AN IMPLEMENTATION-BASED APPROACH TO SHRM: THE CONCEPT OF HR PRACTICE INTENSITY AND ITS RELATIONSHIP TO INDIVIDUAL PERFORMANCE

IE Business School Working Paper WP08-19 26-03-2008

Cristina Simón

HR Center, IE Business School
Maria de Molina, 12 – 4
Madrid 28006
Tel.: 91 568 97 49
Cristina.simon@ie.edu

Raquel Martín

HR Center, IE Business School
Maria de Molina, 12 – 4
Madrid 28006
Tel.: 91 568 96 56
Raquel.martin@ie.edu

Abstract

The present work intends to open new avenues for research under this implementation-based approach. In an exploratory analysis, we propose and test a type of measure, the *intensity of HR practices implementation at the individual level*, that has been barely used in the HRM-performance literature (Boselie et al, 2005; Paauwe and Boselie, 2005; Dorenbosch and Van Veldhoven, 2006). To this purpose, we work over the complete ERP-based datasets of two companies from different industries (banking and IT) which comprise the quantification of the impact of a set of HR practices on an individual employee level. In order to characterize this measure we have defined "intensity" (using the label as discussed by Boselie et al (2005)) as an operationalization of the implementation of the specific practices over employees. Our findings show that relevant variability differences exist at the implementation level across companies that might suggest to reconsider the interpretation of results when studies at higher levels of analysis are performed.

INTRODUCTION

The human resources management (HRM) research field has generated a vast and fruitful literature about a good deal of issues involving people management practices and organizational outcomes. In spite of the criticism about the validity and reliability of findings (Becker and Gerhart, 1996; Wright and Boswell, 2002; Arthur and Boyles, 2007) and the claims on its methodological limitations (Wall and Wood, 2005), the last 15 years of research have shown a covariation between different HR practices or systems of practices and a myriad of performance indicators at the corporate level. As a next stage in the evolution of the discipline, there is a claim for new ways to approach this relation and try to look into the 'black box' between HRM and firm performance (Guest, 2001; Becker and Huselid, 2006; Wright and Kehoe, 2007). Since uncovering the internal operations of HRM is likely to require a certain degree of penetration into the daily dynamics of organizational life, the debate has extended to question whether it is possible to set researchers and practitioners on the same page and find forms of win-win collaboration between both communities (Saari, 2007; Rynes, 2007).

A common ground of interest seem to be the strategic human resources management (SHRM) discipline, classically defined as *"the pattern of planned human resource deployments and activities intended to enable an organization to achieve its goals"* (Wright and Maclahan, 1992). In a recent AMJ special issue addressing the topic of the research-practice gap in HRM, Rynes et al (2007) remark the relationship between HR practices and corporate performance as a common thread of interest for both communities. On a methodological note in the same issue, Cascio (2007) states that, in order to make academic research closer to the practitioners' reality, findings should focus on implementation aspects that would eventually help them to improve their decision-making processes. This shift towards implementation would bring about an overhaul of the research designs that currently dominate the literature in the field:

> *"Doing so forces researchers to confront difficult issues of research design when implementation of the findings is part of the research process, and it forces them to seek the input of practitioners or managers with first-hand experience and in-depth knowledge of the organization." (p.1012)*

An implementation-based approach to SHRM would therefore call for alternative variables and data collection techniques, searching for intermediate outcomes, and eventually leading to recommendations that might improve practitioners' decision making (Hakel et al, 1987; Saari, 2007). This alternative paradigm has been recently discussed by Becker and Huselid (2006). In the context of their discussion these authors highlight *"the need to search for measures of intermediate outcomes and the importance of estimating HR's impact in managerially significant terms"* (p.899).

The implementation-based research proposal in HRM starts to emerge in a moment when the HR function is also experiencing changes on the organizational side. On the one hand, the fast growing adoption of ERPs by HR areas is giving birth to a new set of options of data collection and analysis (for a complete analysis, see Human Resource Management special issue on e-HR, 2004). This source of information becomes especially relevant for measuring well-established policies which conform a strong element of the employees' psychological contract (Rousseau, 2004), such as wage issues, variable pay and benefits, training and promotion, high-potential identification, etc. Furthermore, the lack of company-based expertise in rigorous data modelling and

analysis –which becomes a key question for the purposes of exploiting this information- would make practitioners prone to a collaboration with academics, thus opening up a span of opportunities for partnership along the lines of the evidence-based movement (Pfeffer and Sutton, 2006; Rousseau, 2007).

In the light of these considerations, the present work intends to open new avenues for research under this implementation-based approach. In an exploratory analysis, we propose and test a type of measure, the *intensity of HR practices implementation at the individual level*, that has been barely used in the HRM-performance literature (Boselie et al, 2005; Paauwe and Boselie, 2005; Dorenbosch and Van Veldhoven, 2006). To this purpose, we work over the complete ERP-based datasets of two companies from different industries (banking and IT) which comprise the quantification of the impact of a set of HR practices on an individual employee level. In order to characterize this measure we have defined "intensity" (using the label as discussed by Boselie et al (2005)) as an operationalization of the implementation of the specific practices over employees. Using this type of variables we have tested some of the basic premises of the SHRM discipline (Gerhart, 2005; Becker and Huselid, 2006). Our findings show that relevant variability differences exist at the implementation level across companies that might suggest to reconsider the interpretation of results when studies at higher levels of analysis are performed.

