

## USE OF HRIS IN RECRUITMENT PROCESS. THE SPANISH CASE.

**Fernández-Sánchez, José Antonio**, Department of Business Management, Business Faculty,  
University of Alicante, Spain  
Jose.Fernandez@ua.es

**de Juana-Espinosa, Susana**, Department of Business Management, Business Faculty,  
University of Alicante, Spain  
Susana.Espinosa@ua.es

**Valdés-Conca, Jorge**, Department of Business Management, Business Faculty, University of  
Alicante, Spain  
Jorge.Valdes@ua.es

### Abstract

*Even though the first Human Resources Information Systems (HRIS) only abided for administrative tasks, the uncertainty and high competition that most firms have to presently confront made essential to enhance their applications by means of a strategic re-orientation. This occurrence has turned HRIS into a principal strategic means, capable of providing information about the actual capacity of the firm and of the external potential that it may develop, or that of their competitors.*

*Considering this framework, this paper aims to study the use of HRIS as a tool for assisting hiring decisions. Particularly, it will focus in the selection and recruitment processes in Spanish firms, for which an empirical, quantitative research has been performed. This paper shows the main results of this project and its practical implications.*

*Keywords: internal recruitment, external recruitment, information systems, Spain.*

## 1 INFORMATION SYTEMS AND RECRUITMENT

Among the many definitions of Human Resource Management (HRM), this paper will approach it from a systemic perspective. That is to say, HRM comprises the whole range of activities from the need to fill a free post to the time when an employee leaves the firm. The first one is the recruitment process, which is divided into three stages: Application, selection and socialization. This paper will leave out the latter, focusing in the use of HRIS (Human Resources Information Systems) for the recruitment process until the final appointment decision.

Specifically, the first decision to be made by the firm is whether the recruitment will be internal or external. Table 1 shows a comparative between the pros and cons of each type of recruitment. As it can be seen, the internal recruitment has, initially, more advantages than the external. This is why several academics (e.g. Deguy, 1989; Peña Baztán, 1990 and Díez de Castro *et al.*, 2002) recommend this option whenever it is feasible and suitable. Only in those cases that this is not valid or sufficient, the firm must resort to external recruitment. Nevertheless, it is necessary to keep in mind that this statement is to be taken cautiously. There is no perfect recruitment method; the choice will have to be made considering the particular circumstances of the firm and its objectives.

Internal recruitment		External recruitment	
<i>advantages</i>	<i>disadvantages</i>	<i>Advantages</i>	<i>disadvantages</i>
Low cost	Limited offer	Higher number of candidates	High cost
Faster results	Interest conflicts		Slower
Better knowledge of candidates	Lack of authority due to excess of trust		No prior knowledge of candidates
Shorter socialization period	Lack of innovation and new ideas	Encourage change and innovation	Longer socialization period
Business culture is fortified	Business culture may stagnate	Encourage modifications in culture	Likely cultural shock
Increases motivation between employees	Likely discontent among non-selected		May de-motivate
Increases the build up of knowledge			
Factor for attraction and upkeep of staff			

Table 1. Internal vs. external recruitment

The optimal use of internal recruitment processes requires possessing an updated and accurate knowledge of the personnel of the firm (Leal Millán *et al.*, 1999), for which a HRIS can be used. The simplest and cheapest of them all, most likely, is a human resource inventory (also known as Internal IS): a database or registrar in which the largest amount of information possible is kept. Basic data to be included in this database are the personal details, the recruitment dates, the positions held, promotions, and other observations regarding their performance and potential (Peña Baztán, 1990).

Following this, it must be reminded that the internal recruitment sources are to be employed wisely, because, on occasion, they may lead to deception instead of motivation. Likewise, in order to ensure that all internal and external (if any) applications are considered equally, the former should be complemented with the most complete information available (Besseyre des Horts, 1988).

Considering this frame of work, this paper intends to test two main hypotheses on the topic of the use of these recruitment sources from an empirical point of view. On the one hand, regarding the relationship between HRIS and internal recruitment processes:

**Hypothesis 1:** “The firms that deploy HRIS in their internal recruitment processes will perform better than those who do not do it”.

On the other hand, following those authors that recommend internal over external recruitment decisions, the research inquires whether:

**Hypothesis 2:** “The firms that prefer internal recruitment decisions over external recruitment will perform better than those who do not do it”.

Nevertheless, the implications that the assertion or rejection of these statements will not be fully understood unless a descriptive analysis of the presence and usage of business HRIS is carried out. This will be done prior to the actual test of the hypotheses alleged above.

