ADOPTION OF HUMAN RESOURCE INFORMATION SYSTEM IN ORGANIZATIONS

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Abstract

Businesses, having now, necessarily, adopted a more modern way of operating, realized that people are their valuable resource and for this reason they invest in Human Resources Management with the aim of solving and dealing with complex issues, as a result of economic instability, globalization and competition. Human Resources Management and its technologically advanced operations aim to serve the strategic goals of the business so that it becomes profitable and competitive. The combination of Technology and in particular Information Systems in Human Resource Management can contribute to saving time, reducing costs as well as increasing productivity and efficiency. In the implementation of each such Information System as in any other organizational change, the company is called upon to try something new with the aim of achieving the best possible results in terms of its strategic goals. We hope this study will help organizations adopt HRIS accurately and effectively.

Keywords: *Human Resource Management, HRIS, HRM, HRMS, HR practices, Business Performance, Strategy.*

INTRODUCTION

Our era is characterized by intense competition, rapid technological changes, and globalization of the economy. Within this environment, businesses must face the challenges of the conditions of the modern market, improving their effectiveness, increasing their efficiency and productivity, reducing their operating costs, in order to be able to survive and with the ultimate goal of maximizing their profits.

Businesses now rely heavily on information and communication technologies and sophisticated information systems to be competitive and offer their products and services. What role do information systems play in Human Resource Management, how do they transform "entrepreneurship" and what is their relationship with business performance? Around this issue, research and studies have been carried out which have shown that the benefits of the company from the use of an integrated information system in Human Resource Management are the reduction of operating costs, the optimization of business processes, the saving of resources and finally the increase of its productivity and profitability. In research done by Wiklund and Shepherd (2003), they showed that knowledge-based resources are positively related to the performance of the business. Shang and Seddon (2002) propose a multidimensional, detailed framework for categorizing the benefits that the company derives

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from the use of Human Resources information systems. The existence of such an integrated information system, facilitates a business to operate with as few errors as possible, to avoid inconvenience and possible charges, while the service of its customers is done more correctly, more directly and faster. Kaplan and Norton (1996) argued that in order to remain competitive, businesses need specific management and control systems, mainly in terms of intangible assets (e.g., workforce, infrastructure, technology). Papastathopoulos (2009) states that in the business world the balances are directly affected by the development and application of new technologies, pushing entrepreneurs to find new ones, or to the evolution and adaptation of existing business models-points of equilibrium.

The study wants to discover that hr transaction with HRMS capability, when applied correctly, significantly affects the performance of HRM. The type and size of the organization, the control variables in this study add no value to the findings of the research. This study confirms that traditional human resource management practices with HRMS enabled human resource development, and communication practices mainly affect human resource performance potential. In other words, this study specifically encourages an organization to adopt integrated performance management systems (PMS), an important component of HRMS, for the effective management of their employees.

Therefore, organizations that intend to review and renew the HRM of their business processes are informed by this study that the adoption of an appropriate HRMS, specifically a performance management system (PMS) will be critical to their success.

The adoption of information systems in Human Resource Management is evolving into a key input, which directly affects both the quality and quantity of the output produced by modern businesses (Laudon, Laudon, 2015,16).

LITERATURE REVIEW

The literature review illustrates the concept of HRIS and its benefits as well as the factors influencing the adoption of HRIS in organizations.

What is HRIS?

Human Resource Information Systems help businesses to maintain a correct, comprehensive and up-to-date database, from which the necessary information can be retrieved whenever necessary (Gara, 2001; Walker 1982).

The main purpose of Human Resource Information Systems is to provide full information to the HR department and to support decisions related to the company's personnel. Also, the primary goal of using such an information system should be to save costs and time, and then to analyze data and make decisions. (Kovach, Cathcart, 1999).

Human Resources Information Systems are systems with the help of which the collection, storage, use, analysis, retrieval and distribution of information about the human resources of a company is carried out (Tannenbaum, 1990; Fischer et al, 1999).

According to Broderick and Boudreau (1992) Human Resource Information Systems are the synthesis of databases, applications, software and hardware equipment, which are necessary

for the collection, recording, storage, management, distribution, presentation and exploitation of data concerning the workforce of a company.

According to Kettley and Reilly (2003), Human Resource Information Systems consist of a fully integrated network across an organization of data, information, services, databases, tools and transactions for human resources.

In the case where the transactions of Human Resource Information Systems are made with the help and use of the Internet, then there is talk of "electronic-HR" or "e- HR". Many times, the use of these systems requires the application of conventional, network technologies and advanced voice technologies and applications of the world wide web (Panayotopoulou, Vakola, Galanaki, 2007).

