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E-HR adoption and the role of HRM: evidence from Greece

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Abstract

Purpose – This paper attempts to investigate the transformation in the role of the HR function in Greek firms, as a result of the use of internet and technology.

Design/methodology/approach – The paper is based on both quantitative and qualitative methodology. A survey and focus groups took place in order to meet research objectives.

Findings – This paper examines and discusses the development of e-HR use in Greece and the reasons for adoption of e-HR practices focusing on strategy, process and HRM issues. Findings show that e-HR facilitates the transformation of HRM role into a more strategic one. Driving forces and critical success factors of e-HR adoption and implementation are identified and discussed.

Research limitations/implications – Limits its usefulness to countries that experience a stage of HRM professionalisation and technological development similar to that of Greece.

Practical implications – Identifies critical success factors in e-HR adoption as well as main problems associated with it.

Originality/value – Qualitative results provided by the focus groups give an illustrative picture of the companies presented.

Keywords Human resource management, Internet, Greece

Paper type Research paper

Introduction

The closing of the twentieth century has given rise to a vast debate concerning the response of human resource management to the changing external and internal environment of the firm. The late 1990s found the literature somehow settled on the necessity of strategic HRM, but concerned about the new roles that the HR function should adopt in order to meet contemporary organizational challenges (e.g. Kochan, 1997; Ulrich, 1997a, 1998). The strategic role of the HR function means being involved in strategic planning from the outset and not only during the implementation phase and matching employee resources with business needs. This role is expected to occupy significantly more of the HR practitioner's time in the future (Anderson, 1997). However, this does not mean that the administrative role will cease to exist, although there is an inherent tension between the outlook required for a strategic HR role and that of the HR specialist in a traditional role (Beer, 1997).

One of the important aspects of the changing environment especially relevant to management is the information revolution. According to Ulrich (1997b), an emerging HR practice area that will require investment of time, talent and resources is leveraging technology. Technology comes to the rescue in reducing the tension between the strategic and administrative role, as it has advanced to the point where it can remove part of the administrative responsibility (Ellig, 1997). E-HR refers to conducting

business transactions (and in particular HRM) using the internet along with other technologies (Lengnick-Hall and Moritz, 2003).

Although HRM (along with accounting), due to the quantitative complexity of the profession, coupled with its responsibility for enormous record-keeping, has a very long history of information technology experience in organizations and continues to be a leader in the implementation and use of IT (Townsend and Bennett, 2003), few studies have looked at the level of technology adoption from HR specialists (e.g. Ball, 2001; Hendrickson, 2003).

The purpose of the present study is to examine the use of e-HR in Greece, thus proposing a framework of analysis of e-HR systems in smaller countries. More specifically it aims at:

- examining the reasons for adoption of e-HR practices. The effects of e-HR adoption as well as problems associated with it will also be discussed;

- identifying critical success factors in e-HR adoption; and

- discussing the manner in which e-HR shapes the role of HRM in the new economy, as well as the perceived effect of e-HR in the future of the HR profession.

The paper begins with a brief presentation of HRM in Greece, followed by a review of the notion of e-HR and its functions as they appear in the HRM literature. Then the methodology and the results of the quantitative and qualitative research are presented, as well as the relevant discussion.

Definition of e-HR

The term e-HR was first used in the 1990's and refers to conducting Human Resource Management "transactions" using the internet or an internet (Lengnick-Hall and Moritz, 2003). The term was inspired by the popular term of e-commerce, and wrongfully adopted the "e-" prefix, signifying "electronic", even if e-HR is very specific to the use of the Net, so that a more accurate term would be "online HRM".

E-HR aims at making information available to managers and employees at any time and anywhere. Currently, an e-HR system may include enterprise resource planning software (ERP), HR service centres, interactive voice response, manager and employee portals and web applications. So, a modern e-HR system allows employees to control their own personal information by updating records and making decisions, and allows managers to access information and data, conduct analyses, make decisions and communicate with others, without consulting the HR department.

Three forms/levels of e-HR have been identified (Lengnick-Hall and Moritz, 2003; Walker, 2001), depending on the primary focus of e-HR

(1) *Publishing of information:* This involves one-way communication from the company to the employees or managers. In this form of e-HR, the company uses the intranet as the primary information delivery medium.

(2) *Automation of transactions, with integration of workflow:* In this form of e-HR, paperwork is replaced by electronic input. Intranets and extranets are used, frequently combining several different application programmes.

(3) *Transformation of the HR function:* In this form, e-HR liberates the function from its operational focus and redirects it toward a strategic one. Under this form, HRM takes up the following tasks: partnering with the line, creating centres of expertise and service centre administration.

The latter (transformational) form of e-HR is rare even in countries like the USA, which are very advanced in HRM (Lengnick-Hall and Moritz, 2003; Walker, 2001). Therefore, for the scope of the current paper, the first two distinctions of e-HR will be mostly used.

