132 (1.834)	0.168 (2.285)	0.055 (1.311)	0.036 (0.522)	0.08
SKILLS→CUSTEFF	0.080 (1.446)	-0.101 (1.778)	0.134 (0.393)	0.017 (1.193)	-0.082 (0.864)	0.04
JOBENRICH→CUSTSAT	0.265 (2.681)	-0.105 (1.531)	0.108 (1.466)	0.020 (0.536)	-0.076 (1.114)	0.10
JOBENRICH→CUSTEFF	0.382 (3.266)	-0.127 (1.781)	0.140 (1.866)	0.057 (1.786)	-0.009 (0.132)	0.19
INCENTIVE→CUSTSAT	0.170 (1.641)	-0.100 (1.442)	0.110 (1.503)	0.015 (0.378)	-0.086 (1.242)	0.06
INCENTIVE→CUSTEFF	0.364 (3.098)	-0.121 (1.682)	0.120 (1.703)	0.049 (1.288)	-0.027 (0.403)	0.17

The next step in this procedure is to formulate a partially mediated model, which simultaneously includes three types of causal relationships: a) HCM on HR flexibility; b) HR flexibility on performance and c) HCM on performance. The conclusions on the direct and indirect effects are presented according to the differentiation between the four components of human resource flexibility.

a) The mediating role of human resource intrinsic flexibility

In order to verify whether the effect of the HCM components on performance is produced through their impact on employee intrinsic flexibility (versatility), I estimated six partially mediated structural models, whose fit indices appear in the following table.

Table 6.43. Fit indices for the structural models including human resource intrinsic flexibility as a mediator variable

Model	χ^2_{SB}	d.f.	p	BBNFI	CFI	RMSEA	GFI	AGFI	NC
1) SKILLS→IF→CUSTSAT	57.6935	40	0.03464	0.946	0.960	0.044	0.955	0.925	1.44
2) SKILLS→IF→CUSTEFF	79.8071	61	0.05340	0.948	0.960	0.037	0.945	0.918	1.31
3) JOBENRICH→IF→CUSTSAT	27.2903	24	0.29110	0.988	0.992	0.025	0.966	0.936	1.14
4) JOBENRICH→IF→CUSTEFF	42.0038	41	0.42720	0.997	0.998	0.010	0.962	0.938	1.02
5) INCENTIVE→IF→CUSTSAT	27.6088	24	0.27688	0.987	0.991	0.026	0.967	0.938	1.15
6) INCENTIVE→IF→CUSTEFF	47.2894	41	0.23126	0.980	0.985	0.026	0.957	0.930	1.15

The analyses of the structural parameters corresponding to these models (Table 6.44) allow to draw some initial conclusions about the mediating role of human resource intrinsic flexibility on the relationship between the different elements of HCM and performance. As can be observed in Table 6.44, only models 1 and 6 show a significant indirect effect that corroborates the consideration of this human resource flexibility dimension as a mediating variable.

When IF is introduced in the equation in the first model (SKILLS→IF→CUSTSAT), both the structural coefficient corresponding to the effect of SKILLS on performance and its statistical significance diminish. This can be interpreted as evidence of a total moderator effect. That is, the skill HCM configuration improves customer satisfaction through its impact on intrinsic flexibility. Organisations investing in their employees' development will observe an improvement in their results explained by the influence of the developmental activities on workforce versatility. In the sixth model (INCENTIVE→IF→CUSTEFF), the incentive configuration of the HCM strategy affects customer service effectiveness due to its impact on employee versatility. Fair reward and promotion activities are an incentive for employees to reallocate and move between different organisational roles and jobs and this allows the firm to meet customer requirements easily. In this case, a partial moderator effect exists, since the influence of incentives on service effectiveness is also significant. Thus, this HCM dimension affects performance through other variables apart from its impact on employee versatility.

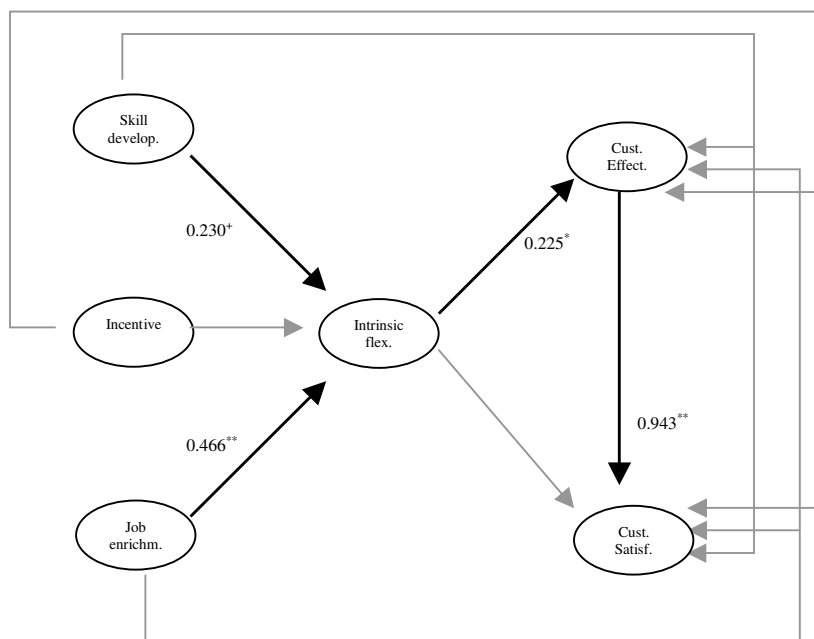
Table 6.44. Structural parameters of the models including human resource intrinsic flexibility as a mediator variable

Model	Indirect effects		Direct effects	Significance of indirect effect	R ²
	HCM→FLEX	FLEX→PERF	HCM→PERF		
1) SKILLS→IF→CUSTSAT	0.245 (2.227)	0.179 (1.973)	0.080 (0.737)	(1.812)	0.04
2) SKILLS→IF→CUSTEFF	0.250 (2.298)	0.346 (3.616)	0.182 (1.708)	(1.544)	0.15
3) JOBENRICH→IF→CUSTSAT	0.427 (3.199)	0.069 (0.673)	0.278 (1.889)	(1.321)	0.08
4) JOBENRICH→IF→CUSTEFF	0.431 (3.227)	0.229 (2.100)	0.400 (2.400)	(1.573)	0.20
5) INCENTIVE→IF→CUSTSAT	0.291 (2.676)	0.134 (1.496)	0.186 (1.514)	(0.622)	0.05
6) INCENTIVE→IF→CUSTEFF	0.289 (2.716)	0.264 (2.955)	0.399 (3.016)	(1.918)	0.22

To provide a more comprehensive interpretation of the antecedents and consequences of the workforce's intrinsic flexibility, I formulated a global model comprising all the HCM configurations as determinants of human resource intrinsic flexibility, as well as the consequences of this human resource flexibility component for organisational performance (Figure 6.4). In this model, causal relationships between the three HCM configurations and both intrinsic flexibility and performance were analysed. Furthermore, as depicted in the figure, I included the possibility that the two performance indicators were related. Specifically, it was assumed that customer service effectiveness can be an antecedent of customer satisfaction (Liao and Chuang, 2004).

The causal paths shown in the figure suggest that HCM affects performance exclusively through its impact on human resource intrinsic flexibility, thus confirming the relevance for organisational success of developing a versatile workforce through human resource activities. The parameters corresponding to the direct effect of HCM on performance are not statistically significant. In addition, the figure shows that human resource intrinsic flexibility influences customer service effectiveness but not customer satisfaction. These results suggest that the benefits of versatile employees for customer satisfaction are explained by their contribution to efficient management of the relationships with the customers. Furthermore, when all the antecedents and consequences of this HR flexibility dimension are considered, the predictive capacity of the model is greater than that of more partial models, attaining a R² coefficient of 0.75.

Figure 6.4. A global model of the mediator role of HR intrinsic flexibility on the relationship between the HCM configurations and performance



*p< 0.05; **p< 0.01; +p<0.1

Note: Grey lines indicate non-statistically significant relationships

b) The mediating role of human resource skill malleability

I estimated four structural models to test the extent to which human resource skill malleability mediates the relationship between the HCM configurations and organisational performance. The values of the fit indices and the χ^2 reveal a good fit of the models (Table 6.45).

The structural coefficients in these models confirm the mediating effect of skill malleability on the linkage between the HCM job enrichment configuration and the two performance indicators (Table 6.46). Organisations that foster job enrichment through the empowerment of employees or teamwork will develop employees who are able to alter their skill or competence base whenever the need arises. This type of employee, in turn, guarantees an improvement in the organisation's results. This finding confirms the suggestions of several authors (e.g. Teece et al., 1997; Boxall and Purcell, 2000) that learning processes developed in the firm over time are an important pillar to sustain

organisational competitive advantage. However, as can be observed in Table 6.46, human resource skill malleability is a partial mediator in this relationship, since the influence of job enrichment on performance is also statistically significant; that is, this component of HCM may influence the results through other variables that are not considered in this study.

Table 6.45. Fit indices for the structural models including human resource skill malleability as a mediator variable

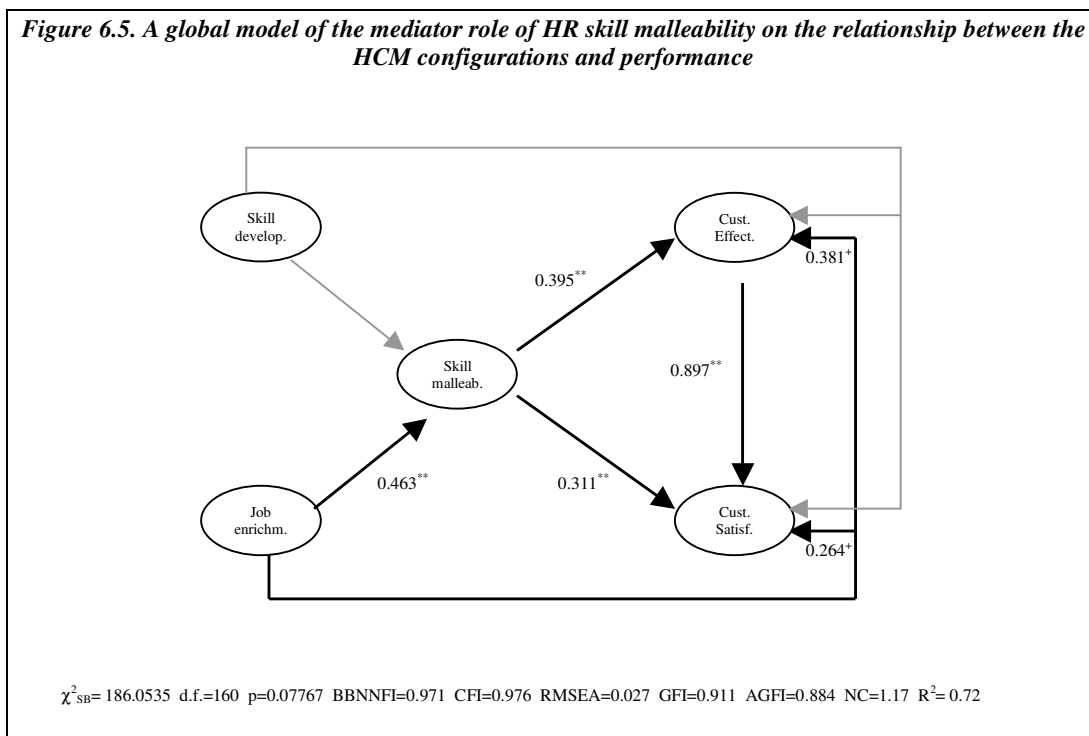
Model	χ^2_{SB}	d.f.	p	BBNNFI	CFI	RMSEA	GFI	AGFI	NC
1) SKILLS→SM→CUSTSAT	60.0727	51	0.18006	0.980	0.985	0.028	0.951	0.925	1.18
2) SKILLS→SM→CUSTEFF	83.9806	74	0.20034	0.980	0.984	0.024	0.941	0.917	1.13
3) JOBENRICH→SM→CUSTSAT	38.8665	32	0.18789	0.984	0.988	0.031	0.957	0.926	1.21
4) JOBENRICH→SM→CUSTEFF	51.4668	51	0.45537	0.999	0.999	0.006	0.953	0.928	1.01

Table 6.46. Structural parameters of the models including human resource skill malleability as a mediator variable

Model	Indirect effects		Direct effects	Significance of indirect effect	R ²
	HCM→FLEX	FLEX→PERF	HCM→PERF		
1) SKILLS→SM→CUSTSAT	0.132 (1.056)	0.374 (4.851)	0.077 (0.787)	(0.995)	0.14
2) SKILLS→SM→CUSTEFF	0.133 (1.065)	0.485 (5.029)	0.184 (1.848)	(1.029)	0.27
3) JOBENRICH→SM→CUSTSAT	0.469 (3.770)	0.318 (3.482)	0.272 (1.846)	(2.393)	0.15
4) JOBENRICH→SM→CUSTEFF	0.472 (3.786)	0.402 (3.754)	0.399 (2.469)	(2.479)	0.29

Similar results are observed when all the hypothesised relationships are estimated simultaneously (Figure 6.5). Skill malleability explains part of the influence of job enrichment on performance. This human resource flexibility component has a positive direct effect on both operational performance and customer satisfaction indicators. Additionally, the job enrichment configuration has a direct impact on the results.