## 2 DATA ANALYSIS

To study the two hypotheses, along with some descriptive data, a nation-wide empirical research was performed. It was founded on the results of a prior research limited to the province of Alicante (Spain), in which the questionnaire was tested and the model was validated.

SCOPE	Spain
POPULATION	3000 Firms with more than 200 employees
SAMPLE	334 valid answers (11,1%)
STANDARD ERROR	5,2% <sup>1</sup>

Table 2. Technical data of the empirical research

The T test, used to determine the inference of the observations, concluded that there were no significant differences between the group of firms that did answer and that who did not. Consequently, the data here shown can be considered as valid indicators of the behaviour of the Spanish firms with more than 200 employees.

### 2.1 Use of HRIS in the firm: a descriptive analysis

Before the two main hypotheses are tested, a complimentary analysis of the findings may lead to a better understanding of the implications of this research. This part of the study will deal with the descriptive analysis of the use of HRIS in the firm.

The first dimension to be concerned about is the type of information system implemented by these firms (see Table 3).

	Traditional (manual) Files				Computerised HRIS				Management of C.V. online			
	F	%	V%	C%	F	%	V%	C%	F	%	V%	C%
<b>YES</b>	259	77,5	77,5	77,5	165	49,4	49,7	49,7	207	62,0	62,3	62,3
<b>NO</b>	75	22,5	22,5	100,0	167	50,0	50,3	100,0	125	37,4	37,7	100,0
<b>Total</b>	334	100,0	100,0		332	99,4	100,0		332	99,4	100,0	

*F=Frequency    %=Percentage    V%= Valid percentage    C%= Cumulative percentage*

Table 3. Most common applications of HRIS

A few facts stand out in table 3. For starters, over two thirds of the firms (77,5%) use manual HRIS, i.e. traditional files. This is likely due to their lower cost and easier handling. As for the most sophisticated systems, this is, the computerised HRIS, barely half of the firms employ them, although this has shown an increasing tendency when compared to the results of the previous experimental research (in early 2004, only a 38,6% of the firms gave an affirmative answer). The motivations underneath this evolution include the sheer necessity to adapt to the requirements of a more complex organization, the desire to imitate those successful firms that had implemented them, or the uprising of more knowledgeable managers in present time businesses, among others. Regarding the deployment of applications for managing C.V.s online (retrieving them and storing the information adequately), it seems easy and useful enough to be accepted by 62% of the organizations.

Regarding the use of HRIS in the recruitment policy, table 4 shows that every stage may benefit from them. Even though, their degree of application is inversely related to the timing and the complexity of

<sup>1</sup> This error has been calculated for N=3000, assuming p=q and a confidence interval of 95%.

the task. As it was observed before, more sophisticated HRIS (and, therefore, able to assist in more complex tasks such as decision making processes) are implemented by a smaller number of firms.

	Reception of applications				Data storage				Data retrieval				Decision making processes			
	F	%	V%	C%	F	%	V%	C%	F	%	V%	A%	F	%	V%	C%
<b>YES</b>	294	88.0	91.0	91.0	285	85.3	88.2	88.2	216	64.7	66.9	66.9	151	42.2	46.7	46.7
<b>NO</b>	29	8.7	9.0	100	38	11.4	11.8	100	107	32.0	33.1	100	172	51.5	53.3	100
<b>Total</b>	323	96.7	100		323	96.7	100		323	96.7	100		323	96.7	100	
<i>F=Frequency    %=Percentage    V%= Valid percentage    C%= Cumulative percentage</i>																

Table 4. Use of HRIS in different recruitment stages

In sum, table 5 shows that 36,5% of the firms do use some HRIS application for all four recruitment-related tasks, which indicate two conclusions:

- HRIS are not an exclusive tool, but they are seldom used in combination with other methods; and
- These applications are good enough as assistants and support devices, but they will never be able to substitute human criterion.

	Frequency	Cumulative frequency	%	Valid %	Cumulative %
<b>0</b>	14	14	4,2	4,2	4,2
<b>1</b>	28	42	8,4	8,4	12,6
<b>2</b>	80	122	24,0	24,0	36,5
<b>3</b>	90	212	26,9	26,9	63,5
<b>4</b>	122	334	36,5	36,5	100,0
<b>Total*</b>	334		100,0	100,0	

\*0= no HRIS; 1= HRIS for only one task; 2= HRIS for two tasks; and so on.