E-HR functions: what benefits do they bring?

E-HR can have an impact on every area of HRM. In this section we briefly discuss the effects of technology on six key HR processes, namely:

(1) HR planning;

(2) acquiring HR (recruitment and selection);

(3) HR evaluation (performance appraisal);

(4) communication;

(5) rewarding HR (performance appraisal, compensation and benefits); and

(6) developing HR (training and development, career management).

The reason for focusing only on the above services is that we consider them as the major areas of e-HR use. Moreover, this classification has already been applied to e-HR use in previous publications (e.g. Ensher *et al.*, 2002).

Human resource planning. In relation to HR planning, e-HR, particularly through the functions of employee and manager self-service applications, has brought substantial progress in terms of employee data updates, personnel changes and job requisitions. This means that, since employees are given the opportunity to update their personal data, the HR record-keeping gains higher accuracy and data quality (Zampetti and Adamson, 2001). The same goes for personnel changes and job requisitions that are submitted by managers to the HR through manager self-service applications.

Acquiring human resources. The practice of online recruitment is one of the most widely discussed functions of e-HR. Online recruitment refers to posting vacancies on the corporate web site or on an online recruitment vendor's' website, and allowing applicants to send their resumes electronically via e-mail or in some electronic format (Galanaki, 2002). It also includes the active search of the internet and the location of resumes. This possibility of online recruitment has been much debated as a unique way to recruit passive job seekers. Furthermore, online recruitment brings substantial benefits in terms of cost, time, candidate pool and quality of response. However, there is always the danger of resume overload, as well as low reputation and effectiveness of various web sites and databases, not to mention its questionable effectiveness for senior executive positions (Ensher *et al.*, 2002). The use of technology can also improve the sorting and contacting of candidates. The internet can ease the selection of employees, especially where long distances are involved. Video conferencing and online tests, for example, have been extensively used at the early stages of the selection process and can achieve spectacular cost and time savings.

Evaluating human resources. E-HR allows the whole performance appraisal (PA) to be conducted on-line, on the corporate internet interface. This means that the manager and the employee are able to submit performance data directly to the HR department in electronic form. This practice, though criticised for the lack of written evidence, reduces paperwork and if read receipts for both supervisor and supervised are used, it can impressively decrease time and cost for the HR department. The self-service application allows managers to immediately enter PA results and employees to manage their performance goals and results and plan their performance on their personal HR page. It can also provide managers with information on how to conduct a PA, the specific criteria and measurements of given positions and roles as well as examples and models of effective appraisals (Adamson and Zampetti, 2001).

Communication. The benefits of e-HR use in terms of communication are substantial. In its simplest form, e-HR includes the use of electronic mail for communication with the employee. The penetration rate of computer-mediated communication, mainly e-mail, is higher than 75 percent in corporate environments and e-mail has emerged as the communication medium of choice (Bontis *et al.*, 2003). Intranet and e-forums have also altered corporate communication, allowing easy access to all kinds of information that management wants to transmit to employees and also easing upward communication.

Rewarding human resources. Employee self-service allows employees to submit electronically their preferences in terms of benefit selection, reducing the burden for the HR department. Experience has shown that after the implementation of a self-service employee benefits system, employees may still be calling with benefit questions, confused about their choices and unable to grasp a broader rewards perspective (Dietch, 2001). However, it is believed that web-delivered employee benefits, if properly implemented, entail considerable economies for the HR department. Moreover, manager self-service allows the manager to take on or confirm salary actions, salary changes, bonuses and stock management. The application usually notifies managers on the choice they need to make or verify about rewards of their subordinates and asks them to insert their decision.

Developing human resources. Using the internet in training and development is one of the mostly discussed aspects of e-HR and probably the one with the most potential in terms of cost benefits. The internet can be used in training needs assessment, in pure e-learning activity and in career management. The e-mail and electronic forms on the intranet of the company or a restricted web site are used to gather information on training needs assessment, inducing benefits in terms of less paperwork, lower administration cost, shorter distribution and response time, and higher response rate (McClelland, 1994). Their only disadvantage is the perceived loss of confidentiality or anonymity of response. E-learning includes any learning activity supported by information and communication technologies. It can take the form of either local intranet provision, delivered over a network of interconnected computers, or of full access to internet and the World Wide Web, drawing upon a full range of multimedia, links to other sites and resources, downloadable streaming videos and communication systems (Sambrook, 2003). E-learning can offer a solution to training in remote or disadvantaged locations (Hirschman, 2001), as well as tailor-made learning that fits the particular needs of the learner (Mumford, 2003), but it can also create barriers to

learning, due to lack of hardware, fear of technology and learner isolation (Sambrook, 2003).

