

**HRIS: The Convergence of Information Technology and Human Resource Management  
Functions in Modern Business Environment**

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**Abstract**

*Technology and HRM have a broad range of influences upon each other. The paper begins by introducing a number of observations on the applications of information technology (IT) in the field of human resource management (HRM) in general. This is due to the fact that IT and its wide range of applications have already made their presence felt in this area. HR professionals should be able to adopt technologies that allow the reengineering of the HR function, be prepared to support organizational and work-design changes caused by technology, and be able to support a proper managerial climate for innovative and knowledge-based organizations. Today the information technology is indeed a base of development for countries and a benchmark practice for leading and successful organizations. These technological advances are being driven primarily by strong demands from human resource professionals for enhancement in speed, effectiveness, and cost containment. With the increasing effect of globalization and technology, organizations have started to use information systems in various functions and departments in the last decades. Human resources management is one of the departments that mostly use management information systems. HR information systems support activities such as identifying potential employees, maintaining complete records on existing employees and creating programs to develop employees' talents' and skills. HR systems help senior management to identify the manpower requirements in order to meet the organization's long term business plans and strategic goals. Middle management uses human resources systems to monitor and analyze the recruitment, allocation and compensation of employees. Operational management uses HR systems to track the recruitment and placement of the employees. HRIS can also support various HR practices such as workforce planning, staffing, compensation programs, salary forecasts, pay budgets and labour/employee relations. The results of the research give valuable insights about the success and effectiveness of HRIS in organizations. Also the results of the study are discussed in the context of the theoretical and empirical background of MIS and HRIS. This will be followed by a report on the findings of a survey on the present trends in organizations with in the different sectors. The results indicated that, while IT has an impact on all sectors in terms of HRM to certain extent, the types of IT used vary significantly between recruitment, maintenance, and development tasks.*

**Keywords:** *Information technology, human resource management, reengineering, management information systems, human resource information system*

**Introduction**

In recent years, the business world is undergoing a substantial change; the employee turnover rate becomes high, and both the organization structure and management pattern change as well. The traditional HRM style fails to catch up with such rapid changes: the traditional style mainly focuses on supportive personnel activities for a company, for example, collecting employee information, monitoring individual performance, and implementing organization policies etc. It is a passive, submissive execution, without self-motivated participation into strategic issue to foresee the challenges of tomorrow. Therefore, there comes a demand for the new HRM that should understand the business strategy, formulate the corresponding management strategy on human resources to improve delivered service, and act as a strategy partner with top management team. To meet the demand, there is an increasing pressure on HRM to support strategic objectives and to focus on value-adding activities, which consequently leads to the change in the job content and the expectations on Human Resource (HR) professionals. Shrivastava (2003) and Stone (2006) noted that one of such changes is that the wide, contemporary use of Information Technology (IT) in supporting various HR activities.

Moreover, the researchers expect that the increasing use of Human Resource Information System (HRIS) can improve the performance of HR professionals and makes them involved in the company internal consulting activities. In addition, Ulrich (1997) mentions that the use of HRIS provides value to the organization and raise HR professionals' status in the organization. HR professionals now have an increased capacity not only to gather information, but also to store and retrieve it in a timely and effective manner. This has not only increased the efficiency of the organization but also the effectiveness of management functions. The twenty-first century is characterized as the knowledge century (Chin-Loy and Mujtaba, 2007). Most of the organizations are now dependent upon knowledge workers and thus on effective knowledge management practices. The ability to not only attract and hire but also to retain and properly utilize these individuals is crucial knowledge for the survival and success of the organization. In this globalized world, a department that is increasingly becoming central to the implementation of organization policy is the HR department. Therefore, the HRIS is now considered an integral part of every organization (Waytt, 2002). More and more organizations are now developing information technology, which can help the organization achieve its goals in a timely manner. These information systems can then help the organization make more strategic decisions. HRIS is an effective tool that can be used for streamlining the administrative functions of the HR department. This can be achieved by creating an elaborate and relevant database. The data that an effective HRIS would have on individual employees can include training completed, awards received, projects participated in and finished successfully, level of education attained, number of years of service, skills, competencies, etc. By using this data, the HR department can make a contribution towards strategy formation within an organization. With an efficient HRIS in place, the development of HR systems becomes easier (Dessler, Griffiths, and Walker, 2004). Organizations must treat information as any other resource or asset. It must be organized, managed and disseminated effectively for the information to exhibit quality. Within an organization, information flows in four basic directions as upward, downward, horizontal and outward/inward (Haag & Cummings, 2008). Taking into account that there is a huge amount of information flow in organizations, it will be possible to understand the importance of information systems in organizations. The information systems field is arguably one of the fastest changing and dynamic of all the business professions because information technologies are among the most important tools for achieving business firms' key objectives. Until the mid-1950s, firms managed all their information flow with paper records. During the past 50 years, more and more business information and the flow of information among key business actors in the environment has been computerized. Businesses invest in information systems as a way to cope with and manage their internal production functions and to cope with the demands of key actors in their environments. Firms invest in information systems for the business objectives such as achieving operational excellence (productivity, efficiency, agility), developing new products and services, attaining customer intimacy and service, improving decision making, achieving competitive advantage and ensuring survival (Laudon, 2009).