Table 5. Number of tasks performed through HRIS

Finally, there was an interest in seeing whether several structural characteristics of these firms were significantly related to the use of HRIS. It can be seen in table 6 that only two classifications are affected by the use of HRIS: parent firms over subsidiaries, and the larger firms. These results respond to the logic that both types of organizations require a more complex structure, which may influence in their decision of relying on HRIS for leaner and more efficient recruitment tasks.

VARIABLES	CHI-SQUARED	DEGREES OF FREEDOM	SIGN.
Family Business	4,241	4	,374
Parent /subsidiary	19,832	6	,003
Public/private	1,295	4	,862
Industry	36,434	28	,132
% Permanent staff	13,960	12	,303
Number of employees	28,320	8	,000

Table 6. Use of HRIS concerning other classification treats

2.2 Hypothesis 1: The firms that deploy HRIS in their internal recruitment processes will perform better than those who do not do it

The first hypothesis is tested with the aid of a new variable created for the purpose of measuring whether the firms use internal recruitment methods based on HRIS applications. A Chi-squared test, carried out on the actual results against the null hypothesis, assesses that the actual results are different enough to overcome a certain probability that they are due to sampling error with a statistical significance of 0,045, thus confirming the assertion of hypothesis 1. Hence, it is found that those firms that rely on internal recruitment processes based on HRIS applications have better outcomes in the performance of the appointed person than those who do not.

Table 7 shows the observed frequencies and how this fact may affect the overall performance of the recruitment process. Regarding the firms' impression on the effects of using HRIS to recruit good candidates, the majority of those that implement them (89,3%) agree in considering this fact "quite" or "plenty" beneficial. It is outstanding as well the fact that only one of them has marked this item as "No beneficial at all".

		Perceived outcomes recruitment/ selection			
		No beneficial at all	A little	Quite	Plenty
Internal recruitment and HRIS	Yes	1 (0.3%)	31 (10.3%)	209 (69.4%)	60 (19.9%)
	No	0 (0.0%)	7 (21.2%)	25 (75.8%)	1 (3.0%)

Table 7. Concurrence of HRIS usage and internal recruitment. Effects on recruitment results.

In addition, in order to find if the use of HRIS has a positive influence on the outcomes of the recruiting process, another Chi-squared test shows that a relationship is established between the independent variable (*Use of HRIS*) and the dependent one (*Perceived outcomes of the process*), with a 0,000 statistical significance. Therefore, it is statically confirmed that a greater application of HRIS contribute in a positive manner to the outcomes of the recruitment process, and, in consequence, to the overall performance of the firm. This evidence agrees, once more, with hypothesis 1.

2.3 Hypothesis 2: The firms that prefer internal recruitment decisions over external recruitment will perform better than those who do not do it

Before carrying out this test, it seemed necessary to see whether firms prefer internal recruitment techniques over external ones. To do so, a frequency analysis was carried out, as illustrated in table 8.

		Frequency	%	Valid %	Cumulative %
Preference of internal recruitment over external recruitment	Never	5	1,5	1,6	1,6
	Very rarely	11	3,3	3,5	5,1
	Rarely	19	5,7	6,1	11,2
	Occasionally	62	18,6	19,8	31,0
	Frequently	72	21,6	23,0	54,0
	Very frequently	77	23,1	24,6	78,6
	Always	67	20,1	21,4	100,0
	Total	313	93,7	100,0	

Table 8. Preference of internal recruitment over external recruitment

The low values of the "very rarely" and "never" categories, and the fact that 69% of the firms prefer internal over external recruitment on a "frequently" to "always" basis, demonstrate that it is internal

recruitment what organizations favour. The reasons under this tendency can be found in the advantages of internal recruitment methods, as seen in the literature review.

As for the consequences of this choice, table 9 provides the results of the relationship between the use of internal recruitment by the firms and the perceived degree of satisfaction with the outcomes of such a decision.

		None	Of little satisfaction	Moderately satisfactory	Satisfactory	Very satisfactory	Addition of the last two
Use of internal recruitment	Seldom	0 (0.0%)	0 (0.0%)	3 (30.0%)	6 (60.0%)	1 (10.0%)	7 (70.0%)
	Occasionally	0 (0,0%)	0 (0,0%)	12 (15,0%)	58 (72,5%)	10 (12,5%)	68 (85,0%)
	Sometimes	1 (0,8%)	0 (0,0%)	11 (8,7%)	97 (76,4%)	18 (14,2%)	115 (90,6%)
	Often	0 (0,0%)	0 (0,0%)	5 (6,9%)	44 (61,1%)	23 (31,9%)	67 (93,0%)
	Always	0 (0,0%)	0 (0,0%)	1 (5,0%)	11 (55,0%)	8 (40,0%)	19 (95,0%)

Table 9. Degree of satisfaction with the outcomes of the recruitment process

This contingency table indicates that those firms that use primarily internal recruitment processes seem more satisfied with their decision. Moreover, another Chi-squared test carried on these two variables rejects the null hypothesis of independence with a statistical significance of 0,013. Therefore, hypothesis 2 is confirmed, as has been argued by the work of other authors (namely Pfeffer, 1994 and 1998; Huselid, 1995; Delaney and Huselid, 1996; Delery and Doty, 1996) who show a positive relationship between the internal recruitment strategy and the performance of the firm.