E-HR and the role of HRM

The shift from traditional HRM to e-HR practices gives rise to several effects on the role of HRM. E-HR, apart from substantial reductions in cost and time and transition of administrative activities from the HR department to the employees themselves, can bring about an "increased emphasis on HR as a strategic business partner whose primary challenge is to recruit, develop and retain talented employees for the organizations" (Ensher *et al.*, 2002, p. 238).

First, a major effect of the shift from traditional HRM to e-HR is that it enables HR employees to focus on more strategic, value-added activities. Less administrative and paperwork allows the HR professionals to develop other, more strategic functions of their profession. On the other hand, this may also mean that with the use of e-HR, fewer HR professionals are needed, because e-HR eliminates the "HR middleman" (Lengnick-Hall and Moritz, 2003). Therefore, the effect of e-HR on the HR profession may be seen as both a threat and an opportunity.

Second, e-HR, through self-service, entails increased involvement of employees and managers in HR practices. The employees and general managers become savvier about HR practices and HR devolvement becomes a reality. This distributed knowledge poses the challenge for HR professionals to consistently keep up with new developments in their field, in order to maintain their advisory-consulting role (Ulrich, 2000).

Another point that needs to be stressed is that, as e-HR is more than technology, it calls for competent HR professionals in order to fully benefit from e-HR development and implementation. "Technology itself may be value neutral, but how it is used can greatly impact the role of HR" (Ensher *et al.*, 2002, p. 238). This can be seen as a further opportunity for the HR profession, to take up the role of the developer of e-HR functions. It demands, however, that the HR professional also become knowledgeable in basic IT issues, so that communication using IT is more productive.

E-HR tools have the potential to transform HR into a strategic partner, but this transition won't come without difficulties. In order to move to the third level of e-HR, i.e. HR Transformation, it is necessary to identify the opportunities for improvement in five areas (Beatty, 2001):

(1) processes used to deliver HR;

(2) people in HR and their competencies;

(3) culture of the HR organization;

(4) its structure; and

(5) the technology used.

So, in the long term, the adoption of e-HR demands significant adjustments overall in the way that the HR department operates. These include devolvement of some functions to the managers, decline of several administrative functions and increased expectations from the HR professional, who will be expected to take up a more strategic and knowledgeable role.

Methodology

The research strategy followed was a combination of qualitative and quantitative methodology, which involved focus groups and questionnaires. Quantitative research was based on a descriptive questionnaire constructed for the purposes of the current research. This questionnaire was divided into two sections. The first one aimed at analyzing companies' e-HR adoption and use and exploring associated benefits and obstacles. The second one was related to the perceived e-HR impact on the role of HRM.

Authors randomly selected 150 HRM Departments to which they sent a letter aiming at explaining the aims and objectives of the research and securing participation. A total of 98 of them expressed their interest in the research and finally a total of 82 HR directors or officers agreed to participate. Members of the research team visited each company's premises and administered the questionnaire. The questionnaires were either completed in the presence of the researcher or mailed to the research team, depending on time and availability. A total of 76 usable questionnaires were collected and analyzed for the purposes of the current research. This gives a response rate of 50.6 percent, which is within the normative response rates in OB/HRM studies proposed by Roth and BeVier (1998).

In order to carry out the focus groups, the research team invited from this pool three HR managers from each of the following sectors:

(1) manufacturing;

(2) banking; and

(3) telecommunications.

Those sectors were chosen on the basis of the strongest representation in the quantitative research. Participants in each session, lasting 120 minutes, were both the authors and the three HR managers from each sector. These three focus groups that took place aimed at collecting in-depth data that contribute to the understanding of the quantitative results. Therefore, a guide which included questions related to both e-HR adoption and use and e-HR impact on HRM was developed by the research team. The focus groups were structured in four parts. In the first there were questions about the organization and its HR strategy, in the second the e-HR systems used were described, in the third part the focus was on employees' reactions to e-HR and finally the effect of e-HR on HRM was discussed. Some representative questions included in the interview guide can be found below:

(1) *Part 1: General HRM questions:*

- · number of people in the HR department;
- · HRM strategy;
- · main HRM problems; and
- · major HRM challenges.

(2) *Part 2: E-HR tools used:*

- · what e-HR systems do you use?
- · areas of e-HR use;
- · frequency of use;

- reasons for e-HR adoption; and
- what was the adoption process?

(3) *Part 3: Employees' reactions to e-HR:*
  - What were the employees' reactions to e-HR?
  - Factors enabling or facilitating employees' acceptance of e-HR.

(4) *Part 4: Effect of e-HR on HRM:*
  - satisfaction from e-HR;
  - effect of e-HR on the role of the HR department;
  - major challenges regarding e-HR adoption; and
  - analysis of results

E-HR use and reasons for adoption
From the 76 organizations in our sample, only 10.5 percent do not have a web page. In almost 80 percent of the cases, the rationale behind web page creation was to improve customer communication, product advertisement and public relations, while only a small percentage initially created the web page for recruiting purposes. Out of the 69 organizations that have a web site, 54.8 percent use it for HR functions.