### **Background of Human Resource Management and Information Technology**

The history of HRM is said to have started in England in early 1800s during the craftsmen and apprenticeship era, and then further developed with the arrival of the Industrial Revolution in the late 1800s. In the 19th century, Frederick W. Taylor suggested that a combination of scientific management and industrial psychology of workers should be introduced. In this case, it was proposed that workers should be managed not only for the job and its efficiencies but also for the psychology and maximum well-being of the workers. Moreover, with the drastic changes in technology, the growth of organizations, the rise of unions and government's concern and interventions resulted in the development of personnel departments in the 1920s. HRM is said to have started from the term 'Personnel Management' (PM). The term 'PM' emerges after the Second World War in 1945 as an approach by personnel practitioners to separate and distinguish themselves from other managerial functions and make the personnel function into a professional managerial positions. Traditionally, the function of PM is claimed to 'hire and fire' employees in organizations other than salary payments and training. However, there were many criticisms and concerns of ambiguity expressed about the purpose and role of PM to HRM (Tyson, 1985) Therefore, the term HRM gradually tended to replace the term PM (Lloyd and Rawlinson, 1992). However, writers argue that the term HRM has no appreciable difference from PM as they are both concerned with the functions of obtaining, organizing and motivating human

resources required by organizations. The rebranding of the term from PM to HRM was done due to the evolvement and changes in the world of management and therefore, a contemporary term would seem appropriate that can encompass new ideas, concepts and philosophies of human resources (Noon, 1992, Armstrong, 2000).