According to Fein (2001) managers rely on Human Resource Information Systems and provide advanced data analytics, specialized for the valuation of management, skills tests, recruitment and organizational development. Therefore, Human Resource Information Systems are much more than a combination of software and computer hardware, since this system includes elements such as functions, policies, processes and human resources and combines them in order to better manage the functions of Human Resource Management.

What are the benefits of HRIS?

- Easy access to data and information related to staff.
- Automation of processes and reduction of bureaucracy. For example, Schnitt (1993) notes that technology makes it possible to have and process data in several places at once, allowing for faster processing of tasks. Thus, operations are carried out at a horizontal level and become more flexible by removing the vertical structure that causes bureaucracy. Kanthawongs (2004) who studied the effect of HRIS on Thai businesses argued that they reduce the "paper" used, the time to search for information, the workload and automate the transfer of documents.
- Accurate and specific data with less probability of error.
- Faster access and processing with the use of technologies that lead both to the satisfaction of the employee who, for example, applies for information and to faster management decision-making.
- Creation of an "organizational memory" in the company that will store information about all employees (even those who left) and will be able to anticipate future career changes of employees, highlight the excellent of the "average" employees, the strengths and weaknesses of the executives and the educational needs or needs of the company for staffing.
- Creation of satisfactory prints in volume, variety and quality that will provide more accurate and meaningful information.
- Elimination of distances, thus making it possible to process the data of all employees even if the company has branches in many areas (remote access, network organizations). For example, distributed databases and communication technologies allow the provision of information in several places at once (Schnitt, 1993). Also, "virtual task forces" are being created to handle specialized problems around the world. As Strassman (1985, 22-7) put it

"It is not in the interest of a business to have a specialist for a rare problem lest this problem appear someday. Technology allows you to have the experts available electronically". Of course, the "abolition of borders" can help in all aspects of personnel management from recruitment and personnel selection to their training and development.

- Modern HRIS are part of an integrated information system that a business has, so if they are a subsystem of an ERP, they solve problems of incompatibility and coordination and help to better organize the business.
- Providing modern services and creating a modern image for the business that makes it attractive to the labor market and to existing and potential staff.
- Acquiring a more professional and customer-centric approach.
- However, the benefit is not so great and is a short-term perspective, because as Kinnie and Arthurs (1993) saw in a survey, only 19% of the companies that studied saw a reduction in costs. In fact, 8% saw an increase in labor costs after the introduction of HRIS, due to the recruitment of new staff in the human resources department with increased technical and problem-solving skills.
- Change in the relationships of employees and line executives, as well as change in the relationships of line executives with the Human Resources department. Now, employees can be part of management and the HR department can work productively with other executives.
- Upgrading the role of HR- manager and greater recognition of its importance.
- Improvement of the services provided by the Human Resources department that comes from the knowledge of the data and not from their acquisition. (Zuboff, 1988)
- Creating a competitive advantage for the business, since human capital is the most important resource of the business and the only one that is difficult to "copy" by competing companies. The competitive advantage can be a "key" to the company's success, especially if we are talking about innovations and original processes that provide added value and uniqueness. Of course, it usually constitutes the "black box" and there is difficulty connecting HRM systems with long-term acquisition of competitive advantage (Ordonez, 2004). Research carried out by the latter in 123 Spanish companies has shown that HRIS contributes to the creation of knowledge at an individual level, that is, to human capital, and that there is a positive relationship between technological changes and the creation of a competitive advantage.
- Transfer of the center of gravity from traditional functions to strategic management of human resources. The human resources department is freed from more trivial processes and ensures time to deal with strategic plans. This is mainly helped by decision support systems (DSS) and artificial intelligence.
- Ability to reorganize HR processes to be more efficient and modern (restructuring, reengineering, outsourcing, strategic alliances). This process is often a one-way street, in order for the company to adapt to rapid changes, globalization, rapid product life cycles, the need for flexibility and the increase of knowledge for the business unit and the customer (Boudreau, 1992).

- Increasing effectiveness and efficiency in 4 ways (Gallagher, 1997; Walker,2001; Kossek et. al., 1994):
- Increased productivity from the appropriate selection of personnel, the reduction of dismissals and flexible working methods.
- Increased needs for the creation of reports to the government regarding labor legislation, which in fact is constantly changing.
- The growth rate of IT technology is high, with the result that HRIS has to adapt in order for a business to be competitive.
- The availability of information systems at relatively reduced prices that increase the return of the investment.

Research conducted in Hong Kong (Ngai, Wat, 2006) on what businesses consider advantages from the use of HRIS highlighted the most important benefit of quickly responding and accessing information and as less important the creation of a competitive advantage. The score was made on a five-point scale, where 5 was considered the most important advantage and with 1 the least significant. The results are shown in detail in the table below and are sorted based on their degree of importance.