The HR area with the highest use of e-HR tools is that of internal communication. Second comes training and development, while HR planning, staffing and rewards represent around 30 percent. The lowest use is reported in the area of PA.

However, the respondents believe that the use of technology in various HR functions will become more widespread in the next two years. As shown in Figure 1, the anticipated increase is higher in the areas of PA and Training and Development. Also, it appears that the use of e-HR for communication purposes will decrease in the future.
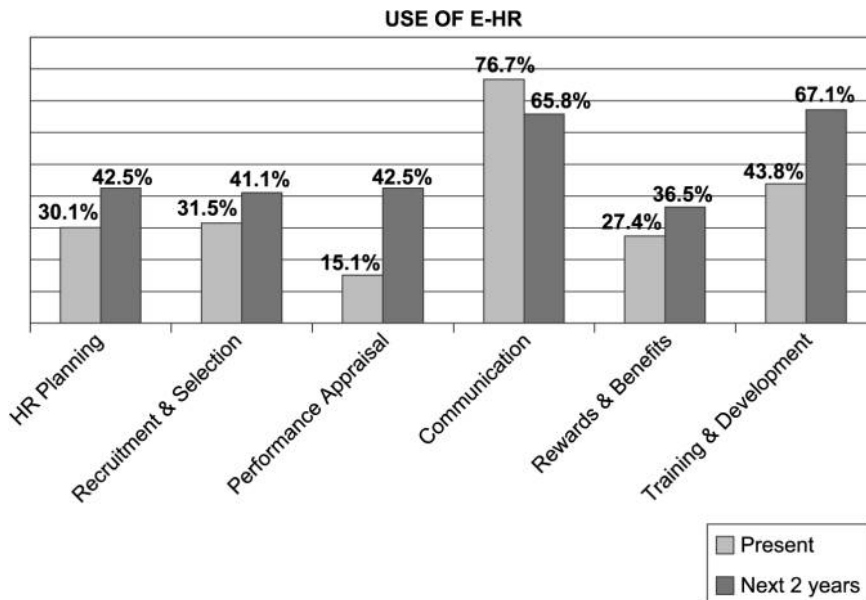

Figure 1.
Present and future use of
e-HR in various functions

This can be attributed to the Greek environment, where the use of e-HR for communication purposes is already high. However, previous results from the CRANET study show that in the area of internal communications Greek firms lag behind firms in other countries, especially among non-managerial staff (Papalexandris and Chalikias, 2002). It is a challenge for Greek HRM to improve communication and it seems that to achieve this it would be more valuable to adopt more traditional and less impersonal means, such as team briefings, given the problems with on-line communication that organizations experience, which include an increased likelihood of misunderstandings and miscommunication, among other things (Ensher *et al.*, 2002).

In order to have a clearer picture of the value of e-HR to the companies in our sample, we asked the respondents to point out the major problems that their HRM departments have to deal with in the existing business environment. The open-ended question about the problems that HR managers face today led to the following list: Recruiting, selecting and retaining talent were identified as the major difficulties, followed by the lack of adequate communication between HR departments and employees. HR managers also identified diversity as a major problem, which is not only a result of various nationalities or backgrounds, but is also due to different levels of adaptability of employees to organizational culture in contexts of change, such as mergers and acquisitions. Finally, other problems like HR understaffing, resistance to change, process inefficiencies and turnover rates constitute challenges for HR managers.

It is not surprising that the above challenges are reported as the main reasons for e-HR adoption. More specifically, the most popular reasons that our respondents gave for using the internet as an HR tool were the facilitation of the recruitment process (advertising, CVs, applications) and its benefits for communication. Only 10 percent of the respondents reported cost effectiveness as a principal reason for e-HR use.

Non-users of e-HR were asked to present the reasons for not integrating technology into their HR department. The main reason is that they don't see the benefit of its use (31.4 percent) – 28.6 percent argue that although they currently do not use e-HR, it is in their short-term future plans to incorporate it into their HR functions. A total of 22.9 percent respond that although they use technology in order to communicate with customers and other stakeholders, they don't see the usefulness of using it for HRM purposes. Security concerns seem to be an issue for 8 percent of non-users, while 12 percent give other justifications, like practical problems of web design or inconsistency with practices used. The list below summarizes the reasons for adopting and not adopting e-HR for users and non-users respectively.

(1) *Companies using e-HR:*
  - facilitation of the recruitment process;
  - benefits for communication; and
  - cost effectiveness.

(2) *Companies not using e-HR:*
  - limited usefulness;
  - security concerns;
  - inconsistency with practices used; and
  - other practical problems.

