

Functional Flexibility in Human Resource Management Systems: Conceptualization and Measurement

Susana Fernández-Pérez de la Lastra¹, Fernando Martín-Alcázar¹ & Gonzalo Sánchez-Gardey¹

¹ Business Management Departament, Cádiz University, Cádiz, Spain

Correspondence: Susana Fernández-Pérez de la Lastra, Departament of Business Management, Cádiz University, Glorieta Carlos Cano s/n – 11002 Cádiz, Spain. Tel: 34-956-015-462. E-mail: susana.fernandez@uca.es

Received: October 17, 2013

Accepted: November 14, 2013

Online Published: January 11, 2014

doi:10.5430/ijba.v5n1p1

URL: <http://dx.doi.org/10.5430/ijba.v5n1p1>

Abstract

In spite of its strategic relevance, functional flexibility has still not been clearly defined by the literature. Drawing on different conceptualizations and measurement tools, empirical studies have reached different and even contradictory findings. This paper proposes a construct to define and measure functional flexibility in the field of Human Resource Management. In doing so, we will try to clarify this concept, classifying previous definitions and contributing with an integrative conceptualization. In the first part of this work we discuss and justify the need for certain level of functional flexibility in human resource management systems, which helps the organization to improve its capacity to adapt to current environments. From this point of view, this capacity is considered as a relevant source of competitive advantage. Drawing on our theoretical analysis, we propose a new functional flexibility construct and a measurement model that could help to develop deeper analysis on this topic. This construct would serve as a starting point in the definition of a measurement scale for functional flexibility. Future research lines derived from this analysis are discussed in the last section of the paper. Specifically, we discuss the need to analyse how exploration and exploitation of human capital can be combined in flexible human resource management strategies.

Keywords: functional flexibility, flexibility in strategic human resource management, theoretical review, measurement model

1. Introduction

The importance of flexibility is already reflected in seminal studies, as Steers' (1975) who even proposed to use flexibility as a criterion to assess the effectiveness of organization. Suárez, Cusumano and Fine (1995) also argue the importance of flexibility for companies, and the need for understanding and managing it strategically. As suggested by some authors (Gerwin, 1993; Gupta & Goyal, 1989) flexibility is not only used by companies to adapt to changes and uncertainty in the environment, but also to generate uncertainty in their competitive advantages.

Reviewing previous literature, we identify different areas of organizational flexibility. In this sense, studies have explored flexibility in aspects as competitive strategies, production methods, organizational structures, or human resource management (Atkinson, 1984; Michie & Sheehan, 2001; Roca-Puig, Beltrán-Martín, Escrig-Tena & Bou-Llusar, 2005; Swan & Fox, 2009). Adopting a strategic point of view, and drawing on the resource-based perspective we assume that the design of flexible human resource management systems enables the organization to generate new valuable, unique and inimitable resources (Barney, Wright & Ketchen, 2001). If resources are difficult to imitate and can be adapted to changing conditions, they will be able to generate superior performance and sustainable competitive advantage for companies. Likewise, this approach argues that the possibility of an organization to obtain and maintain a sustainable competitive advantage depends largely on the degree of exclusivity of the competences and skills of their human resources. Considering this, we can conclude that the manner in which this human capital is generated and activated has a strategic role within the organization.

Valle, Martín and Romero (2001) explained the contextual changes that made the human resources management function change to a more strategic role. As it can be observed, all these changes justify the need for flexible human resource management systems:

- a. Sociodemographic factors. The characteristics of the population are changing, basically because of two reasons: a decrease in the birth rate and the increasing life expectancy. The new demographic situation originated has

relevant implications for human resources management. In this regard, the improvement of the quality of life and its impact on a higher life expectancy makes employees to decide to postpone their retirement age. As a consequence of this, firms have comparatively older workforces. The decrease in the birth rate causes a lack of young people in enterprises, reducing the contribution of new perspectives, values and knowledge. Among other socio-demographic changes with implications for strategic human resource management we can highlight: (1) the increase in the incorporation of women in the labor market, (2) the coexistence in companies of people of different ages and, (3) the increase in the non-domestic labour force. This socio-demographic changes increases workforce diversity within organizations, a condition that also requires a greater degree of flexibility in management systems.

- b. Political-Legal factors. Firms' strategic development depends, to a great extent, on the institutional context country. State's role in this sense is particularly important, not only because of the normative framework, but also because of its economic, social and political influence (Kalleberg, 2001). Organizations need to adapt themselves to the changes occurred in this socio-political context, which is also characterised nowadays by instability and change. One of the most important political elements for human resource management in the recent years is the impulse of social policies against workplace discrimination. Similarly, reforms in labour markets regulation, collective bargaining and social security also impact substantially human resource management decisions.
- c. Economical factors: globalization involves the expansion of international trade and the expansion of multinational corporations (Stone-Romero, Stone & Salas, 2003). It also favours mergers and acquisitions processes, which are normally due to the need for achieving an adequate scale to operate in international markets (Valle et al., 2001). These changes also require more flexible organizations. Valle et al. (2001), for instance, discussed the effects of mergers and acquisitions for human resource management. As the authors argue, the main effect in this sense is the increase in the volume of layoffs and anticipated retirements due to redundancy of functions in the resulting company. As a consequence of this employees perceive these processes as highly insecure and risky.
- d. Technological factors. Because of technological advances, organizations are nowadays more able to create and maintain flexible structures (Phillips & Wright, 2009). As Konrad and Deckop (2001, p. 274) stated "Technology changes may even be helping re-define the role of HR in the organization". According to Martínez-Sánchez, Vela-Jiménez, Pérez-Pérez, and De Luis-Carnicer (2009) competition in high-tech companies creates the need to rapidly develop products to remain competitive, requiring greater labour flexibility.
- e. Organizational factors. One of the internal factors that have a stronger influence on human resource management is organizational culture. As Barney (1986) noticed the organization's culture can be considered by itself a source of competitive advantage and it is determined in part by human resource management systems (Lau & Ngo, 2004; Ngo & Loi, 2008). In fact, different authors have stated that organizational culture and human resource management are inseparable (Jackson & Schuler, 1995; Ngo & Loi, 2008). Firms' degree of innovation is also a relevant organizational factor to consider, as innovations (both technological and organizational) require workers to acquire and renew their qualifications. As a consequence of this, organizations need to be more flexible. The new forms of work derived from the introduction of new technologies require more versatile workers.

These factors describe a new context for human resource management, which has led companies to adopt a series of changes to adapt to new circumstances. According to Patrickson and Hartmann (2001) the majority of these changes require investments in human resource management systems to make them more flexible.

As it can be observed, the need to maintain a specific degree of flexibility in human resources management seems to be demonstrated by previous literature. Theoretically, the importance of flexibility has been justified using the Resource Based View of the firm (Barney, 1991; Beltrán-Martín, Roca-Puig, Escrig-Tena & Bou-Llusar, 2009). Its effects on organizations' financial performance have been tested in empirical works such as those proposed by Bhattacharya, Gibson and Doty (2005). Despite this importance, there is still lack of consensus in the literature about how to conceptualize flexibility in the field of human resource management (Beltrán-Martín et al., 2009; Mayne, Tregaskis & Brewster, 1996). Different works have defined and measured it using diverse constructs, normally focusing just on part of its dimensions (Bhattacharya et al., 2005; Golden & Powell, 2000; Kalleberg, 2001; Looise, van Riemsdijk & De Lange, 1998; Roca-Puig, Beltrán-Martín & Bou-Llusar, 2008).