Table 1. Advantages of using HRIS

Arithmetic mean		Standard deviation
Quick response and access to information	4,377	0,813
Improve data control	4,186	0,892
Reduce data entry multiple times	3,991	1,026
Organization of processes in human resources	3,835	0,927
Fewer mistakes	3,779	1,1
Pre-standardization of processes	3,522	0,983
Reduction of bureaucracy	3,412	1,257
Reduction of human resources functions	3,404	1,002
Better control over HR operations	3,287	1,227
Decision-making based on good information	3,257	1,14
Improving services to customers	3,254	1,225
Creating a competitive advantage	3,063	1,149

Source: Ngai, Wat, (2006).

Factors affecting the use of HRIS

It is worth noting that until 1986, according to a survey (Hall , Torrington, 1986) most companies used information systems mainly to record employee data and for the payroll process and not for forecasts, analyses and support of business decisions. Since then, various empirical reports show that this situation has changed (Kinnie, Arthurs, 1996; IES/IPD, 1997, 1998, 1999). The reasons for this low usage rate stem from various factors in the environment of a Human Resource department, such as the size, culture, strategy, strength and policy of the business.

The size of the enterprise

The relationship between the size of the organization and the use of information systems was first distinguished by Hall and Torrington, 1986. It can be observed that there are two fundamental differences between small and large enterprises, regarding the purchase of a Human Resources Information System: the cost and the risk. Obviously, the smaller enterprise cannot afford the costs and complexity of a universal business information system, such as PeopleSoft or SAP. The risk is greater for the small business as it may face serious problems in the implementation of the new software. Thus, small business is always more careful with the system it has adopted and may take longer to develop complex processes with it (Thaler-Carter, 1988). However, the literature shows conflicting data on the potential of small businesses to implement a Human Resources Information System. Thaler-Carter (1998) observed that smaller companies choose low-cost and risk applications. Ball (2001) concluded that small businesses are less likely to implement such a system, in particular for recruitment and training processes. Also, small enterprises have problems in managing their electronic resources (Delone, 1981). On the contrary, Raymond (1985) noted that small enterprises are capable of the universal development and implementation of information systems. Similarly, according to Cooley, Waltz and Waltz (1987) there are two factors which help to increase the use of information systems by smaller enterprises:

- the ever-lower cost of software and hardware equipment,
- the fact that computers are becoming increasingly user-friendly, with no need for special qualifications in computer science.

Regarding larger companies, it is worth noting that they are usually equipped with better and more trained specialists in the human resources management department than smaller companies (Ivancevich, 1998). Finally, Ein-Dor and Segev point out that larger companies are more likely to have successful Human Resource Information Systems.

The culture of the enterprise

The culture of the company is shaped by the values and standards that govern the business. Company culture plays an important role in determining the extent to which employees are ready and willing to learn new things and in determining the extent to which they resist the proposed changes (Antal, Diekes, Hahner, 1997). Earlier studies have highlighted the importance of top management support for the implementation of information systems (Bruwer, 1984; Doll, 1985). Various scholars have discovered that the support of top management is one of the most important factors that determine the effectiveness of an information system (Cerveny, Sanders, 1986; Keen, Morton, 1978). Yeung and Brockbank (1995) noted that the lack of such support is a major deterrent to the restructuring of the operations of Human Resources Management.

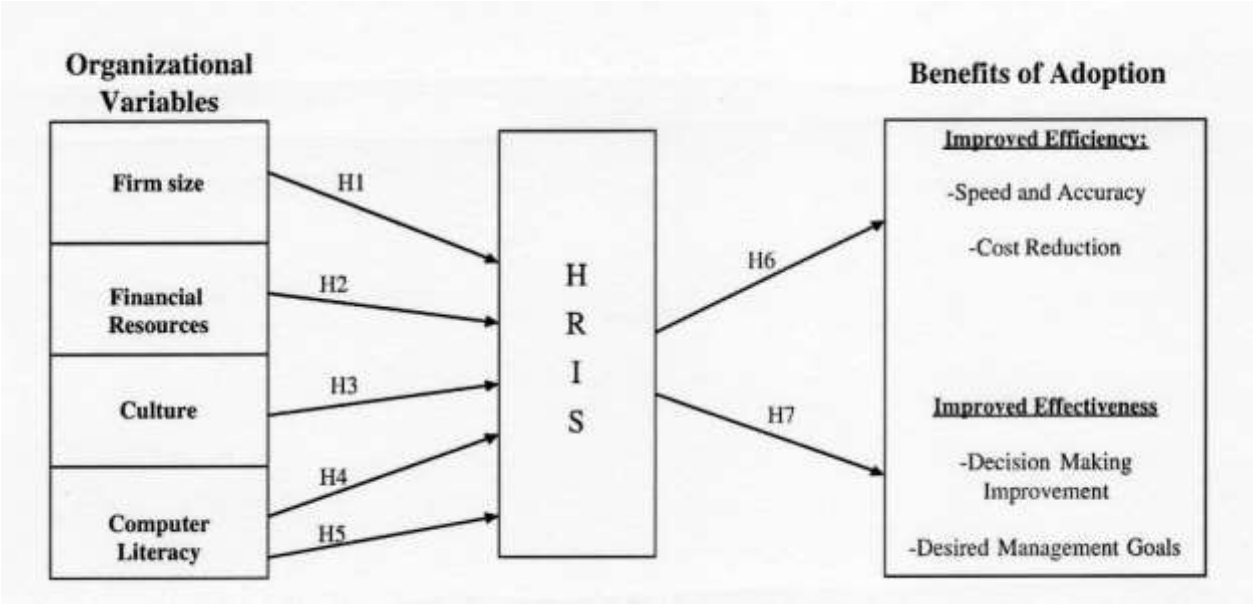
It has also been pointed out that the failure of a Human Resources Information System is mainly due to the ineffective communication of its users and the inconsistency of users with regard to their obligations (Keil, Cule, Lyytinen, Schmidt, 1998). In a small enterprise in