Figure 2 shows the areas that benefit from the use of e-HR, according to the respondents. The most important gains are believed to be in time management, operating cost reduction and company image. It is interesting to note that 90.9 percent of the respondents who reported minimization of mistakes as a main benefit of e-HR use it for PA purposes, and 75 percent of those who think that e-HR contributes to employee development use technology in training and development. Moreover, all the respondents who think that time management is an advantage of e-HR currently apply e-HR tools in reward management, or are planning to use it within the next two years.

The areas mentioned in Figure 2 can be grouped in three main categories: those concerning strategic goals (company image, goal alignment, cost reduction), those concerning HRM goals (employee satisfaction, employee development, employee retention, communication) and those concerning processes (decision-making, time management, mistakes reduction). An interesting finding here is the fact that HR experts perceive the adoption of e-HR practices to have a relatively less beneficial impact on pure HRM goals, as opposed to strategic goals of the organization.

E-HR effect on the role of HRM: present and future

Figure 3 shows the number of people employed in the HR departments of the companies in our sample. Only 5 percent of the organizations in our sample do not have a Personnel/HRM department. All the others have a well-staffed department (either Personnel or HRM, with the former indicating an administrative role, while the latter emphasising a strategic role of the function), with the exception of 17.6 percent where only one employee is in charge of the HR issues. Taking into consideration those specific characteristics of our sample, the following part clarifies the impact of e-HR on the current HR role.
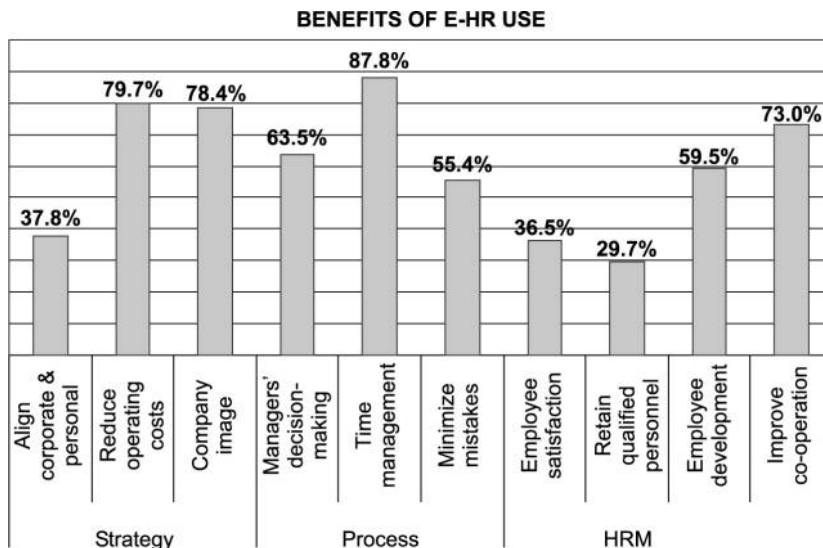

Figure 2.
Organisational areas that benefit from the use of e-HRM

STRUCTURE OF HR DEPARTMENT

Figure 3.
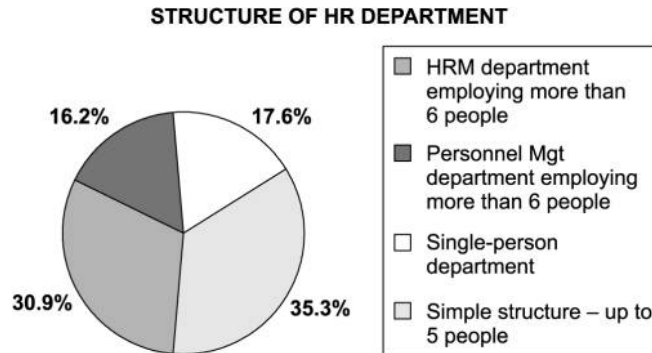Structure of personnel/HR
department

Figure 4 shows the main challenges that the HR department will face in the future. The majority of the respondents suggested that HRM would become an integral part of strategy in the future. As a result, HR departments are expected to become bigger, employing more HR professionals, which is the second major challenge identified by the participating HR managers. This finding is in contrast to the general view that HR departments are expected to shrink as a result of greater use of e-HR. However, the 19.4 percent of respondents expressing this view might be a reflection of either the high percentage of single-person departments present in our sample, or of a natural concern that existing HR departments should acquire more employees with IT skills. Another challenge is the assessment for service quality. HRM needs to satisfy its internal customers and provide excellent quality service. Increasing technology penetration and more investment in training will continue to challenge HRM in the future according to the participating companies. Although only about 8 percent of the respondents from our sample see the increasing use of e-HR as a challenge for HRM departments, their opinion is that the adoption of e-HR for various functions will become quite widespread in the next two years, as was shown in Figure 1. It has to be noted here that there is a significant percentage of 18.6 percent who are suspicious of e-HR expansion in the future, as it cannot replace personal communication and contact.

