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"Business strategy, human resource systems, and organizational performance in the Spanish banking industry"

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BUSINESS STRATEGY, HUMAN RESOURCE SYSTEMS, AND ORGANIZATIONAL PERFORMANCE IN THE SPANISH BANKING INDUSTRY [Second Draft, July 2009; IJHRM Style]

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Business strategy, human resource systems, and organizational performance in the Spanish banking industry

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Abstract Although human resource (HR) systems in the form of bundles of HR practices and their impact on organizational performance have attracted considerable attention, the role that business strategy could play in this relationship remains uncertain, particularly in service industries. In order to avoid any confounding effects, this study analyzes the performance impact of adopting different HR systems in an empirical setting in which employees are vital if the company is to remain competitive, the firms belong to the same industry and the primary activities involved are the delivery of services to customers. Based on survey data from 86 banking institutions in Spain, three HR systems were identified, two of which rendered better organizational performance when matched to defender strategies, thus supporting a contingency explanation of the adoption of HR systems. Findings showed that even in an industry under strong universalistic pressures to adopt certain predictable HR practices, matching HR systems with a business strategy pays off.

Keywords Banking industry; defenders; human resource systems; organizational performance; prospectors; Spain.

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Business strategy, human resource systems, and organizational performance in the Spanish banking industry

1. Introduction

The role that human resources management (HRM) may play in allowing a firm to remain competitive has been increasingly recognized by scholars and practitioners alike in the last few years (Flood et al. 2008). In a world which is moving towards a knowledge-based economy, HRs are becoming an important source of competitive advantage in both manufacturing and service industries, thus demanding the adoption of correct practices in areas such as human resource (HR) selection, job design, performance appraisal, compensation or development (Bae and Lawler, 2000). Rather than implementing individual practices on a stand-alone base, the adoption of a system of mutually reinforcing HR practices can make a difference in the marketplace by enabling a firm to gain access to valuable, scarce, imperfectly imitable and difficult to substitute HRs (Barney and Wright, 1998; Wright, McMahan and McWilliams, 1994).

Despite the numerous studies which have been carried out on the relationship between HR systems and organizational performance, considerable uncertainty remains as to the causal picture of that relationship, ranging from universalistic to contingency explanations (Delery and Doty, 1996). The universalistic position states that there is always a single best HR system, whereas the contingency position advocates the need to match HR systems with business contingencies such as business strategy. Contradictory findings abound, but overall the evidence from a vast amount of studies dismisses the validity of contingency explanations (Becker and Huselid, 1998), which is extremely surprising considering the level of empirical support for contingency reasoning in many
fields of management. This uncertainty is greater still in the context of service industries (Guest, Michie, Conway and Sheehan, 2003), as most studies have been conducted in manufacturing industries (e.g., Arthur, 1994). Some of the reasons behind these contradictory findings can be attributed to the widespread use of multi-industry settings and the resulting confusion over the meaning of HR systems or business strategies in different industries, the cross-industry variation in the importance attached to HRs and the accompanying varying levels of labor intensity (Li, 2003).

In this study, we analyze the performance impact of adopting different HR systems in an empirical setting in which the employees are vital to the company’s remaining competitive, the firms belong to the same industry and the primary activities involved are the delivery of services to customers (Batt, 2002). The banking industry in Spain not only meets all these requirements, but also provides a highly distinctive setting which makes it possible for researchers to trace the adoption of HR systems back to industrial conditions. Based on survey data from 86 banking institutions in Spain, three HR systems were identified, revolving around the “organic workplace”, the “internal development of HRs” and “relational employee management”. When the last two of these were matched to defender strategies they delivered better organizational performance, thus supporting a contingency explanation of the adoption of HR systems.

2. Theoretical background

The design of HR systems in areas such as recruitment, job design, evaluation, compensation or development for the business to gain a competitive advantage has attracted increasing attention over the last few years (Lengnick-Hall, Lengnick-Hall, Andrade and Drake, 2009; Wood, 1999). Rather than using individual HR practices in isolation, researchers have come to recognize the importance of using HR systems on the grounds of both strategic and organizational considerations. Taking a resource-based
view of the firm, the adoption of individual HR practices is less likely to comply with the requirements of being scarce, valuable, imperfectly imitable and difficult to substitute than the adoption of a system of mutually coherent practices (Becker and Huselid, 1998). Taking a behavioral perspective, the implementation of HR practices as a set of mutually reinforcing policies allows the business to avoid the detrimental effects that may arise from an isolated implementation of potentially contradictory HR practices (Pfeffer, 1998).

2.1. HR systems

Many studies have proposed conceptually derived typologies or empirically based taxonomies of HR systems. Amongst the first group are the make and buy HR systems proposed by Miles and Snow (1984), the work harder, work smarter and work differently HR systems advanced by Schuler and Jackson (1987a), the input control, behavior control and output control HR systems used by Snell (1992), the commitment, productivity, compliance and collaboration HR systems conceived by Lepak and Snell (1999, 2002), and the bureaucratic, professional, market and flexible HR systems described by Verburg, Den Hartog and Koopman (2007). The second group contains the control and commitment HR systems identified by Arthur (1992, 1994), the administrative and human capital enhancing HR systems recognized by Youndt, Snell, Dean and Lepak (1996), and the traditional and innovative HR systems described by Ichnowski, Shaw and Prennushi (1997).

Another stream of studies is focused on the dimensions of HR systems, rather than on types of HR systems. For example, Huselid (1995) describes employee skills, employee motivation and organizational structures as being the dimensions underlying HR systems, whereas in a parallel study MacDuffie (1995) identifies similar dimensions such as skill/knowledge, motivation/commitment and work structures. This set of
dimensions also resembles that put forward by Appelbaum, Bailey, Berg and Kalleberg (2000) and later analyzed by Bartel (2004), consisting of skills, incentives and participation.

Despite the distinctions made between types and dimensions of HR systems, studies cannot easily be directly classified into one category or another (Ichnowski and Shaw, 1999, 2003). As discussed by MacDuffie (1995), there is no clear conceptual basis for identifying practices affecting just one dimension or type of HR systems, nor is there a straightforward rationale for considering that an HR system is empirically based or conceptually derived.

2.2. HR systems and organizational performance

The impact of HR systems on organizational performance has been extensively empirically investigated, taking both universalistic and contingency perspectives (Delery and Doty, 1996). Universalistic arguments are the simplest form of causal reasoning in management because they imply that the relationship between an independent variable and a dependent variable is universal across the population of organizations (Delery, 1998). When this causal reasoning is applied in the context of human resource management (HRM), it entails that the greater the use of specific HR practices, the better the organizational performance.

The prescriptive bias is evident, as it proposes that several HR practices make a direct impact on organizational performance, regardless of the environment or any other factors. As a consequence, these HR practices have been prescriptively labeled with various expressions such as “best practices” (Pfeffer 1994), “high-performance HR practices” (Appelbaum et al. 2000; Huselid 1995), “progressive HR practices” (Delaney and Huselid, 1996; Ichniowski, Shaw and Prennushi, 1997), “high implication
practices” (Bae and Lawler 2000; Batt 2002), “commitment systems” (Arthur 1994; Boselie, Paauwe and Jansen, 2001; Walton 1985) or “innovative HR practices” (Ichniowski and Shaw 1999; Ichniowski et al. 1997), while “high-performance HR practices” is the most widely accepted expression in HRM literature. Numerous studies have attempted to evidence a direct correlation between HR practices and organizational performance (Table 1).