THEORETICAL BACKGROUND

A look into the practice level of the HR architecture

Becker and Gerhart (1996) established a distinction among three levels of analysis in HR, namely guiding principles, policies and practices, placing an emphasis on the capacity of generalization of their respective effects. Wright and Boswell (2002) further defined the practice level as "actual, functioning observable activities as experienced by employees". Wright and Nishii (2004), focusing on the HR practice level of analysis, depict a theoretical model and distinguish between intended, actual and perceived practices. This "actual" dimension is introduced in order to recognize that "not all intended HR practices are actually implemented, and those that are may often be implemented in ways that differ from the initial intention" (p.11). By contrast with the expression of intentions, which are generally stated by HR decision makers, many other actors may impact the actual level (supervisors, HR business partners, etc).

The present work is in line with the above described HR practice level of analysis, and it focuses on the *actual* level by contrast with the *intended* one. Moreover, it proposes an implementation-based approach to its operationalization and measurement.

Implementation of practices and the measurement of HR intensity

In their review of the HRM literature, Boselie et al (2005) state that an HRM practice can be measured in three ways: presence (as "yes/no"), coverage (as proportion of employees receiving the practice) and intensity (as the degree to which an individual employee receives the practice). Data for all three types of variables are supposed to be collected through surveys, where the type of respondents (experts, key informants, etc) becomes a key aspect for the purposes of reliability and validity of the measures. Equally, Gerhart et al (2005) and Wright and Nishii (2004) assume surveys as the only option, and focus the concern on whether respondents should be line managers and

employees rather than HR managers in order to guarantee that the measure is on "actual" rather than "intended" measures. In a further critical analysis of progress achieved in the analysis of the relation between HR and business performance, Gerhart (2005) suggest that the established paradigm, based on measuring the proportions of employees covered by practices and relying on informant's estimations, should be reconsidered. Along this line, Dorenbosch and Van Veldhoven (2006) open up the scope of measurement and present suggest indicators that may reduce the subjectivity of the respondents, by asking for specific rates such as the number of employees promoted or the annual training budget per position.

In the present work we introduce a complementary type of measurement for the HR practice level, which focuses on the "actual" implementation of the policy as it is *received* -rather than *perceived*-by individual employees (Wright and Nishii, 2004). The fast accessibility of technology and its increasingly growing adoption on the part of HR areas is giving rise to the existence of company-based individual-level datasets with measures of the implementation of HR practices (Hempel, 2004). Such datasets have already become longitudinal for many companies, and many of them may be structured and robust enough to allow for sound statistical analyses.

Our claim is that the HR practice level of abstraction can be operationalized in terms of **HR intensity** over *every* individual employee – that is, the quantification of such practice over individual employees or groups of employees. The intensity variables will adopt different types of values according to the practice being implemented. Thus, the intensity of the practice 'annual wage' will be operationalized into % of annual salary increase; the intensity of the training practice will be the number of courses received – which can be segmented on the basis of content type, methodology used, etc. Along these lines, we think of the HR practice as a sort of 'treatment', which implies the administration of different intensity levels to individuals according to their specific conditions.

We find both conceptual and methodological arguments in favor of this measure of intensity. First, presence and coverage can be valid –or even the only possible- measures for some types of practices (such as the newly-adopted ones for which no record has yet been made). However, they may not be informative if used for practices that conform the core elements of HRM (such as wage, promotion, training, employment security, etc). The lack of availability of this type of intensity measure can be a reason for the proportional scarcity of HRM studies on such core practices, as outlined by Boselie et al (2005).

As far as methodological issues are concerned, support to this alternative intensity measure also comes from the debate about variance and measurement error initiated in the early 2000. Gerhart et al (2000), Wright and Boswell (2002) and Wright and Nishii (2004) claim that practically all studies in SHRM have worked over variance at the cross-company level, ignoring or assuming constancy at the others. An implementation-based approach would look into a different level of variance, that due to individuals, instead of that found at the cross-company level. Following this argument, in order to be able to assume uniformity at the individual-level when using higher variables, we should be able to find similar types of variance in the individual performance explained by the degrees of intensity in the same HR practices. We test this assumption in the

present work, by comparing the implementation over individual employees of the same set of policies in two different companies.

Selection of HR practices within the AMO framework

Research reviews, be they on general HRM or on SHRM (refs), mostly cite the AMO model (Appelbaum et al, 2000; Boxall and Purcell, 2003) as one of the most widely used theoretical frameworks when selecting a set of HR practices for the purposes of research design. In particular, the "M" subsystem comprises those practices that seek to influence employees' extrinsic motivation (Boxall and Purcell, 2003; Gerhart, 2005). Relying on the AMO framework, we have selected a number of Motivation practices for the purposes of our study. The intensity of implementation of the practices – performance appraisal, base wage and promotion- is measured in the same way in both companies, thus providing a solid basis for comparative analyses.

HR practices, bundles or configurations?