particular, the general manager plays an important role in the decision to implement such an information system, given that smaller enterprises have such a structure and are usually managed by the owner himself, who also has the position of general manager (Raymond, Magnenat-Talmann, 1982; Solomon, 1986). Finally, the importance of supporting top management led Kovach and Cathcart (1999) to conclude that this is one of the biggest challenges in the successful implementation of an effective Human Resources Information System.

Capabilities / Power of the enterprise

Regarding the power and capabilities of employees, it is stated that users with the most computer skills are more likely to want and more easily accept the experience of an information system (Igbaria, Nachman, 1990). On the contrary, employees who are less familiar with computers are more anxious about the new information technologies to be imposed (Igbaria, Parasuraman, 1989). Therefore, the higher the level of knowledge management in information technologies, the more likely it is that a Human Resources Information System will be successfully implemented.

Diagram 1: Factors affecting the implementation of Human Resource Information Systems, Benefits of implementation



Source: Nusair et al. (2007)

Other relevant factors

The influence of other relevant factors on the use of Human Resource Information Systems was investigated by Kossek et al. (1994) and Kinnie and Arthurs (1996). They argued that there are four different and determinants of a company's culture that influence the use of information systems:

1. The tendency of personnel department experts to separate IT specialists and assign electronic tasks to them, and thus justify their own lack of computer skills.

2. The gradual automation of information systems, which is determined by the time and efficiency of the operations of human resources management.
3. Opponents of information systems, through the interior of the company, declare ignorance and indifference to the information system.
4. Information intermediaries, i.e., those who comply with the new roles in Human Resource Management.

Also, other factors have been deemed critical for the use of information systems, such as the structure of a human resources department, its strength and policy and finally the skills that employees in this department have (Haines, Petit, 1997).
Beckers and Bsat (2002) noted that the cost of acquiring, installing and maintaining an information system can be high and this is usually the biggest obstacle to its implementation. Similarly, Kovach and Cathcart (1999) pointed out that the lack of money and support from top management are the major obstacles to the implementation of a successful Human Resources Information System.
In conclusion, we could say that Human Resource Information Systems serve three different functions (Papalexandri, 2003):

- They assist the executives of the Human Resources Management department in the fulfillment of their traditional duties (recruitment, training, remuneration, evaluation, security).
- They provide information to third parties, such as line executives, trade union representatives and external bodies (state, partner companies), relevant to the company's human resources.
- They support the HR planning process. The relevant information is provided to senior management, who use it to support and make decisions related to the company's strategy.

CONCLUSIONS

The impact of information technology and consequently of the information systems created to offer integrated innovative solutions and faster reactions to issues that arise, have come to change the future of business operations since already through the literature review conducted in this paper and the results collected from the research, we find that the influence is obvious and non-negotiable. After all, to increase the effectiveness of HRM, organizations are increasingly dependent on HRIS (Ball, 2001, Lippert, Swiercz, 2005, Troshani et al., 2011).
Specifically, the Information Systems were developed to affect the functions of Human Resources Management with the aim of improving them and proven according to research the development of ICT has significantly improved the design of human resource management, the results showed that HRM programming supported by ICT increases the efficiency of human resources.
This research adds a positive sign and redefines the importance of Information and Communication Technology in all its dimensions. Its contribution to business processes or specifically to the management processes by HR executives to support and upgrade human

resources, seems to be an increasingly integral part of it. Although there is confusion about the use or total adoption of systems, due to various factors, mainly the investment of capital, companies are found to recognize the benefits and partially overcome their misgivings. In addition, further research study is expected as technology does not stop providing proposals for future research that require the relevant interest.

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