However, a considerable amount of studies also posit that the relationship between HR systems and organizational performance is moderated by business contingencies. Although many contingencies could possibly determine the election of HR practices, the most frequently studied contingency variable is that of business strategy. In fact, the evolution over time of the personnel function is closely coupled with the growing interest among scholars and practitioners alike in the role of business strategy in the HRM field.

Contingency studies seek to determine those business HR practices that best match the company’s strategy (Arthur 1992, 1994; Miles and Snow, 1984; Schuler and Jackson, 1987a). The integration of strategy and HRM has been analyzed, taking into consideration various strategic levels. Studies therefore exist that analyze the link between HRM and corporate-level strategies, such as diversification strategy (Balkin and Gómez-Mejía, 1990) or international strategy (Lei, Slocum and Slater, 2000), whereas other studies investigate the coupling of HRM with business-level strategies, their being formed of strategic orientation (Miles and Snow, 1978), competitive strategy (Porter, 1980) or product life cycle (Schuler and Jackson, 1987b).
2.3. *HR system matched with business strategy*

With regard to the role of business-level strategy, many studies have analyzed the match between business strategy and HR systems (Table 2), particularly through the use of the proposals advanced by Miles and Snow (1984) and Schuler and Jackson (1987a).

The model proposed by Miles and Snow (1984) can be considered to be the first theoretical approximation in which the HR practices and systems that are best suited to the business strategy were specified and studied in depth, thus obtaining a consistent framework based on two opposed HRM systems, such as the buy-based system and the make-based system. These stylized systems were subsequently matched with the strategic orientation of the organization, ranging from the defender strategy to the prospector strategy (Miles and Snow, 1978), by claiming that defenders must adopt internally-developed HRM systems (make) if they are to perform correctly, whereas prospectors must embrace market-based HRM systems (buy) if they are to do so.

The model advanced by Schuler and Jackson (1987a) is based on the widely used Porter (1980) business strategy typology, revolving around differentiation and low cost leadership strategies, and conveniently adapted to reflect an additional strategy centered on innovation. After having carefully described various practices for each of the major personnel functions, such as planning, staffing, performance appraisal, compensation and training, Schuler and Jackson (1987a) went on to propose sets of mutually reinforcing practices which made up various HR systems and they then matched those HR systems with the business strategy. Specifically, innovative firms must adopt a work
differently approach to HRM, whereas those firms committed to low cost leadership must apply a work harder approach to HRM.

Although a considerable amount of studies have been carried out to date, most findings have found no empirical support for a contingency relationship between business strategy and HR systems (Table 2). Another important problem is that there is no consensus regarding the personnel practices that best suit each specific business strategy, since findings are contradictory amongst those studies which found some empirical support for contingency relationships. Finally, it is interesting to note that researchers have extensively embraced the model advanced by Schuler and Jackson (1987a), whereas only a handful of exceptions adopt the model advanced by Miles and Snow (1984), which is surprising as it would appear to have more empirical support than does the other.

In an attempt to further develop the Miles and Snow typology (1984) of HR systems in the light of the recent studies made so far on HR systems, we propose three underlying dimensions behind systems focused on building or acquiring HRs. The **structural** dimension is related to the way in which an organization deals with its environment and makes key decisions regarding the internal or external source of HRs, such as commitment to training, the development of internal labor markets or the adoption of a promotion from within policy (Miles and Snow, 1984). The **behavioral** dimension is concerned with the internal deployment of HRs within the organization, including key decisions affecting the day-to-day life of a typical employee, no matter how he or she attained a job position, such as job design, performance appraisal and compensation (Schuler and Jackson, 1987a). The **time** dimension deals with the approach a firm adopts towards managing relationships with employees over time,
including the firm’s willingness to provide employment security and assure a long-lasting relationship (Lepak and Snell, 1999).

The structural dimension was the focus of the Miles and Snow study (1984), whereas the behavioral dimension was more clearly presented in Schuler and Jackson’s study (1987a) and was later developed in Snell (1992) and Youndt at al. (1996). More recent studies centered on the ever-changing HR talent requirements in today’s competitive landscape (Lepak and Snell, 1999) have paved the way towards a recognition of the importance of the time dimension (Lepak and Snell, 2002; Verburg et al., 2007).

In the context of the study presented here, the Miles and Snow typology (1978) of prospector, analyzer and defender strategies proved very useful in capturing the existent business strategies in the Spanish banking industry, whereas the Miles and Snow typology (1984) of building HRs and acquiring HRs was extremely useful in mapping the HR practices undertaken by banking institutions in Spain in the last couple of years. Moreover, these HR practices revolve around the three underlying dimensions identified above, as is discussed in the following section.

3. The Spanish banking industry

The Spanish banking industry is made up of three main financial institutions (private banks, savings banks and credit unions), which compete against one another under a regulated market. Since the privatization, liberalization and deregulation that took place in the 1990s (Vives, 1990), there are no operative differences between private banks, savings banks and credit unions in Spain, since they are all cleared to become involved in any banking activity, ranging from commercial banking to investment banking, passing through institutional banking (Zúñiga, Fuente and Suárez, 2004; Zúñiga and
Vicente, 2006). In contrast to other developed countries, the separation of retail banking and wholesale banking is not mandatory in Spain, a legal environment that has produced the consolidation of a universal banking model. In Spain, it is extremely difficult to find specialized financial institutions focused solely on savings, personal loans, mortgages, credit cards, private banking, corporate loans or asset management. Spanish banking institutions are all involved in many of these banking activities as a consequence of their firm size, geographical scope and business strategy, regardless of whether they are private banks, savings banks or credit unions (Maudos, Pastor and Pérez, 2002). Generally speaking, small-sized banking institutions are mainly centered on commercial banking activities, medium-sized banking institutions are involved in both commercial and investment banking, and large-sized banking institutions are committed to institutional banking activities, in addition to retail and investment banking activities (Más, Nicolau and Ruiz, 2005). Any deviation from this general rule can be explained by geographical scope and business strategy. One important consequence of the universal banking model is the widespread design of work structures that makes it possible for employees to perform multiple task duties.

Another distinctive feature of the Spanish banking industry lies in the branch model. In sharp contrast with other European countries, the banking channels in Spain are based on small-sized branches which are dispersed throughout several locations within a concrete city (Vives, 1990). It is not unusual to find as many as 20 branches of the same bank in a medium-sized city, with an average branch size of about 5 employees. The prevailing European model consisting of a large banking office usually located at the center of each city has not been successfully applied in Spain, as many foreign banks have discovered over the last few years (Fernández de Guevara, Maudos and Pérez, 2005). The Spanish customer is accustomed to finding many competing
branches near home and to being treated personally by dedicated employees. The customer orientation of the employee has become a key success factor in the banking industry, along with the level of confidence developed over years of relations. In many instances, the employee’s technical competence is of less importance for the customers than their perception of the employee’s trustworthiness. On the contrary to the impersonal and technical-oriented approach which is typical of the large office, the branch model in Spain increases the bank’s dependence on its employees for customer retention and satisfaction.