Figure 6.5. A global model of the mediator role of HR skill malleability on the relationship between the HCM configurations and performance



*p<0.05; **p<0.01; +p<0.1

Note: Grey lines indicate non-statistically significant relationships

c) The mediating role of human resource behavioural malleability

The hypothesis that considers human resource behavioural malleability as a mediating variable in the HCM–performance relationship was tested by estimating four structural models, whose fit indices and χ^2 values confirm a good fit (Table 6.47).

Table 6.47. Fit indices for the structural models including human resource behavioural malleability as a mediator variable

Model	χ^2_{SB}	d.f.	p	BBNNFI	CFI	RMSEA	GFI	AGFI	NC
1) JOBENRICH→BM→CUSTSAT	22.5027	45	0.89337	1	1	0.000	0.978	0.962	0.50
2) JOBENRICH→BM→CUSTEFF	59.0712	51	0.20447	0.977	0.982	0.027	0.949	0.922	1.16
3) INCENTIVE→BM→CUSTSAT	32.8637	32	0.42455	0.997	0.998	0.011	0.970	0.948	1.03
4) INCENTIVE→BM→CUSTEFF	70.1883	50	0.03130	0.941	0.956	0.042	0.944	0.913	1.40

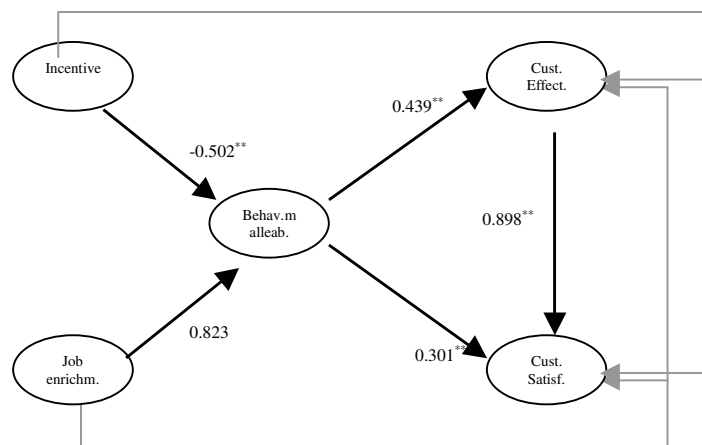
The coefficients corresponding to these models do not support the mediating role of employee behavioural malleability in the linkage between HCM and performance. Results in Table 6.48 indicate the non-significance of the indirect effect that captures the mediation of BM on the linkage between HCM and performance.

Table 6.48. Structural parameters of the models including human resource behavioural malleability as a mediator variable

Model	Indirect effects		Direct effects	Significance of indirect effect	R ²
1) JOBENRICH→BM→CUSTSAT	HCM→FLEX 0.475 (3.681)	FLEX→PERF 0.225 (1.912)	HCM→PERF 0.277 (1.855)	(1.497)	0.12
2) JOBENRICH→BM→CUSTEFF	0.357 (3.670)	0.209 (2.038)	0.220 (2.440)	(1.612)	0.22
3) INCENTIVE→BM→CUSTSAT	0.041(0.471)	0.299 (2.917)	0.193 (1.809)	(0.472)	0.13
4) INCENTIVE→BM→CUSTEFF	0.041 (0.541)	0.269 (3.120)	0.230 (3.141)	(0.504)	0.31

Nonetheless, the estimation of a global model of the antecedents and consequences of human resource behavioural malleability (Figure 6.6) confirms that when all the determinants of BM are taken into account, this human resource flexibility dimension mediates the impact of the job enrichment and the incentive configurations on performance. As can be observed in the figure, these HCM components have no significant impact on performance apart from that corresponding to improvements in employee behavioural malleability. These results suggest that organisations whose members question and reassess the relevance of existing performance standards, work norms, and underlying assumptions (i.e. exhibit behavioural malleability) will attain better results than firms with employees that follow standardised routines. The development of proactive employees can be attained through the human resource strategy, especially through an appropriate job design that broadens the employee's role in the organisation. The incentive configuration, as explained in section 6.2.1 may be counterproductive to the pursuit of workforce initiative. This model explains more than 70% of the variance in organisational performance, as indicated by the R² coefficient.

Figure 6.6. A global model of the mediator role of HR behavioural malleability on the relationship between the HCM configurations and performance



$\chi^2_{SB}=133.8801$ d.f.=125 p=0.27733 BBNNFI=0.988 CFI=0.990 RMSEA=0.018 GFI=0.927 AGFI=0.901 NC=1.17 R²=0.73

*p<0.05; **p<0.01; +p<0.1

Note: Grey lines indicate non-statistically significant relationships

d) The mediating role of human resource relational flexibility

The mediating effect of workforce relational flexibility is not confirmed by the estimation of the structural models (Tables 6.49 and 6.50). The results obtained in section 6.3.2 did not confirm the influence of this dimension on performance. Without a direct impact of the intermediate variable on performance, there is no possibility of mediation. Consequently, a global model with all the antecedents and consequences of HR relational flexibility (Figure 6.7) fails to demonstrate any mediator effect.

Table 6.49. Fit indices for the structural models including human resource relational flexibility as a mediator variable

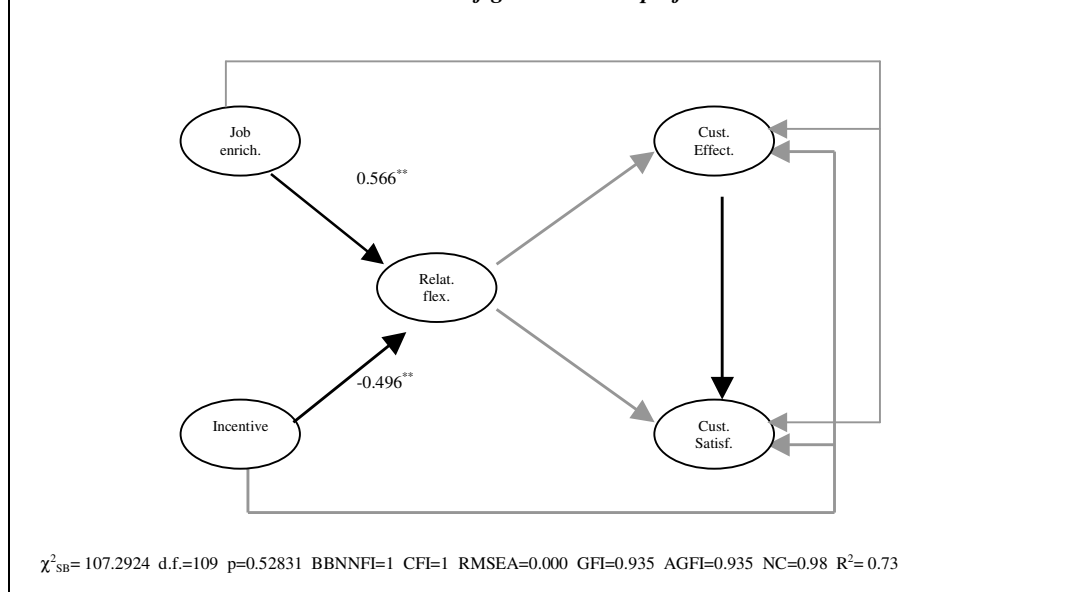
Model	χ^2_{SB}	d.f.	p	BBNNFI	CFI	RMSEA	GFI	AGFI	NC
1) JOBENRICH→RF→CUSTSAT	24.0713	24	0.45753	1	1	0.004	0.971	0.945	1.00
2) JOBENRICH→RF→CUSTEFF	35.4423	41	0.71544	1	1	0.000	0.963	0.941	0.86
3) INCENTIVE→RF→CUSTSAT	23.7254	24	0.47739	1	1	0.000	0.972	0.947	0.99
4) INCENTIVE→RF→CUSTEFF	40.8508	41	0.47718	1	1	0.000	0.959	0.935	0.99

Table 6.50. Structural parameters of the models including human resource relational flexibility as a mediator variable

Model	Indirect effects		Direct effects	Significance of indirect effect	R ²
	HCM→FLEX	FLEX→PERF	HCM→PERF		
1) JOBENRICH→RF→CUSTSAT	0.221 (1.828)	0.033 (0.376)	0.279 (2.557)	(0.348)	0.08
2) JOBENRICH→RF→CUSTEFF	0.221 (1.808)	0.013 (0.136)	0.395 (3.187)	(0.134)	0.16
3) INCENTIVE→RF→CUSTSAT	-0.138 (1.241)	0.120 (1.327)	0.186 (1.597)	(1.327)	0.05
4) INCENTIVE→RF→CUSTEFF	-0.130 (1.177)	0.155 (1.426)	0.395 (3.029)	(1.019)	0.18

My data do not verify that HR relational flexibility mediates the impact of HCM on performance. Nonetheless, I should point out here that when environmental dynamism was introduced in the analyses, I concluded that it only influences performance in dynamic contexts. Therefore, future research should simultaneously consider the mediator role of HR flexibility together with the moderation of the environment on the HCM-performance linkages.

Figure 6.7. A global model of the mediator role of HR relational flexibility on the relationship between the HCM configurations and performance



*p< 0.05; **p< 0.01; +p<0.1

Note: Grey lines indicate non-statistically significant relationships

6.3. CHAPTER SUMMARY

The results obtained in this chapter confirm the adequacy of the scales used in this study to measure the various concepts included in the hypotheses. The structural models estimated partially confirm the research hypotheses of this research (see Appendix 4). HCM configurations impact most of the human resource flexibility dimensions, which in turn influence organisational performance. Of all the HCM strategy components, job enrichment emerges as the most critical factor in improving employee flexibility.

Regarding the impact of human resource flexibility on organisational results, all the dimensions except for relational flexibility have a significant effect on the performance indicators. In addition, when the covariation between these dimensions is taken into consideration, the results suggest that HRF, as a whole, also contributes to organisational success. The inclusion of environmental characteristics in the analyses confirms that human resource flexibility has a stronger impact on performance when the organisation operates in a dynamic context.

In the following chapter, I will provide a more detailed discussion of these results, together with their implications for organisations.

Chapter 7. Discussion

7.0. INTRODUCTION

The general purpose of the present research was to analyse the contribution of High Commitment Management (HCM) to organisational performance by considering human resource flexibility as a mediator variable in this relationship. In doing so, an empirical study on a sample of 226 Spanish companies belonging to different sectors was carried out. Specifically, I have focused on the commercial and marketing department of the companies included in my sample. The theoretical review provided in this dissertation and the application of SEM models to the data leads to several conclusions, which refer to three main questions.

Firstly, I have revised the concept of HCM by attending to the underlying dimensions of this strategy. During recent decades, interest has arisen in people management systems that reject Taylorist and control methods. These new workplace practices (high commitment management) emphasise the organisations' interests in employee needs and expectations, the humanising of work and the utilisation of equitable practices (Kamoche, 1994). However, no consensus has been reached on how to operationalise a HCM strategy (Guest, 1997). In this study I have reviewed the main areas of discrepancy that emerge when defining the components of HCM and I have focused on a definition of HCM that centres on the "architecture" of this strategy (Becker and Gerhart, 1996).

Secondly, I have studied the concept of human resource flexibility from the Resource-Based View (RBV) perspective. Various scholars claim that the RBV provides valuable insights to define HR flexibility and it can provide this literature with a more solid theoretical basis (Looise et al., 1998; Wright and Snell, 1998; Dyer and Shafer, 1999). In this research I have applied the characteristics of flexible resources to the study of HR flexibility.

Thirdly, I have examined the effects of HCM on organisational performance. Specifically, I have focused on three research questions: a) what effect does HCM have on workforce flexibility?, b) does human resource flexibility improve organisational results?, and c) do environmental characteristics (in this study, dynamism) moderate the relationship between HR flexibility and organisational performance? Answers to these questions may help to advance the analysis of the “black box” (Ramsay et al., 2000) that exists between human resource strategies and organisational outcomes.

In this chapter, I explain the conclusions of the present study in greater detail. Some of the limitations of the study together with future lines of research to come out of these results are also discussed.

7.1. MAIN CONCLUSIONS OF THE RESEARCH

Through the theoretical review provided in Chapters 1 to 4, and the empirical study undertaken in a sample of Spanish companies (Chapters 5 and 6), I can now discuss the extent to which this research has fulfilled the objectives set out at the beginning of the dissertation.

7.1.1. CONCEPTUALISATION OF HCM: SKILL DEVELOPMENT, JOB ENRICHMENT AND INCENTIVES

HCM is a specific human resource management approach based on the creation of commitment and trust linkages between employees and the organisation (Wood and Albanese, 1995). The adoption of a HCM strategy entails the use of certain practices in the various human resource management areas (staffing, training, performance appraisal and job design). The review provided in Chapter 2 revealed the lack of agreement over the operationalisation of this strategy. I proposed a revision of the underpinnings of HCM in order to provide a more systematic approach to analyse the components of this strategy.

The analysis of the underpinnings of HCM entails examining the “architecture of the system” (Becker and Gerhart, 1996); that is, the analysis of human resource strategies from the point of view of bundles or configurations, rather than isolated practices. From the review of relevant studies in the HRM literature, I concluded that HCM is made up of three bundles, namely: a) skill development configuration, b) job enrichment configuration, and c) incentive configuration. Each configuration denotes an organisational logic that explains the adoption of certain human resource practices. In this regard, my proposal considered these configurations to represent a latent managerial approach that captures the correlation between a set of practices.

This conception of HCM was corroborated in the empirical research. Through the application of the Confirmatory Factor Analysis (CFA) technique in the sample of companies, the factorial structure of the HCM strategy was demonstrated. The results of the CFA showed HCM to comprise three interrelated dimensions, each corresponding to

one of the defined HCM configurations. Various conclusions can be drawn from these findings.