Considering the above discussion, the objective of this paper is triple: (1) to define a concept of functional flexibility in the field of human resource management, (2) identify and define its dimensions and categories and, (3) propose a measurement scale. As we will see in the following sections, functional flexibility is a relevant organizational capability "that allows the company to generate and maintain a sustainable competitive advantage, and therefore obtaining higher levels of effectiveness" (García-Tenorio, Sánchez & Holgado, 2011, p.23). Therefore, it is

necessary to deepen the analysis of its internal dynamics, as previous studies have noticed (López-Cabrales, Valle & Galán, 2011).

The paper is structured in four blocks. After justifying the research and presenting the objectives, in the second section we will review the extant literature to describe the theoretical and conceptual framework of the flexibility in the field of human resource management. In the third block, an integrative construct for functional flexibility is presented, describing its dimensions, and the set of measures defined. Finally, in the fourth section, conclusions will be presented, explaining the paper's contribution, as well as its limitations and the future lines of research that arise from our theoretical analysis.

2. Conceptualization of Functional Flexibility in the Field of Human Resource Management

2.1 Conceptual Delimitation of Organizational Flexibility in Human Resource Management

The disparity of concepts proposed in the literature shows the difficulty of defining flexibility. As Suárez et al. (1995) indicate organizational flexibility is not a simple but multidimensional concept. Moreover, it is highly dependant on the context, and the areas in which it is studied.

According to Upton (1995), flexibility depends more on human resources than on technological assets. Researchers have argued that the ability of human resources to be flexible is directly linked to the profitability of the company. Flexibility benefits labour productivity, motivation, and the development of intellectual assets, which are at the basis of organizations' competitive advantage (Becker, 1996; Becker & Huselid, 1998; Huselid, 1995). In a similar vein, Bhattacharya et al. (2005) confirm that the flexibility of human resources is related to the competitive advantage of the company, which is reflected on productivity, profitability and efficiency in the control of business costs. Because of these reasons, it seems clear that strategic human resource management should promote organizational flexibility, in order to help the company achieve a dynamic adjustment (Wright & Snell, 1998).

Reviewing the literature we find that different researchers have used diverse denominations to call this type of flexibility. In fact, it has been named as labour flexibility, human resources flexibility, human resource management flexibility, or strategic human resource management flexibility. In this regard, some authors have noticed the disparity and ambiguity of the definitions proposed (Ketkar & Sett, 2009; Mayne et al., 1996; Wright & Snell, 1998). According to Roca-Puig et al. (2008), human resources capacity for adaptation is defined as labour flexibility. Bhattacharya et al. (2005), on the other hand indicate that human resources flexibility is an indicator of the company's ability to react and adapt to changing conditions. Milliman, Von Glinow and Nathan (1991) define human resources flexibility as a capacity that human resource management systems should have to adapt timely to changes and new requirements, both outside and inside the company. From a different point of view, human resource flexibility has been defined as the ability to vary the quality and quantity of the personnel of the company to meet the changing environment (Peiró, García-Montalvo & Gracia, 2002). For Wright and Snell (1998), flexibility in strategic human resource management has a double meaning: (1) the presence of diverse skills and behaviors and, (2) organization's ability to implement human resource management adapting it to the requirements of the moment.

As we have seen, although they have obvious connections, the different definitions proposed emphasize on different dimensions of the flexibility construct. To provide an integrative definition, it will be necessary to deepen on the analysis of three key elements raised in previous definitions: (1) human resource management practices, (2) employees' competences and, (3) employees' motivation and commitment (Roca-Puig et al., 2008). From this starting point, we will propose an integrative construct in the next section, which will be named *flexibility in the strategic human resources management*, trying to cover all the dimensions considered.

2.2 Categories of Flexibility in Strategic Human Resource Management

Looise et al. (1998) distinguished different types of human resource management flexibility, drawing on two criteria. Firstly, they differentiated between internal and external flexibility. The second criterion distinguishes between quantitative (or numerical) and qualitative (or functional) flexibility. Internal flexibility is related to the use of the existing workforce to respond to changes. External flexibility refers to firm's capability to incorporate external workforce. On the other hand, quantitative flexibility (or numerical) is linked to the variation of the amount of work, while qualitative (or functional) flexibility measures variations in the content of the work, considering employees' qualification. From the combination of the types described above, four possible categories can be established: (1) internal-quantitative, (2) internal-qualitative, (3) external-quantitative and (4) external-qualitative. Each of these categories has its advantages and disadvantages, which are discussed by Looise et al. (1998).

Some other proposals, such as Atkinson's (1984) model of flexible company simplify this argument, assuming that the concept of human resource management flexibility has two categories or dimensions (Roca-Puig et al., 2008). These two dimensions have named in different ways: *functional* and *numerical* flexibility (Atkinson, 1984; Smith,

1997); *internal* and *external* flexibility (Cappelli & Neumark, 2001); dynamic and static flexibility (Deyo, 1997); *focused on work* and *focused on relations* flexibility (Tsui, Pearce, Porter & Hite, 1995).

As it can be observed, previous classifications are based on the distinction between two types of flexibility, one focused on the inside of the organization, which emphasizes on the use of human capital, and another that refers to the numerical arrangement of the workforce, focusing on recruitment and exit mechanisms available in the labour market. In this paper, we will follow the Roca-Puig's et al. (2008) denomination (Figure 1). As it has been explained before, these authors suggested that the concept of labour flexibility covered different types of policies and practices of human resource management, which could be grouped into two categories: internal or functional flexibility and external or numerical flexibility (Atkinson, 1984; Kalleberg, 2001). Table 1 shows the definitions of these two categories, provided by different authors. Drawing on them, we can define functional (or internal) flexibility as a condition that means to extend the skills and capabilities of employees, as well as their behaviors so they can play a wider variety of jobs or tasks and thus to cope with changes and new requirements in the competitive environment of the company. On the other hand, numerical (or external) flexibility is the ability to vary the number of workers and/or number of hours of work, as well as vary the wage costs according to the needs.

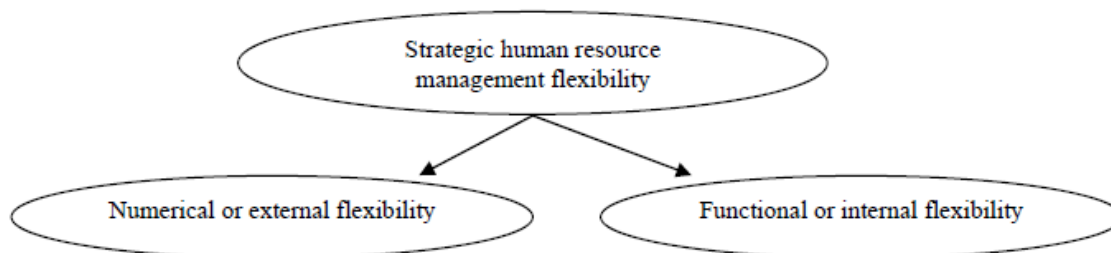


Figure 1. Categories of strategic human resource management flexibility

Source: own elaboration

The majority of these researchers assume that these two types of flexibility are mutually exclusive, so that organizations use only one of them. However, other authors have explained how they can be used simultaneously (Kalleberg, 2001; Van der Meer & Ringdal, 2009).