Several studies have shown that the systemic consideration of practices suggests a greater impact over different performance indicators than the analysis of individual, isolated HR practices. In his pioneering work, MacDuffie (1995) showed that firm performance at the establishment level was better explained by the impact of an internally set of consistent practices rather than by individual ones. Working with systems of employment practices, Delery and Doty (1996) presented results in support of three relevant theoretical models in SHRM: universalistic, contingent and configurational, this one proposing internally consistent patterns of practices that are related with performance. Guest et al (2003) provide a critical analysis of different ways to explore the existence of 'bundles' of practices, and provide evidence of the superiority of methods such as factor or cluster analysis over regression to identify consistent sets of HR practices.

Dimensions of individual performance

The definition of performance underlying the measures used in the vast majority of studies has also been a matter of debate over the last years, especially in the I/O field (Bennet et al, 2006; de Nisi, 2000). The characterization of performance as a single-criterion construct, mostly focusing on an indicator of business results, has long been criticized as a main stumbling block to theoretical progress (Austin and Crespin, 2006). Under this assumption, researchers are bound to the search for the best possible measure of the criterion, the so-called 'general-factor' or GPM (general performance measure). Although the 'general-factor' argument has received considerable empirical support (see Viswesvaran et al, 2005 for a review), it has been growingly challenged by evidence pointing at the emergence of a set of multiple components that explain the latent structure of performance (Campbell et al., 1993). This approach goes beyond the search for 'objective' measures as criterion and focuses on the identification of further latent variables. Research along these lines has given rise to several taxonomies and holistic models of performance (Scott and Einstein, 2001; Wong and Snell, 2003; Paul and Anantharaman, 2003).

Regardless its role in the equation, results achievement is obviously a must in the performance debate (Huselid et al., 2005; Bennett et al., 2006). However, there is no consensus in the literature about whether results should considered as merely one of the multiple dimensions of performance (Scott and Einstein, 2001) or as a different variable

reflecting the evaluation of the results of performance, such as productivity or efficiency (Campbell, 1993). In any case, wider strategic approaches to business, and particularly work derived from the resource-based perspective (Barney, 1995, 2001) have long claimed that the contribution of individuals to the organization goes far beyond results achievement, especially when searching for long –term added value or sustainable competitive advantage. This being the case, the concept of performance should integrate both the 'hard' (results) and the 'soft' (competency-based) types of measures in order to gain comprehensiveness. Within this framework, soft measures collected through performance appraisals can enter the HRM-performance equation either as an IV –as a measure of the HR practice- or as a DV –a complementary performance outcome.

RESEARCH FRAMEWORK AND HYPOTHESIS

The aim of this work is to perform a comparative analysis of the relationship between the intensity of implementation of a set of HR practices and the individual performance of employees in two different companies. The sets of HR practices belong to the motivation subsystem as considered by the AMO model. We seek for variability differences at the implementation level that might be relevant and worth to take into account when using these types of variables in research design at higher levels of analysis (Gerhart, 2005).

On the basis of the preceding arguments we explore the following hypotheses:

> *H1: There will be an association between greater intensity degrees of individual HR practices (promotion, performance appraisal and differential base wage) and individual performance, which will be equivalent in both companies.*
>
> *H2: A set of consistent patterns based on the intensity degrees of HR motivational practices will be observed, which will be equivalent in both companies.*
>
> *H3: There will be an association between the observed patterns on HR motivational practices and individual performance.*

METHOD

Sample

We worked with the HR enterprise resource planning (ERP) datasets from two Spanish companies: a 10,000 employees retail bank (BANK) and a 6,000 employees IT consulting (IT CONSULT), both of them nationwide. These datasets comprise quantitative data on the intensity of implementation of a large set of HR policies collected longitudinally. From the original databases as provided by companies we made a number of choices for the purposes of maximizing the comparability of data:

Company tenure: employees with tenure equal or larger than 5 years were selected, thus eliminating the disparities of perceptions of HR practices that may come from newcomers and their biased understanding of the company due to lack of experience (Rousseau, 1995)

Selection of job groups: in both cases, only the job groups formally considered as front-office by HR managers were selected. Thus, BANK includes the branch network and ITCONSULT comprises those groups which conform the pool of consultants and managers that perform the projects.

Selection of HR practices: we removed from the database those motivation practices for which (i) we did not have the same types of measures, and (ii) the understanding of the practice implementation was not equally understood by the HR managers of both companies. This was the case of the administration of bonuses and some formal recognition components.

As a result of this process, the final working samples are composed of 4,755 employees in the case of BANK and 1,102 employees in the case of ITCONSULT. The distribution of cases across job groups is shown in Figure 1.

MEASURES

A description of the variables used and their corresponding measures is shown in Table 2.