On the one hand, these results lend support to the definition of the HCM strategy according to the premises of the AMO Model (abilities, motivation, opportunities to participate) (Bailey, 1993; Delaney and Huselid, 1996; Applebaum et al., 2000). From this perspective, HCM is characterised by three issues. Firstly, organisations that adopt HCM emphasise the skill development of the workforce. The skill development configuration assumes that the organisation's human capital can be continuously improved through exhaustive training and recruitment activities. Second, HCM emphasises the enrichment of jobs through the encouragement of teamwork, autonomy and skill-based job design. The third component of the HCM strategy, incentives, focuses on the provision of equitable and fair rewards that motivate employees to effectively contribute to the achievement of the organisation's goals. These results concur with those of Delery and Doty (1996), Guest (1997), Bailey et al. (2001) or Batt (2002), among others, who demonstrated the appropriateness of the AMO Model to conceptualise High Commitment Management.

In addition, by moving from a practice-oriented to a system-oriented perspective when defining the HCM strategy, a more global interpretation of the strategy can be made, which helps to integrate discrepancies identified in previous conceptualisations of HCM. For example, I pointed out that some authors considered only certain practices as components of HCM, such as formal human resource planning (Koch and McGrath, 1996), realistic job previews (Hoque, 1999) or systematic assessment of training efficacy (Roche, 1999). On considering workforce skill development as one of the main components of HCM, it is possible to observe that these practices, recommended only by certain empirical studies in the HRM literature, can be interpreted as part of a similar managerial approach focused on the continuous improvement of the organisation's human capital. It is the architectural characteristics of HCM (i.e. configurations or bundles) that may be common to any organisation adopting a high-commitment strategy; the utilisation of certain practices may be dependent on specific organisational objectives or environmental conditions faced by the firm (Becker and Gerhart, 1996).

On the other hand, the consideration of the HCM components as latent variables is based on the idea of *internal fit*. Internal fit refers to the congruence between various human resource practices (Arthur, 1994; Delery and Doty, 1996). Factorial analyses capture the notion of internal fit by considering that human resource practices are found together because they are grounded in a common philosophy (Vandenberg et al., 1999). These results are similar to those of previous studies, such as MacDuffie (1995), Youndt et al. (1996) or De Menezes and Wood (2006), who demonstrate the existence of a common factor underlying the use of particular human resource practices.

7.1.2. CONCEPTUALISATION OF HUMAN RESOURCE FLEXIBILITY: INTRINSIC, MODIFICATION AND RELATIONAL FLEXIBILITY

Despite recent interest in the notion of HR flexibility, there is no commonly accepted definition of this term. The literature review provided in Chapter 3 showed that some of the most well-known frameworks of HR flexibility (e.g. the model of the flexible firm by Atkinson, 1984) are practice-oriented, designed to offer managers recommendations for the daily practice in their organisations. Nonetheless, little effort has been made to provide the study of HR flexibility with a solid theoretical basis (Looise et al., 1998). Following the suggestions of various scholars (e.g. Wright and Snell, 1998; Chadwick and Cappelli, 1999; Dyer and Shafer, 1999), I have sought to fill this research gap by conceptualising HR flexibility from the Resource-Based View (RBV) perspective.

The incorporation of the RBV into the HR flexibility field involves considering flexibility from an internal perspective, by focusing on the pool of employees existing in the organisation at a certain moment. Furthermore, similar to the role that value, rareness, durability and inimitability play in the consideration of organisational resources as sources of sustainable competitive advantages (Barney, 1991), the RBV approach defines a set of criteria that characterises flexible resources (Sanchez, 1995, 1997). I applied these criteria to the conceptualisation of HR flexibility. As a result, I considered that HR flexibility is a multidimensional concept made up of the following components: a) HR intrinsic flexibility, b) HR modification flexibility (skill malleability and behavioural malleability), and c) HR relational flexibility.

The application of Structural Equation Modelling to the data confirmed the proposed structure of the HR flexibility concept. The first dimension of HR flexibility (intrinsic flexibility or versatility) refers to employees' abilities to work in different tasks and under diverse circumstances. The second dimension (skill malleability) indicates how easily and quickly employees acquire the abilities needed to carry out new tasks. The third dimension is behavioural malleability, which refers to how easily and quickly employees alter their routines at work when faced with new circumstances. Finally, HR relational flexibility indicates employees' willingness to cooperate and collaborate with others both within and outside the organisation. In addition, these results corroborate the intercorrelation of these dimensions; in other words, employees who show flexibility in one of the areas are also likely to do so in the others.

The proposed definition of HR flexibility complements previous studies on the internal side of labour flexibility. By considering questions such as skill malleability or behavioural malleability, the RBV perspective introduces a proactive element into the HR flexibility concept, focused on the change-initiating role of employees that allow organisations to anticipate future external changes. This definition differs from previous conceptualisations of internal HR flexibility, which mainly focus on workforce versatility (also known as functional flexibility, Molleman and Slomp, 1999; Karuppan, 2004), and therefore, on employees' ability to move or reallocate once a triggering episode has occurred.

Despite the novelty of the proposed HR flexibility scale, several tests confirmed its construct validity and consequently, the correspondence between the indicators and the theoretical construct to be measured.

7.1.3. ANALYSIS OF THE CAUSAL RELATIONSHIPS BETWEEN HCM, HR FLEXIBILITY AND ORGANISATIONAL PERFORMANCE

The statistical treatment of the data obtained from the sample of companies allowed to analyse the extent to which HR flexibility mediates the relationship between HCM and organisational performance. The testing of this relationship was structured into three questions. First, the causal linkages between HCM and HR flexibility were examined. Second, the influence of HR flexibility on organisational performance was tested.

Finally, the moderator effect of environmental dynamism on the HR flexibility-organisational performance relationship was studied. The estimation of various structural models following the SEM methodology allowed to examine the significance and strength of the proposed relationships.

7.1.3.1. Influence of HCM on HR flexibility

According to Dyer and Reeves (1995), before they become manifest in organisational results, human resource strategies impact a set of employee-related variables. Human resource management determines the nature of the relationships between the organisation and its employees and consequently, employee responses at work. Following this same logic, the first group of hypotheses in this research (H1-H9) established causal relationships between HCM components and HR flexibility. In order to test these hypotheses, several structural equations were estimated. Six out of the nine hypotheses were empirically corroborated.

The results of these analyses confirm that the two main HCM configurations that determine *HR intrinsic flexibility* in the commercial and marketing departments are skill development and job enrichment. Training and staffing activities designed to increase the organisation's human capital (i.e. collective skills and abilities) determine employee potential to reallocate between jobs and to assume responsibility for multiple tasks. These results are similar to those of previous studies, such as Skaggs and Youndt (2004), who demonstrated the relevance of developmental initiatives to guarantee workforce responsiveness to changing customer expectations. On the other hand, job enrichment also emerges as a determinant of employee versatility. Some scholars have argued that the provision of challenging jobs reinforces the effect of training activities and thus, contributes to improving the employee's pool of competencies (Friedrich et al., 1998).

Regarding the determinants of *HR modification flexibility* (skill malleability and behavioural malleability), job enrichment is the main antecedent of change-orientation at work. These results are in line with the suggestions made by Wright and Snell (1998), who affirm that organisational experiences related to job design may contribute to broaden both the skills and behavioural repertoires of individuals. The main explanation

from these linkages rests on the idea of employee “role perception”, referring to the range of problems and competences that an employee sees as relevant to his or her work (Parker et al., 1997). Employees are likely to expand their role perception when their jobs are challenging and interesting, thus assuming that their responsibilities exceed the formal description of their jobs. This type of employee has a wide vision of the range of skills that are relevant to their work and consequently, they may be more willing to learn (i.e. higher skill malleability). Similarly, as the perception of an employee role in the organisation expands, the scope of problems that employees feel responsible for becomes wider (Parker, 2000) and employees are more disposed to alter their routines at work (i.e. higher behavioural malleability). These results are similar to conclusions of previous empirical studies, such as LePine and Van Dyne (1998) or Axtell et al. (2000). Contrary to what I expected, the incentive configuration of the HCM strategy has a negative impact on behavioural malleability. A possible explanation for this linkage is that, by focusing on employee past performance at work, performance appraisals and equitable rewards inhibit the exhibition of proactivity and initiative.

The analyses also show the positive impact of job enrichment on the dimension of *HR relational flexibility*. Consistent with the results of Youndt and Snell’s (2004) research, this study demonstrates that by reducing job delimitations and encouraging employee autonomy at work, a climate of cooperation emerges among the workforce in the companies analysed. In addition, the negative impact of the incentive configuration on this component of human resource flexibility suggests that human resource practices concerned with individual achievements at work fail to take into account of the interrelations between employees and their contribution to common goals (Campbell et al., 1998; Nahapiet and Ghoshal, 1998).

A further notable finding is that when all the components of HCM are simultaneously included in the analyses, the predictive capacity of the structural models (in terms of the coefficient of determination) increases. That is, by assuming a global conception of HCM, it is easier to understand changes in the flexibility of the workforce. For instance, for the case of HR relational flexibility, the estimation of two isolated models for the two predicted antecedents (i.e. job enrichment and incentives) revealed no significant relationships between the dependent and the independent variables. However, when these two antecedents were included as interrelated independent variables, the predicted

relationships were confirmed. The simultaneous consideration of various HCM components helps to identify the suppressing and reinforcing effects between the components of this human resource strategy when determining HR flexibility.

7.1.3.2. Influence of HR flexibility on organisational performance

Human resource flexibility has been considered as a competitive factor that allows organisations to face external challenges and to improve their performance. People's abilities to cope with change and efficiently respond to changing circumstances have been posited by various scholars as a critical determinant of organisational success (Murphy and Jackson, 1999; Pulakos et al., 2000). Hypotheses 10 to 13 focused on the linkages between the components of HR flexibility and two indicators of organisational performance: customer service effectiveness (CUSTEFF) and customer satisfaction (CUSTSAT). After introducing a set of control variables that may affect the dependent variable, the analyses confirmed all the predicted relationships, except for the influence of HR relational flexibility on performance. These analyses were complemented by a set of mediator models that tested the intermediate role of HR flexibility on the HCM-organisational performance linkage.

a) Does HR flexibility impact organisational performance?

For the sample of companies in this study, the positive impact of HR intrinsic flexibility on the two performance criteria was confirmed. In line with previous studies (Cordery et al., 1993; Rosenblatt and Inbal, 1999; Valverde et al., 2000; Youndt and Snell, 2004), these results verify that versatile employees contribute to enhancing organisational effectiveness. Similarly, I found that employees showing higher skill malleability are also a determinant of firm performance, in line with Lado and Wilson (1994), who stated that employees with malleable skills are better able to respond in improved ways to new circumstances, reducing performance variability at work over time and increasing productivity. Moreover, I found evidence that behavioural malleability also influences organisational results, since it may ensure that employees develop new processes at work that eliminate costly steps or reduce inputs which in turn, may benefit organisational performance (Youndt and Snell, 2004). In this regard, the results

corroborate previous empirical evidence, such as the research by Kirkman and Rosen (1999), in which the influence of employee proactivity on various organisational result criteria (productivity, commitment and customer service) was demonstrated.

In contrast, I did not find empirical support for the HR relational flexibility-organisational performance relationship. Some explanations can be given for this result. On the one hand, despite the benefits that high levels of social capital (i.e. interactions among organisational members) provide to organisations, such as better knowledge transfer, increased problem-solving abilities or reduction of formal control over employees, among others (Nahapiet and Ghoshal, 1998; Youndt and Snell, 2004), HR relational flexibility involves a set of costs that may undermine its benefits for the organisation's performance. According to research by Leana and Van Buren (1999), collaboration among organisational members may entail a set of costs. For example, social capital requires maintenance and thus, some maintenance costs may appear (e.g. costs associated with preserving ongoing relationships and norms such as the socialisation of new members). In addition, the focus on the collective, rather than the individual, may reduce individual incentives to innovate, making it difficult to introduce strategic changes that might be beneficial for the organisation (Leana and Van Buren, 1999). The non-statistical significance of the causal relationship between HR relational flexibility and organisational results may be due to the fact that the costs implicit in collaboration among employees are equal or superior to its benefits.

On the other hand, the scope of the analysis was also able to justify the non-significance of the impact of HR relational flexibility on performance. As I have discussed throughout this dissertation, employees operating in the commercial and marketing areas determine the nature of the linkages between the firm and its customers, which in most of the cases is based on individual agreements between a single employee and a specific customer. Given the nature of the activities carried out by this specific group of employees, it is possible that collaboration among the workforce does not constitute a critical factor to improving organisational performance, as may occur for instance in activities related to research and development.

Moreover, the analyses revealed the suitability of considering the interrelationships between the components of HR flexibility when analysing their impact on performance. I demonstrated that there is a latent concept underlying all the HR flexibility dimensions. The analyses revealed that this second-order variable (HRF), which explains the correlations between all the aspects of human resource flexibility has a significant effect on organisational performance. Consequently, in the organisations analysed, employees showing a coherent pattern of flexibility in all its aspects contribute to enhancing organisational outcomes.

A relevant conclusion that can be drawn from all these results is the need to expand the job performance concept in modern organisations, by including employee abilities to engage in broad open-ended and interdependent roles that differ from a traditional conception of job performance, centred on the effective performance of a set of specified tasks (Campbell, 2000; Parker, 2000). Nowadays, all employee features should be taken into account, rather than only considering his or her abilities relevant to the formal description of the job. Aspects such as the provision of new ideas or the ability to interact with colleagues should become part of the labour performance notion (Ilgen and Pulakos, 1999; Murphy, 1999).