HR CHALLENGES IN THE FUTURE

Figure 4.
Main challenges that HR
department will face in the
future
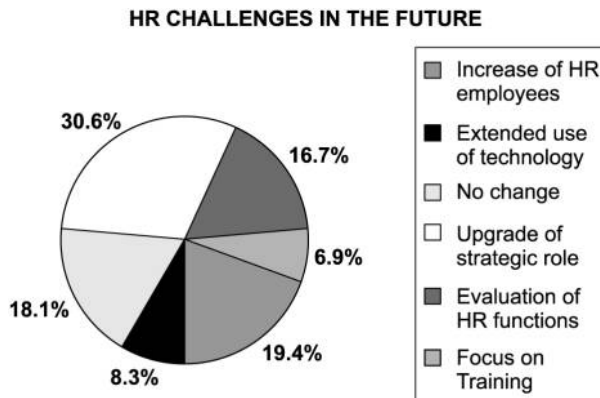
Overall, the respondents in our sample believe that the adoption of e-HR has many advantages for their HR departments (Figure 5). The majority state that e-HR has increased information (81.1 percent) and improved communication (75.5 percent) to employees. Also, they think that technology has played a part in reducing HR costs (55.4 percent), providing greater employee access to HRM issues (41.9 percent) and improving the services provided to their internal customers (40.5 percent). These findings suggest that e-HR can add value to the HRM department, and this is clearly why 87.7 percent of our respondents believe that the adoption of new technology will upgrade the role of the HR manager. On the contrary, a small percentage (12.3 percent) say that there will be no change in the status of the HR manager as a result of e-HR usage.

Finally, according to our respondents, electronic tools need to be improved. About 40 percent want their companies to introduce integrated systems and an equal percentage expect their organizations to invest in training regarding e-HR. Lower percentages expect electronic tools to become more user-friendly (15 percent) and quicker (7.5 percent).

Qualitative research

As described in the methodology section, three focus groups took place in order to look at the practitioners' view on critical success factors leading to e-HR adoption as well as the perceived changes in the role of the HR function. Focus groups results for each sector are discussed in the section that follows.

Manufacturing sector

E-HR adoption: Two of the participants clearly saw the benefits of e-HR and supported their future development. The third one argued that e-HR can certainly facilitate administration, but raised serious doubts about its expansion to other HR functions. They all agreed that e-HR adoption led to cost reduction and two of them said it facilitated decision-making.

All participants indicated organizational culture and individual IT competencies as critical success factors for e-HR adoption and use. They all commented that when
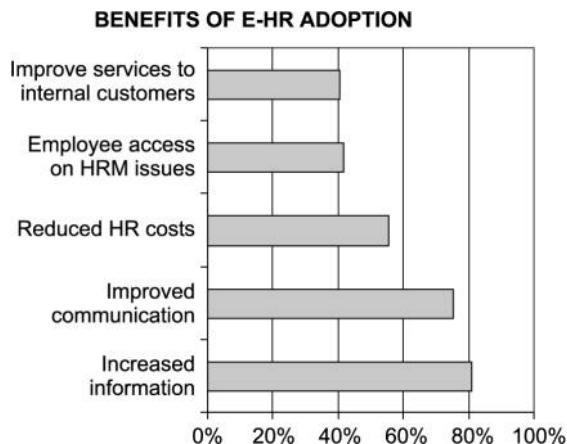
BENEFITS OF E-HR ADOPTION

Figure 5.
Benefits of e-HR adoption

culture supports e-HR use, then people gradually learn how to use the system and through this process they realize the benefits for both themselves and their organization. One of them argued that:

> We have had good feedback from people with knowledge-intensive jobs such as R&D that the use of a knowledge base or intranet for internal communication made their lives a lot easier.

Changes in the role of the HR function: All participants put emphasis on collaboration among departments. One participant specifically commented on the importance of collaboration between the human resources department and information systems department. One of the participants argued that:

> Some years ago we couldn't communicate. We didn't really know what system we needed and IT people couldn't understand our needs. Things are better now, my colleagues from HR are coming closer to technology and realizing its benefits and IT people are starting to understand HR functions.

They all agreed with the fact that one challenge that their departments face is to recruit and retain people with IT skills, flexibility and adaptability in order to further develop and implement e-HR.

Banking sector
E-HR adoption: Two of the participants indicated that their companies have just started adopting e-HR and, therefore, their employees are suspicious of e-HR use, although they have successfully implemented an intranet for internal communication. One of the participants said:

> Our employees don't really want to listen when we mention e-systems for HR purposes. They think that we have so many other problems that these systems seem to be a kind of "luxury" for our company.