Variable Name	*Description*	*Measure*
Dependent Variable		
Individual Performance	Degree of fulfillment of objectives	Standardized for the job group
Independent Variables		
Base Salary	Annual Fixed Compensation	Standardized for the job group
Performance Appraisal	Management by objectives (MBO) system for which employees works on a daily basis against a set of objectives	Standardized for the job group. BANK – continuous ITCONSULT - categorical
Promotion	Change the position within company to a position more high in the hierarchical company	1 - the employee has been promoted anytime over the whole (3-year) period; 0 – not promoted
Control Variables		
Gender	Employee`s gender	1 – male; 0 - female
Tenure	Experience within company	Years that the employee takes working in the company having as reference the year 2005

Table 2. Variables used in the analyses

All data are averaged over a three-year period, with the aim of reducing problems of simultaneity of one period explanatory variable measures. For the purposes of the present exploratory work, we seek for degrees of association between HR practices and individual performance, and therefore no casual relation is pretended to be inferred from the analyses (Guest et al, 2003).

The DV and the IVs base salary and performance appraisal have been transformed into z-scores per position, in order to control for job groups and improve the comparability of the measures. Standardization also serves for the purpose of removing the effect of market value and therefore allowing for comparison between different industries. For the standardization we have followed the job categories presented in Table 1.

DATA ANALYSIS

The first hypothesis was tested using a multiple regression analysis. The three HR practices were entered simultaneously into a regression equation using individual performance for the two company samples.

As regards hypothesis 2 and 3, a two-stage clustering procedure was firstly used to identify configurations. We first used hierarchical cluster analysis to identify seeds for second-stage clustering. The first-stage clustering procedure was conducted using Ward's method to minimize within-cluster differences and to avoid problems with chaining of observations found in linkage methods (Hair et al. 1995; Tabachnick and Fidell, 2001). Squared Euclidean distances (i.e., the distance between cases in the multidimensional space described by the clustering variables) were used as the similarity measure. A nonhierarchical, k-means cluster analysis was run as the second stage of the clustering procedure to generate solutions for two to five clusters. The clustering variables for this stage were only the HR intensity variables, and the seeds for them were the means on these dimensions from the first-stage clusters

A one-way ANOVA was further performed to determine the relationships between cluster groups (patterns of intensity practices) observed for each company and individual performance. The significance of these relationships was further investigated using Tukey range test.

Finally, we evaluated the relationships between the cluster groups and demographic variables, and individual performance using one-way factor ANOVA. This method was considered convenient because of its capability to highlight interactions among the variables used and to identify the important variables that affect the DV, in our case individual performance (Tabachnick and Fidell, 2007).

RESULTS

Association between HR practices and individual performance

The descriptive statistics and correlations between variables are reported in Tables 2 and 3.

TABLE 2
Descriptive Statistics and Correlations[a] (BANK)

Variable	Mean	S.D.	1	2	3	4	5
1. Individual Performance	0,000	1,000					
2. Promotion[b]	0,070	0,260	-,041**				
3. Performance appraisal	0,001	0,855	,143**	-,025			
4. Base Salary	0,000	1,000	,360**	-,074**	,112**		
5. Gender[c]	0,730	0,443	,031*	-,064**	-,053**	,319**	
6. Tenure	23,330	9,767	-,048**	-,0118**	-,033*	,355**	,401**

[a] Individuals (N=4.755). [b]Promotion as 1, no promotion, 0. [c]Coded as male,1; female, 0.
* p<.05 ** p<.01 Two-tailed test

TABLE 3
Descriptive Statistics and Correlations[a] (IT CONSULT)

Variable	Mean	S.D.	1	2	3	4	5
1. Individual Performance	0,000	1,000					
2. Promotion[b]	0,210	0,405	,145**				
3. Performance appraisal	0,004	0,993	,416**	,164**			
4. Base Salary	0,000	1,000	-,095**	-,245**	-,077*		
5. Gender[c]	0,780	0,415	,075*	-,036	-,042	,101**	
6. Tenure	14,440	7,410	,180**	-,160**	-,047	,237**	,050

[a] Individuals (n=1.102). [b]Promotion as 1, no promotion, 0. [c]Coded as male,1; female, 0.
* p<.05 ** p<.01 Two-tailed test

Results show moderate to low correlations among the three IVs in both cases, which indicates a certain degree of dependency among HR practices. With the exception of the correlation among promotion and performance appraisal in BANK, all the rest of the coefficients were significant, though effect sizes vary considerably. As for the particular relation of the isolated HR practices with individual performance, promotion in the case of BANK and base salary for ITCONSULT show a negative sign, with very low coefficients ($r < 0,1$).

Table 3 shows the results of the regression analyses performed for both samples. R^2 indicates that a 14% and a 18% of the variability in individual performance is predicted by the set of motivational practices in BANK and ITCONSULT respectively. The impact of the different practices on each company is, however, quite different. In the case of BANK, the practice of promotion did not contribute significantly to regression, which is consistent with the low bivariate correlation with the DV. The same type of effect is seen in ITCONSULT but in this case it is base salary the practice that is not significant. The Variance Inflation Factor (VIF, in all cases around 1) showed there is no collinearity among variables. These results do not provide support for Hypothesis 1.

Patterns of intensity of HR practices

In order to search for patterns of intensity of HR practice patterns a cluster analysis was performed. Sensitivity analysis of the solutions indicates that four configurations in the case of BANK and three in the case of ITCONSULT provide the strongest overall solutions.