Information technology in the past decade drastically changed the human resources function. Providing support for mainly administrative activities such as payroll and attendance management in the beginning, information technology today enhances many of the recruitment function's sub processes such as long and short-term candidate attraction, the generation, pre-screening, and processing of applications or the contracting and on boarding of new hires. Online job advertisements on corporate web sites and internet job boards, online CV databases, different forms of electronic applications, applicant management systems, corporate skill databases, and IS supported workflows for the contracting phase are only few examples of the various ways by which information systems today support recruitment processes (Keim & Weitzel, 2009). In HR planning process, it is easier to follow workforce gaps, the quantity and quality of the labor force and to plan future workforce requirements with the help of HR knowledge systems (Dessler, 2005). HRIS can support long range planning with information for labor force planning and supply and demand forecast; staffing with information on equal employment, separations and applicant qualifications; and development with information on training programs, salary forecasts, pay budgets and labor/employee relations with information on contract negotiations and employee assistance needs (Shibly, 2011). Risk and security management is another crucial function, which can be derived by HRIS by following private and highly sensitive individual data and multiplatform security aspects, which are perhaps the most serious factors that need to be taken into consideration (Karakanian, 2000). HRIS is defined as an "integrated system used to gather, store and analyze information regarding an organization's human resources' comprising of databases, computer applications, hardware and software necessary to collect, record, store, manage, deliver, present and manipulate data for human resources function" (Hendrickson, 2003). An HRIS can perform a number of functions from the simple storage and communication of information, to more complex transactions. As technology advances, the range of functions that an HRIS can undertake increases. Actually HRIS is directed towards the HR department itself (Ruël, Bondarouk & Looise, 2004), but the use of HRIS can provide a number of benefits not only to the HR function, but also line managers, and the wider organization (Parry, 2009). The use of HRIS has been advocated as an opportunity for human resource professionals to become strategic partners with top management. HRIS allow HR function to become more efficient and to provide better information for decision making (Beadles, Lowery & Johns, 2005). The increased use of web technology to deliver HR will leave HR specialists more time for strategic decision-making and that outsourcing of people-management activities will liberate HR specialists to perform more strategic activities (Kulik & Perry, 2008). According to Ulrich (2007; 2009) as one of the strategic partners, the HR manager derives benefit from IHRS, to disseminate and execute the strategy within the organization. These systems enable employees to manage much of their own HR administrative work. They can take care of many routine transactions whenever they wish, because automated systems don't keep office hours. In addition to their former operational role, HR professionals can also act as a competency manager by arranging the right people to the right positions in the right time with their new strategic architecture role (Gürol, Wolff & Ertemsir, 2010). HRIS is thought to contribute to overall business performance by fulfilling or at least supporting the tasks of data storage and retrieval, of serving as primary administrative support tools, of reporting and statistics as well as of program monitoring (Ostermann, Staudinger & Staudinger, 2009). HRIS plays an important role for any organisation to effectively manage its human assets. Many organizations have adopted HRIS to assist their daily human resources operations. HRIS must align and satisfy the needs of the organization and its users in order to be successful (Noor & Razali, 2011). However, HR departments need to recognize some of the current limitations of web technology and its integration to the HRIS backbone. Similar to most e-business ventures, security of private HR information is a top priority. Organizations looking seriously into internet enabling of their HR businesses should evaluate the authentication, security, access rules, and audit trails related to service providers' networks, servers, and applications (Karakanian, 2000). On the other hand there can be undesired and unexpected consequences of HRIS. Undesired consequences refer, for instance, to an increase of quantity but a decrease of quality of applicants

in e-recruiting (Strohmeier, 2009). Another important aspect of using information systems is user satisfaction. It is often suggested as an indicator of Information System (IS) success. Many IS empirical researchers have regarded user satisfaction as important proxy of IS success and it is the most employed measure of IS success due to its applicability and ease of use. Within this literature, system and information characteristics have been core elements on user satisfaction, which is defined as the attitude that a user has toward an information system (Shibly, 2011).

HRM generally uses IT as HRIS. HRIS is an integrated system acquiring and storing data used to make analysis, make decisions in the field of HR. A contemporary HRIS is a dynamic database about employees' performance and demographic information. HRIS provides information about employees' data, employment, application requirement, job characteristics, and selection and staffing, procedures of employment, corporate structure, professional and individual improvement, education costs, performance appraisal, personnel planning, organizing etc. And these data are used for many purposes simple or complex (Lippert and Swiercz, 2005, 340–353; Bernik et al. 2007:130-133). Again, eHRM is an IT application for supporting or connecting at least two people or collective actors in participating HR activities (Strohmeier, 2007, 19–37). In recent years, HRIS is accessible (distance access applications, system intervention, upgrading) for users through internet. In other words, eHRM is a HRIS, which HR personnel, managers and other employees' access via internet or intranet. To increase the effectiveness of HRM, organizations are becoming more and more dependent on HRIS (Ball, 2001; Lippert and Swiercz, 2005; Troshani, et al., 2011). At the functional level, HRIS can keep track of employees', applicants', and contingent workers' qualifications, demographics, performance evaluation, professional development, payroll, recruitment, and retention (Harris and Desimone, 1995; Troshani et al., 2011). With HRIS, the administrative efficiency maintains faster information processing, improved employee communications, and greater information accuracy (Overman, 1992; Beadles, et al., 2005), lower HR costs and overall HR productivity improvements (Beadles *et al.*, 2005; Dery *et al.*, 2009; Wiblen *et al.*, 2010; Troshani *et al.*, 2011). Strategic value can be derived using HRIS tools that assist decision-making concerning vital HR functions (Farndale *et al.*, 2010; Troshani *et al.*, 2011). For example, an HRIS can be considered as a tool that provides strategic planners with the needed information enabling them to forecast future workforce demand and supply requirements. Moreover, it can be considered as a tool that helps employers in retaining the right employees. This can be done by paying them competitive salaries compared to the market, and training them to develop their skills and abilities to carry out their existing and future jobs.