Table 1. Definitions of the categories of the flexibility of the strategic direction of human resources

CATEGORIES STRATEGIC DIRECTION OF HUMAN RESOURCES FLEXIBILITY		
REFERENCES	FUNCTIONAL OR INTERNAL FLEXIBILITY	NUMERICAL OR EXTERNAL FLEXIBILITY
Atkinson (1984)	Versatility of functions that employees can perform. Adaptability to be allocated to different tasks	Adjustment of the volume of work that can be done through, for example, flexible hours or part-time employees (internal-numerical flexibility), or by means of, for example, temporary employees or contingent (external-numerical flexibility)
Volberda (1998)	Ability to increase the variety of skills of workers	Capacity to adjust the size of workforce to changes in demand
Huang and Cullen (2001)	Adaptability of the workers of the organization to deal with circumstances and unusual events that require creativity and initiative	Company's capacity to adjust the number of employees to its specific circumstances
Kalleberg (2001)	Improvements in employee skills in order to perform a variety of jobs and participate in decision-making	Costs reductions by limiting the recruitment of workers
Roca-Puig et al. (2008)	Efforts made by the company to incorporate and develop employees' skills and abilities, so that they could be assigned to other jobs or departments within the company	Capacity to change the number of workers employed in order to adapt quickly and effectively to the workload by changes in demand

Source: own elaboration

According to Van der Meer and Ringdal (2009) numerical or external flexibility is used exclusively to reduce labor costs. In this regard, the basic limit for this type of flexibility can be found in labour regulation, which defines a framework for the relationships between employers and employees. Functional flexibility, on the other hand is focused on increasing productivity (Van der Meer & Ringdal, 2009). The first type of flexibility, (numerical or external) has been widely studied in previous investigations, but more research seems to be required to understand the implications of functional flexibility. Following this fact, we will focus in the rest of the paper on the internal dimension of human resource management, deepening on its specific dimensions.

2.3 Dimensions of Functional Flexibility

There are different definitions of functional flexibility. Nevertheless, as it has been previously explained, they all focus on internal aspects, exploring how human capital can be allocated to meet organizational conditions (Beltrán-Martín et al., 2009). Some researchers have extended the concept of functional flexibility by using the resource-based perspective. In this sense, Beltrán-Martín et al. (2009) argue that “organisational resources are flexible when they are suppliers of novel services” (p. 1581). For instance, when resources can be used in various situations without transforming them or applying simple transformations, they provide relevant adaptability capabilities to the organization (Penrose, 1959; Sánchez, 1995). As Beltrán-Martín et al. (2009) explained researchers have still not come to a consensus regarding the dimensions that build the concept functional flexibility.

Our proposal of the dimensions of functional flexibility is based on the theoretical approaches offered by Wright and Snell (1998) and Bhattacharya et al. (2005). When proposing their strategic human resource management models, these authors argue that there are different ways in which flexibility can be incorporated in the human resources system of the company. According to them, functional flexibility has three components or dimensions: (1) practices of human resource management, (2) employee skills and, (3) behaviors. Firstly, human resource practices flexibility refers to how the different activities and policies can be applied to different circumstances or functions of the organization. In this regard, it is particularly important to consider the speed of this adaptation process (Bhattacharya et al., 2005). Skills flexibility, on the other hand, refers to the different forms in which the skills of workers can be used and quickly reassigned (Wright & Snell, 1998). As Bhattacharya et al (2005) explained “employee behavior flexibility represents adaptability as opposed to routine behaviors; it is the extent to which employees possess a broad repertoire of behavioral scripts that can be adapted to situation-specific demands” (p. 624). Our proposal considers that flexibility has two dimensions, depicted in Figure 2: (1) flexibility HR practices and, (2) human capital flexibility. The flexibility of employee skills and behaviors referred by previous authors (Bhattacharya et al., 2005; Wright & Snell, 1998) will be introduced in our model as it is explained below, as a subdimension of human capital flexibility.

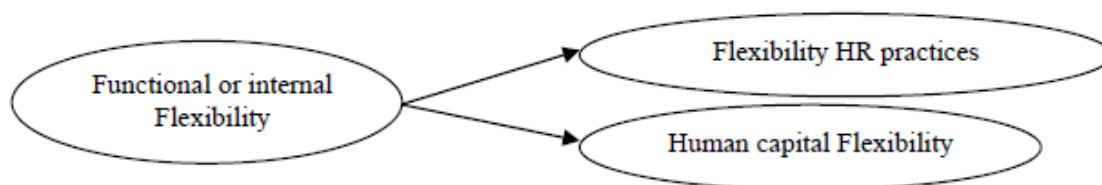


Figure 2. Dimensions of functional flexibility

Source: own elaboration

2.3.1 Flexibility of Human Resource Management Practices

Human resources practices can be defined as those activities designed to manage organization's human capital. With these practices, firms try to drive employees' behavior and increase their skills to build capabilities for the firm (Schuler & Jackson, 1987; Wright & Snell, 1991).

Human resource practices focus on each of the areas that build the human resource system and must be consistent with the organization's strategy. In this sense, Wright and McMahan (1992) define strategic human resource management as the system of human resources policies and practices developed to achieve organizational objectives. As indicated by Martín, Romero and Sánchez (2005) there is no consensus in the literature regarding the practices that build the human resources system. According to Sheppeck and Militello (2000) and Ordiz and Avella (2002) to create competitive advantages, human resource management systems must be oriented to the following objectives: (a) identify and hire workers with higher skills through recruitment, selection and job-design practices, (b) increase staff motivation and empower employees, (c) establish performance appraisal systems to increase workforce productivity

and, (d) promote the alignment of employees' objectives with organizational goals by designing flexible practices and new forms of work.

Reviewing the literature we can find two different approaches to analyse the relationship between human resource practices and flexibility: (1) a first set of papers exploring the effects of a flexible design of the practices and, (2) another group of authors identifying human resource practices that induce firms' flexibility.

The first group has majoritarily adopted a contingent point of view. From this perspective research has explained the design of flexible human resource practices with strong theoretical foundations and empirical support (Roca-Puig et al., 2008). As Kalleberg (2001) explained, the flexibility of human resource practices allows companies to build capabilities to adapt to changes such as the increase of competition, diversity of markets or technological innovation. Thus considered, the practices themselves need to be flexible, and should be adapted to different types of workers and environments. For instance, compensation policies allow workers to choose between different modes depending on their preferences. Similarly, tasks planning can be modified according to customer needs or employees' preferences.