The third distinguishing feature concerns the attractive competitive structure of the banking industry. There are sundry reasons to explain the favorable conditions Spanish banking institutions have enjoyed for many years, but the most important of them can be summarized in three main factors: entry barriers, market concentration and industry growth. Despite the relaxation of entry barriers in local banking markets as a consequence of liberalization and deregulation across Europe, entry barriers continue to be very high in the Spanish banking industry owing to the prevailing universal banking model and, more importantly, the aforementioned structure of the banking channels in Spain. The requirement that a potential competitor should enter the banking industry with an extensive branch network which is prepared to provide virtually any banking service is a major motive behind the persistent failure of foreign banks to gain a market share in Spain (Fernández de Guevara and Maudos, 2004). The market concentration is extremely high owing to the Spanish government’s lax policy on mergers and acquisitions during the 80s and 90s, which led to the creation of some national champions such as SANTANDER or BBVA amongst private banks, and LA CAIXA or CAJA MADRID amongst savings banks. Credit unions are currently undergoing the processes of mergers and acquisitions that were undertaken by their banking
counterparts in previous decades. In fact, Spain’s four largest banking institutions control about 50% of the domestic deposits and roughly 55% of the credit and loans. In Spain, the banking industry growth rate clearly outperformed that of its European counterparts from 1999 to 2008, with a yearly average growth rate in credit for the last five years of more than 10% (Fernández de Guevara et al., 2005). In order to cope with these favorable industry conditions, Spanish banking institutions made a vast investment in human capital as a consequence of an extensive recruitment policy specifically targeted at young people with postgraduate degrees in parallel with the promotion of an early retirement policy for older employees.

The pervasive universal banking model, the distinctive retail channels and the attractive competitive structure in the Spanish banking industry, along with the accompanying HR implications in this market, present an interesting opportunity to tap into the link between business strategy and HR systems in the light of the contradictory findings amassed so far under the contingency approach. To do so, the study presented herein has chosen the Miles and Snow (1978) typology of defenders, analyzers and prospectors and the Miles and Snow (1984) typology of HR systems focused on building and acquiring HRs, conveniently delineated on the basis of structural, behavioral and time dimensions.

4. Hypotheses

Drawing on the theoretical review carried out so far, we propose two sets of hypotheses which are amenable to testing in the setting of the Spanish banking industry described above. The first set comprises two macro hypotheses addressing the validity of both universalistic and contingency relationships, whereas the second set includes two groups of micro hypotheses which make it possible to specify the particular contingency relationships.
Many works have found evidence supporting the theory that the adoption of certain HR practices has a direct impact on organizational performance (Table 1). Most findings pertain to individual HR practices, whereas findings related to systems of mutually reinforcing HR practices are scarce and far from being conclusive. Among the reasons behind these contradictory findings are the predominant choice of multi-industry samples and the prevailing focus on non-labor intensive industries. The paucity of non-U.S. studies is also of concern. In order to overcome these limitations and to provide findings based on non-U.S. studies, we re-examine the performance impact of HR systems in a research setting which is more appropriate for the testing of universalistic relationships. Therefore, our first hypothesis is as follows:

*Hypothesis 1: The adoption of HR systems has a positive effect on organizational performance.*

The evidence regarding the moderating role of business strategy on the relationship between HR systems and organizational performance is even more elusive than that related to the direct impact of HR systems on organizational performance. In fact, there are more empirical studies which do not support a contingency relationship than those which do (Table 2). This confusion can be partly explained by the fact that the testing of contingency relationships is not independent of the typology used to characterize business strategy. Most studies are based on the Porter typology (1980) of business strategies, whereas evidence based on the Miles and Snow typology (1978) is scarce. As justified in the previous section, we use this latter typology to propose the second hypothesis:

*Hypothesis 2: The relationship between the adoption of HR systems and organizational performance is moderated by business strategy.*
The second set of hypotheses addresses specific HR systems and their impact on organizational performance, considering the role of business strategy. By taking the Miles and Snow typology (1978) of business strategies, we analyze the performance consequences of matching HR systems with business strategies. Two micro hypotheses are proposed, one for prospectors and one for defenders. It is worth noting that this study carries out an exploration of intra-industry contingency patterns within a single industry, thus avoiding the potential bias of confounding intra-industry contingency patterns with inter-industry contingency patterns which may be present in multi-industry studies.

4.1. Defenders

Defenders operate within a narrow competitive scope and stick to it in the long term. They stress stability and business commitment in dealing with their surrounding environment, which calls for extensive planning. Defenders focus on building human resources by adopting a make system (Miles and Snow, 1984), signifying that they invest heavily in training and career development, favor internal promotions over recruitment above entry level and apply specific policies for retaining employees. Hence, the following hypothesis is advanced:

*Hypothesis 3a: For firms pursuing a defender strategy, the adoption of make-based HR systems has a positive effect on organizational performance.*

Since defenders attempt to compete on the basis of efficiency, they design an organizational structure which formalizes procedures and routinizes tasks (Miles and Snow, 1978). Consequently, defenders embrace a mechanic system revolving around narrow job designs, process-oriented performance appraisal, fixed reward systems and seniority-based compensation. In view of the above arguments, our hypothesis is stated as follows:
Hypothesis 3b: For firms pursuing a defender strategy, the adoption of mechanic HR systems has a positive effect on organizational performance.

With regard to employee relationship management, the fact that defenders commit to the business in the long-term and compete on the basis of incremental changes explains why these organizations adopt a relational approach to dealing with employees. Defenders are willing to provide employees with employment security and to assure a long-lasting relationship. Our hypothesis is accordingly stated as follows:

Hypothesis 3c: For firms pursuing a defender strategy, the adoption of relational HR systems has a positive effect on organizational performance.

It is interesting to note that the above hypotheses are complementary inasmuch as each hypothesis pertains to different dimensions of the HRM function: dealing with the environment (structural dimension), the internal deployment of HRs within the organization (behavioral dimension) and employee relationship management (time dimension).

4.2. Prospectors

The prospectors’ definition of their competitive scope is broad and unstable, since they are actively seeking opportunities. This type of business strategy implies that the firm is willing to move into new business areas and, eventually, exit from existent products and markets, thus showing a short term commitment to its business domain. Improvisation frequently replaces extensive planning because of the need to move quickly in response to market opportunities. As a consequence, prospectors tend to buy the ever-changing need for HR talent in the external marketplace rather than investing in the time-consuming development of internal labor markets (Miles and Snow, 1984). The following hypothesis is presented:
Hypothesis 4a: For firms pursuing a prospector strategy, the adoption of buy HR systems has a positive effect on organizational performance.

Internally, prospectors demand a flexible organizational design centered on the low formalization of tasks and outcome-based control systems (Miles and Snow, 1978). On the HR side, it implies an organic system focused on broad job designs, outcome-oriented performance appraisal, variable reward systems and performance-based compensation. The following hypothesis is therefore proposed:

Hypothesis 4b: For firms pursuing a prospector strategy, the adoption of organic HR systems has a positive effect on organizational performance.