### **Review of Literature**

In today's knowledge economy, the success of organizations depends mainly on the performance of their human resources (HR) (Lippert and Swiercz, 2005). Human resource management is about the procedures and practices that encompass the human resource aspect within organizations (Dessler and Al Ariss, 2012). Such practices should be connected to the overall strategy of the organization. This was discussed by Bratton and Gold (2003) who stated that "the strategic approach to managing employment relations which emphasizes that leveraging people's capabilities is critical to achieving sustainable competitive advantage". Many researchers supported this and commented that the change from a primarily administrative personnel function to a strategic position attends to re-design the nature of the HRM functions (see for example Ulrich, 1997; Sheehan and Cooper, 2011). The functions re-design is estimated to provide HRM with a better opportunity of impact on strategic decisions in order to eventually improve organizational performance (Bowen and Ostroff, 2004; Sheehan and Cooper, 2011). Such functions are planning, recruitment, selection, appraisal and performance management, reward management, development, employee relations, health and safety, and union-management relations (DeCenzo and Robbins, 2010). Furthermore, Akhtar and his associates (2008) added that training, participation, result-oriented appraisals and internal career opportunities considered a valid human resource management (HRM) practices. As mentioned above, many researchers have discussed the issue of HRM and its functionalities. For example, Martinsons (1997) and Beulen, (2009) investigated the issue of HRM functionalities and commented that distinguishing these functionalities arises from the perspective of organizational and employee-centric view. They added that the strategic dimension for organizational continuity and prosperity relies immensely on value and importance of the human capital, which identifies the knowledge as a significant part

of this capital. These functions are human resource planning, staff development and regulatory compliance, benefits administration, performance appraisal, and recruitment and selection.

Technology is a set of processes, methods, techniques, tools, equipment, machinery and skills that a product or service is offered by them. Technology is the application of science to industry, using regular and directional practices and research (Tarogh, 2002). The use of technology in HR has expanded spectacularly and is continuing to change HR management activities with executives, managers, and employees (Mathis and Jackson, 2010). HRIS has grown in popularity since the 1960s (Lederer, 1984). A survey conducted in a study carried out by Ball (2001) showed that 60 percent of Fortune 500 companies during late 90's use the HRIS to support daily human resource management (HRM) operations. HRIS is now used not only for administrative purposes but also for strategic and business decision-making purposes (Broderick and Boudreau, 1992; Kossek et al., 1994; Kovach et al., 2002). When the HRIS function was computerized, fast decision making was able to take place in the development, planning, and administration of HR because data became much easier to store, retrieve, update, classify, and analyze. In addition, an HRIS can strengthen an organization's character in general (Sadri and Chatterjee, 2003). Tracking information concerning an applicant's or an employee's qualifications and demographics, recruitment, professional development, performance evaluation, payroll, retention, and attrition are essential for success at the HR functional level (Harris and Desimone, 1995). This was supported by many researchers who commented that in order to increase the effectiveness of HRM, organizations are becoming increasingly reliant on HRIS (Troshani et al., 2011). Accordingly, by facilitating improved access to metrics, HRIS can improve administrative efficiency through faster information processing, improved employee communications, greater information accuracy, lower HR costs and overall HR productivity improvements (Beadles et al., 2005; Dery et al., 2009; Wiblen et al., 2010; Troshani et al., 2011). Furthermore, more and more companies use an HRIS to actively support both their HR management and their business management (Shrivastava and Shaw, 2004; Hussain et al., 2007; Lepak et al., 2006; Beulen, 2009).