Ketkar and Sett (2009) indicated the existence of certain human resource management practices that directly induce flexibility. This effect is particularly relevant and should be analysed as something different to the flexibility of the human resources practices. These flexibility-inducing practices should be further analysed to explore how organizations can facilitate the adaptation skills and behaviors of employees. Drawing on an extensive review of the literature, Ketkar and Sett (2009) grouped these practices in the following categories: (1) selection and staffing, (2) training and development, (3) performance management, (4) compensation and incentives, (5) communication, (6) participation and, (7) employees' empowerment. As different authors have indicated, companies should implement practices specifically designed to increase organizational flexibility (Bhattacharya et al., 2005; García-Tenorio et al., 2011; Michie & Sheehan, 2001; Pérez-López, Montes-Peón & Vázquez-Ordás, 2006). For instance, innovative selection systems could help to identify employees who can adapt to new situations. Training programs could provide new skills and drive employees' behaviour. Job rotation and temporary assignments also expand skills, while evaluation and reward systems motivate the employees to participate in strategic decision-making in response to changes in the environment. As empirical research has also demonstrated, these practices are more efficient if they are complemented with participative work systems.

2.3.2 Human Capital Flexibility

Wright and McMahan (2011) conducted a review of the concept of human capital, offering definitions from different approaches (economic and psychological). To specify the approach to human capital in which our study is based, we draw on Becker's (2002: p.3) definition: "Human capital refers to the knowledge, information, ideas, skills, and health of individuals". As Becker (1996) also argued, human capital would include behavior, conduct, accumulated labor, harmful addictions and other habits of employees. Wright and McMahan (2011) defined human capital, at the individual level, as a set of characteristics possessed by employees. This human capital provides improved efficiency at the individual level, and can also create unit-level value if the organization is able to articulate the process of accumulation of human capital.

Competitive advantages can be created through a system of human resource practices able to combine employees' capabilities (Kamoche, 2001). In this process, human resource management practices are responsible for generating and retaining human capital (Ulrich, 1998), as they directly influence individuals' skills and capabilities (Becker & Huselid, 1998; Jin, Hopkins & Wittmer, 2010). According to this line of research, human capital is a basic element for establishing flexible structures and strategies (Huang & Cullen, 2001; Roca-Puig et al., 2008). Similarly, empirical research has demonstrated the relevance of human resource practices not only for human capital generation, but also to align employees' core competences to company's strategy.

Drawing on the resource-based view of the firm (Barney, 1991), the literature has explained that organizations' capability to create and maintain sustainable competitive advantages depend on the degree of exclusivity of the skills of their workers. It is widely acknowledged that flexibility is a factor that enhances this exclusivity, making organizations able to apply their human capital to a variety of objectives and situations (Sánchez, 1995).

More recently, Beltrán-Martín et al. (2009) went a step beyond, explaining that human capital flexibility can be explained by three sub-dimensions: (1) intrinsic flexibility, (2) modification flexibility and, (3) relational flexibility (Figure 3). Intrinsic flexibility is the ability of the organization to use human capital in various tasks or jobs. It means that workers are versatile in terms of skills, abilities and functions, making the company able to use them in different situations (Van den Berg & Van der Velde, 2005). According to Bhattacharya et al. (2005), companies have two

options to generate this particular type of flexibility. Firstly, firms must be able to assure that they have the professional profiles that they require, according to their specific needs. If this condition is met, companies will be able to combine and reorganize their skills to a variety of situations, adapting the organization to external and internal changes. Bhattacharya et al. (2005) indicated that firms could foster skills flexibility through the following human resource practices: job rotation, multifunctional teams and project based work systems.

Modification flexibility, on the other hand, represents firms' capability to efficiently transform the human capital of their workers. As Bhattacharya et al. (2005) argued, this kind of flexibility is explained by individuals' scope of skills and behaviors. This objective has obvious implications for the design of human resource practices. For instance, performance management systems should be not only designed to assess actual performance, but also to foster the acquisition and development of new skills, to promote learning and to motivate employees to develop their behaviors (Collins & Clark 2003; Ketkar & Sett, 2009). Similarly, Ketkar and Sett (2009) identified a set of practices that allow the organization to expand, modify and/or transform their human capital. Among them, they highlighted recruitment and selection, development-focused training programmes, performance evaluation and incentives/rewards systems, career development, job rotation and empowerment and participation practices.

Finally, relational flexibility represents the combination of the capabilities of the different employees. It focuses on coordination mechanisms, as a mean to generate new forms of collective human capital. Mathews (2002) and Beltrán-Martín et al. (2009) explain how the links between resources can be altered to build higher combinations without changing the nature of individual human capital. Practices fostering relational flexibility must be aware that not all employees contribute the same to organizational goals. In this sense, Li and Zhang (2002) highlight the relevance of core employees, who possess core capabilities to interact with other and build high performance networks.

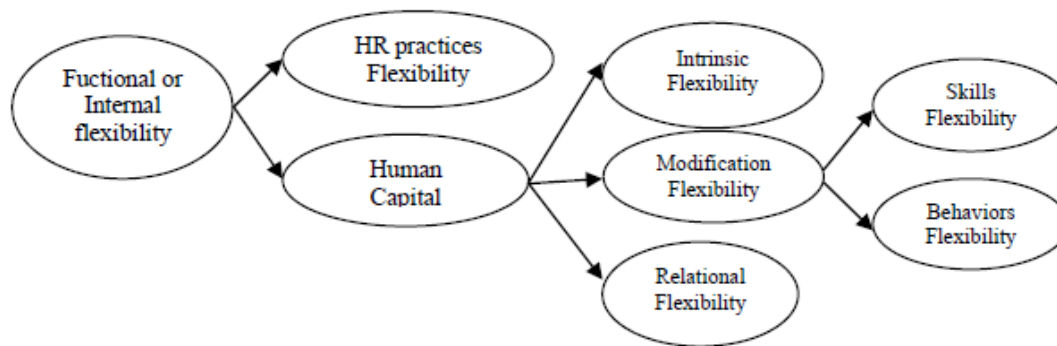


Figure 3. Sub-dimensions of human capital flexibility

Source: own elaboration

3. Measurement of Functional Flexibility

The literature reviewed in previous sections confirms the relevance of employees' adaptability for firms' survival in competitive environments. Drawing on the models proposed to conceptualize functional flexibility, we have defined a new integrative construct, integrating the dimensions identified by previous studies. Trying to go a step beyond, we propose in this last section of the paper an empirical instrument to measure our functional flexibility construct, covering the five dimensions that build it. To define this scale, we integrate the measures proposed in the three papers that provided the basis for our conceptual definition of functional flexibility (Beltrán-Martín et al., 2009; Bhattacharya et al., 2005; Ketkar & Sett, 2009).

Bhattacharya et al. (2005) extracted data from a survey to measure flexibility of skills, behaviors and human resources practices. Their instrument was built by seven-point Likert scales designed through a three stage process: (a) a set of preliminary items was selected, drawing on their literature review, (b) the original measures were reviewed and modified by a group of academics and human resource managers, (c) the scale was validated in a pilot test. The 50 elements of the original questionnaire were reduced to 22, which was the final number of items introduced.