In addition, and taking into account the unit of analysis in the present study, this research verifies the relevance of employees from the commercial or marketing areas to the organisation's success. This is consistent with suggestions made by MacKenzie et al. (1998), who highlighted the bottom-line implications of the extra-role performance in this particular group of employees. Employees in these areas shape the nature of the interdependences between the organisation and its customers, which has emerged as a competitive factor in today's organisations (Slater and Olson, 2000).

I also observed that the impact of HR flexibility dimensions on firm performance is stronger when customer service effectiveness (CUSTEFF) is taken as the dependent variable. This performance indicator refers to the ability to fulfil customers' demands and preferences. The consideration of performance indicators that are closely linked to employee performance at work may help researchers to understand the causal link between employee-related outcomes and overall performance.

b) Is HR flexibility an intermediate mechanism that explains the influence of HCM on organisational performance?

Previous analyses have demonstrated the relevance of HR flexibility to organisational performance in my sample of companies. However, these results did not provide information about the extent to which HR flexibility actually explains the influence of HCM on performance. To verify the role of HR flexibility as an intermediate mechanism in this linkage, several partially mediated models were estimated. Some mediating effects were verified.

First, the data establish that *HR intrinsic flexibility* mediates the influence of various components of HCM on organisational performance. On the one hand, employee versatility mediates the influence of the HCM strategy skill development configuration on organisational performance i.e. investment in the continuous development of the workforce leads to an increase in staff versatility, which in turn benefits organisational performance. On the other hand, employee versatility emerges as an intermediate variable between the provision of equitable incentives and rewards and organisational outcomes.

Second, *HR modification flexibility* mediates the impact of job enrichment on performance. Through the impact on the two components of this HR flexibility dimension (i.e. skill malleability and behavioural malleability), job enrichment initiatives benefit the organisation's overall performance. The provision of challenging jobs foments the expansion of the employee role in the organisation, which contributes to developing a change-oriented mindset among the workforce. This type of employee is willing to alter his or her features (in terms of skills and behaviours) as the need arises, thus contributing to the enhancement of organisational effectiveness.

7.1.3.3. The moderator role of environmental dynamism on the HR flexibility-organisational performance relationship

The consideration of the RBV as the theoretical framework for the study of HR flexibility implies that the characteristics of the environment should be also taken into account. A stream of research in the RBV literature considers that external conditions determine the value of organisational resources (Barney, 2001; Aragón-Correa and

Sharma, 2003). Following this reasoning, I considered that environmental dynamism may determine the value of flexible resources for the organisation (H14-H17). As Datta et al. (2005) recently affirmed, by requiring frequent strategic and structural adaptations, dynamic environments increase complexity and as a consequence, skill requirements and behaviours in the organisation are likely to be more complex and varied, increasing the need for individuals with both the capacity and willingness to deal with complexity and change.

These results confirmed that the more dynamic the external environment is, the more relevant human resource flexibility will be to the organisation's success. Specifically, I verified that employee skill malleability, behavioural malleability and HR relational flexibility have a stronger effect on customer service effectiveness when external conditions are characterised by a high rate of dynamism. For all these models, the interaction term of the structural equations was statistically significant, lending support to the recommendations of various scholars, such as Riley and Lockwood (1997), Motodwidlo and Schmit (1999) or Batt (2002), who defend the appropriateness of employee flexibility in dynamic environments. Employees that easily alter the *status quo* at work, by enhancing their skill base, showing initiative or collaborating with others will be more disposed to maintain effective relationships with customers in environments characterised by continuous changes.

Conversely, this study does not provide empirical support for the moderator effect of dynamism on the linkage between HR intrinsic flexibility and organisational outcomes. I found that versatile employees in the commercial and marketing departments have a positive influence on performance regardless of the environmental conditions in which the organisation operates. This coincides with Wright et al. (1994), who suggested that the broad pool of skills and abilities inherent in versatile employees provide the organisation with a "human capital advantage" that is beneficial for organisations of all types.

To summarise, for the sample of Spanish companies considered it was corroborated the relevance of human resource flexibility for organisational success. These results lend support to the relevance of the so called "active labour performance" in employees

belonging to the commercial or marketing areas of the firm. While traditional notions of labour performance considered that employee effectiveness at work is measured in terms of how far the employee has actually achieved pre-specified goals or tasks, active labour performance takes the perspective that people at work can go beyond these assigned tasks. It is believed that flexible employees who can develop their own goals and can self-start these goals emerge as critical success factors in modern organisations (Frese and Fay, 2001). In addition, through the corroboration of the mediator role of HR flexibility on the HCM-performance relationship, this study has contributed to “unlocking the black box” (Ramsay et al., 2000; Moynihan et al., 2001) that is often found in studies linking human resource management activities with organisational outcomes. These results complement previous findings of empirical studies that aimed to demonstrate how HCM impacts a set of employee-related outcomes before it is manifest in final results, (e.g. Fey et al., 2000; Paul and Anantharaman, 2003; Youndt and Snell, 2004).

7.2. LIMITATIONS AND FUTURE LINES OF RESEARCH

Despite the conclusions about linkages between HCM, HR flexibility and organisational performance, this research presents certain limitations with respect to theoretical questions, as well as to methodological issues. In this section, I discuss some of the weaknesses of the study, together with ideas for future research that may help to solve the shortcomings of the dissertation.

Firstly, although the conceptualisation of HR flexibility from a RBV provides a new approach to the analysis of flexibility from the employee perspective, the resource approach assumes a static vision of the concept, referring to the flexibility of the workforce at a specific point of time. An interesting line of research could be to integrate a more dynamic perspective into the definition of HR flexibility. Future research should consider the role of dynamic capabilities in the mobilisation and combination of flexible employees within the organisation. The dynamic capabilities approach focuses on “resource renewal” and comprises organisational activities focused on reconfiguring and transforming resources so as to address environmental changes, coordinating and integrating resources and transforming resources through learning

(Teece et al., 1997; Eisenhart and Martin, 2000; Johnson et al., 2003; Pavlou and El Sawy, 2004). The inclusion of dynamic capabilities in the study of resource flexibility implies the consideration of a higher-level source of flexibility: *coordination flexibility* (Sanchez, 1997). Thus, in a further development of the conceptualisation of HR flexibility presented in this research, the organisation's abilities to allocate, integrate or redeploy employees to the targeted uses defined by the organisation should be taken into consideration (Sanchez, 1997; Volberda, 1998; Johnson et al., 2003).

Other limitations of the study refer to the methodology employed in the empirical research. Regarding data collection, I have considered the commercial/marketing manager's opinion on the characteristics of employees under his or her responsibility to evaluate HR flexibility. Other more direct measures of HR flexibility may be preferable, such as employee self-rating of their own flexibility (Delery, 1998). By collecting data from employees, more realistic information about people's actual flexibility may be obtained. Individual flexibility levels could be then aggregated at the unit level to obtain measures of the flexibility of a group of employees (Ostroff and Bowen, 2000).

Moreover, collecting data directly from employees would enable identification of individual antecedents of HR flexibility. For instance, when analysing human resource skill malleability, a number of individual characteristics should be taken into consideration, such as employee previous knowledge or individual learning orientation (London and Mone, 1999; Parker, 2000). The inclusion of these variables in future studies could help to understand why some people are more flexible than others in the workplace and therefore, it could give managers some orientation about which employees should be selected or trained more intensively when the organisation faces changing conditions. Additionally, by identifying individual antecedents of flexibility, a better understanding of the influence of HCM on HR flexibility could be provided, since those antecedents (e.g. motivation, experience, previous education, etc.) may be taken as control variables to isolate the impact of HCM on employee flexibility.

Studies at the employee level could also contribute to understanding the interrelationships between HR flexibility and other aspects of job performance, therefore leading to a better understanding of employee contribution to organisational results. The conclusions of this study demonstrated the relevance to organisational

results of the so-called “active performance concept”, which contrasts with the most traditional concept of labour performance, focused on the achievement of pre-established goals (Frese and Fay, 2001). Hence, further questions emerge, such as: Are employees who perform well in a set of established tasks equally ready to face challenging external conditions? Does proficiency in the performance of daily jobs constitute a source of motivation for employees to engage in extra-role behaviours that facilitate organisational flexibility? The comparison between the reactive and proactive sides of employee performance at work would contribute to advancing understanding of the relevance of social aspects to organisations.

The results of the present research may be taken as an initial attempt in this direction. By selecting companies (from those that participated in this research) with the highest or lowest HCM levels and those manifesting highest or lowest HR flexibility it would be possible to identify organisations suitable for more thorough analysis through case studies. This qualitative technique would be appropriate to examine individual employee peculiarities in these organisations.

In addition, only 14% of the companies in the sample provided information from two respondents. I consider it important to extend the number of organisations with two informants, so as to avoid common method variance bias. Likewise, information about other organisational areas could be included in future research, in an attempt to analyse the human resource strategies applied in those areas and the flexibility shown by groups of employees other than those in the commercial/marketing department.

By expanding the sample size, more complete models could be estimated. For instance, this study tested the mediator role of HR flexibility in the HCM-organisational performance linkage through various partial models, one for each HR flexibility dimension. The estimation of partial models to test for the mediating effects of HR flexibility on the HCM-organisational performance linkage fails to take into consideration the interrelationships between the different dimensions of HR flexibility. With larger sample sizes, it would be possible to estimate more complex models that consider all the interrelationships between the variables.

Additionally, with a larger database a simultaneous test of mediator and moderator effects in the structural models could be performed. In this research, models estimating

the mediator role of HR flexibility in the linkage between HCM dimensions and organisational performance did not consider that environmental dynamism might strengthen the influence of employee flexibility on organisational performance. Future empirical studies including both types of effects (mediator and moderator) in a single model could provide additional information about the relevance of HR flexibility to organisational success.

Another limitation of the present study refers to the analyses of convergent and discriminant validity of the measurement scales. While information for the HR flexibility scale allowed to develop a Multitrait-multimethod matrix (MTMM), alternative measures were not available for the rest of the scales, and thus the MTMM method to test for the scale validity was not performed. Future research should include various methods to assess a single concept. For example, regarding the measurement of the HCM strategy, it would be interesting to ask managers their opinions about the global “philosophy” of human resource management in the organisation, or to assess employees’ perceptions of the human resource practices that are applied in their jobs.

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Appendixes

HUMAN RESOURCE FLEXIBILITY

NO.VARIABLE	CORRESPONDENCE IN THE QUESTIONNAIRE
"Please, indicate the extent to which employees in this department currently possess the capabilities and attributes listed", being 1= applies to very few employees and 7=applies to most of the employees	
Intrinsic flexibility (IF)	
V12	If the need emerged, employees of this department could be easily transferred to other jobs with similar responsibilities than their current jobs'
V13	If the need emerged, employees of this department could be easily transferred to more qualified jobs
V14	Employees of this department easily assume responsibilities over tasks corresponding to other jobs
Skill malleability (SM)	
V15	Employees in this department try to constantly update their skills and abilities
V16	Employees in this department learn quickly new procedures and processes introduced in their jobs
V17	Employees in this department anticipate future skill requirements that may be needed to perform their jobs
V18	When employees in this department are not able to perform a specific task, they learn quickly the way of doing it
*	Employees in this department adopt an active role in their own training (e.g. identifying future training needs or evaluating the results of training courses)
Behavioural malleability (BM)	
V19	When employees detect problems to perform their jobs, they voluntarily try to identify the causes of these problems
V20	Most of the changes that took place in this department were introduced by employees
V21	Employees in this department act efficiently when a problem emerges, even in those cases in which employees do not have full information about the problem
V22	Employees in this department act efficiently under uncertain and ambiguous circumstances
Relational flexibility (RF)	
V23	Employees in this department share information and learn from one another
V24	Employees in this department exchange ideas with people from different areas of the organisation
V25	Employees in this department partner with customers, suppliers, alliance partners, etc. to develop solutions, even though this does not belong to their job responsibilities
*	Employees in this department apply knowledge from one area of the organisation to problems and opportunities that arise in another

ORGANISATIONAL PERFORMANCE

NO.VARIABLE	CORRESPONDENCE IN THE QUESTIONNAIRE
"How would you compare the organization's performance over the past 3 years to that of its competitors?", being 1=worse, 4= equal, 7=much better	
Customer service effectiveness (CUSTEFF)	
V26	Improvements in the range of products and services offered to our customers
V27	Abilities to influence customers' behaviour patterns
V28	Being able to adjust to customers' requirements
V29	Approaching customers quickly
V30	Improvements in the number of contacts with new customers
Customer satisfaction (CUSTSAT)	
V31	Improvements in customer satisfaction
V32	Customer retention
V33	Improvements in the communication with customers
*	Reduction in the number of complaints or claims from customers

ENVIRONMENTAL DYNAMISM

NO.VARIABLE	CORRESPONDENCE IN THE QUESTIONNAIRE
"Please, evaluate the following statements, referring to your perceptions about the environment in which your organisation operates", being 1=completely disagree, 7=completely agree	
V34	Customer demand and preferences are relatively stable in your industry (-)
V35	The actions of your major suppliers (including materials, equipment or labour suppliers) change very little from year to year (-)
V36	The volume of sales for firms in your industry fluctuates very little from year to year
V37	Your firm must frequently change the way it produces its goods or services in order to be competitive
V38	Your firm frequently changes its technology to keep up with competitors

Appendix 2: Alternative measures of human resource flexibility

HUMAN RESOURCE FLEXIBILITY (GENERAL ASSESSMENT)