All participants commented on the role of individual competencies related to IT as a critical success factor in e-HR adoption and use. Another critical success factor was the banking sector's characteristics and culture. They all agreed that the banking sector started the technology adoption process early on and before other sectors. As a result, the development of e-systems for customers introduced a new way of working which positively affected organizational culture and employees' attitudes toward technology adoption. One participant said that:

> Implementation of e-systems in general depends on how people perceive the benefits coming from this implementation and on the level of systems user friendliness. For people working in banks it is a lot easier since banks were among the first to implement e-systems for their customers.

HR professionals' IT skills and management commitment were also identified as critical success factors in e-HR adoption and use, although all participants commented that HR professionals need more training in using e-systems adequately. More specifically, one participant said that "in general HR professionals haven't associated their role with technology adoption and use". She continued that:

In our (HR professionals') mind, HRM is associated with traditional functions. It is even difficult for us to get used to technology and start doing things in a different way. It is usually the younger people in the department who can use e-recruitment at a satisfactory level.

Changes in the role of the HR function: All participants agreed that the adoption and use of e-HR would support HR functions, making administrative tasks less time-consuming and more effective. Apart from the administrative processes, other HR processes and responsibilities such as learning, innovation, communication, competencies management or career planning will be improved and supported with the use of e-HR. As a result, e-HR use can support not only the traditional HR role but also the alignment of HR functions with the organization's strategic objectives. However, two of the participants commented that HR "has a long way to go before results and benefits of e-HR adoption, especially for HR development, will be tangible".

Telecommunications sector
E-HR adoption: Results from the third focus group, which took place with participants from the telecommunication sector, confirmed that the nature of the sector differentiated the level of e-HR adoption and use. Telecommunications is a technology-oriented business sector and as a result, e-HR use and adoption started earlier than in other sectors. All of the participants agreed that the technological nature of the sector along with the development of a technology-focused/friendly organizational culture supported e-HR expansion. In addition, the telecommunications sector traditionally recruits and selects people with a high level of IT skills, which facilitated e-HR adoption and use. One participant said:

We found that out the hard way since we went through two mergers and as a result we had to deal with various levels of IT. The higher the IT level and awareness, the better the adaptation to e-HR systems.

Two of them argued that their company now uses e-HR for knowledge management and sharing, as well as decision support, thus enhancing the strategic role of HR.
Changes in the role of the HR function: The development and adoption of e-tools as a way to support not only traditional and administrative HR functions, but also knowledge sharing, innovation or e-learning will upgrade HR's role in an organization. All participants agreed that technology supports HRM's strategic role and makes its day-to-day activities less time-consuming and error free. One participant concluded that:

Technology has a lot more to offer. So it is up to the HR professionals to decide what they want and how they want it in order to upgrade their services and enhance their role.

Discussion
Level of e-HR use
An important conclusion that can be drawn from both the quantitative and qualitative study is that in general the Greek firms in our sample seem to lag behind in e-HR adoption, compared to other studies (e.g. Ensher *et al.*, 2002). This reflects the general pace of HR development in Greece, which is slower than in the rest of Europe. Studies concerning the practice of HRM in Greece have noted the gradual progress that has

been made in the field during the past years (e.g. Papalexandris, 1993). Developments in Greece are largely due to external environmental factors that dictate the move towards more competitive and goal-oriented policies and practices in HRM. Such factors include external competition, participation in the European Monetary Union, the higher educational level of professional management, and the way that multi-national companies based in Greece have developed and use HRM.

Most companies mostly use e-HR for Publishing of Information and Automation of Transactions

More specifically, the highest use of e-HR is reported in the area of internal communication. This was anticipated, given the fact that the major reason for the presence of a company on the internet was communication. Our results show that the use of technology in various HR functions will become quite widespread in the next two years. Close to 30 percent of those not already using e-HR intend to do so shortly. The anticipated increase is higher in the areas of PA and training and development. Those findings are not surprising. As far as PA is concerned, research shows that it is an area of HR where the use of computers is limited to information storage for administrative purposes (Ball, 2001). The increase in the use of 360-degree PA will result in the adoption of technological tools, as they facilitate the whole process in terms of distribution of PA materials, elimination of paperwork, higher response rate, less opportunity for error, speed, effectiveness in handling the data and reduced cost (Ensher *et al.*, 2002). It is no coincidence that the intranet in PA is used by the vast majority of the respondents who believe that the organization benefits from e-HR in terms of minimization of mistakes.

As for training and development, it is common knowledge that on-line training and e-learning provide a flexible, lower cost solution, which increases the individual's learning ability as well as the effective evaluation of the development activities (Ensher *et al.*, 2002). The anticipated reduction in the area of internal communication can be explained both by the already high use of technology (76.7 percent) compared to the other functions, as well as by the problems with on-line communication that the organizations experience, which include increased likelihood of misunderstandings and miscommunication (Ensher *et al.*, 2002).