More recently, Ketkar and Sett (2009) validated the 22 items originally proposed by Bhattacharya et al. (2005) and completed the scale by introducing 2 items to measure flexibility of skills and 8 for behavior flexibility. Their final scale was finally composed by: 9 items for skills flexibility, 16 items for behaviors flexibility and 7 items to measure

the flexibility of human resources practices. The measures were also defined as seven-point Likert scales, using a method that was similar to Bhattacharya's et al. (2005): (a) items were selected through a comprehensive review of the literature and interviews with academics and practitioners, (b) the initial scale was reviewed by a panel of 12 managers with experience in different sectors and, (c) items' reliability and validity was tested using data from an initial sample of 16 managers.

Finally, Beltrán-Martín et al. (2009) proposed an alternative set of items, also drawing on a systematic review of previous empirical studies in the field. These authors adapted previous scales (Bhattacharya et al., 2005; Pulakos et al., 2000; Volberda, 1998), and defined their own instrument, covering all the dimensions of internal labour flexibility that they theoretically identified. After defining the items selected for each of these dimension, they performed different analyses to validate the suitability of the measure scale. Particularly, they carried out tests to confirm constructs' dimensionality, reliability and validity. To do so, they used structural equations modelling (SEM). The result of this process was a final scale built by: 3 items for intrinsic flexibility, 4 items for skills flexibility, 4 items for behaviors flexibility and 3 items for relational flexibility.

To measure the degree of functional flexibility within organizations we propose an integrative approach, trying to cover all the dimensions identified in previous research. Drawing on the measures defined in the papers reviewed above, we propose the measurement model depicted in figure 4. As it can be observed, this construct simultaneously considers all the dimensions identified in our review of the concept of flexibility, and identifies items to measure each of them. The set of measure for each of the subdimensions is included in Table 2.

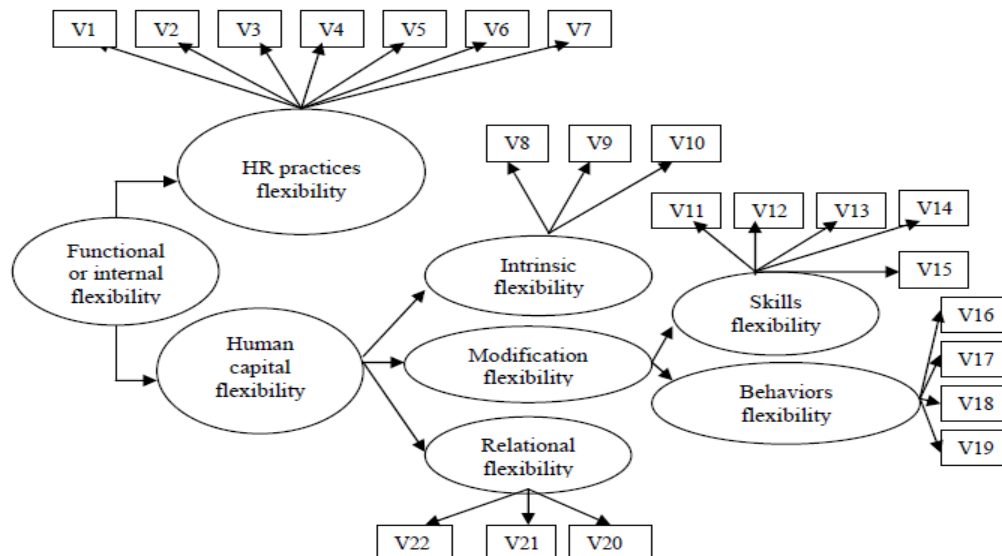


Figure 4. Functional flexibility measurement model

Source: own elaboration

As it can be observed in Table 2, 22 items finally composed the scale. Flexibility of human resources practices is measured by items V1-V7. To measure human capital flexibility, on the other hand, we propose a combined scale (items V8 to V22), and intrinsic flexibility is measured by items V8 to V10. With regard to the modification flexibility, we differentiate between two sub-constructs: skills flexibility that would be measured by items V11 to V15, and behaviors flexibility, which we propose to measure through items V16 to V19. Finally, three items are introduced to measure the relational dimension of flexibility (V20 to V22).

Table 2. Description of the functional flexibility measures

VARIABLE	ITEM		REFERENCE
	HR practices flexibility		
V1	Flexibility of our HR practices helps us to adjust to changing demands of the environment		Bhattacharya et al. 2005; Ketkar & Sett, 2009
V2	Our firm modifies its HR system to keep pace with the changing competitive environment		Bhattacharya et al. 2005; Ketkar & Sett, 2009

V3	Our HR practice parameters are designed so that they quickly adjust to changes in business conditions	Bhattacharya et al. 2005; Ketkar & Sett, 2009
V4	We make frequent changes in our HR practices to align the HR system with changing work requirements.	Bhattacharya et al. 2005; Ketkar & Sett, 2009
V5	Changes in our HR practices enable us to remain competitive in the market	Bhattacharya et al. 2005; Ketkar & Sett, 2009
V6	Our HR practices adjust meaningfully to changed business scenarios	Bhattacharya et al. 2005; Ketkar & Sett, 2009
V7	Our HR practices, as a whole, are flexible	Bhattacharya et al. 2005; Ketkar & Sett, 2009
Intrinsic flexibility		
V8	If the need emerged, employees could be easily transferred, in a short period of time, to other jobs with similar responsibilities than their current jobs	Bhattacharya et al. 2005; Beltrán-Martín et al., 2009
V9	If the need emerged, employees could be easily transferred, in a short period of time, to more qualified jobs	Bhattacharya et al. 2005; Beltrán-Martín et al., 2009
V10	Employees easily assume responsibilities over tasks corresponding to other jobs.	Beltrán-Martín et al., 2009; Ketkar & Sett, 2009
Skills flexibility		
V11	Employees try to constantly update their skills and abilities	Beltrán-Martín et al., 2009; Ketkar & Sett, 2009
V12	Employees learn quickly new procedures and processes introduced in their jobs	Bhattacharya et al. 2005; Beltrán-Martín et al., 2009
V13	Employees anticipate future skill requirements that may be needed to perform their jobs	Beltrán-Martín et al., 2009
V14	When employees are not able to perform a specific task, they learn quickly the way of doing it.	Beltrán-Martín et al., 2009
V15	We have enough diversity of skills among our employees to meet changing market demands	Ketkar & Sett, 2009
Behaviors flexibility		
V16	When employees detect problems to perform their jobs, they voluntarily try to identify the causes of these problems	Beltrán-Martín et al., 2009
V17	The flexibility of our employees' work habits helps us to change according to market demands	Bhattacharya et al. 2005
V18	People in our firm change their work habits in response to changes in the competitive environment, in a short period of time.	Bhattacharya et al. 2005
V19	People in our firm change their behavior in response to customer requirements	Bhattacharya et al. 2005
Relational flexibility		
V20	Employees in this department share information and learn from one another.	Beltrán-Martín et al., 2009
V21	Employees in this department exchange ideas with people from different areas of the organization	Beltrán-Martín et al., 2009
V22	Employees from different areas of the organization conducted regular meetings to share experiences and work processes that have been successful in being able to extrapolate to other parts of the organization	Own contribution

Source: own elaboration

To build these scales, we followed the recommendations described by Drucker-Godard, Ehlinger and Grenier (2001), Fowler (2002) and Johnson and Harris (2002). According to these authors, to guarantee that the responses really fit the intended measures (validity), and achieve consistent valuations (reliability), it is necessary to: (1) use measures that have been validated in previous studies, (2) Reduce the use of open-end questions, which are normally difficult to use in empirical studies, (3) minimize the use of dichotomic variables and, (4) in the case of ordinal categorical variables, use scales with at least 5 points.