An HRIS can be defined as "a composite of database, computer applications, hardware and software necessary to collect/record, store, manage, deliver, present, and manipulate data for human resource" (Broderick and Boudreau, 1992). The literature shows many previous related studies in HRIS, however, most of them were theoretical (Ngai and Wat, 2006). In addition, most studies were conducted in the context of developed countries' organizations. Ngai and Wat (2006) conducted a survey of the implementation of HRIS in Hong Kong organizations. They found that the greatest benefits of the implementation of HRIS were the quick response and access to information that it brought, while the greatest barrier was the insufficient financial support. In addition, Ngai and Wat (2006) reported many other previous related studies conducted in HRIS implementation. For example, a study of Martinson's (1994) aimed to compare the degree and sophistication in the use of IT between Canada and Hong Kong. Martinson found that the use of HRIS was less widespread in Hong Kong than in Canada, while IT for HRM was applied more in Hong Kong than in Canada. Ball (2001) conducted a survey in order to explore the uses of HRIS in smaller UK organizations and found that smaller organizations were less likely to use HRIS. Moreover, Burbach and Dundon (2005) conducted a study to assess the strategic potential of HRIS to facilitate people management activities in 520 organizations in the Republic of Ireland. They found that foreign owned large organizations adopted HRIS more often than smaller Irish owned organizations. They also found that HRIS technologies were used for administrative rather than strategic decision-making purposes. Another recent study conducted by Delorme and Arcand (2010), aimed to elaborate on the development of the roles and responsibilities of HR practitioners from a traditional perspective to a strategic perspective, found that the introduction of new technologies in the organization affected the way HR professionals accomplished their tasks within the HR department and the rest of the organization. The study of Krishnan and Singh (2006) explored the issues and barriers faced by nine Indian organizations in implementing and managing HRIS. The main HRIS problems were lack of knowledge of HR department about HRIS and lack of importance given to HR department in these organizations. Cooperation is required across various functions and divisions of the organization for proper implementation of HRIS. Today, in every organization, the use of information technology and information systems is discussed and the usefulness or necessity of using a computer is discussed anywhere. Thus, managers have encountered a question in the investment to apply Information Technology in their organizations: "where is the investment border in

technology?" It is natural, technology will be more important as a cost-effective way than the traditional methods; so managers need to know to what extent the application of information technology systems are efficient and effective. On the other hand, the IT affects indices that all are among the primary conditions for the success of modern organizations. The identification of this has been the major concern of organizational decision makers (Rezaiean and Taghizadeh, 2007). A large volume of research has taken into consideration positive aspects of IT. However, ongoing research, and their performance description warn ways in which information technology affects the social and organizational life (Tarafdar et al, 2013). The use of information technology along with the various information systems that are designed for different needs has been developed. IT enables managers to communicate more and better with the organization, the environment and each other. More participation in decision making, increasing the speed of decision making, increasing the speed of identifying the issues, reducing the height of the organization pyramid, improving coordination and increasing professional staff, are just some of the effects of information technology and information systems have on some of organizations (Mehrinezhad, 2002 ).

### **Objectives of the Study**

1. To find the impact of Information Technology in Human Resource Management
2. To identify the different types of IT tools used in HRM functions
3. To identify the key benefits of application of IT in Human Resource Management

### **Research Methodology**

A study of a qualitative nature was conducted via semi-structured interviews among randomly selected middle-level managers across business sectors. Sectors targeted include construction, transportation, and manufacturing. Overall, a total number of thirty respondents participated in the study. The aim was to uncover their viewpoints and experiences as well as gauge their level of awareness of Information Technology in HR department either as individuals or as part of their organizational practice. The secondary data was collected from various Publications in Books, companies' catalogues, Magazines, Journals, E-Journals, Periodicals business reviews.

### **Limitations of Study:**

The study is limited to Thane District, Maharashtra-India and the majority of the information is collected from various secondary sources.

### **Benefits of Information Technology**

The implementation of Human Resource Information System varies between organizations. Some use it to reduce costs, others to facilitate better communication, and some use it to re-orient HR operations to increase the department's strategic contribution. HRIS provides management with strategic data not only in recruitment and retention strategies, but also in merging HRIS data into large-scale corporate strategy. The data collected from HRIS provides management with decision-making tool. An HRIS can have a wide range of usage from simple spreadsheets to complex calculations. Through proper HR management, firms are able to perform calculations that have effects on the business as a whole. Such calculations include health-care costs per employee, pay benefits as a percentage of operating expense, cost per hire, return on training, turnover rates and costs, time required to fill certain jobs, return on human capital invested, and human value added. It must be noted that none of these calculations results in cost reduction in the HR functions. The aforementioned areas, however, may realize significant savings using more complete and current data that can be made available to the appropriate decision makers. Consequently, HRIS is seen to facilitate the provision of quality information to management for informed decision-making. Most notably, it supports the provision of executive reports and summaries for senior management and is crucial for learning organizations that see their human resources as providing a major competitive advantage. HRIS is therefore, a medium that helps HR professionals perform their job roles more effectively. This can be implemented at three different levels, i.e. the publishing of information, the automation of transaction, and finally transforming the entire working of the HR department so it plays a more strategic role and adds more value to the organization. It is, however, very difficult to ascertain the value addition made by HRIS on the revenues and profits of an organization since strategic HRIS is beneficial in facilitating the