Despite the current low level of technology utilisation, there are encouraging messages concerning the future exploitation of e-HR potential, as we anticipate a significant development, both quantitative and qualitative, in the use of e-HR within the next two years.

The majority of respondents maintained that e-HR can allow the transformation of HRM and close to 90 percent of them expect this to happen in the future.

Reasons for e-HR adoption
Concerning the reasons for e-HR adoption, it appears that, as the majority of the respondents are mostly concerned with staffing and internal communication issues, the main reason for e-HR adoption is facilitation of staffing procedure and communication.

Surprisingly, cost reduction has not been identified as a reason for e-HR adoption. This could be attributed to the early stage of e-HR in Greece, in combination with the lack of technical knowledge and IT familiarisation. These haven't yet allowed

substantial cost reductions to take place. In other words, the low adoption of e-HR means that adopting an e-HR platform is still quite expensive in Greece, so that cost benefits are not quite obvious from the beginning. On the other hand, this could mean that e-HR adoption is mostly driven by other considerations, such as quality in recruitment and communication, rather than cost effectiveness. However, concerning the benefits of e-HR use, time and cost savings appear to be much appreciated, along with the minimisation of mistakes.

It should be noted that e-HR adoption differs by sector type. Previous research has shown that a reason for earlier adoption of e-HR in technology-intensive sectors is image (Galanaki, 2002). Companies in IT want to show early adoption of IT tools from fear of staying behind, as this would not match their image. Also, introducing technology for customers (e.g. e-banking) positively affects employees' attitude toward technology.

Critical success factors in e-HR

Organizational culture appears to be a critical success factor for e-HR adoption, according to the focus groups. The effect of organizational culture on the adoption of e-HR has been discussed in the past, notably in relation to the emphasis that companies put on intense, face-to-face services (Lengnick-Hall and Moritz, 2003), as well as with the effect of culture on the change management that the transition to e-tools entails (Jackson and Harris, 2003). According to the latter, high-performance culture is more prone to accept change, and consequently electronic tools adoption.

Another success factor for e-HR is employees' IT skills. It appears from the focus groups that IT skills and familiarisation with them also facilitate e-HR adoption. This is the reason why HRM needs to invest in IT training and communicate the benefits of employee participation and involvement in e-HR services.

Collaboration of HRM and IT has also been identified as a critical success factor in e-HR adoption and use (Workforce, 2002). This collaboration can ensure successful integration of technology into HR process aiming at responding to the need for quality HRM services.

E-HR and the role of HRM

It seems that the role of the HR function can be upgraded by e-HR adoption, as is a common perception between the respondents of our study. This perception is confirmed by the fact that, according to HR experts, the adoption of e-HR practices has a beneficial impact on strategic goals of the organization such as company image, goal alignment and cost reduction.

As for the future, although close to 20 percent of HR managers appeared sceptical in relation to e-HR, as it is no substitute for personal contact and face-to-face communication, a striking majority (89.7 percent) of the respondents think that e-HR will upgrade the HRM role. In other words, they believe that in the future the transformation of HRM under all generations of e-HR (speed, quality, new achievements) will be reached.

Conclusions

The aims of this paper were to examine the reasons for adoption of e-HR practices, to identify critical success factors in e-HR adoption and to discuss the effect of e-HR on the future of the HR profession.

We have identified an array of reasons for the adoption of e-HR, with the most pressing of them lying in strategy (operating cost reduction and company image enhancement) and process (time management) considerations. Technology awareness and organizational culture, as well as collaboration between HR and IT, were promoted as the most critical success factors for successful e-HR adoption.

As for the role of e-HR in the future of HRM, we would argue that e-HR is a tool that can facilitate the transition from an administrative to a more strategic role for HRM, enabling it to improve the quality of its services. Within this context, e-HR adoption and use can be facilitated through cultivating an organizational culture, which facilitates the integration of technology in organizational processes and functions and promotes the collaboration between different departments such as HR and IT, in order to institutionalise this change. In addition, employees' IT skills and attitudes play a crucial role in the above-mentioned integration. So, HRM needs to invest in supporting people to develop the necessary skills and attitudes in order to actively participate and use the new services. It also needs to invest in communicating the benefits of these services, in order to eliminate any resistance or reluctance to use the new services.

This paper appeals to an audience of people who study or practice HRM, especially in countries experiencing a stage of HRM professionalisation and technological development similar to that of Greece. The findings of the current research can be extended to other countries that share the same traits as Greece, in terms of level of e-HR use.

In future research, many issues related to e-HR need to be explored, such as security and control of the data transferred through the new platforms, as well as the standing of the employee and the role of the trade unions *vis-à-vis* these new tools. A further study of the effect that the sector in which the company operates has on the use of e-HR would also be interesting.

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