[Insert Table 6 about here]

Neither of the cluster groups shows a center defined in promotion, because the percentage of promoted employees is not very high. Table 7 reflects the distribution of the promotion values across clusters. In the BANK case (7,3% of the total sample), the largest proportion of promotions is located in cluster 2. As for ITCONSULT, the percentage of promotions is 20,7%, with the vast majority located in cluster 2.

TABLE 7
Distribution of promotions across cluster groups

BANK

		PROMOTION	
		NO	YES
CLUSTER	1	94,20%	5,80%
	2	89,20%	10,80%
	3	93,30%	6,70%
	4	92,30%	7,70%
		92,70%	7,30%

IT CONSULT

		PROMOTION	
		NO	YES
CLUSTER	1	86,30%	13,70%
	2	68,60%	31,40%
	3	92,70%	7,30%
		79,30%	20,70%

The intensity patterns observed in the cluster groups are very different for each of the company samples. In the BANK case, cluster 4 emphasizes base salary (z-score = 2,47) together with the highest scores in performance appraisal. This cluster collects a very small group of employees (6,56%). Base salary is also comparatively emphasized in cluster 1, in this case with average appraisal scores. Half of the sample is included in cluster 3, which seems to be defined around high performance appraisal scores. Finally, cluster 2 includes the largest number of promotions, with low intensity levels in the rest of the practices.

In the case of ITCONSULT, half of the cases are concentrated in cluster 2, which also contains the largest number of promotions. Consequently, this cluster emphasizes promotion and also base salary, but under moderate ranges (center - z-score = 0,62). Cluster 3 emphasizes performance appraisal, while cluster 1 seems to be characterized by cases with lower intensity in both practices.

A comparative analysis of the clusters observed in both BANK and ITCONSULT show that, even when distinct patterns of HR practice intensity are observed within each of the company samples, configurations largely differ among them, with different combinations of intensity degrees. Therefore, our results do not provide support fo hypothesis 2 as far as the equivalence of patterns is concerned.

Effect of HR intensity patterns over individual performance
Results of the cluster analysis strongly suggest that the patterns of intensity of implementation of HR practices are highly context-dependent. In order to analyze to what extent the observed patterns of practices were able to differentially affect individual performance, a one-way ANOVA was run for each sample using clusters as factors and individual performance as the DV. Results are shown in Table 8. In both cases, the hypothesis of equality of means is rejected (p>001 in both cases). Figures 1 and 2 graph the average of individual performance z-scores for each of the cluster groups.

FIGURE 1
Association between cluster groups and individual performance (BANK)

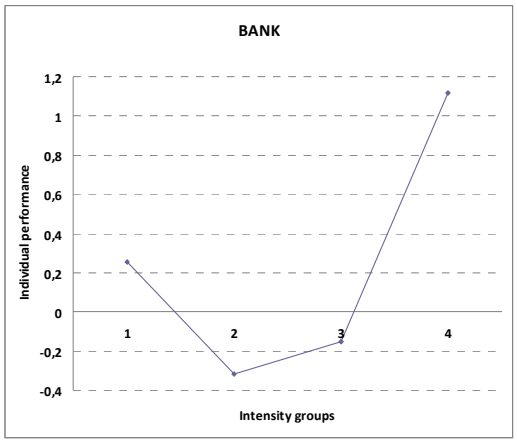
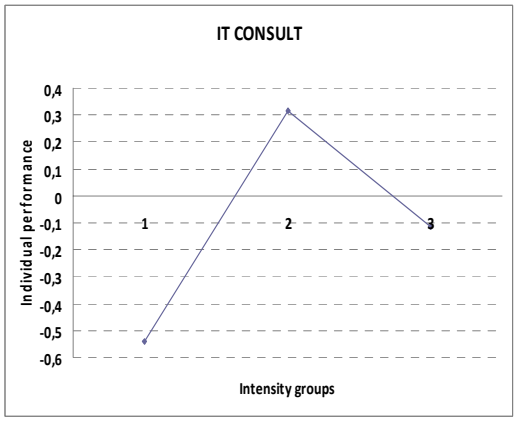


FIGURE 2
Association between cluster groups and individual performance (ITCONSULT)



Some relevant results emerge when both types of relationships are visually examined taking into account the characteristics of the intensity patterns just outlined. The differences between companies in the implementation of their practices become more salient when we examine them in the light of individual performance levels. In the BANK case the "best performers" is cluster 4 with only 6,56% of employees, and the rest of the groups do not differ greatly in their performance (z-scores range between -0,3 and 0,3, vs. 1,2 in cluster 4). Conversely, ITCONSULT presents a lower range of individual performance scores (zcores from 0,3 to 0,55), with half of employees under the "best performance" group (cluster 2).

Also consistent with previous analyses, the pattern of HR practices intensity that best performers receive is also quite different for both companies: BANK focuses on differentially higher base salary while ITCONSULT offers a combination of promotion and moderately higher equity scores. The relevance of performance appraisal is also very different in both cluster groups, since it is emphasized in BANK but keeps the lowest scores in ITCONSULT.

To further test hypothesis 3 we run factorial ANOVA (cluster x gender x tenure), 4 x 2 x 4 (BANK) and 3 x 2 x 4 (ITCONSULT) on the mean individual productivity scores. Table 8 shows the corrected model which includes all the effects of the model taken together. The critical level associated to F (p=0.000) indicates that the model explains a significant part of the variation observed in individual performance. The values of R^2 indicate that the effects included in the model are explaining 18,6 % of the variance of dependent variable in BANK and 20,3 % in the IT CONSULT.