“Please, indicate the extent to which employees in this department currently possess the capabilities and attributes listed”, being 1= applies to very few employees and 7=applies to most of the employees

INTRINSIC FLEXIBILITY	Employees in this department are versatile
SKILL MALLEABILITY	Employees in this department have a strong learning capacity
BEHAVIOURAL MALLEABILITY	Employees in this department easily modify their behaviours when changes occur
RELATIONAL FLEXIBILITY	Employees in this department are willing to cooperate with other persons

Appendix 3: Correlation matrix of the variables included in the research

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	
V1	1																			
V2	.370**	1																		
V3	.405**	.455**	1																	
V4	.314**	.315**	.374**	1																
V5	.261**	.197**	.371**	.177*	1															
V6	.238**	.338**	.242**	.218**	.208**	1														
V7	.135+	.142*	.084	.150*	.154*	.306**	1													
V8	.239**	.209**	.071	.272**	.098	.351**	.377**	1												
V9	-.054	.117+	-.004	-.014	.071	.167*	.393**	.181*	1											
V10	-.034	.061	.042	-.009	.079	.121+	.249**	.227**	.428**	1										
V11	.040	.208**	.169*	.200**	.150*	.285**	.333**	.222**	.358**	.381**	1									
V12	.131+	.217**	.094	.130+	.000	.199**	.066	.068	.148*	.148*	.224**	1								
V13	.168*	.236**	.042	.159*	.136+	.218**	.111	.181*	.171*	.171*	.285**	.586**	1							
V14	.075	.271**	.061	.167*	.152*	.202**	.103	.127	.151*	.151*	.244**	.359**	.515**	1						
V15	.108	.191**	.088	-.005	.047	.164*	.254**	.120	.268**	.268**	.217**	.358**	.330**	.420**	1					
V16	.021	.212**	.049	.007	.043	.152*	.268**	.103	.261**	.261**	.287**	.337**	.453**	.478**	.678**	1				
V17	.135+	.145*	.022	-.024	.100	.222**	.248**	.070	.324**	.277**	.363*	.275**	.411**	.319**	.569**	.539**	1			
V18	.089	.174*	.011	-.045	.033	.121	.234**	.016	.314**	.241**	.237**	.432**	.476*	.508**	.639**	.737**	.541**	1		
V19	-.102	.150*	-.083	-.172*	-.056	.097	.077	-.118	.268**	.235**	.203**	.212**	.250**	.266**	.356**	.468**	.438**	.474**	1	
V20	-.015	.043	-.149*	-.091	-.092	.007	-.049	-.166*	.205**	.124+	.082	.168*	.188**	.214**	.275**	.224**	.354**	.313**	.373**	
V21	.100	.165*	.011	.022	.110	.045	.033	-.055	.191**	.198**	.228**	.196**	.256**	.311**	.316**	.434**	.365**	.506**	.480**	
V22	.046	.056	-.086	.025	-.036	.085	.159*	.038	.293**	.238**	.227**	.328**	.399**	.418**	.488**	.543**	.529**	.503**	.500**	
V23	.012	.045	-.040	-.074	.042	-.033	-.038	-.133+	.159*	.046	.055	.282**	.260**	.322**	.361**	.366**	.286**	.399**	.270**	
V24	.002	-.030	-.033	-.017	.041	-.090	.066	-.083	.130+	.066	.106	.195**	.174*	.171*	.292**	.326**	.331**	.354**	.375**	
V25	.066	.119	.027	-.018	.037	-.044	-.011	-.120	.178*	.112	.042	.119+	.107	.225**	.273**	.288**	.269**	.319**	.355**	
V26	.068	.096	.078	.171*	.015	.117	.256**	.103	.079	.162*	.197**	-.015	.086	.078	.178**	.211**	.117+	.144*	.071	
V27	.054	.162*	.019	.076	.072	.242**	.237**	.191**	.225**	.212**	.289**	.225**	.312**	.240**	.259**	.339**	.277**	.345**	.233**	
V28	.124	.249**	.087	.095	.179*	.176*	.268**	.149*	.160*	.130+	.219**	.103	.261**	.181**	.201**	.336**	.296**	.285**	.271**	
V29	-.061	.123	-.007	-.063	-.054	.047	.111	-.016	.145*	.111	.082	.074	.143*	.132+	.220**	.230**	.253**	.244**	.258**	
V30	.080	.195**	.113	.027	-.041	.178*	.215**	.179*	.136+	.183*	.279**	.121+	.237**	.096	.192**	.332**	.292**	.281**	.210**	
V31	-.007	.049	.001	-.044	.077	.049	.191**	.084	.096	.199**	.041	-.106	.108	.067	.167*	.260**	.235**	.128+	.227**	
V32	-.008	.009	.066	-.077	.035	.062	.170*	.003	.132+	.172*	.061	.075	.178**	.193**	.318**	.369**	.275**	.285**	.241**	
V33	.044	.197**	.128+	-.050	.107	.090	.173*	.068	.223**	.202**	.159*	.004	.139*	.130+	.194**	.259**	.231**	.166*	.281**	
V34	.105	.071	.054	.149*	.073	.146*	-.052	.088	-.013	-.018	-.019	.017	.095	.073	-.002	-.008	-.055	-.041	-.024	
V35	.031	-.038	.078	.061	.035	-.098	.033	.159*	.043	.010	-.066	-.066	.018	-.048	-.081	-.003	-.008	-.108	-.125+	
V36	.010	-.125+	-.102	-.099	.032	.021	.112	.084	.046	.048	-.027	.021	.047	-.026	.023	.027	.051	.016	.024	

*p< 0.05; **p< 0.01; +p<0.1

Appendixes

(continued)

	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30	V31	V32	V33	V34	V35	V36
V20	1																
V21	.352**	1															
V22	.341**	.472**	1														
V23	.398**	.349**	.409**	1													
V24	.325**	.366**	.443**	.471**	1												
V25	.296**	.448**	.312**	.456**	.449**	1											
V26	.027	-.017	.084	-.033	-.110	.047	1										
V27	.180**	.166*	.197**	.082	-.007	.089	.432**	1									
V28	.015	.238**	.228**	.086	.080	.060	.321**	.410**	1								
V29	.234**	.081	.216**	.073	.045	.093	.361**	.434**	.414**	1							
V30	.031	.167*	.208**	.015	.054	.023	.318**	.358**	.474**	.481**	1						
V31	.137*	.075	.162*	-.030	-.008	.018	.320**	.435**	.463**	.460**	.391**	1					
V32	.099	.070	.189**	.078	.110	.040	.320**	.463**	.441**	.454**	.426**	.645**	1				
V33	.109	.067	.189**	.146*	.027	.065	.400**	.413**	.498**	.457**	.418**	.638**	.645**	1			
V34	.099	.016	.040	.091	.033	.120+	-.154*	-.067	-.014	-.018	-.042	-.004	-.108	-.090	1		
V35	-.096	.016	.022	.088	.066	.060	-.184**	-.051	-.066	-.055	-.053	.041	-.048	-.064	.358**	1	
V36	-.001	.076	.055	-.010	.121	.049	-.069	-.048	-.019	-.011	.065	.002	-.051	-.118+	.270**	.369**	1

*p< 0.05; **p< 0.01; +p<0.1

Appendix 4: Summary of the hypotheses tested in this research

HIPOTHESIS	EMPIRICAL EVIDENCE
<i>RELATIONSHIPS BETWEEN HCM AND HUMAN RESOURCE FLEXIBILITY</i>	
<i>Hypothesis 1:</i> The skill development configuration of the HCM strategy will have a positive effect on HR intrinsic flexibility	Yes
<i>Hypothesis 2:</i> The job enrichment configuration of the HCM strategy will have a positive effect on HR intrinsic flexibility	Yes
<i>Hypothesis 3:</i> The incentive configuration of the HCM strategy will have a positive effect on HR intrinsic flexibility	Yes
<i>Hypothesis 4:</i> The skill development configuration of the HCM strategy will have a positive effect on HR skill malleability	No
<i>Hypothesis 5:</i> The job enrichment configuration of the HCM strategy will have a positive effect on HR skill malleability	Yes
<i>Hypothesis 6:</i> The job enrichment configuration of the HCM strategy will have a positive effect on HR behavioural malleability	No
<i>Hypothesis 7:</i> The incentive configuration of the HCM strategy will have a positive effect on HR behavioural malleability	Yes
<i>Hypothesis 8:</i> The job enrichment configuration of the HCM strategy will have a positive effect on HR relational flexibility	Yes
<i>Hypothesis 9:</i> The incentive configuration of the HCM strategy will have a negative effect on HR relational flexibility	No
<i>IMPACT OF HR FLEXIBILITY ON ORGANISATIONAL PERFORMANCE</i>	
<i>Hypothesis 10:</i> HR intrinsic flexibility will have a positive effect on organisational performance	Yes
<i>Hypothesis 11:</i> HR skill malleability will have a positive effect on organisational performance	Yes
<i>Hypothesis 12:</i> HR behavioural malleability will have a positive effect on organisational performance	Yes
<i>Hypothesis 13:</i> HR relational flexibility will have a positive effect on organisational performance	No
<i>THE MODERATING ROLE OF ENVIRONMENTAL DYNAMISM ON THE CONTRIBUTION OF HR FLEXIBILITY TO ORGANISATIONAL PERFORMANCE</i>	
<i>Hypothesis 14:</i> The strength of the relationship between HR intrinsic flexibility and organisational performance will be higher in dynamic environments than in stable environments	No

<i>Hypothesis 15:</i> The strength of the relationship between HR skill malleability and organisational performance will be higher in dynamic environments than in stable environments	Partially
<i>Hypothesis 16:</i> The strength of the relationship between HR behavioural malleability and organisational performance will be higher in dynamic environments than in stable environments	Partially
<i>Hypothesis 17:</i> The strength of the relationship between HR relational flexibility and organisational performance will be higher in dynamic environments than in stable environments	Partially
<i>THE MEDIATING ROLE OF HUMAN RESOURCE FLEXIBILITY ON THE RELATIONSHIP BETWEEN HCM AND ORGANISATIONAL PERFORMANCE</i>	
<i>Hypothesis 18:</i> Intrinsic flexibility will mediate the relationships between skill development, job enrichment and incentive HCM configurations and organisational performance	Partially
<i>Hypothesis 19:</i> Skill malleability will mediate the relationships between skill development and job enrichment HCM configurations and organisational performance	Partially
<i>Hypothesis 20:</i> Behavioural malleability will mediate the relationships between job enrichment and incentive HCM configurations and organisational performance	Partially
<i>Hypothesis 21:</i> Relational flexibility will mediate the relationships between job enrichment and incentive HCM configurations and organisational performance	No

Resumen de la Tesis

Resumen de la Tesis⁴⁴

1. Justificación y objetivos de la investigación

Durante los últimos años, el dinamismo de los entornos competitivos está incrementándose como consecuencia de factores tales como la mayor globalización de los mercados o los rápidos desarrollos tecnológicos. Es por ello que cada vez más, las empresas afrontan una tasa creciente de cambio e incertidumbre que les fuerza a adaptar sus habilidades organizativas y a innovar sus métodos de dirección para mantener los niveles de competitividad (Volberda, 1996; Sanchez, 1997). Las fuentes tradicionales de ventajas competitivas están cambiando y en los entornos actuales es imperativo desarrollar nuevas estrategias que permitan afrontar los retos externos. Los esfuerzos de las empresas deben dirigirse a ajustar los medios organizativos disponibles a los cambios externos, lo cual descansa en gran medida la gestión que se haga de los aspectos sociales de la organización (Wright y Snell, 1998).

Desde el punto de vista de la dirección de la empresa, la gestión de los recursos humanos (GRH) está cambiando. Esto puede observarse, por ejemplo, en las descripciones de los puestos de trabajo. Actualmente, la introducción de las nuevas tecnologías en la organización o la necesidad de aprendizaje continuo están modificando la forma de evaluar el rendimiento laboral de los empleados. En términos

⁴⁴ La normativa sobre los estudios de doctorado de la Universitat Jaume I, aprobada en la Junta de Gobierno de 4 de marzo de 1999, establece en el apartado XIII ("Tesis Doctoral") que para aquellas tesis doctorales escritas en una lengua distinta a las oficiales de la Universitat Jaume I (español o catalán), deberá adjuntarse un apartado suficientemente amplio en alguna de estas dos lenguas que incluya una descripción de los objetivos, metodología, aportaciones y conclusiones de la tesis doctoral.

generales, en los entornos competitivos actuales, la Gestión por Alto Compromiso (GAC) emerge como el sistema óptimo para gestionar las relaciones con los empleados. La GAC es un enfoque particular de la GRH de la empresa, caracterizada por el énfasis en desarrollar continuamente las habilidades de los empleados, enriquecer los puestos de trabajo y proporcionar incentivos equitativos.

Desde el punto de vista del empleado, la contribución de las personas a la organización se está también modificando. Para competir en entornos dinámicos no es suficiente con que los empleados sean eficientes en las tareas propias de su puesto de trabajo, sino que éstos deben también adoptar una serie de roles más abiertos e interdependientes (Campbell, 2000; Parker, 2000). En definitiva, la flexibilidad de los recursos humanos (FRH) es considerada como un factor de éxito en los entornos competitivos actuales. Por ejemplo, Sanchez (2004: 526) afirmó recientemente que recursos humanos flexibles pueden constituir una alternativa válida en actividades caracterizadas por sistemas productivos rígidos. De manera genérica, la flexibilidad de los recursos humanos se refiere a la posibilidad de variar la calidad y cantidad del personal de la empresa para afrontar los cambios del entorno (Gouswaard et al., 2001; Peiró et al., 2002). Dada la relevancia de la flexibilidad de los recursos humanos en los entornos actuales, es importante proporcionar una clara definición del concepto. En nuestra investigación, proponemos estudiar la flexibilidad de los recursos humanos desde el marco teórico del enfoque basado en los recursos (EBR) (Wernerfelt, 1984; Barney, 1991; Amit y Schoemaker, 1993).