decision-making process. These decisions can result in greater employee motivation and satisfaction and both are extremely difficult to quantify.

Technology affects organizations and work relations in organizations by enabling to access information and to join people electronically. With new processes and providing some benefits HRIS changes traditional HR processes and it is expected that HRIS will provide functionality for realization of units' objectives and goals. The following are the few benefits of using Information Technology in HRM functions.

1. **Cost Reduction:** Effects of IT on HR costs appear in several ways. First, IT reduces costs of processes and works. For example, transforming from traditional HR to eHR reduces costs of some HR applications, such as, postal cost, announcement cost and data processing cost. Using self-service technology reduces the processing costs of HR up to 75%. E-selections and e-recruiting decrease costs of staffing and selections due to reduced employee turnover, reduced staffing costs, and increased hiring efficiency. Second, using self-service HR allows employees to perform their own work themselves directly. Thus, HR professionals spend less time on routine tasks.

2. **Time Saving:** IT allows HR professionals to spent less time on routine tasks and make easier to acquire and analyze information. For example, researches show that recruiting process shortens twelve days (Baloh and Trkman, 2003: 498-505).

3. **Increase in Efficiency:** Intense use of IT aromatizes and standardizes routines. HR professionals may focus less on administrative activities and more on interpreting information. HR professionals may spend more time on other aspects of their jobs. Thus, HR professional can access more information, respond the problems in a timely major from managers and employees and evaluate the complex information more effectively. Comparing with manual processes, reducing data errors, simplifying and fastening processes of HR practices make HRIS more advantageous.

4. **Enabling communication and collaboration:** IT is a tool for effective communication and collaboration. E-mail, messaging, discussion lists, videoconferencing, virtual teams, electronic workgroups, and tele-working have changed the nature of workplace communication and collaboration. These make workplace interactions possible for employees even they are not physically present in the workplace. IT improves the skills of workers for collaborating, accessing information and decision-making. Participative decision-making becomes an organization-wide activity. Internet and web based technologies facilitate sharing of decision-making responsibility through the organization hierarchy and structure. HRIS as an integrated system also increases the capacity of reporting in the organization.

5. **Competency Management:** IT tools enable HR professionals both to reach larger candidate pool and make decision making more objective and effective to employ more relevant and competent candidates by means of decision making techniques in the selection and recruiting process. Improving and shortening the recruiting process increases competencies of incumbents and as a result quality of works. At the same time, because of distance access e-HR can be used to develop human capital of the organization effectively.

6. **Knowledge Management:** Knowledge management is a systematic process of acquiring, creating, capturing, synthesizing, learning, and using information, insights, and experiences to enhance decision-making. Knowledge management system is a natural extension of HRIS and HR development activities. HR professionals should integrate traditional HR functions into knowledge management. Because organizations should acquire and manage, organizational knowledge to prevent knowledge looses when employees leave the job. Using IT tools such as intranet, virtual collaborations, data storage and data mining can improve skills for knowledge acquisition and distributions. Knowledge Management tools also facilitate knowledge participation and empower the specific task areas. IT assists HR professionals to access and disseminate information more efficiently.

7. **Structuring Strategic HR:** Strategic role of HR focuses on aligning HR activities with HR strategies. Therefore, HR should work with managers and line managers in collaborations. IT is accepted as an important impetus for strategic HR. IT builds stronger HR units and allows HR to engage in more significant strategic roles. IT solutions free HR from the burden of routine administrative tasks.

If HR professionals rely on IT, they hold a more strategic role. Because they will have time to interpret information, develop strategies and think about corporal transformation.