TABLE 8
ANOVA

BANK

ANOVA. Dependent variable: Individual Performance			
	df	F	Sig.
Between Groups	3	220,212	0
Within Groups	4751		
Total	4754		

IT CONSULT

ANOVA. Dependent variable: Individual Perfor			
	df	F	Sig.
Betwe	2	75,956	0
Withir	1099		
Total	1101		

Individual performance means for the cluster groups were significantly different (BANK: F=60,528, p<000; ITCONSULT: F=17,397, p<0,000). Significant main effects were also found for the control variables, gender and tenure. Two-way interactions were only significant for gender and tenure, and there was no significant three-way interaction among cluster groups, gender and tenure (Table 8).
Results of the factorial ANOVA show that the observed patterns of intensity have an effect over individual performance, explaining an important portion of its variability. Therefore, our data provide support to Hypothesis 3. However, it should be noted that the configuration of the clusters (based on the implementation intensities of the practices) is different in both companies.

DISCUSSION

Relying on the claim made by Zajac (2000) that attention should be given to the *"uniqueness of the strategic fit not only for particular organizations but also for particular moments in time"*, Becker and Huselid (2006) in their prospective analysis of future directions in SHRM defend the need to approach research from an implementation point of view. The objective of the present work was to throw some light into this implementation-based research approach to the relation between HR practices and performance. To that purpose we have used a measure of actual implementation of a set of HR practices, reflecting the relative weight of every practice that each individual employee receive. Using this measure in the context of two different companies, we have analyzed the degrees of association of individual practices, and we have also searched for patterns of practices and their joint effect over employee performance.

Using this intensity variable as a measure of the "intermediate outcome" recently claimed by several authors (Becker and Huselid, 2006; Gerhart, 2005; Cascio, 2007) we have found significant between-companies differences at the implementation level in terms of the relation between isolated practices and employee performance. Equally, results show that organizational contexts yield quite distinct patterns of implementation of analog policies for different groups of employees. In the light of our data, companies

seem to differ greatly in the implementation of the same practice, thus creating a source of between-company variance that has been frequently ignored in cross-company studies. We suggest that this type of studies can contribute to analyze variability contained in the relation among HR practices and performance in its various multilevel components, thus helping to interpret what is the portion of "true variance" explained in cross-company studies.

The key findings of our empirical analysis reveal that an implementation-based view of the HRM-performance link calls for *contingency* -from a theoretical point of view- and *case study research* and *quasi-experimentation* -from a methodological perspective-. Both the distribution of our dependent variable, individual performance, and the relationships it keeps with the motivational practices under study suggest that, once a certain level of "base-touching" with employees is reached, implementation becomes very context-dependent. This interpretation is convergent with the assumption of equifinality advocated by configurational perspectives (Doty and Glick, 1994; Delery and Doty, 1996).

Nevertheless, not everything in our findings is so differential between companies. Regardless the industry or organizational conditions, analyses at the implementation level have shown in both cases:

a) The emergence of clear cut patterns of practices based on combinations of intensity degrees.

b) The existence of significant differences in the relation of these patterns with individual performance scores.

c) A two-way interaction effect of the two control variables (gender and tenure) influencing individual performance, which is independent of the HR practice patterns.

The definition of intensity variables has also proved to be useful in measuring those "traditional" HR practices, for which commonly used operationalizations such as existence or coverage are not informative –since they are core practices received by all employees, as in the case of base salary.

This paper intends to open possible avenues of action for bridging the gap between academics and practitioners –an issue very present in the current SHRM debate as well (Rynes et al, 2007; Cascio, 2007; Cohen, 2007). Being a case study as it is, the particular results of the reported research are not generalizable in the form of technical recommendations on HR policies. However, some useful advice can be provided to practitioners regarding the nature and operationalization of the variables they should collect if they are willing to adopt an research-based-practice approach (Saari, 2007) for fine-tuning their daily activities and decision-making processes. Intensity measures can also help to estimate HR's impact in managerially significant terms, for analyses such as the ones presented in this study are a source of "food for thought" for practitioners regarding the distance they may find between their intentions and the reality of the implementation of the practices.

We also assert that there is a lot to say on the part of the academic world as far as the definition of variables, datasets and data collection methods is concerned. The collection and further analysis of well-designed data structures under statistical, scientific criteria could provide both academics and practitioners with invaluable insights into the mechanisms underlying the relationship between HR strategies, policies and practices and the many corporate performance indicators which are critical for the competitiveness of companies in the current business world.

LIMITATIONS AND FURTHER RESEARCH

This work is highly exploratory by nature. We have worked with a type of variable which has barely been used in the literature, and a lot of further research will be required before consolidated findings are reached with the corresponding theoretical support.