Finally, defenders adopt a market-based approach to dealing with employees as a consequence of the need to continuously restructure the business domain and hence redefine the talent pool to match the ever-changing competitive landscape. Rather than being committed to extensive training targeted towards existent employees, prospectors prefer to manage HR talent by contracting new employees and laying employees off. For the sake of flexibility and quick response, prospectors are reluctant to provide employees with employment security and thus adopt a transactional approach to employee relationship management. The last hypothesis is stated as follows:

Hypothesis 4c: For firms pursuing a prospector strategy, the adoption of transactional HR systems has a positive effect on organizational performance.

As was previously explained, the first hypothesis pertains to dealing with the environment, the second hypothesis is related to the internal deployment of HRs within the organization and the third hypothesis is concerned with employee relationship management.
5. Methods

5.1. Sample and data collection

The population of this research was made up of 202 banking institutions based in Spain, with 72 private banks, 47 savings banks and 83 credit unions. Bearing this population composition in mind, a proportional stratified sampling would have been the most appropriate choice in that it would have allowed us to ensure that each banking institution category was represented in the same proportions within the overall sample, but this was impossible since the small population size would have dramatically decreased the statistical power necessary to conduct the quantitative analyses. Instead, a decision was made to use a census procedure with the purpose of increasing the final sample size, thus making the joint analysis of all categories of Spanish banking institutions possible, which made more sense than excluding a category because it did not match the population proportions.

The data was collected via a questionnaire survey targeted at the 202 banking institutions. This was mailed to the corporate human resources manager of each banking institution, as these managers had intimate knowledge of both the firm’s HR practices and the generic business strategy. Before beginning the field work in January 2005, the questionnaire was validated by 2 banking institutions and representatives from 2 national associations of banking institutions. As a result of this procedure, the quality of the survey was improved by incorporating new items, dropping unimportant items and amalgamating similar items.

The overall response rate after three mailing rounds attained a level of over 42 percent (86 usable responses) which was higher than the expected 25 percent obtained in similar mail surveys. With this response rate, the sampling error was equal to 8.2 percent at a confidence level of 95 percent. The response rate was, on average for the
credit unions (36 usable responses, 43 percent), slightly higher than the average for the savings banks (25 usable responses, 53 percent) and slightly lower than average for the private banks (15 usable responses, 21 percent), which can be explained by the fact that private banks are under greater pressure to be the targets of mail surveys in Spain (many of which are mandatory). Although the private banks were under-represented in the final sample as compared to the population proportions (as a consequence of it not being possible to use a proportional stratified sampling procedure, as explained above), the potential bias introduced by this fact is negligible in the light of the research objectives addressed by the study presented here, since no direct comparison of different banking institutions was pursued.

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Insert Table 3 about here
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The non-response bias test undertaken in this research indicated that there was no difference between respondents and non-respondents in available archival data, such as the banking institution’s size (natural logarithm of number of employees, p= .836), financial performance (return on equity, p= .718; return on assets, p= .922) or corporate growth (yearly change in assets, p= .703).

5.2. Measurement of HR system

As a necessary task to delineate the HR practices leading to HR systems, an extensive review was made of existing empirical literature in which special attention was paid to those studies undertaken in the banking industry (Delery and Doty, 1996; Gelade and Ivery, 2003; Saá and García-Falcón, 2004; Whitener, 2001). As a result of this review several HR practices grouped into seven major areas were included in this research: internal labor markets, participation, training, broad job design, rewards, job stability and rigorous selection (Table 4).
Another key aspect of this research consisted of delineating HR systems with the aid of a qualitative or quantitative technique. In this study, we used a factor analysis of the HR practices considered, which permitted us to delineate different dimensions of the HR system. Other techniques do not allow the researcher to identify the underlying dimensions of the HR system.

5.3. Measurement of business strategy

In order to maintain consistency with the choice of the internal and market HR systems described above, the well-known Miles and Snow typology (1978) consisting of defenders, analyzers and prospectors was used in this study.

The measurement of business strategy was made possible through the widely-used paragraph method. In accordance with the technique advanced by Shortell and Zajac (1990), HR managers were asked to self-type their banking institution’s business strategy on a continuous scale ranging from 1 to 7, which subsequently allowed the researchers to derive the relevant business strategy categories of defenders, analyzers and prospectors.

5.4. Measurement of organizational performance

The measurement of firm performance in the HRM literature is problematic as the easily available financial measures do not properly reflect the level to which HR practices have contributed to overall business success (Dess and Robinson, 1984). In order to make an appropriate measurement possible in the context of HRM, Delaney and Huselid (1996) advanced a scale with which to directly assess the degree of achievement in different business-related areas for banking institutions, such as market
share, profitability, the growth rate of deposits and loans, productivity and customer satisfaction.

In order to avoid any potential common-method bias prompted by the fact that the same informant was asked to report on both the independent (HR practices and business strategy) and dependent (organizational performance) measures, a test for convergent validity was carried out by computing the correlations between our subjective performance measure and two widely-used objective performance measures derived from archival data such as return on assets (ROA) and return on equity (ROE). In both cases, the Pearson correlation coefficients exceeded 0.6 (n= 86 firms; p< 0.001), thus indicating the convergent validity of our performance measure.

5.5. Statistical techniques

As a preliminary procedure, a principal component factor analysis was used to identify the underlying dimensions among the items addressing the HR practices such that a set of variables representing the banking institution’s adoption of a HR system was produced. Those factors with eigenvalues exceeding one were extracted and subsequently interpreted with the aid of a varimax rotation.

The main statistical technique employed for the hypotheses testing were ordinary least squared linear regression (H₁ and H₂). By following the suggestions made by Venkatraman (1989) and Aiken and West (1991), a multiple linear regression with interactions was used to evaluate the existence of a moderator effect (H₃ and H₄), namely, a relationship involving HR system (HRS), organizational performance (OP) and business strategy (BS) in which the relationship between HRS and OP differed according to the BS:

\[ OP = \beta_0 + \beta_1 \text{HRS} + \beta_2 \text{BS} + \beta_3 \text{HRS} \times \text{BS} + \epsilon; \quad [1] \]
In accordance with the regression equation [1], the interaction term HR$S \times $BS implies that the regression of OP on HRS depends upon the specific value of BS, signifying that there are different regression lines for each business strategy. The moderation hypothesis will not therefore be rejected if the non-standardised $\beta_3$ coefficient is significantly different from zero (Venkatraman, 1989), and the explanatory power of the model in which the interaction term is incorporated improves significantly (Aiken and West, 1991).

6. Results

6.1. HR systems

The factor analysis resulted in a three-fold solution accounting for over 84 percent of the variance. The values of the Bartlett sphericity test ($p < .001$) and KMO (.72) indicated that the data were appropriate for factor analysis (Table 5).

\begin{table}
\centering
\begin{tabular}{|c|c|}
\hline
Factor & Description \\
\hline
Make-based factor & Practices related to internal development of employees’ capabilities, such as level of participation, training programs and internal job market. \\
Organic factor & Broad job design and outcome-based variable reward systems typical of organic organizations. \\
Relational factor & Firm’s willingness to maintain long-lasting relationships with employees by making rigorous selection decisions in exchange for job security and assurance of enduring employment relationship. \\
\hline
\end{tabular}
\end{table}

The factor loadings matrix showed that the three-factor solution was easily amenable to interpretation. The make-based factor captures various practices related to the banking institution policies promoting the internal development of employees’ capabilities, such as the level of participation, training programs and the presence of an internal job market. The organic factor represents broad job design and outcome-based variable reward systems which are typical attributes of organic organizations as opposed to mechanic organizations\(^7\). Finally, the relational factor reflects the firm’s willingness to maintain long-lasting relationships with employees by making rigorous selection decisions in exchange for job security and the assurance of an enduring employment relationship.