En resumen, los factores sociales de la organización son críticos para el desarrollo de respuestas organizativas apropiadas a los retos externos (Dyer y Shafer, 1999). Desde el punto de vista individual, a los empleados se les exige una mayor flexibilidad en el trabajo que permita a la empresa desarrollar respuestas adecuadas. Desde el punto de vista de la gestión empresarial, las actividades que componen la GRH de la empresa están evolucionando hacia una gestión por alto compromiso. En este estudio nos centramos en estas dos cuestiones y en sus interrelaciones. En concreto, el propósito de nuestra investigación es analizar en qué medida la GAC mejora los resultados organizativos y qué papel desempeña la flexibilidad de los recursos humanos en esta relación.

Los objetivos que se derivan de este propósito genérico son los siguientes:

1. Revisar el concepto de Gestión por Alto Compromiso (GAC), identificando sus componentes, así como similitudes y diferencias entre la GAC y otros términos relacionados que han aparecido en la literatura, tales como gestión de alto rendimiento o gestión de alta involucración. Asimismo, pretendemos proporcionar una definición de la GAC basada en las dimensiones que subyacen a este enfoque de gestionar los recursos humanos.
2. Revisar el concepto de flexibilidad de los recursos humanos desde el enfoque basado en los recursos (EBR). Son varios los estudios que desde el EBR han identificado los rasgos que definen a los recursos flexibles, con el propósito de entender por qué algunas organizaciones son más flexibles que otras (e.g. Galunic y Rodan, 1998; Sanchez, 2004). En la presente investigación, aplicamos los rasgos o características de los recursos flexibles al análisis y definición de la FRH.
3. Examinar el efecto de la GAC sobre los resultados organizativos. Concretamente, pretendemos analizar tres tipos de relaciones:
 - a) Efecto de la GAC sobre la flexibilidad de los recursos humanos.
 - b) Consecuencias de la flexibilidad de los recursos humanos sobre los resultados organizativos.
 - c) Papel moderador del entorno en la relación entre la flexibilidad de los recursos humanos y los resultados organizativos.

2. Planteamiento y metodología utilizada

La consecución de los citados objetivos se ha basado en una revisión de la literatura tanto de gestión de recursos humanos, como del enfoque basado en los recursos, así como en el desarrollo de una investigación empírica en una muestra de empresas españolas.

2.1. Revisión de la literatura e hipótesis de la investigación

Respecto a la revisión de los conceptos teóricos relacionados con la gestión de los recursos humanos, hemos analizado los orígenes y evolución de la GRH hasta llegar a la aparición de la Gestión por Alto Compromiso (GAC) como un enfoque particular de gestionar las relaciones entre la empresa y sus empleados. La GAC tiene sus orígenes en los modelos de Walton (1985) y Guest (1987) y puede definirse como una estrategia de recursos humanos cuyo propósito es fomentar el compromiso de las personas con la organización, de modo que el control y las presiones externas se sustituyan por el auto-control del comportamiento por parte del empleado (Wood y Albanese, 1995: 220). La adopción de la GAC implica el uso de determinadas prácticas de recursos humanos, en las áreas de reclutamiento y selección, formación, evaluación del rendimiento y análisis de los puestos de trabajo. La revisión de algunos estudios relevantes en el campo de la GAC nos ha permitido observar una falta de consenso respecto a las prácticas que componen esta estrategia.

Ante la falta de acuerdo sobre los componentes de la GAC hemos considerado adecuado revisar los conceptos sobre los que se basa esta estrategia con el fin de proporcionar un enfoque más sistemático en la definición de GAC. Este enfoque parte de la “arquitectura del sistema” (Becker y Gerhart, 1996), es decir, de las dimensiones que conforman la esencia de la estrategia de recursos humanos y que subyacen al uso de determinadas prácticas. De acuerdo con Wood y Albanese (1995), Edwards y Wright (2001) y Gallie et al. (2001), entre otros, son tres las dimensiones que definen una estrategia de GAC: desarrollo de las habilidades, enriquecimiento del puesto de trabajo y provisión de incentivos equitativos. Siguiendo la nomenclatura propuesta por Youndt

y Snell (2004) en nuestro trabajo nos referimos a estas tres dimensiones como configuraciones de la GAC.

La *configuración de desarrollo de las habilidades* parte de la idea que el potencial de los empleados no está utilizado plenamente en la empresa y que es posible mejorarlo a través de los medios adecuados. Es por ello que uno de los rasgos que definen a una empresa que adopta la GAC son los esfuerzos por desarrollar la base de conocimientos de sus empleados (Gallie et al., 2001: 1082). En este sentido, la mejora del capital humano de la organización se refiere tanto a las actividades de reclutamiento, que permiten incrementar la calidad de los empleados contratados, como a las actividades formativas, dirigidas a mejorar las competencias de los empleados de la empresa (Delery y Doty, 1996).

La *configuración de enriquecimiento del puesto de trabajo* intenta eliminar los aspectos más rutinarios del trabajo y proporcionar a los empleados tareas motivantes y satisfactorias (Wood y Albanese, 1995). El enriquecimiento del trabajo hace referencia al incremento del nivel de responsabilidad del empleado en su trabajo (Drach-Zahavy, 2004), a la concepción del trabajo como un medio para aprender, así como al trabajo en equipo (Huselid, 1995; Guthrie, 2001).

Por último, la *configuración de incentivos* se dirige a motivar a los empleados para que contribuyan activamente al logro de los objetivos organizativos. Esta tercera dimensión de la GAC se relaciona con la provisión de retribuciones monetarias y no monetarias que sean percibidas por los empleados como justas o equitativas (Takeuchi et al., 2004). Por una parte, la GAC pretende incrementar la percepción de “equidad de procedimiento”, al determinar las retribuciones del empleado de acuerdo con los resultados de la evaluación de su rendimiento laboral (Cobb et al., 1995). Por otra parte, esta configuración de la GAC promulga la existencia de equidad interna y externa de los salarios, de modo que los empleados perciban que las retribuciones que reciben son justas en relación con las de sus compañeros y con las de otras empresas (Lam et al., 2002).

La GAC ha centrado la atención de numerosos estudios empíricos, dirigidos a demostrar su influencia sobre los resultados organizativos. Desde la “perspectiva universalista”, trabajos como los de Arthur (1992, 1994) o Huselid (1995) afirman que la GAC es

siempre beneficiosa para los resultados empresariales, con independencia de las peculiaridades de la organización en que se implante. Por su parte, los estudios ubicados en la “perspectiva contingente” demuestran que algunas variables organizativas (p.ej. estrategia) moderan el efecto que tiene la GAC en los resultados organizativos. Por ejemplo, Youndt et al. (1996) proporcionan evidencia empírica de que la GAC influye sobre el *performance* cuando la empresa adopta una estrategia de flexibilidad productiva o de calidad. Finalmente, desde la “perspectiva configurativa” se defiende la necesidad de adoptar sistemas coherentes de prácticas de alto compromiso. Algunos trabajos empíricos han demostrado que cuando las prácticas que integran la GAC son coherentes entre sí, su repercusión en los resultados organizativos es mayor (MacDuffie y Kochan, 1995; Delery y Doty, 1996).

No obstante, a pesar del importante número de trabajos que corroboran el efecto positivo de la GAC sobre los resultados organizativos, existen algunas cuestiones aún sin resolver acerca de los procesos a través de los cuales se ejerce esta influencia (Ramsay et al., 2000). Es decir, muchos de los estudios empíricos han ignorado qué variables son las que explican la influencia de la GAC sobre el *performance* (denominado “problema de la caja negra”). En nuestra investigación, proponemos la consideración de la flexibilidad de los recursos humanos como una variable que media en la relación entre la GAC y los resultados organizativos.

En el presente trabajo se aborda la definición de la flexibilidad de los recursos humanos a partir de las premisas del EBR. La adopción de este marco teórico implica estudiar la flexibilidad de los recursos humanos desde una perspectiva interna (desde el punto de vista del empleado), que considera las características flexibles de la fuerza de trabajo en un momento determinado. Aunque algunos estudios recientes han identificado los rasgos que definen a los recursos humanos flexibles desde una perspectiva centrada en el empleado (e.g. Wright et al., 1994; Pulakos et al., 2000; Breu et al., 2001; Shafer et al., 2001; Dyer y Shafer, 2002; Kara et al., 2002), se observa una falta de acuerdo respecto a los indicadores de la FRH. En nuestra investigación, aplicamos las características de los recursos flexibles definidas desde el EBR (Penrose, 1959; Sanchez, 1995, 1997, 2004; Galunic y Rodan, 1998) al estudio de la flexibilidad de los recursos humanos.

De manera similar al papel que desempeñan las características de los recursos estratégicos en la generación de ventajas competitivas (Barney, 1991; Peteraf, 1993), el EBR sugiere una serie de criterios o rasgos que definen a los recursos “flexibles”. Desde este punto de vista, se considera que los recursos de una empresa serán flexibles cuando proporcionen a la empresa varias opciones estratégicas, es decir, diferentes acciones alternativas dirigidas a adaptarse y/o anticiparse a los cambios en el entorno (Helfat y Raubitschek, 2000; Mathews, 2002; Sanchez, 2004). Desde el EBR la flexibilidad de un recurso es un concepto multidimensional, definido a partir de tres criterios: flexibilidad intrínseca, flexibilidad de modificación y flexibilidad relacional (Sanchez, 1995, 1997, 2004; Galunic y Rodan, 1998). En nuestra investigación aplicamos los criterios de los recursos flexibles al ámbito de los recursos humanos.

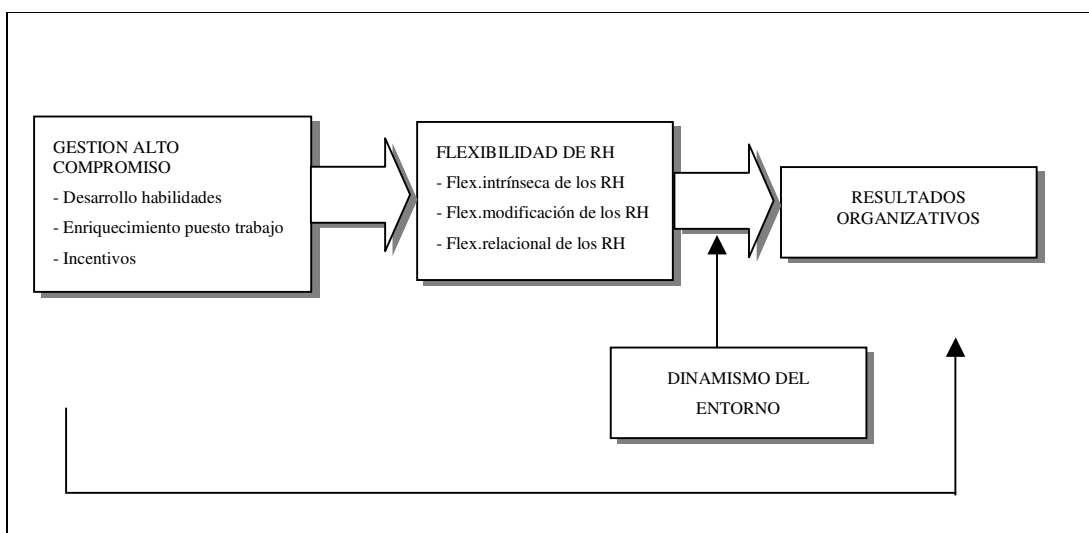
La *flexibilidad intrínseca* de los recursos humanos se refiere a la versatilidad de los empleados, es decir, la capacidad de los empleados para moverse entre puestos y tareas y para trabajar bajo diversas circunstancias sin que ello implique mayores costes o tiempo para la empresa (van den Berg y van der Velde, 2005).

En referencia a la *flexibilidad de modificación* de los recursos humanos ésta se relaciona con el grado en que las características de los empleados pueden modificarse con facilidad (muestran maleabilidad). Considerando que el EBR define los recursos humanos como el conjunto de conocimientos que poseen las personas de la empresa y los comportamientos que éstas manifiestan (Boxall, 1999; Wright et al., 2001), hemos definido la maleabilidad tanto en términos de conocimientos como de comportamientos. La “maleabilidad de los conocimientos” indica la facilidad y rapidez con que los empleados obtienen las habilidades necesarias para llevar a cabo nuevas tareas y cubrir cualquier posible “gap” de conocimientos que afecte a su rendimiento laboral (Maurer et al., 2003). En cuanto a la “maleabilidad de los comportamientos”, esta dimensión implica que las personas en la organización adaptan sus respuestas ante situaciones novedosas, basándose en la improvisación e iniciativa, más que en unos patrones predefinidos de acción (Dyer y Ericksen, 2005).

Por último, la *flexibilidad relacional* de los recursos humanos indica el grado en que los empleados se coordinan y trabajan conjuntamente en el logro de unos objetivos comunes. La flexibilidad relacional de los recursos humanos se asocia, por tanto, a la

idea del capital social (Youndt y Snell, 2004) y se hace patente en la empresa, por ejemplo, cuando los empleados comparten las opiniones de sus compañeros, cuando ayudan a otros empleados o complementan las acciones emprendidas por otros, mostrando una serie de comportamientos “ciudadanos” en la organización (Organ, 1988; Shore y Wayne, 1993; Weick y Roberts, 1993).