The methodology used, a comparative analysis of two quantitative cases, presents a number of limitations, one of which obviously has to do with the generalizability of results. However, we believe that results obtained from this simple, two-case analysis are stimulating enough for encouraging the growth of research on the HRM-performance link along these lines. A critical mass of industry-based case studies over time would provide researchers with some ability to generalize results and have a solid glance into what currently is the "black box" of lower-level application of HR practices. Since one of our conclusions is that the implementation level is highly context-dependent, further research would have to look into covariates and mediating variables that influence such dependency, trying to find out if there are any commonalities among such covariates. As we are using a case study methodology, a qualitative complementary analysis would undoubtedly throw some light over this unveiled set of organizational associations. Intensity variables operating at the implementation level can be combined with perceptual measures such as the ones proposed by Fuller et al (2003), Gerhart (2005) and Dorenbosch and van Veldhoven (2006) in order to analyze interactions among the actual impact of practices and perceived effects by employees. Equally, they can be used in the context of multilevel analyses to study further effects over unit or establishment-level performance indicators in direct relation with individual employees' contributions to them. Following the theoretical models considering levels of abstraction stated by Gerhart (1996), Wright and Boswell (2001) and Wright and Nishii (2004), we also need to expand from the implementation level and analyse the relationship among intensity measures and other distal variables considered in the HMR architecture, such as principles and their strategic intent correlates.

In spite of the usefulness of the HR practice intensity measure, we recognize the difficulties involved in achieving partnerships with practitioners in order to obtain this type of datasets. There is room for optimism, however, given the dramatic growth of HR-ERPs in organizations and the promising avenues that are currently being opened by the evidence-based movement and the academics debates currently in favor of establishing research partnerships with practitioners (refs).

REFERENCES

Appelbaum, E., Bailey, T., Berg, P. and Kalleberg, A. *Manufacturing advantage: why high-performance systems pay off,* Ithaca, NY: ILR Press.

Arthur, J.B. and Boyles, T. (2007) Validating the human resource system structure: A levels-based strategic HRM approach. *Human Resource Management Review* **17**, 77-92.

Austin, J.T. and Crespin, T.R. (2006) Problems of criteria in Industrial and Organizational Psychology: Progress, Problems and Prospects. In: Bennet, W., Lance, C.E. and Woehr, D.J., (Eds.) *Performance Measurement: Current Perspectives and Future Practices*, pp. 9-48. Mahwah: LEA.]

Barney, J.B. (1995) Looking inside for competitive advantage. *Academy of Management Executive* **9**, 49-61.

Barney, J.B. (2001) Is the resource-based "view" a useful perspective for strategic management research? Yes. *Academy of Management Review* **26**, 41-55.

Becker, B. and Gerhart, B. (1996) The impact of human resource management on organizational performance: progress and prospects . *Academy of Management Journal* **39**, 779-801.

Becker, B.E. and Huselid, M.A. (2006) Strategic Human Resources Management: Where do we go from here? *Journal of Management* **32**, 898-

Bennett, W., Lance, C.E. and Woehr, D.J. (2006) *Performance MEasurement: Current perspectives and future challenges*, Mahwah: LEA.

Boselie, P., Dietz, G. and Boon, C. (2005) Commonalities and contradictions in HRM and performance research. *Human Resource Management Journal* **15**, 67-94.

Boxall, P. and Purcell, J. (2003) *Strategy and Human Resource Management,* London: Palgrave Macmillan.

Campbell, J.P., McCloy, R.A., Oppler, S.H. and Sager, C.E. (1993) A Theory of Performance. In: Schmitt, N. and Borman, W.C.a.A., (Eds.) *Personnel selection in organizations* , pp. 35-70. San Francisco: Jossey Bass]

Cohen, D.J. (2007) The very separate worlds of academic and practitioner publications in human resource management: reasons for the divide and concrete solutions for bridging the gap. *Academy of Management Journal* **50**, 1013-19.

Delery, J.E. and Doty, D.H. (1996) Modes of theorizing in Strategic Human Resources Management: Tests of universalistic, contingent and configurational performance predictions. *Academy of Management Journal* **39**, 802-835.

DeNisi, A. (2000) Performance appraisal and performance management: a multilevel analysis. In: Klein, K.J. and Kozlowski, S.W.J., (Eds.) *Multilevel theory: Research and Methods in Organizations*, pp. 121-156. San Francisco: Jossey

Bass]

Dorenbosch, L. and van Veldhoven, M. (2006) Rethinking HRM practices measuremente: A classification of choices for researchers. *Paper presented at the EIASM 21st Workshop Strategic HRM*

Doty, D.H. and Glick, W.H. (1994) Typologies as a unique form of theory building: toward improved understanding and modeling. *Academy of Management Review* **19**, 230-51.

Gerhart, B. (2005) Human resources and business performance: findings, unanswered questions and an alternative approach. *Management Revue* **16**, 174-85.

Guest, D. (2001) Human resource management: when research confronts theory. *Int. J. of Human Resource Management* **12**, 1092-1106.(Abstract)

Guest, D., Conway, N. and Dewe, P. (2004) Using sequential tree analysis to search for "bundles" of HR practices. *Human Resource Management Journal* **14**, 79-97.

Hakel, M.D., Sorcher, M., Beer, M. and Moses, J.L. (1982) *Making it happen - Designing research with implementation in mind*, Beverly Hills, CA: Sage.