4. Conclusions

As Kalleberg (2001) indicated, organizational flexibility is an essential aspect for the organizations of the twenty-first century. In the competitive context described in the introduction, companies are required to face challenges that cannot be managed without a certain degree of flexibility. As we have seen throughout this article, some internal dimensions of firms must be changed to assure organizational flexibility.

This paper proposed a general conceptualization of flexibility, particularly useful for the field of strategic human resource management, as it emphasizes its functional or internal dimension. From this general view, the work contributes to previous discussions on this matter in the following way: (a) reviewing and clarifying the terminology used to describe organizational flexibility in the field of human resources, (b) proposing integrative definitions of functional (or internal) and numerical (or external) flexibility, (c) establishing the dimensions that build the functional flexibility construct and, (d) proposing a measurement scale for the proposed concept of functional flexibility.

4.1 Limitations of the Study

An important limitation of this study is that the measurement scale is not validated through an initial sample that could help us to assess its psychometric properties.

The importance of flexibility has been sufficiently justified, but has not been taken into account, one limitation of this study, the importance for organizations to continue conducting normal activities as efficiently as possible, creating short-term value. As O'Reilly and Tushman (2008) argued, it would be necessary to explain how organizations can use their flexible structures to simultaneously explore new opportunities and perform their short-term tasks efficiently. Companies and organizations that implement these two processes simultaneously and successfully are called ambidextrous (Tushman & O'Reilly, 1996). An ambidextrous organization efficiently manages its current and future strategy, exploiting the resources that generate their present value and exploring new opportunities to adapt itself to changing markets. According to the literature (Duncan, 1976; Gibson & Birkinshaw, 2004; Ketkar & Sett, 2009; Tushman & O'Reilly, 1996) organizations competing in a dynamic environment must be ambidextrous. In fact, the need for being ambidextrous is the core of survival in the long term. In this sense, Levinthal and March (1993, p. 105) argued that: "the basic problem confronting an organization is to engage in sufficient exploitation to ensure its current viability and, at the same time, devote enough energy to exploration to ensure its future viability". O'Reilly and Tushman (2008) indicated from a strategic point of view, that companies seeking to succeed in the long term must have operational capabilities and capacities to recombine and reconfigure their resources and organizational structures (dynamic capabilities) and thus to adapt to new market situations. Considering the importance of human capital for companies' competitive possibilities (Wright & McMahan, 2011) it would be necessary to explore how firms can achieve the combination of exploration-exploitation skills and abilities, building an ambidextrous pool of human capital. As Ketkar & Sett (2009) argued, some HR practices can help organizations to induce this type of flexibility, building ambidextrous capabilities, able to exploit present resources and explore new opportunities.

4.2 Future Research Directions

Future research that would, first, the measurement scale validate proposed for functional flexibility construct described above. Thus, the proposed model check performing a contribution to literature. Equally could also be made more explicit analysis of advantages and disadvantages of the proposed scale over existing ones.

Since a important limitation in this study was the lack of consideration of ambidextrous organizations, could pose a more detailed study of this issue, and this issue is another possible future direction to investigate. Today, according to the literature, the future trend in this field of study, is that organizations are flexible to adapt to changes and therefore, explore new opportunities and ways to do the work but also be efficient in activities allow you to be efficient in the short term (O'Reilly and Tushman, 2008).

We could also go deeper into each of the subdomains of the functional flexibility and further complete the proposed theoretical model. In this sense the approach could be analyzed also offered Ketkar and Sett (2009) who argue that

human resource flexibility is composed of at least four sub-dimensions: flexibility of the skills, flexibility of behavior, the flexibility of the human resource practices and flexibility of human resource practices inducing flexibility. As we can see this approach is based on the Bhattacharya et al. (2005) but introducing a fourth dimension. This new dimension brought by Ketkar and Sett (2009) is the flexibility of human resource practices inducing flexibility, which are practices explicitly designed to create flexibility, given the importance it can have from a strategic standpoint. It consists of a set of policies designed to develop new human capital through ambiguous and complex processes. That is, applying human resources practices that allow employees of the company, through expanding their skills, competencies, etc., to protect the company from threats and also to exploit future opportunities.

Acknowledgements

The research project described in this paper has been developed under the Research Project PO7-SEJ-02776, funded by the Andalusian Government (Andalusian Plan for R+D+I 2007-2013) and the Research Project ECO2011-26982, funded by the Spanish Ministry for Science and Technology (Non-oriented Fundamental Research Projects Subprogram).

References

- Atkinson, J. (1984). Manpower Strategies for Flexible Organizations. *Personnel Management*, 16(8), 28–31.
- Bahrami, H. (1992). The emerging Flexible Organization: Perspectives from Silicon Valley. *California Management Review*, 34(4), 33-52.
- Barney, J.B. (1986). Organizational Culture: Can it be a Source of Sustained Competitive Advantage? *Academy of Management Review*, 11(3), 656–665. <http://dx.doi.org/10.5465/AMR.1986.4306261>
- Barney, J.B. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99–120. <http://dx.doi.org/10.1177/014920639101700108>
- Barney, J.B., Wright, D., & Ketchen, D.J. (2001). The resource-based view of the firm: ten years after 1991. *Journal of Management*, 27(6), 625-641. <http://dx.doi.org/10.1177/014920630102700601>
- Becker, B.E., & Huselid, M.A. (1998). High-performance work systems and firm performance: A synthesis of research and managerial implications. In G. R. Ferris (Ed.), *Research in personnel and human resource management* (pp. 16, 53–101). Greenwich, CT: JAI Press.
- Becker, G.S. (1996). The Economic Way of Looking at Behavior: The Nobel Lecture. *Essays in Public Policy* (No. 69). Palo Alto, CA: Hoover Institution, Stanford University.
- Becker, G.S. (2002). The age of human capital. *Education in the Twenty-First Century*. Retrieved from http://media.hoover.org/sites/default/files/documents/0817928928_3.pdf
- Beltrán-Martín, I., Roca-Puig, V., Escrig-Tena, A., & Bou-Llusar, J. (2009). Internal labour flexibility from a resource-based view approach: definition and proposal of a measurement scale. *The International Journal of Human Resource Management*, 20(7), 1576-1598. <http://dx.doi.org/10.1080/09585190902985194>
- Bhattacharya, M., Gibson, D. E., & Doty, D. H. (2005). The effects of flexibility in employee skills, employee behaviors, and HR practices on firm performance. *Journal of Management*, 31(4), 622-640. <http://dx.doi.org/10.1177/0149206304272347>
- Cappelli, P., & Neumark, D. (2001). Do “high-performance” work practices improves establishment-level outcomes? *Industrial and Labour Relations Review*, 54(4), 737-775.
- Collins, C.J., & Clark, K.D. (2003). Strategic Human Resources Practices, Top Management Team Social Networks, Firm Performance: The Role of Human Resource Practices in Creating Competitive Advantage. *Academy of Management Journal*, 46(6), 740–751. <http://dx.doi.org/10.2307/30040665>
- Deyo, F.C. (1997). Labor and post-Fordist industrial restructuring in East and Southeast Asia. *Work and Occupations*, 24(1), 97-118. <http://dx.doi.org/10.1177/0730888497024001007>
- Drucker-Godard, C., Ehlinger, S., & Grenier, C. (2001). Validity and reliability. In R.A. Thietart (Ed.), *Doing management research: a comprehensive guide* (pp. 196-219). Londres: Sage.
- Duncan, R.B. (1976). The Ambidextrous Organization: Designing Dual Structures for Innovation. In R.H. Kilmann, L.R. Pondy & D. Selvin (Eds.), *The Management of Organization* (Vol. 1, pp.167–188). Nueva York: North Holland.
- Fowler, F.J.JR. (2002). *Survey Research Methods* (3a ed.). Thousand Oaks, California: Sage.