Tras definir la GAC y la flexibilidad de los recursos humanos, analizamos las relaciones entre ambos conceptos así como su repercusión sobre los resultados organizativos. El modelo general de nuestra investigación se muestra en la siguiente figura.



Como se observa, nos planteamos analizar, en primer lugar, el impacto de la GAC sobre la flexibilidad de los recursos humanos. En segundo lugar, pretendemos examinar la relevancia de la flexibilidad de los recursos humanos sobre los resultados organizativos y en qué medida el dinamismo del entorno modera la influencia que tiene la flexibilidad de los recursos humanos sobre el *performance*. Cada una de estas cuestiones se ha plasmado en un conjunto de hipótesis de investigación.

Influencia de la GAC sobre la flexibilidad de los recursos humanos

Son varios los autores que han subrayado la importancia que tiene la GAC para fomentar la flexibilidad de los empleados (e.g. Guest, 1997; Sparrow, 1998). En nuestro trabajo, analizamos las relaciones entre las diferentes configuraciones que componen la

GAC y las dimensiones de la flexibilidad de los recursos humanos en los siguientes términos:

Hipótesis 1: La configuración de desarrollo de las habilidades de la GAC ejerce un efecto positivo sobre la flexibilidad intrínseca de los recursos humanos

Hipótesis 2: La configuración de enriquecimiento del puesto de trabajo de la GAC ejerce un efecto positivo sobre la flexibilidad intrínseca de los recursos humanos

Hipótesis 3: La configuración de incentivos de la GAC ejerce un efecto positivo sobre la flexibilidad intrínseca de los recursos humanos

Hipótesis 4: La configuración de desarrollo de las habilidades de la GAC ejerce un efecto positivo sobre la maleabilidad de los conocimientos de los recursos humanos

Hipótesis 5: La configuración de enriquecimiento del puesto de trabajo de la GAC ejerce un efecto positivo sobre la maleabilidad de los conocimientos de los recursos humanos

Hipótesis 6: La configuración de enriquecimiento del puesto de trabajo de la GAC ejerce un efecto positivo sobre la maleabilidad de los comportamientos de los recursos humanos

Hipótesis 7: La configuración de incentivos de la GAC ejerce un efecto positivo sobre la maleabilidad de los comportamientos de los recursos humanos

Hipótesis 8: La configuración de enriquecimiento del puesto de trabajo de la GAC ejerce un efecto positivo sobre la flexibilidad relacional de los recursos humanos

Hipótesis 9: La configuración de incentivos de la GAC ejerce un efecto negativo sobre la flexibilidad relacional de los recursos humanos

Influencia de la flexibilidad de los recursos humanos sobre los resultados organizativos

Asimismo, hemos revisado los argumentos teóricos que sostienen la consideración de la flexibilidad de los recursos humanos como un factor competitivo en la empresa. Para ello hemos analizado, en primer lugar, las relaciones entre la FRH y los resultados organizativos y, en segundo lugar, el papel que desempeñan las características del entorno en esta relación.

a) Impacto de la flexibilidad de los recursos humanos sobre los resultados organizativos

Aunque hay numerosos estudios que corroboran que cuando los recursos humanos de la organización satisfacen las características de los recursos estratégicos contribuyen a incrementar los resultados organizativos (Wright et al., 1994), menor atención se ha prestado a la importancia competitiva de los recursos humanos como recursos flexibles. Para abordar esta cuestión, planteamos las siguientes hipótesis:

Hipótesis 10: La flexibilidad intrínseca de los recursos humanos ejerce un efecto positivo sobre los resultados organizativos

Hipótesis 11: La maleabilidad de los conocimientos de los recursos humanos ejerce un efecto positivo sobre los resultados organizativos

Hipótesis 12: La maleabilidad de los comportamientos de los recursos humanos ejerce un efecto positivo sobre los resultados organizativos

Hipótesis 13: La flexibilidad relacional de los recursos humanos ejerce un efecto positivo sobre los resultados organizativos

b) Papel moderador del dinamismo del entorno en relación entre la FRH y los resultados organizativos

Algunos trabajos dentro del EBR consideran que el valor de los recursos organizativos depende del contexto en el cual opera la empresa (Barney, 2001; Aragón-Correa y Sharma, 2003). Siguiendo este mismo razonamiento, nos planteamos si el impacto de la flexibilidad de los recursos humanos sobre los resultados organizativos depende del grado de dinamismo del entorno que afronta la organización. Así, hemos planteado cuatro hipótesis que consideran el dinamismo como una variable moderadora en la relación entre la FRH y el *performance*.

Hipótesis 14: La intensidad de la relación entre la flexibilidad intrínseca de los recursos humanos y los resultados organizativos será mayor en entornos dinámicos que en entornos estables

Hipótesis 15: La intensidad de la relación entre la maleabilidad de los conocimientos de los recursos humanos y los resultados organizativos será mayor en entornos dinámicos que en entornos estables

Hipótesis 16: La intensidad de la relación entre la maleabilidad de los comportamientos de los recursos humanos y los resultados organizativos será mayor en entornos dinámicos que en entornos estables

Hipótesis 17: La intensidad de la relación entre la flexibilidad relacional de los recursos humanos y los resultados organizativos será mayor en entornos dinámicos que en entornos estables

La consideración de la flexibilidad de los recursos humanos como una variable mediadora en la relación entre GAC y resultados organizativos

Una revisión de la literatura en gestión de recursos humanos revela que la GAC ejerce un efecto significativo sobre los resultados organizativos. Sin embargo, durante los últimos años muchos autores han recomendado profundizar en los mecanismos que explican esta relación (e.g. Becker y Huselid, 1998; Ostroff y Bowen, 2000). Con el fin de abordar esta cuestión y contribuir a “abrir la caja negra” entre estas variables, hemos formulado cuatro hipótesis adicionales en las que se incluye la flexibilidad de los recursos humanos como una variable que media entre la GAC y los resultados organizativos, en los siguientes términos:

Hipótesis 18: La flexibilidad intrínseca de los recursos humanos ejerce un papel mediador en la relación entre las configuraciones de desarrollo de las habilidades, de enriquecimiento del puesto de trabajo y de incentivos de la GAC y los resultados organizativos.

Hipótesis 19: La maleabilidad de los conocimientos de los recursos humanos ejerce un papel mediador en la relación entre las configuraciones de desarrollo de las habilidades y de enriquecimiento del puesto de trabajo de la GAC y los resultados organizativos.

Hipótesis 20: La maleabilidad de los comportamientos de los recursos humanos ejerce un papel mediador en la relación entre las configuraciones de enriquecimiento del puesto de trabajo y de incentivos de la GAC y los resultados organizativos.

Hipótesis 21: La flexibilidad relacional de los comportamientos de los recursos humanos ejerce un papel mediador en la relación entre las configuraciones de incentivos y de enriquecimiento del puesto de trabajo de la GAC y los resultados organizativos

2.2. Desarrollo del estudio empírico

Con el propósito de contrastar las hipótesis anteriores hemos llevado a cabo un estudio empírico en una muestra de empresas españolas de diferentes sectores. La unidad de análisis en las empresas de nuestra muestra se circunscribe al área comercial y de marketing de la organización. Es decir, nuestro interés se centra en analizar las relaciones entre las estrategias de GAC aplicadas a los empleados de los departamentos

comerciales y de marketing de las empresas, la flexibilidad mostrada por dichos empleados y en qué medida estas variables contribuyen a mejorar los resultados organizativos (concretamente, la eficiencia de las relaciones con los clientes y la satisfacción de los clientes).

El procedimiento para la recogida de datos se ha basado en la administración de un cuestionario a los directivos de contacto de cada empresa. Un total de 226 empresas participaron en el estudio, lo cual supone (a un nivel de confianza del 95%) un error muestral de $\pm 6,3\%$. El procedimiento estadístico utilizado es el de modelos de ecuaciones estructurales (SEM) a partir del programa EQS 6.1 para Windows (Bentler, 1995).

3. Aportaciones originales

Una de las aportaciones de este trabajo se relaciona con la operativización de la estrategia de gestión por alto compromiso. Desde el punto de vista de la “arquitectura” de esta estrategia (Becker y Gerhart, 1996), hemos considerado que los componentes de la GAC se agrupan en tres dimensiones o *configuraciones* (desarrollo de las habilidades, enriquecimiento del puesto de trabajo e incentivos). Cada una de estas configuraciones representa una lógica organizativa que subyace al uso de determinadas prácticas o técnicas. En concreto, hemos considerado estas tres dimensiones como variables latentes que explican la correlación entre varias prácticas de recursos humanos. La consideración de los componentes de la GAC como variables latentes supone adoptar una perspectiva centrada en “sistemas” de recursos humanos, más que en “prácticas” aisladas y, en consecuencia, se asume que existe un *ajuste interno* entre las prácticas que conforman cada una de las configuraciones de la GAC (Arthur, 1994; Delery y Doty, 1996). Nuestros análisis a través de la metodología SEM confirman la estructura propuesta para la estrategia de GAC y corroboran las conclusiones de algunos trabajos previos, como los de MacDuffie (1995), Youndt et al. (1996) o De Menezes y Wood (2006), los cuales demuestran la existencia de un factor común que subyace al uso de determinadas prácticas de recursos humanos.

Por otra parte, se pueden extraer algunas conclusiones respecto a la definición de la flexibilidad de los recursos humanos desde una perspectiva de recursos y al desarrollo de un instrumento de medida de este concepto. A partir de la aplicación de los modelos de ecuaciones estructurales en nuestros datos, hemos confirmado la estructura propuesta para el concepto de flexibilidad de los recursos humanos desde una perspectiva de recursos. Atendiendo a los resultados de varios análisis factoriales confirmatorios (AFC) se ha comprobado que la flexibilidad de los recursos humanos comprende cuatro dimensiones – factores latentes correlacionados – que se corresponden con las dimensiones de la flexibilidad de recursos definidas desde el EBR: flexibilidad intrínseca, maleabilidad de conocimientos, maleabilidad de comportamientos y flexibilidad relacional de los recursos humanos. La definición de la flexibilidad de recursos humanos propuesta en este estudio complementa algunas de las definiciones previas de este concepto (p.ej. flexibilidad funcional). La inclusión de aspectos tales

como la maleabilidad de los conocimientos o de los comportamientos de los empleados en el concepto de FRH implica una visión más proactiva de la flexibilidad de los recursos humanos, al considerar el papel del empleado como iniciador del cambio, que permite a la organización anticiparse a cambios externos incluso antes de que éstos tengan lugar.

Otra aportación de nuestra investigación hace referencia a las relaciones entre la GAC, la flexibilidad de los recursos humanos y los resultados organizativos. Siguiendo el razonamiento teórico expuesto en el epígrafe anterior, presentaremos las aportaciones de este trabajo al estudio de tres grupos de relaciones: a) entre la GAC y la flexibilidad de los recursos humanos, b) entre la flexibilidad de los recursos humanos y los resultados organizativos y c) consideración de la FRH como una variable que media entre la GAC y los resultados organizativos.

a) Influencia de la GAC sobre la flexibilidad de los recursos humanos

Los resultados obtenidos para nuestra muestra de empresas sugieren que las dos configuraciones de la gestión por alto compromiso que influyen en la flexibilidad intrínseca (o versatilidad) de los empleados son el desarrollo de las habilidades y el enriquecimiento del puesto de trabajo, verificando así las hipótesis 1 y 2 de nuestra investigación. Es decir, las actividades de formación dirigidas a desarrollar la base de conocimientos de los empleados contribuyen a incrementar el potencial de los empleados para moverse entre puestos y tareas y su capacidad de asumir responsabilidad sobre múltiples tareas en la organización. Estos resultados corroboran los de Skaggs y Youndt (2004), quienes demuestran la relevancia que tienen las actividades formativas para facilitar la capacidad de reacción de las personas en la organización. Asimismo, cuando la organización se esfuerza por enriquecer los puestos de trabajo, logra también mejorar la versatilidad de los empleados. En relación con esta cuestión, trabajos como los de Friedrich et al. (1998) sugieren que a medida que se eliminan los aspectos más rutinarios del trabajo, el puesto de trabajo se convierte en sí mismo en una fuente de conocimientos que favorece la versatilidad de las personas. Además, el enriquecimiento del trabajo influye en la motivación de los empleados para moverse rápidamente en la empresa cuando las circunstancias externas así lo exigen.

Por lo que respecta a los determinantes de la flexibilidad de modificación de los recursos humanos (que comprende maleabilidad de conocimientos y de comportamientos), nuestros datos revelan que uno de los componentes de la gestión por alto compromiso que influye en mayor medida en estas dimensiones de la FRH es el enriquecimiento del puesto de trabajo (hipótesis 5 y 6). Tal y como afirman Wright y Snell (1998), el diseño del puesto de trabajo que fomenta la autonomía o el trabajo en grupo de los empleados contribuye a modificar con más facilidad los comportamientos y conocimientos de los empleados. Una posible explicación para esta relación la encontramos en la literatura sobre comportamiento organizativo. Concretamente, trabajos como los de Parker et al. (1997) consideran que a medida que los puestos de trabajo se enriquecen la percepción que tienen los empleados de su rol en la empresa se amplía; es decir, los empleados asumen que sus responsabilidades en la empresa van más allá que las definidas para su puesto de trabajo. Empleados con una percepción más amplia de su “rol” en la empresa, asumirán que necesitan ampliar sus conocimientos y competencias continuamente y por tanto, se mostrarán más predispuestos a aprender (es decir, mostrarán mayor maleabilidad de conocimientos). Asimismo, a medida que el rol percibido por el empleado en la empresa se amplía, el empleado asume responsabilidad sobre un mayor número de problemas y tareas en la empresa, mostrando una mayor inclinación a alterar sus rutinas en el trabajo cuando sea necesario (es decir, mostrando una mayor maleabilidad de comportamientos) (Parker, 2000).