6.2. Business strategies
The introduction of the different business strategies into the regression equation was carried out by using dummy variables (Aiken and West, 1991). Two dummy variables were generated in order to represent the defender strategy in one extreme and the prospector strategy in another, whereas the remaining non-pure strategies were grouped into the omitted category. It should be noted that, for interpretation purposes, this model implies a comparison of a pure strategy (defender or prospector) vs. a non-pure strategy (omitted category).

When the independent variables are dummy variables, the interaction effect is measured by the difference between the slopes of the linear regression lines.

6.3. Descriptive statistics

Colinearity was not an issue as no correlation among the independent variables was above 0.4. The correlation between the prospector strategy and defender strategy was well above that value, but these dummy variables were not entered simultaneously in the regression equations (Table 6).

Insert Table 6 about here

Apart from the likely presence of scale economies as reflected in the correlation between banking institution size and organizational performance, the bivariate results based on the correlation matrix showed strong preliminary support for the universalistic approach; the adoption of HR systems was significantly correlated with organizational performance, regardless of whether the HR system was based on make-based practices, organic practices or relational practices. However, this tentative finding must be interpreted with caution since it could mask hidden contingency relationships. The effectiveness of a given HR system may be different when it is applied by a prospector as opposed to a defender banking institution. Thus, the exploration of the pair-wise
correlation matrix was encouraging since it involved the challenge of uncovering real contingency relationships when apparently universalistic relationships seemed to be at work.

6.4. Hypotheses testing

The results of the hypotheses testing showed that the adoption of HR systems makes a positive impact on banking institution performance, as the coefficient estimates for make-based practices, organic practices and relational practices proved to be positive and statistically significant at the 5 percent level (Table 7). Furthermore, the explanatory power of the Model [2] in which these three HR systems were included significantly improved over the baseline Model [1]. However, a closer inspection of these findings revealed that organic practices lost their significance when business strategy variables were included in the Model [4], whereas the performance impact of make-based practices and relational practices remained statistically significant.

Insert Table 7 about here

Until that moment, the empirical support for Hypothesis 1 which universalistically relates the adoption of high-performance HR systems to organizational performance was partial, as one out of three HR systems did not make a positive impact on organizational performance. These findings were subsequently subject to further testing in which the role of contingency relationships was incorporated with the aid of the interactions between HR systems and business strategy. Jaccard and Torrisi (2003) have demonstrated that the most appropriate approach for analyzing interactions is that proposed by Cohen and Cohen (1983), which implies a direct comparison between the principal effects model and the model with interactions. The principal effects model contained only the major variables, namely the HR system and the business strategy.
(Model [4]), whereas the model with interactions involved the addition of the interactions between the HR system and the business strategy to the principal effects model (Models [5] to [7]).

The results of this analysis supported Hypothesis 2, which states that business strategy moderates the relationship between the adoption of a high-performance HR system and organizational performance, since the explanatory power (measured by the change in the $R^2$ statistic) of Models [5] and [6], in which two out of the three pair-wise interactions were incorporated, showed a significant improvement in comparison to the principal effects model [4]. Furthermore, an inspection of the sign and significance of the coefficient estimates in Model [5] indicated that the adoption of HR systems promoting long-term employment relations makes a positive impact on organizational performance when the banking institution implements a defender strategy. The coefficient estimates in Model [6] likewise supported the hypothesis that the adoption of HR systems centered on the internal development of employees favorably affects organizational performance when the banking institution follows a defender strategy. On the contrary to these findings, the coefficient estimates in Model [7] were not statistically significant, nor was the change in $R^2$, but it is interesting to note that the sign of the coefficient estimates was as expected, i.e., that the adoption of HR systems based on organic practices fuels organizational performance when the banking institution applies a prospector strategy.

7. Discussion

7.1. Context-specific drivers of HR systems

During the last decade the Spanish banking industry has enjoyed both an attractive competitive structure and important growth rates. The need to match the increasing demand for banking services with the necessary provision of skilled personnel to the
banking industry has produced a vast amount of investment in human capital, which has taken the form of an extensive recruitment policy specifically targeted at young people with graduate degrees in parallel with the promotion of an early retirement policy for older employees. The entire banking industry’s top priority has been to develop banking professionals from scratch, thus promoting a clear orientation towards the internal development of HRs according to a make-based system, rather than buying banking professionals from a skill shortage labor market.

The widespread universal banking model has imposed the need for Spanish banking institutions to have employees at their disposal who are capable of performing multiple duties. As a consequence of this challenge, the banking institutions have set up an organic environment characterized by broad job design, flexible job positions, variable compensation systems and outcome-based rewards, thus making the universal banking model possible from an HR perspective.

The dense retail channel network and accompanying small-sized branches have placed major importance on their employees’ customer orientation. Spanish customers are accustomed to being dealt with personally by dedicated employees with whom they develop a long-lasting, personal relationship. Spanish banking institutions have consequently been compelled to promote a long-term approach to employment as a result of the evolving customer-employee connections: a given employee is not easily replaceable with any other employee. This has prompted banking institutions to adopt a relational dealing with their employees.

It is interesting to note that this study’s industry-specific findings are partially consistent with the multi-industry findings of Husselid (1995), MacDuffie (1995) and Bartel (2004), as our make-based, organic and relational HR systems revolve around employee skills, organizational structures and employee motivation, respectively. In
addition to providing further evidence for the presence of HR systems, our study contributes to extant research by detailing the formation of HR systems in the context of a specific industry and the patterns of coherence among HR practices, such as promotion from within in exchange for extensive training and employee participation (make-based HR system), flexible job positions in exchange for generous compensation packages (organic HR system), and rigorous selection in exchange for a long-term job (relational HR system).

7.2. Performance consequences of HR systems

The previously described setting represents a unique opportunity for researchers to investigate the performance impact of adopting different HR systems, solely because it favors a universalistic picture of the causal linkages and thus provides a stringent, conservative test for the contingency approach. In a distinctive context that clearly promotes the internal development of human resources, an organic workplace and a relational dealing with employees, any deviation from these HR practices could entail a detrimental effect on the banking institution’s organizational performance, even when the business strategy has recommended that it should embrace this deviation.

Our findings have shown that the relationship between HR systems and organizational performance is moderated by the banking institution’s business strategy, thus supporting the contingency approach. There is no one best way to manage human resources without considering the role of business strategy, not even in the context of a Spanish banking industry that has been under strong pressure to adopt some predictable HR practices. The effectiveness of these HR practices depends upon the type of business strategy adopted by banking institutions, and thus does not support Hypothesis 1. It is interesting to note that real contingency relationships are somewhat hidden behind apparent universalistic relationships, as suggested by the preliminary findings.
stemming both from the correlation matrix and from certain regression equations (Models [2] and [4]). Only when business strategy is brought back into the analysis, do the actual contingency patterns emerge, thus supporting Hypothesis 2.