- García-Tenorio, J., Sánchez, I., & Holgado, R. (2011). Flexibilidad y desarrollo de los recursos humanos en un contexto de innovación: análisis empírico en el sector biotecnológico. *Revista Europea de Dirección y Economía de la Empresa*, 20(1), 17-40.
- Gerwin, D. (1993). Manufacturing Flexibility: a strategic perspective. *Management Science*, 39(4), 395-410. <http://dx.doi.org/10.1287/mnsc.39.4.395>
- Gibson, C.B., & Birkinshaw, J. (2004). The Antecedents, Consequences, and Mediating Role of Organizational Ambidexterity. *Academy of Management Journal*, 47(2), 209-226. <http://dx.doi.org/10.2307/20159573>
- Golden, W., & Powel P. (2000). Towards a definition of flexibility: in search of the Holy Grail? *Omega*, 28(4), 373-384. [http://dx.doi.org/10.1016/S0305-0483\(99\)00057-2](http://dx.doi.org/10.1016/S0305-0483(99)00057-2)
- Gupta, Y.P., & Goyal, S. (1989). Flexibility of manufacturing systems: Concepts and measurements. *European Journal of Operational Research*, 43(2), 119-135. [http://dx.doi.org/10.1016/0377-2217\(89\)90206-3](http://dx.doi.org/10.1016/0377-2217(89)90206-3)
- Huang, H.J., & Cullen, J.B. (2001). Labour Flexibility and Related HRM Practices: A Study of Large Taiwanese Manufacturers. *Canadian Journal of Administrative Sciences*, 18(1), 33-39. <http://dx.doi.org/10.1111/j.1936-4490.2001.tb00242.x>
- Huselid, M.A. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal*, 38(3), 635-672. <http://dx.doi.org/10.2307/256741>
- Jackson, S.E., & Schuler, R.S. (1995). Understanding Human Resource Management in the Context of Organizations and Their Environment. *Annual Review of Psychology*, 46, 237-264.
- Jin, Y., Hopkins, M.M., & Wittmer, J.S. (2010). Linking Human Capital to Competitive Advantages: Flexibility in a Manufacturing Firm's Supply Chain. *Human Resource Management*, 49(5), 939-963. <http://dx.doi.org/10.1002/hrm.20385>
- Johnson, P., & Harris, D. (2002). Qualitative and Quantitative Issues in Research Design. In D. Partington (Ed.), *Essential Skills for Management Research* (pp. 99-116). Londres: Sage Publications.
- Kalleberg, A.L. (2001). Organizing Flexibility: The Flexible Firm in a New Century. *British Journal of Industrial Relations*, 39(4), 479-504. <http://dx.doi.org/10.1111/1467-8543.00211>
- Kamoche, K.N. (2001). *Understanding human resource management*. Philadelphia: Open University Press.
- Ketkar, S., & Sett, P.K. (2009). HR flexibility and firm performance: analysis of a multi-level causal model. *The International Journal of Human Resource Management*, 20(5), 1009-1038. <http://dx.doi.org/10.1080/09585190902850240>
- Konrad, A.M., & Deckop, J. (2001). Human resource management trends in the USA - Challenges in the midst of prosperity. *International Journal of Manpower*, 22(3), 269-278. <http://dx.doi.org/10.1108/01437720110398374>
- Lau, C.M., & Ngo, H.Y. (2004). The HR System, Organizational Culture, and Product Innovation. *International Business Review*, 13(6), 685-703. <http://dx.doi.org/10.1016/j.ibusrev.2004.08.001>
- Levinthal, D. A., & March, J. G. (1993). The myopia of learning. *Strategic Management Journal*, 14, 95-112. <http://dx.doi.org/10.1002/smj.4250141009>
- Li, H., & Zhang, Y. (2002). Founding Team Comprehension and Behavioral Integration: Evidence from New Technology Ventures in China. In D. Nagao (Ed.). *Academy of Management Best Paper Proceedings* (pp. 1-6). Nueva York: Briarcliff Manor.
- Looise, J.C., van Riemsdijk, M., & de Lange, F. (1998). Company labour flexibility strategies in The Netherlands: an institucional perspective. *Employee Relations*, 20(5), 461-482. <http://dx.doi.org/10.1108/01425459810238747>
- López-Cabralés, A., Valle, R., & Galán, J.L. (2011). Employment Relationships as drivers of flexibility and learning. *Personnel Review*, 40(5), 625 - 642. <http://dx.doi.org/10.1108/00483481111154478>
- Martín Alcázar, F., Romero Fernández, P.M., & Sánchez Gardey, G. (2005). Strategic human resource management: integrating the universalistic, contingent, configurational and contextual perspectives. *International Journal of Human Resource Management*, 16(5), 633-659. <http://dx.doi.org/10.1080/09585190500082519>
- Martínez-Sánchez, A., Vela-Jiménez, M.J., Pérez-Pérez, M., & De Luís-Carnicer, P. (2009). Innovation and labour flexibility. A Spanish study of differences across industries and type of innovation. *International Journal of Manpower*, 30(4), 360-376. <http://dx.doi.org/10.1108/01437720910973052>