Por último, hemos observado que tanto el enriquecimiento del puesto de trabajo como la provisión de incentivos equitativos son determinantes de la flexibilidad relacional de los empleados (hipótesis 8 y 9). En relación con la primera cuestión, un mayor enriquecimiento del puesto de trabajo favorece la generación de un clima de cooperación entre la fuerza de trabajo que resulta en una mejora de la flexibilidad relacional de los recursos humanos (Youndt y Snell, 2004). Por lo que respecta a la configuración de incentivos de la GAC, hemos comprobado que esta configuración afecta negativamente a la flexibilidad relacional de los recursos humanos, pues tal y como sugieren Campbell et al. (1998) y Nahapiet y Goshal (1998), el énfasis en los resultados individuales para determinar la retribución supone ignorar las interrelaciones entre los empleados y su contribución a unos objetivos comunes.

b) Influencia de la flexibilidad de los recursos humanos sobre los resultados organizativos

En nuestra muestra de empresas hemos observado que la flexibilidad intrínseca de los recursos humanos mejora los resultados organizativos (hipótesis 10), corroborando así las conclusiones de algunos estudios anteriores, como los de Cordery et al. (1993) o Rosenblatt y Inbal (1999). Asimismo, cuando los empleados manifiestan una mayor maleabilidad de conocimientos, se observa un incremento en los indicadores de resultados (hipótesis 11). Siguiendo a Lado y Wilson (1994), empleados que aprenden rápidamente reducen la variabilidad en el rendimiento en el trabajo a lo largo del tiempo y mejoran la productividad, lo cual repercute favorablemente en los resultados organizativos. Se observan unos resultados similares para la maleabilidad de los comportamientos de los recursos humanos (iniciativa o proactividad) (hipótesis 12). Según Youndt y Snell (2004) a medida que los empleados se muestran más proactivos en el trabajo, son capaces de desarrollar nuevos procesos que eliminen pasos costosos o que reduzcan inputs. En este sentido, nuestros resultados son similares a los obtenidos por Kirkman y Rosen (1999), quienes concluyen que la proactividad del empleado supone una mejora de la productividad, del compromiso y del servicio al cliente. Finalmente, por lo que respecta a la flexibilidad relacional de los recursos humanos, no se ha verificado que exista una relación significativa entre este componente de la FRH y los resultados organizativos (hipótesis 13).

Una conclusión que puede extraerse de estos resultados es la necesidad de ampliar la noción de rendimiento en el trabajo en las organizaciones actuales. La concepción tradicional del rendimiento laboral se basa en evaluar la consecución, por parte del empleado, de unos objetivos predefinidos en su puesto de trabajo (p.ej. en términos de unidades de producto o número de nuevos clientes). Sin embargo, ante la relevancia de la flexibilidad de los recursos humanos para los resultados organizativos, el concepto de rendimiento laboral debería también incluir las habilidades del empleado para moverse entre puestos, mostrar iniciativa, proporcionar nuevas ideas o aprender rápidamente (Campbell, 2000; Parker, 2000).

Por otra parte, la consideración del EBR como el marco teórico de nuestro estudio implica la necesidad de considerar los rasgos del entorno al analizar la relevancia competitiva de los recursos organizativos (Barney, 2001). De este modo, la aplicación de modelos SEM con efectos moderadores en nuestra muestra de empresas nos ha permitido examinar el papel moderador del dinamismo del entorno en la relación entre la FRH y el *performance*. En general, las conclusiones de estos análisis revelan que a mayor dinamismo del entorno, más intensa es la relación entre la FRH y los resultados organizativos.

En concreto, hemos observado que la maleabilidad de conocimientos, la maleabilidad de comportamientos y la flexibilidad relacional de los recursos humanos ejercen un efecto mayor sobre los resultados organizativos (específicamente, sobre la eficiencia de las relaciones con los clientes) en entornos dinámicos que en entornos estables (hipótesis 15, 16 y 17). Estos resultados apoyan las sugerencias de varios autores tales como Riley y Lockwood (1997), Motodwidlo y Schmit (1999) o Batt (2002), quienes afirman que empleados que contribuyan a alterar el *status quo* de la organización, mejorando continuamente su base de conocimientos, manifestando iniciativa o colaborando con otras personas, estarán mejor preparados para mantener relaciones provechosas con los clientes en entornos caracterizados por cambios continuos.

No obstante, no hemos observado que el dinamismo modere la influencia de la flexibilidad intrínseca de los recursos humanos (versatilidad) sobre los resultados organizativos (hipótesis 14). Es decir, empleados versátiles ejercen un efecto positivo sobre los resultados organizativos con independencia de las características del entorno en el cual opera la organización.

c) La consideración de la flexibilidad de los recursos humanos como una variable mediadora en la relación entre GAC y los resultados organizativos

Finalmente, se ha formulado un conjunto de modelos SEM con efectos mediadores en los cuales se introduce la FRH como una variable que intermedia entre la gestión por alto compromiso y los resultados organizativos. El propósito de estos modelos es profundizar en los mecanismos a través de los cuales la gestión de los recursos humanos de la organización influye sobre los resultados.

Los resultados de estos análisis confirman parcialmente la hipótesis 18. Se observa que la flexibilidad intrínseca de los recursos humanos media en la relación entre las configuraciones de desarrollo de las habilidades e incentivos de la GAC y los resultados organizativos. Es decir, en el ámbito de los departamentos comerciales y de marketing de las empresas españolas estudiadas, a medida que la empresa invierte en formar y desarrollar su fuerza de trabajo y proporciona unos incentivos equitativos, el nivel de versatilidad de estos empleados se incrementa, mejorando a su vez los resultados de la organización.

Se han verificado, también parcialmente, las hipótesis 19 y 20. En este sentido, el efecto de la configuración de enriquecimiento del trabajo de la GAC en los resultados organizativos se produce por mediación de los dos componentes de la flexibilidad de modificación de los recursos humanos (maleabilidad de conocimientos y maleabilidad de comportamientos). Es decir, a medida que los puestos de trabajo incluyen aspectos tales como la autonomía o el trabajo en equipo, se produce en los empleados una tendencia hacia el cambio que resulta en una mejora de la competitividad de la empresa.

4. Conclusiones obtenidas y futuras líneas de investigación

Nuestro estudio ha demostrado los beneficios de la gestión por alto compromiso para el desarrollo de empleados flexibles. En el ámbito de los departamentos comerciales y de marketing de una muestra de empresas industriales y de servicios, hemos observado que aspectos tales como el desarrollo de las habilidades, el enriquecimiento del trabajo y la provisión de incentivos equitativos mejoran la flexibilidad de los recursos humanos. En este sentido, el presente trabajo apoya investigaciones anteriores que resaltan la relevancia de las estrategias de recursos humanos para fomentar la adaptabilidad de la fuerza de trabajo (e.g. LePine y Van Dyne, 1998; Axtell et al., 2000; Youndt y Snell, 2004).

Nuestra investigación también ha demostrado la necesidad de considerar las características del entorno al evaluar el valor de los recursos humanos para la empresa. En concreto, se ha observado que a mayor dinamismo del entorno, más intensa es la relación entre la flexibilidad de los recursos humanos y los resultados organizativos, en línea con las sugerencias de varios autores (e.g. Riley y Lockwood, 1997; Batt, 2002).

Por último, en el presente trabajo hemos observado que algunos de los componentes de la flexibilidad de los recursos humanos median en la relación entre la GAC y los resultados organizativos. Es decir, parte de la influencia que ejerce la GAC sobre los resultados se explica por el hecho que la GAC mejora la flexibilidad de los empleados. De este modo, nuestra investigación se ubica en una nueva línea de investigación dentro de la literatura en gestión de recursos humanos que pretende explorar los mecanismos entre la gestión de recursos humanos y los resultados a nivel organizativo (e.g. Rogg et al., 2001; Paul y Anantharaman, 2003; Park et al., 2003).

Teniendo en cuenta estos resultados, se pueden proponer varias líneas futuras de investigación que a su vez se desprenden de las propias limitaciones de este trabajo.

Por una parte, cabe resaltar que, a pesar de la novedad que supone la aplicación del EBR en la definición de la flexibilidad de los recursos humanos, este marco teórico implica una visión estática del concepto, al referirse a la flexibilidad de la fuerza de trabajo en un momento del tiempo determinado. En nuestra opinión, sería conveniente dotar al estudio de la FRH de un marco de referencia más dinámico, lo cual exigiría

tener en consideración las capacidades dinámicas de la organización. Las capacidades dinámicas comprenden un conjunto de actividades que se dirigen a reconfigurar y transformar los recursos organizativos con el fin de ajustarlos a los cambios externos (Teece et al., 1997; Eisenhart y Martin, 2000; Johnson et al., 2003; Pavlou y El Sawy, 2004). Se trataría, por tanto, de abordar el estudio de la FRH desde un nivel de análisis de orden superior, correspondiente a la idea de la “flexibilidad de coordinación” propuesta por Sanchez (1997). Ello implicaría considerar, en la definición de la FRH, las habilidades de la organización para mover, integrar o desarrollar los empleados flexibles de acuerdo con la información sobre el entorno (Sanchez, 1997; Volberda, 1998).

Por otra parte, en el presente trabajo la información relativa a la flexibilidad de los empleados de los departamentos comerciales y de marketing de las empresas se ha obtenido a partir de la opinión de los directivos de dichos departamentos, los cuales han evaluado las características de los empleados a su cargo, siguiendo las recomendaciones de Delery (1998). Sin embargo, sería también interesante obtener medidas más directas de la flexibilidad de los recursos humanos, con información obtenida a partir de los propios empleados. Los datos individuales sobre flexibilidad podrían posteriormente agregarse al nivel de grupo o de organización para analizar la flexibilidad de la fuerza de trabajo (Ostroff y Bowen, 2000).

Además, al obtener información directamente del empleado podría estudiarse en mayor detalle los antecedentes de la flexibilidad de los empleados. Por ejemplo, en referencia con la flexibilidad de modificación de los recursos humanos, autores tales como London y Mone (1999) apuntan que la maleabilidad de los conocimientos del empleado puede verse afectada por factores personales como los conocimientos previos o las preferencias personales por el aprendizaje. La inclusión de estos antecedentes en investigaciones futuras ayudaría a comprender por qué algunas personas son más flexibles que otras en el puesto de trabajo, y en consecuencia, permitiría ofrecer recomendaciones a los directivos sobre qué empleados seleccionar ante una mayor necesidad de flexibilidad en la empresa. Asimismo, al identificar los antecedentes personales de la flexibilidad, se mejoraría la comprensión sobre la influencia de la gestión de los recursos humanos en la FRH, puesto que dichas variables (e.g. motivación, experiencia previa, etc.) podrían ser consideradas como variables de control

que aislaran el efecto de las prácticas de recursos humanos en la flexibilidad del empleado.

Estudios al nivel del empleado permitirían, a su vez, examinar las interrelaciones entre la flexibilidad de los recursos humanos y otros aspectos del rendimiento laboral, con el fin de explorar en mayor detalle la contribución de los empleados al éxito organizativo. Los resultados de nuestra investigación han verificado la relevancia que tiene el denominado “concepto activo del rendimiento laboral” para la competitividad de la empresa, al corroborar la influencia de la FRH sobre indicadores de resultados organizativos. Este concepto activo del rendimiento laboral contrasta con la noción tradicional del rendimiento en la empresa, centrado en la consecución por parte del empleado de objetivos pre-definidos y estáticos (Frese y Fay, 2001). Sería interesante, por tanto, plantearse si empleados que manifiestan un buen rendimiento laboral “tradicional” están también preparados para afrontar cambios externos, o si un mejor rendimiento en el trabajo incrementa la motivación del empleado para manifestar flexibilidad. Así pues, la comparación entre los aspectos más reactivos y proactivos del rendimiento laboral permitirían abundar en la relevancia de los aspectos sociales para la organización.

Los resultados de la presente investigación pueden considerarse como un punto de partida para lograr los propósitos anteriores. Concretamente, la selección de empresas (entre las participantes en este estudio) con un mayor o menor grado de implantación de la GAC así como organizaciones con mayores o menores niveles de flexibilidad de los recursos humanos permitiría identificar organizaciones susceptibles de análisis más detallados, por ejemplo, a partir de estudios de casos.

Finalmente, consideramos interesante ampliar el tamaño de la muestra con el fin de formular modelos estructurales más complejos, que permitiesen profundizar en las relaciones causales propuestas en este trabajo. Cuando se ha estimado el efecto mediador de la FRH en la relación entre la GAC y los resultados organizativos no hemos considerado que las consecuencias de la flexibilidad de los recursos humanos sobre los resultados pueden variar de acuerdo con el dinamismo del entorno. Con un mayor tamaño muestral sería posible incluir, en un único modelo, tanto efectos mediadores como moderadores que permitiesen avanzar en la consideración de la

flexibilidad de los empleados como un mecanismo que explica la influencia de la GAC sobre el éxito organizativo.

La ampliación de nuestra muestra permitiría a su vez, recabar información acerca de otros empleados de la empresa, pertenecientes a diversas áreas organizativas y contrastar así si diferentes empleados reaccionan de modo distinto – en términos de su flexibilidad – a unas prácticas similares de recursos humanos.