### 3 DISCUSSION AND CONCLUSIONS

The main conclusion of this paper is the realization that the use of business HRIS is in a developing and retrieval. In spite of this, it is recognized the positive influence that these systems have in the recruiting process, which make us think that HRIS will gain a place in many organizations in the short and medium term.

Regarding the commonest applications of HRIS, our findings indicate that a fairly large percentage of firms rely on these systems for at least one the stages of the recruitment process. Nevertheless, the presence of these applications is scarcer for the most complex and delayed in time tasks, such as decision making processes, because they require, in return, more complex HRIS. This conclusion is therefore reinforced by the findings expressed above, since it is the developing stage of HRIS what leads to this decompensate situation.

It was also observed that two groups of organizations lead the HRIS implementation trend: the parent companies, with regard to their subsidiaries, and the largest firms in terms of number of employees. This seems a logical finding because their more complex structures may benefit more of the advantages of HRIS to increase the efficiency of their recruiting processes.

Besides, HRIS are found to be preferred in combination with other HRM practices, instead of on their own. This reveals that human judgement is still the main criterion for making decisions in this area, albeit assessed or supported by the information provided by the HRIS.

As for the main hypotheses tested in this research, internal recruitment is the favourite method for filling in vacant positions within the firms, which confirms the theoretical assumptions that asserted that, even though both internal and recruitment strategies are to be considered, the former is less costly and provides more advantages to the firms. Indeed, the evidence supports that a better performance is expected from the people internally recruited, which in turn will improve the overall business performance.

The same can be stated about the synergies caused by the interaction between HRIS and internal recruitment. The business managers, overwhelming, agree in the positive effects that the advantages of the latter, and the better quality information provided by the former, have in the outcomes of the recruitment decisions.

Finally, we would like to express our own impression on this topic. It is our belief that HRIS add competitive value to the firm as a whole and to the HRM department specifically. Despite this conviction, shared with many other academics of the field, we have reservations supporting that information systems may endow businesses with a sustainable competitive advantage on their own. Classic strategic information systems benefited from their being the first to arrive, but they soon became a commodity, even a compulsory asset in order to remain in the industry. Their pervasive condition may inhibit other firms from developing the strategic changes needed for succeeding in the foreseeable future.

## References

- Besseyre des Horts, C.H. 1988. *Gérer les ressources humaines dans l'entreprise*, Les éditions d'organisation, Paris.
- Deguy, M. 1989. *Politique des Ressources Humaines dans l'Entreprise*, Les Éditions d'Organisation. Paris.
- Delaney, J.T. and Huselid, M.A. 1996. 'The impact of human resource management practices on perceptions of organizational performance', *Academy of Management Journal*, 39 (4): 949-969.
- Delery, J.E. and Doty, D.H. 1996. 'Modes of theorizing in strategic human resource management: Tests of universalistic, contingency, and configurational performance predictions', *Academy of Management Journal*, 39 (4): 802-835.
- Díez, J., Redondo, C., Barreiro, B. and López, M.A. 2002. *Administración de empresas. Dirigir en la sociedad del conocimiento*, Ed. Pirámide, Madrid.
- Huselid, M.A. 1995. 'The impact of human resource management practices on turnover, productivity, and corporate financial performance', *Academy of Management Journal*, 38 (3): 635-672.
- Leal, A., Alfaro de Prado, A., Rodríguez, L. and Román, M. 1999. *El factor humano en las relaciones laborales. Manual de dirección y gestión*, Ed. Pirámide, Madrid.
- Peña Baztán, M. 1990. *Dirección de personal. Organización y técnicas*, Ed. Hispano Europea, Barcelona.
- Pfeffer, J. 1994. 'Competitive advantage through people', *California Management Review*, 36 (2): 9-28.
- Pfeffer, J. 1998. 'Seven practices of successful organizations', *California Management Review*, 40 (2): 96-124.