- Mathews, J.A. (2002). A Resource-based View of Schumpeterian Economic Dynamics. *Journal of Evolutionary Economics*, 12(1), 29–54. <http://dx.doi.org/10.1007/s00191-002-0106-z>
- Mayne, L., Tregaskis, O., & Brewster, C. (1996). A comparative analysis of the link between flexibility and HRM strategy. *Employee Relations*, 18(3), 5–24. <http://dx.doi.org/10.1108/01425459610116447>
- Michie, J., & Sheehan, M. (2001). Labour Market Flexibility, Human Resource Management and Corporate Performance. *British Journal of Management*, 12(4), 287–306. <http://dx.doi.org/10.1111/1467-8551.00211>
- Milliman, J., Von Glinow, M.A., & Nathan, M. (1991). Organizational life cycles and strategic international human resource management in multinational companies: Implications for congruence theory. *Academy of Management Review*, 16(2), 318–339. <http://dx.doi.org/10.5465/AMR.1991.4278949>
- Ngo, H.Y., & Loi, R. (2008). Human resource flexibility, organizational culture and firm performance: an investigation of multinational firms in Hong Kong. *The International Journal of Human Resource Management*, 19(9), 1654–1666. <http://dx.doi.org/10.1080/09585190802295082>
- Ordiz Fuertes, M., & Avella Camarero, L. (2002). Gestión Estratégica de los Recursos Humanos. *Investigaciones Europeas de Dirección y Economía de la Empresa*, 8(3), 59–78.
- O'Reilly, C.A., & Tushman, M. L. (2008). Ambidexterity as a dynamic capability: Resolving the innovator's dilemma. *Research in Organizational Behavior*, 28(1), 185–206. <http://dx.doi.org/10.1016/j.riob.2008.06.002>
- Patrickson, M., & Hartmann, L. (2001). Human resource management in Australia - Prospects for the twenty-first century. *International Journal of Manpower*, 22(3), 198 – 206. <http://dx.doi.org/10.1108/01437720110398248>
- Peiró, J.M., García-Montalvo, J., & Gracia, F. (2002). How Do Young People Cope with Job Flexibility?: Demographic and Psychological Antecedents of the Resistance to Accept a Job with Non-Preferred Flexibility Features. *Applied Psychology: An International Review*, 51(1), 43–66. <http://dx.doi.org/10.1111/1464-0597.0078z>
- Penrose, E.T. (1959). *The Theory of Growth of the Firm*. London: Basil Blackwell.
- Pérez López, S., Montes Peón, J.M., & Vázquez Ordás, C.J. (2006). Human Resource Management as a Determining Factor in Organizational Learning. *Management Learning*, 37(2), 215–239. <http://dx.doi.org/10.1177/1350507606063443>
- Phillips, P.A., & Wright, C. (2009). E-business's impact on organizational flexibility. *Journal of Business Research*, 62(11), 1071–1080. <http://dx.doi.org/10.1016/j.jbusres.2008.09.014>
- Pulakos, E.D., Arad, S., Donovan, M.A., & Plondon, K.E. (2000). Adaptability in the Workplace: Development of a Taxonomy of Adaptive Performance. *Journal of Applied Psychology*, 85(4), 612–624. <http://dx.doi.org/10.1037/0021-9010.85.4.612>
- Roca-Puig, V., Beltrán-Martín, I., Bou-Llusar, J., & Escrig-Tena, A.B. (2008). External and internal labour flexibility in Spain: a substitute or complementary effect on firm performance? *The International Journal of Human Resource Management*, 19(6), 1131–1151. <http://dx.doi.org/10.1080/09585190802051428>
- Roca-Puig, V., Beltrán-Martín, I., Escrig-Tena, A.B., & Bou-Llusar, J.C. (2005). Strategic Flexibility as a Moderator of the Relationship Between Commitment to Employees and Performance in Service Firms. *International Journal of Human Resource Management*, 16(11), 2075–2093. <http://dx.doi.org/10.1080/09585190500315026>
- Sánchez, R (1995). Strategic Flexibility in Product Competition. *Strategic Management Journal*, 16(S1), 135–159. <http://dx.doi.org/10.1002/smj.4250160921>
- Schuler, R.S., & Jackson, S.E. (1987). Linking competitive strategies with human resource management practices. *Academy of Management Executive*, 1(3), 207–219. <http://dx.doi.org/10.5465/AME.1987.4275740>
- Sheppeck, M.A., & Militello, J. (2000). Strategic HR configurations and organizational performance. *Human Resource Management*, 39(1), 5–16. [http://dx.doi.org/10.1002/\(SICI\)1099-050X\(200021\)39:1<5::AID-HRM2>3.0.CO;2-I](http://dx.doi.org/10.1002/(SICI)1099-050X(200021)39:1<5::AID-HRM2>3.0.CO;2-I)
- Smith, V. (1997). New forms of work organization. *Annual Review of Sociology*, 23(agosto), 315–339.
- Steers, R.M. (1975). Problems in the measurement of organizational effectiveness. *Administrative Science*, 20(4), 546–558.

- Stone-Romero, E. F., Stone, D.L., & Salas, E. (2003). The influence of culture on role conceptions and role behavior in organizations. *Applied Psychology: An International Review*, 52(3), 328–362. <http://dx.doi.org/10.1111/1464-0597.00139>
- Suárez F, Cusumano M., & Fine, C. (1995). An empirical study of Flexibility in manufacturing. *Sloan Management Review*, 37(1), 25-32.
- Swan, E., & Fox, S. (2009). Becoming Flexible: Self-flexibility and its Pedagogies. *British Journal of Management*, 20(1), 149-159. <http://dx.doi.org/10.1111/j.1467-8551.2008.00642.x>
- Tsui, A.S., Pearce, J.L., Porter, L.W., & Hite, J.P. (1995). Choice of employee-organization relationship: influence of external and internal organizational factors. *Research in Personnel and Human Resources Management*, 13, 117-151.
- Tushman, M.L., & O'Reilly, C. (1996). Ambidextrous organizations: Managing evolutionary and revolutionary change. *California Management Review*, 38(1), 8-30.
- Ulrich, D. (1998). Intellectual capital = competence x commitment. *Sloan Management Journal*, 1(1), 15-26.
- Upton, D.M. (1995). What really makes factories flexible? *Harvard Business Review*, 73(4), 74-84.
- Valle, R., Martín, F., & Romero, P.M. (2001). Trends and emerging values in human resource management - The Spanish scene. *International Journal of Manpower*, 22(3), 244-251. <http://dx.doi.org/10.1108/01437720110398301>
- Van den Berg, P.T., & Van der Velde, M.E.G. (2005). Relationships of Functional Flexibility with Individual and Work Factors. *Journal of Business and Psychology*, 20(1), 111–129. <http://dx.doi.org/10.1007/s10869-005-6994-9>
- Van der Meer, P.H., & Ringdal, K. (2009). Flexibility practices, wages and productivity: evidence from Norway. *Personnel Review*, 38(5), 526-543. <http://dx.doi.org/10.1108/00483480910978036>
- Volberda, H.W. (1998). *Building the flexible firm, How to Remain Competitive*. New York: Oxford University Pres.
- Wright, P.M., & McMahan, G.C. (1992). Theoretical Perspectives for Strategic Human Resource Management. *Journal of Management*, 18(2), 295–320. <http://dx.doi.org/10.1177/014920639201800205>
- Wright, P.M., & McMahan, G.C. (2011). Exploring human capital: putting ‘human’ back into strategic human resource management. *Human Resource Management Journal*, 21(2), 93-104. <http://dx.doi.org/10.1111/j.1748-8583.2010.00165.x>
- Wright, P.M., & Snell, S.A. (1991). Toward an integrative view of strategic human resource management. *Human Resource Management Review*, 1(3), 203-225. [http://dx.doi.org/10.1016/1053-4822\(91\)90015-5](http://dx.doi.org/10.1016/1053-4822(91)90015-5)
- Wright, P.M., & Snell, S.A. (1998). Toward a unifying framework for exploring fit and flexibility in strategic human resource management. *Academy of Management Review*, 23(4), 756-772. <http://dx.doi.org/10.5465/AMR.1998.1255637>