Bearing in mind the conservative nature of our test, we found that the internal development of human resources and the relational dealing with employees contribute to organizational performance, and that defender banking institutions gain more benefit from adopting these HR systems than do prospector banking institutions, thus supporting Hypotheses 3a and 3c. Contrary to Hypothesis 3b, the adoption of an organic workplace does not prove to be more beneficial for defender banking institutions.

These contingency patterns are quite consistent with Miles and Snow (1984) and Lepak and Snell (1999). The internal development of human resources and the relational dealing with employees are more effective when the banking institution follows a defender strategy\(^4\). On the contrary, the contingency patterns suggested by Schuler and Jackson (1987a) do not obtain empirical support. The banking institutions that follow a prospector strategy do not obtain any gains from adopting an organic workplace, nor do those that choose a defender strategy find it beneficial to adopt a mechanic workplace. In this respect, it is worth noting that the lack of supporting evidence for the moderating effect of business strategy on the relationship between organic HR systems and business performance can be attributed to the way in which business strategy is operationalized in this work. The discussion regarding organic vs. mechanic workplaces is presented by Schuler and Jackson (1987a), taking a somewhat adapted version of the Porter (1980) typology of business strategy, whereas our findings are, conversely, based on the Miles and Snow (1978) typology. As is widely recognized, the overlap between both typologies is far from being perfect.
7.3. Research implications

Two interesting research implications emerge from the findings discussed above. First, the bundles of HR practices identified in this study focused on the banking industry are somewhat different from those obtained in previous studies, which possibly signifies that more attention must be paid to the dynamics of industry-specific patterns of HR systems. One important implication derived from this study is that multi-industry investigations impose a coarse-grained framework for the analysis of HR practices. The existing contradictory findings regarding the relationship between HR systems and organizational performance may be partially attributed to the fact that *intra-industry* HR practices are blurred with *inter-industry* HR practices. Rather than attempting to search for *inter-industry* HR systems, it would prove more constructive to compare *intra-industry* HR systems across different industries. More research is needed on the intricacies of HR systems in specific industries.

Second, the most widely used theoretical perspective in the justification of HR systems is that of maintaining coherence among a set of HR practices in order to influence employee behavior in a predictable manner which is consistent with the demands of business strategy (Pfeffer, 1994), in what Schuler and Jackson (1987a) called “needed role behaviors”. This is an *organizational behavior* argument and the connection with strategy is made mainly through an *implementation* perspective. However, a resource-based approach to HRM would suggest that HR systems are important if the firm is to be competitive because they easily meet the criteria of being scarce, valuable, imperfectly imitable and difficult to substitute resources (Wright et al., 1994), or at least, they meet these criteria more easily than do individual HR practices (Becker and Huselid, 1998). This is a *strategic management* argument in which a *formulation* perspective dominates. In our findings, we have discovered an HR system
which does not make an impact on organizational performance, i.e., the adoption of an organic workplace. Is this the consequence of it being an incongruent HR system (organizational behavior argument) or is it the result of it being an easily imitable HR system (strategic management argument)? According to the field work and our conversations with HR managers, we have reason to consider that easy imitability is the cause, thus explaining why the adoption of an organic HR system does not improve organizational performance in the Spanish banking industry. The distinction drawn between congruency and imitability in a HR system should be analyzed further.

7.4. Limitations and future studies

The results of this study should be interpreted with caution owing to certain limitations. The first limitation is that, given sample size restrictions and the statistical power needed to perform pair-wise interactions between business strategy and HR systems, it was impossible to consider further control variables in the regression analyses to account for organizational performance variation. Aside from banking institution’s size, or the type of banking institution, studies using a larger sample could examine the covariate effect of additional variables such as business specialization (Maudos et al., 2002) or geographical scope (Maudos, 1998).

A second limitation pertains to the reliance on subjective measures. Although it is rather difficult to capture HR practices using archival measures, the greater availability of firms’ internal information over time and firms’ increasing willingness to disclose information on corporate social responsibility issues provide researchers with an opportunity to search for proxy measures of HR practices. Rather than relying on scale-based measures of HR practices coming from questionnaire responses, as this study does, it may prove useful to rely on proxy-based measures of HR practices collected
from voluntary reports published by firms. Studies following this second measurement strategy may shed light on the robustness of our findings based on questionnaire data.

A further limitation is related to the cross-sectional design of our research and the accompanying problems in ascertaining the direction of causality and the presence of unobservable effects. It is not clear whether HR systems determine organizational performance (direct causality), as has been supposed throughout the study presented here, or whether it is simply the case that well-performing banking institutions are inclined to adopt high-performing HR systems (reverse causality), nor it is possible to ascertain whether there is a true relationship between HR systems and organizational performance (genuine causality) or whether some unobservable, firm-specific effects are spuriously behind both the adoption of HR systems and the level of organizational performance (spurious correlation). Research based on longitudinal data is needed to confirm the assumptions of direct causality and genuine causality underlying our findings.

8. Conclusion

The major objective of this study has been to analyze the performance impact of adopting different HR systems in an empirical setting in which the employees are vital if the company is to remain competitive, the firms belong to the same industry and the primary activities involved are the delivery of services to the customers. These requirements have made an important contribution to assuring the study of HR practices in a context which is free of any intervening factor that could possibly produce misleading findings, such as those derived from non-labor intensive industries or multi-industry samples. A further requirement was that the firms had to be constrained by an unusual environment which forced them to adopt certain predictable HR systems, along
with providing the researchers with an opportunity to carry out hypotheses testing within the context of a distinctive empirical setting.

The banking industry met the requirements of being a well-defined, labor-intensive, service industry, whereas the Spain-based banking institutions met the requirements of being highly distinctive in comparison to their European counterparts as a result of the widespread universal banking model, the dense retail channel network and accompanying small-sized branches, and the attractive competitive structure. Each of these distinguishing characteristics which prevail in Spain has forced its banking institutions to adopt an HR systems based on three clearly identifiable directions: (a) the internal development of HRs, (b) the organic management of HRs, and (c) the relational manner of dealing with employees. Interestingly, these three HR systems are not only consistent with the Spanish banking industry’s distinguishing features but they are also confirmed by the evidence derived from this study. In fact, the factor analysis has revealed the presence of three sets of mutually reinforcing HR practices, which have subsequently been labeled as make-based practices, organic practices and relational practices.

An analysis of the performance impact of these three HR systems has led to the discovery that empirical support for a contingency relationship exists, since defender banking institutions which adopt make-based and relational practices attain more benefit than do prospector banking institutions.

9. Acknowledgements

We would like to thank the anonymous reviewers for their insight, ideas and comments on this paper. The authors acknowledge the financial support of this research from the Spanish Commission for Science and Technology (TSI2005-08225-C07-07) and the
Castilla-La Mancha Regional Government (AEC08-066 and PII1109-0268-8514). Each author has contributed equally to the paper.

10. Notes

1 The following specific techniques have been employed: (a) Applying the paragraph method in terms similar to those used to determine the business strategy (Bird and Beechler, 1995); (b) Adding the number of high-performance HR practices implemented by a firm (Wright, Gardner and Moynihan, 2003), which can be easily used with dichotomous variables and adapted to continuous scales by considering the median as the cut-off point (Delaney and Huselid, 1996); (c) Using a factor analysis that permits the identification of different dimensions of the HR system (Boselie et al., 2003; Huselid, 1995); (d) Constructing a single index resulting from the addition of mean scale values pertaining to a group of determined practices, such as selection, training, development, retribution and design of positions. (Bae and Lawler, 2000; Datta, Guthrie and Wright, 2005); (e) Using a cluster analysis with the purpose of identifying homogeneous groups of HR practices or groups of firms adopting similar HR practices (Arthur, 1994; Becker and Gerhart, 1996).