Hempel, P.S. (2004) Preparing the HR profession for technology and information work. *Human Resource Management* **43**, 163-77.

Huselid, M., Beatty, R.W. and Becker, B.E. (2005) 'A players' or 'A positions'? The strategic logic of workforce management. *Harvard Business Review* **December**, 110-117.

MacDuffie, J.P. (1995) Human Resource Bundles and Manufacturing Performance: Organizational Logic and Flexible Production Systems in the World Auto Industry. *Industrial and Labor Relations* **48**, 197-221.

Paauwe, J. and Boselie, P. (2005) HRM and performance: what next? *Human Resource Management Journal* **15**, 68-83.

Paul, A.K. and Anantharaman, R.N. (2003) Impact of people management practices on organizational performance: analysis of a causal model. *Int. J. of Human Resource Management* **14**, 1246–1266(Abstract)

Pfeffer, J. and Sutton, R. (2006) Evidence-based management. *Harvard Business Review* 63-74.(Abstract)

Rousseau, D. (2006) Is there such a thing as 'Evidence-Based Management'? *Academy of Management Review* **31**, 256-269.(Abstract)

Rousseau, D. (1995) *Psychological contracts in organizations: Understanding written and unwritten agreements*, Thousand Oaks, CA: Sage.

Rousseau, D. (2004) Psychological Contracts in the Workplace: Understanding the Ties that Motivate. *Academy of Management Executive* **18**, 120-127.

Rynes, S.L., Gyluk, T.L. and Brown, K.G. (2007) The very separate worlds of academic and practitioner periodicals in human resource management: implications for evidence-based management. *Academy of Management Journal* **50**, 987-1008.

Saari, L. Bridging the worlds. *Academy of Management Journal* **50**, 1043-5.

Scott, S.G. and Einstein, W.O. (2001) Stretegic performance appraisal in team-based organizations: one size does not fit all. *Academy of Management Executive* **15**, 107-116.

Viswesvaran, C., Schmitt, F.L. and Ones, D.S. (2005) Is there a general factor in ratings of job performance? A meta-analytic framework for disentangling substantive and error influences. *Journal of Applied Psychology* **90**, 108-131.

Wong, Y.L. and Snell, R.S. (2003) Employee Workplace Effectiveness: Implications for Performance Management Practices and Research. *Journal of General Management* **29**, 53-69.

Wright, P.M. and Boswell, W.R. (2002) Desegregating HRM: A Review and Synthesis of Micro and Macro Human Resource Management Research. *Journal of Management* **28**, 247-276.

Wright, P.M. and Macmahan, G.C. (1992) Theoretical Perspectives for Strategic Human Resource Management. *Journal of Management* **18**, 295-320.

Wright, P.M. and Nishii, L.H. (2005) Strategic HRM and Organizational Behavior: Integrating Multiple Levels of analysis. Working paper series, S.o.I.a.L.R.C.U., (Ed.)

TABLE 1

Sample distribution across job groups

BANK		IT CONSULT	
Position	**Percent**	**Position**	**Percent**
Branch manager	22,10	Consultans	37,40
Sales agent	26,50	Managers	26,90
Supervisor	27,20	Experts	35,80
Teller	24,20		

TABLE 4

Regression Results

	BANK				IT CONSULT			
Variables	**b**	**s.e.**	**Sig.**	**VIF**	**b**	**s.e.**	**Sig.**	**VIF**
Promotion	-,012	-,906	0,365	1,006	,068	2,395	0,017	1,088
Performance appraisal	,104	7,690	0,000	1,013	,401	14,472	0,000	1,029
Base salary	,348	25,614	0,000	1,018	-,048	-1,687	0,092	1,066
R^2		,141				,181		
N		4755				1102		

TABLE 5

Final Clusters Centers

	BANK				IT CONSULT		
Variables	**1**	**2**	3	4	**1**	**2**	3
Promotion	0	0	0	0	0	0	0
Performance appraisal	0,04	-1,18	0,35	0,46	-,31	-,52	1,21
Base Salary	,75	-0,50	-0,49	2,47	-1,2	,62	-0,08
Percentage of cases	24,25	18,19	51,00	6,56	23,23	49,36	27,40

TABLE 9

Factorial ANOVA: Tests of Between-Subjects Effects

Tests of Between-Subjects Effects

Dependent Variable: Individual Performance

	BANK			IT CONSULT		
Source	df	F	Sig.	df	F	Sig.
Corrected Model	31	27,548	,000	23	11,943	,000
Intercept	1	39,135	,000	1	5,640	,018
Intensity cluster	3	60,528	,000	2	17,397	,000
Gender	1	5,842	,016	1	14,030	,000
Tenure	3	7,425	,000	3	5,160	,002
Cluster*Gender	3	2,5	,058	2	2,120	,121
Cluster*Tenure	9	,568	,824	6	2,001	,063
Gender*Tenure	3	3,355	,018	3	5,702	,001
Cluster*Gender*Tenure	9	1,444	,163	6	1,793	,097
R^2						
,153			0,203			
R^2 (Adjusted)						
,148			0,186			

NOTAS

Depósito Legal: M-20073 I.S.S.N.: 1579-4873