### **Findings**

Beside IT is an important instrument for realizations of HR functions, widely use of IT in the HR functions affects HR management in many aspects. Few are listed below-

a. Traditional HR functions: Use of IT within the HR functions increases effectiveness and efficiency of HR practices, decreases time and costs. Moreover, IT facilitates distributions of information along the organizational hierarchy; it empowers organizational decision making and knowledge management.

b. New HR process: Self-service HR, e-learning and e-recruiting are new processes. These are possible only with IT tools. These new processes regarding effectiveness, efficiency and cost create more value than traditional HR processes do for the organization.

c. New types of working: Widely use of IT in the business creates new types of works such as tele working and web based project contracts.

d. Strategic impact: IT is a very important force for the transformation of HR functions. IT decrease transactional burden on the HR functions. Therefore, HR professionals devote more time for the strategic issues to be a strategic partner.

e. New Competencies: Transforming HR management from administrative functions to strategic focus defines new competencies of successful HR professionals. These competencies are business knowledge, change management and technological competencies. HR professionals can be unsuccessful in adaptation of IT in business although they know about technology. In order to be an important player in an organization and to create value for the organization HR professionals need to know about business and its environment.

f. Adaptation of IT also changes the routines, business processes and work habits. Therefore, HR professionals need to have the competencies of change management. HR managers need also new competencies on IT and more knowledge on facilities of IT before they had in the past.

g. The main IT tools used in HRM functions includes Application software (such as DBMS, used to accomplish HR spreadsheets, data mining/data functions, warehousing), information system software (such as decision support systems, executive information systems, expert systems), information and communication technologies (ICT) (such as LAN/WAN/neural network, internet/intranet, web portals)

### **Conclusion**

Information Technology is considered to be one of the most important elements that affect the activity of human resource department. This was supported by the main objective of this study of having a relationship between information systems and human resources functionalities. As a consequence of the advancement of information technologies and evolvement of e-HR organizations have become more competitive by reducing costs and improving productivity, quality and profitability in HRM area. Modern businesses and industries are taking suitable steps for the implementation of IT in the key area of the management of human resources by enabling the employees to make their optimum contribution to the gaining of a competitive advantage. This study investigates the extent and comparative impact of IT use on HRM functions in organizations from different sectors. It has also taken into account the usage pattern of different IT tools to perform different HRM functions in organizations. Based on the survey data, the results firstly indicated that IT has significant impact on all sectors in terms of management and planning tasks and, secondly, that type of IT used varies significantly for the tasks of recruitment, and maintenance and development functions. The findings also support the conclusion that the use of IT is pervasive in the organizations for their HRM activities. However, there is no standardization in the integration of computer software into main HRM activities. This may be explained by the gap between job requirements and the ability of employees to perform HRM tasks. In general, organizations do not have portals exclusively for HR functions and use different computer software for similar HRM functions. This also means that these technologies are not systematically and maturely used for HRM functions.

It was found that strategic integration, forecasting and planning, human resources analysis, and communication and integration have no relationship with human resource functionalities. Whereas, it was found that performance development, knowledge management, and records and compliance as dimensions of human resources information systems have a relationship with human resources functionalities, accordingly, an effect over them. HRIS is mostly being employed as an administrative tools more than a strategic one. The holistic view of the role that HRIS can play in improving the efficiency and integration of HR department into a more strategic role was missing. The respondents could not establish a direct link between HRIS and its impact on their routine work. There was a lack of clarity as to the exact value the HIRS system would add to the organization. So even though HRIS appears to have tremendous promise it has not been fully utilized according to its potential. However, more research should be done in other sectors to see whether these finding are similar in different industries. In addition, it is found those employees' perceptions of HRIS show difference according to their position and satisfaction of employees from HRIS shows difference according to their position. The results of the research reveal that HR employees perceive HRIS useful and they are satisfied with the system. It was found that both HRIS perception and HRIS satisfaction of employees show difference according to position variable. This finding may have its source from the limited access of HRIS functions depending on the positions of employees. Thus future studies should also consider the relationships between the access limitations to information content and functions of HRIS and user satisfaction. Overall present research provides valuable insights into the study of utilization of IT in different HRM functions.

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