2 Firms with scores of 1 and 2 were therefore classified as defenders, those with scores ranging from 3 to 5 were classified as analyzers and those with scores of 6 and 7 were classified as prospectors, as proposed by Shortell and Zajac (1990) and later applied by Peck (1994) and Bird and Beechler (1995).

3 Specifically, they were asked to report to what extent these organizational objectives had been achieved in the last three years.

4 Although the coefficient estimate signs are similar to those predicted, the symmetric hypotheses do not obtain empirical support, namely the negative performance consequences of adopting these two HR systems when the banking institution follows a prospector strategy (thus not supporting Hypotheses 4a, 4b and 4c).

5 In order to compensate for this problem, we made the decision to choose the most relevant variable in explaining performance in the banking industry, such as the banking institution’s size, which is a proven proxy for economies of scale and scope (Altunbas and Molyneux, 1996a, 1996b) and is closely related to organizational complexity (Zúñiga and Vicente, 2006), market power (Maudos, 1998) and benefits deriving from technical change (Altunbas, Goddard and Molyneux, 1999).
In an additional analysis (not shown) and consistent with earlier findings in the European banking industry, the institutional type of the banking firm did not contribute towards explaining organizational performance variation (Atunbas and Chakravarthy, 1998; Fernández de Guevara and Maudos, 2002).
<table>
<thead>
<tr>
<th>STUDY</th>
<th>PERFORMANCE MEASURES</th>
<th>COUNTRY</th>
<th>INDUSTRY</th>
<th>N</th>
<th>STATISTICAL TECHNIQUE</th>
<th>EMP. SUPPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>McDuffie (1995)</td>
<td>Productivity and quality</td>
<td>VARIOUS</td>
<td>Automobile</td>
<td>62</td>
<td>Regression Analysis</td>
<td>Yes</td>
</tr>
<tr>
<td>Deleire y Dutty (1996)</td>
<td>ROA and ROE</td>
<td>USA</td>
<td>Banking</td>
<td>1050</td>
<td>Correlation Analysis</td>
<td>Yes</td>
</tr>
<tr>
<td>Hudelid and Breker (1996)</td>
<td>GRATE and Tobin's Q</td>
<td>USA</td>
<td>Various</td>
<td>218</td>
<td>Regression Analysis</td>
<td>Yes</td>
</tr>
<tr>
<td>Kadileberg, Kooke, Marsden and Spach (1996)</td>
<td>Subjective measures of market performance</td>
<td>USA</td>
<td>Various</td>
<td>629</td>
<td>Cluster Analysis Regression Analysis</td>
<td>Yes</td>
</tr>
<tr>
<td>Hudelid, Jackson and Schuler (1997)</td>
<td>Productivity, GRATE and Tobin's Q</td>
<td>USA</td>
<td>Various</td>
<td>297</td>
<td>Factorial Analysis Correlation Analysis Regression Analysis</td>
<td>Yes</td>
</tr>
<tr>
<td>Schinowsky, Shaw and Pennabhi (1997)</td>
<td>Productivity and quality</td>
<td>USA</td>
<td>Steel</td>
<td>36</td>
<td>Regression Analysis</td>
<td>Yes</td>
</tr>
<tr>
<td>Lisnville and Bayad (1999)</td>
<td>Satisfaction, turnover and absenteeism, productivity, quality, market shares, number of clients and profit</td>
<td>FRANCE</td>
<td>Various</td>
<td>271</td>
<td>Factorial Analysis Correlation Analysis Regression Analysis</td>
<td>Yes</td>
</tr>
<tr>
<td>Schinowsky and Shaw (1999)</td>
<td>Productivity and quality</td>
<td>USA and JAPAN</td>
<td>Steel</td>
<td>41</td>
<td>Regression Analysis</td>
<td>Yes</td>
</tr>
<tr>
<td>Lee and Miller (1999)</td>
<td>ROA</td>
<td>KOREA</td>
<td>Various</td>
<td>129</td>
<td>Regression Analysis</td>
<td>No</td>
</tr>
<tr>
<td>Applebaum, Bailey, Berg and Kalleberg (2000)</td>
<td>Productivity, quality and costs.</td>
<td>USA</td>
<td>Various</td>
<td>40 y 4374</td>
<td>Regression Analysis</td>
<td>Yes</td>
</tr>
<tr>
<td>Ramsay, Scholarios and Harley (2000)</td>
<td>Subjective measures of productivity, financial performance, quality, absenteeism, turnover and changes in labor costs</td>
<td>UNITED KINGDOM</td>
<td>Various</td>
<td>1,400 y 15,000</td>
<td>Cluster Analysis Correlation Analysis Regression Analysis</td>
<td>Partial</td>
</tr>
<tr>
<td>Guthrie (2001)</td>
<td>Productivity</td>
<td>NEW ZEALAND</td>
<td>Various</td>
<td>164</td>
<td>Correlation Analysis Regression Analysis</td>
<td>Yes</td>
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<tr>
<td>Michie and Sherban (2001)</td>
<td>Subjective measures of financial performance and innovation</td>
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<td>Various</td>
<td>240</td>
<td>Regression Analysis</td>
<td>Yes</td>
</tr>
<tr>
<td>Batt (2002)</td>
<td>Turnover and sales growth</td>
<td>USA</td>
<td>Call Centers</td>
<td>270</td>
<td>Correlation Analysis Regression Analysis</td>
<td>Yes</td>
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<td>Batt, Colvin and Kecke (2002)</td>
<td>Turnover</td>
<td>USA</td>
<td>Telecommunications</td>
<td>302</td>
<td>Correlation Analysis Regression Analysis</td>
<td>Yes</td>
</tr>
<tr>
<td>Björkman and Xiucheng (2002)</td>
<td>Subjective measures of profitability, market share and sales</td>
<td>CHINA</td>
<td>Various</td>
<td>62</td>
<td>Correlation Analysis Regression Analysis</td>
<td>Yes</td>
</tr>
<tr>
<td>Ariflero's Berry (2003)</td>
<td>Work climate, sales, customer satisfaction and staff retention</td>
<td>UNITED KINGDOM</td>
<td>Banking</td>
<td>137</td>
<td>Correlation Analysis EEM</td>
<td>Yes</td>
</tr>
<tr>
<td>Guest, Michie, Conway and Sherban (2003)</td>
<td>Turnover, productivity and profitability, Subjective measures of productivity and financial performance</td>
<td>UNITED KINGDOM</td>
<td>Various</td>
<td>366</td>
<td>Correlation Analysis Regression Analysis</td>
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</tr>
<tr>
<td>Li (2003)</td>
<td>Turnover, profitability and productivity</td>
<td>CHINA</td>
<td>Various</td>
<td>296</td>
<td>Correlation Analysis Regression Analysis</td>
<td>Yes</td>
</tr>
<tr>
<td>Molina y Ortega (2003)</td>
<td>Turnover, employee satisfaction and customer satisfaction</td>
<td>SPAIN</td>
<td>Various</td>
<td>405</td>
<td>ANOVA</td>
<td>Yes</td>
</tr>
<tr>
<td>Wright, Gardner, Moynihan y Allen (2003)</td>
<td>Commitment, productivity, profitability, quality, operating expenses and shrinkage</td>
<td>USA and CANADA</td>
<td>Restaurants</td>
<td>45</td>
<td>Correlation Analysis Regression Analysis</td>
<td>Yes</td>
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<tr>
<td>Bartel (2004)</td>
<td>Growth rate of deposits and loans</td>
<td>USA</td>
<td>Banking</td>
<td>330</td>
<td>Correlation Analysis Regression Analysis</td>
<td>Yes</td>
</tr>
<tr>
<td>Hartog and Verbug (2004)</td>
<td>Subjective measures of business and market performance, turnover, absenteeism and predisposition towards the work</td>
<td>NETHERLANDS</td>
<td>Various</td>
<td>175</td>
<td>A. factorial Correlation Analysis Regression Analysis</td>
<td>Yes</td>
</tr>
</tbody>
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### TABLE 2.
Summary of Findings from Contingency Empirical Research

<table>
<thead>
<tr>
<th>STUDY</th>
<th>PERFORMANCE MEASURES</th>
<th>COUNTRY</th>
<th>INDUSTRY</th>
<th>N</th>
<th>STRATEGY TYPLOGY</th>
<th>STATISTICAL TECHNIQUE</th>
<th>EMP. SUPPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arthur (1994)</td>
<td>Turnover, productivity and quality</td>
<td>USA</td>
<td>Steel minimills</td>
<td>30</td>
<td>PORTER</td>
<td>Cluster Analysis</td>
<td>Yes</td>
</tr>
<tr>
<td>Huselid (1995)</td>
<td>Turnover, productivity, GRATE and Tobin's Q</td>
<td>USA</td>
<td>Various</td>
<td>968</td>
<td>PORTER</td>
<td>Correlation Analysis</td>
<td>No</td>
</tr>
<tr>
<td>Delevy y Duffy (1996)</td>
<td>ROA and ROE</td>
<td>USA</td>
<td>Banking</td>
<td>1050</td>
<td>MILES AND SNOW</td>
<td>Correlation Analysis Cluster Analysis</td>
<td>No</td>
</tr>
<tr>
<td>Bae and Lawler (2000)</td>
<td>Satisfaction, commitment and subjective measures of market performance</td>
<td>KOREA</td>
<td>Various</td>
<td>138</td>
<td>PORTER</td>
<td>Correlation Analysis Regressión Analysis</td>
<td>Yes</td>
</tr>
<tr>
<td>Guthrie, Spell and Nyamori (2002)</td>
<td>Productivity</td>
<td>NEW ZEALAND</td>
<td>Various</td>
<td>137</td>
<td>PORTER</td>
<td>Correlation Analysis Regressión Analysis</td>
<td>Yes</td>
</tr>
<tr>
<td>Chan, Shaffer and Snape (2004)</td>
<td>Subjective measures of business and market performance</td>
<td>HONG KONG</td>
<td>Various</td>
<td>82</td>
<td>PORTER</td>
<td>Correlation Analysis Regressión Analysis</td>
<td>No</td>
</tr>
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</table>
**TABLE 3**

Technical information concerning the sampling and data collection

<table>
<thead>
<tr>
<th>Population composition</th>
<th>Private banks, savings banks and credit unions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit of analysis</td>
<td>Firms (Corporate headquarters)</td>
</tr>
<tr>
<td>Geographic area</td>
<td>National scope (Firms based in Spain)</td>
</tr>
<tr>
<td>Source of information</td>
<td>Mail questionnaire (Survey)</td>
</tr>
<tr>
<td>Key informants</td>
<td>Corporate human resource managers</td>
</tr>
</tbody>
</table>

<p>| Population size                | 202                                             |
| Total sample size (Census)     | 202                                             |
| Final sample size (Usable responses) | 86                                      |
| Response rate                  | 42.5 percent                                    |
| Sampling error (Level of confidence) | 8.2 percent (95 percent)                      |
| Field work dates               | January 2005-June 2005                         |</p>
<table>
<thead>
<tr>
<th>HR Practices</th>
<th>Measurement scale</th>
<th>Number of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal labor markets</td>
<td>Delaney and Huselid (1996)</td>
<td>4</td>
</tr>
<tr>
<td>Participation</td>
<td>Delery and Doty (1996)</td>
<td>4</td>
</tr>
<tr>
<td>Training</td>
<td>Snell and Dean (1992)</td>
<td>7</td>
</tr>
<tr>
<td>Broad job design</td>
<td>Delery and Doty (1996)</td>
<td>4</td>
</tr>
<tr>
<td>Rewards</td>
<td>Saura and Gómez-Mejía (1996)</td>
<td>5</td>
</tr>
<tr>
<td>Job stability</td>
<td>Delery and Doty (1996)</td>
<td>4</td>
</tr>
<tr>
<td>Rigorous selection</td>
<td>Snell and Dean (1992)</td>
<td>5</td>
</tr>
</tbody>
</table>
**TABLE 5**

Factor analysis of HR practices

<table>
<thead>
<tr>
<th>HR Practices</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Communalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal labor markets</td>
<td>.825</td>
<td></td>
<td></td>
<td>.857</td>
</tr>
<tr>
<td>Participation</td>
<td>.713</td>
<td></td>
<td></td>
<td>.769</td>
</tr>
<tr>
<td>Training</td>
<td>.691</td>
<td></td>
<td></td>
<td>.731</td>
</tr>
<tr>
<td>Broad job design</td>
<td>.816</td>
<td></td>
<td></td>
<td>.794</td>
</tr>
<tr>
<td>Rewards</td>
<td>.785</td>
<td></td>
<td></td>
<td>.770</td>
</tr>
<tr>
<td>Job stability</td>
<td>.887</td>
<td></td>
<td></td>
<td>.824</td>
</tr>
<tr>
<td>Rigorous selection</td>
<td>.856</td>
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Percentage of variance explained = 84.2 percent  
Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy = .725  
Barlett sphericity test (chi-squared) = 158.081 (p=.000).
<table>
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<tr>
<th>Variable</th>
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<td>2. Relational Factor</td>
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<td>3. Make-based Factor</td>
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<td>4. Organic Factor</td>
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<td>1.23</td>
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<tr>
<td>5. Prospector strategy(2)</td>
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<td>.090</td>
</tr>
<tr>
<td>6. Defender strategy(2)</td>
<td>.60</td>
<td>-.106</td>
</tr>
<tr>
<td>7. Business performance</td>
<td>4.96</td>
<td>1.73</td>
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**p < 0.01 (two-tailed); * p < 0.05 (two-tailed); + p < 0.10 (two-tailed)

(1) Natural logarithm of number of employees.
(2) The Pearson correlation coefficient is shown since the Kendall and Spearman correlations offered similar results.
### TABLE 7
OLS linear regression with interactions (Dependent variable: Organizational performance)

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** Non-standardized Coefficient (Standard Deviation)

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** p < .01; * p < .05; + p < .10
References


