Role of Internet and Information Technology for Improving Human Resource Management Services: An Empirical Analysis

Sangamesh[1] Dr. Anita Sharma[2]

[1]Research Scholar, CMJ University, Shillong, Meghalaya

[2]Professor of Human Resource Management, CMJ University, Shillong, Meghalaya

Abstract - Managed information technology all science can influence and establish a relationship with the complex among the important role has played in all scientific fields. Information technology has caused today no boundaries and distance world, for circulation there is no information and all aspects of human societies. Like how to live, work and Human Resource Management in organizations, offices and unexpected extent. the subject has been these changes will be effective when the domain ICT activities identified and the creation of these activities will be provided. In this paper, a brief review the impact of technology information the Human Resource Management the business objectives of the organization and satisfaction of employees has been set.

The study sought to examine the impact of human resource information systems on human resource management service delivery in public and private organizations. The study adopted a cross sectional and quantitative survey design. A sample of 92 respondents was drawn from a study population of 110. The stratified random sampling technique was employed to categorize the respondents and purposive random sampling was used during the selection of the sample. The SPSS computer package was used to analyze the data collected by use of a research administered questionnaire.

Findings indicate that 75% of the staff in the HR departments did not possess the required competencies to operate the HRIS and that as a result of the combined knowledge and skills on the HRIS. In regard to the assessment of the impact of Human Resource Information Systems on Human Resource Management Service Delivery, the findings revealed that due to the availability of the HRIS, the HRIS had improved the HR functions at the organizations, HRIS improved the data maintenance process and HRIS improved the data input process.

The present 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. This will be followed by a report on the findings of a survey on the present trends in organizations with in the different sectors in Turkey. Although the impact of IT on HRM has long been attracting the interest of academics, no empirical research has ever been realized in this field in Turkey, and few studies have been reported elsewhere. The survey was conducted among the 106 IT managers and professionals from various sectors, based on whose results, the data shows that IT is used extensively in the organizations to perform HRM functions in Turkey's dynamic economy. The results also 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. However, the empirical results here reveal that these organizations are not applying these technologies systematically and maturely in the performance of HRM functions.

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INTRODUCTION

Internet has transformed our lives and the way we communicate, how we learn, how we work and spend free

time, in essence – it has more or less changed every aspect of human society one can think of. The significance of the Internet and information technology (IT) in both business and private field has grown considerably in the last years, with exponential growth of Internet users and services offered.

Since – in today's business environment – people and their knowledge are company's key assets, it is obvious and expected of each company to be aware and prepared for such changes. Not only (or not at all) are the IT specialists ones that should be aware of the new trends and understand them, but also (or even first and foremost) the managers.

The intention of this paper is to present some ways for a company to adapt to emerging changes. A continuous monitoring of environment and prompt reaction to existing (and coming) challenges can assure a long-term survival of most of today's companies. At that, coverage of the paper is not focused on "dot com" (internet) companies rather than on "ordinary" (traditional) companies.

Information technology (IT) is recognized as a critical infrastructure in many organizations. IT is also emerging as an effective contributor to organizational performance. It is often argued that success of the IT induction is attributed to strategy, consistent delivery, systems usability. This finding suggests that human resources (HR) in the organization play a vital role. Information systems (IS) research has recognized the importance of HR in the IT acquisition process. In this paper, the IT acquisition process is considered as a staged process, and the stress is on HR contributions. Further a framework is discussed and structural equation modeling (SEM) is used to understand the organizational readiness.

Human Resource information is key to making effective strategic decisions. Therefore, the use of Human Resource Information Systems (HRIS) has been advocated as an opportunity for human resource (HR) professionals to contribute to organizational strategy. According to Lengnick-Hall, Mark & Moritz (2003) HRIS is a system used to acquire, store, manipulate, analyze, retrieve and distribute pertinent information about an organization's human resources. It is often regarded as a service provided to an organization in the form of information. Human resources and information technology are the two elements that many firms are learning to use as strategic weapons to compete (Ball, 2001). HRIS are expected to make the HR function more efficient but the question remains whether HRIS has lived to this. HRIS are designed to support the planning, administration, decision making and control activities of human resources management (Brown, 2002).

Lengnick-Hall and Moritz (2003) posit that HRIS needs to be implemented at three different levels: the publishing of information, the automation of transactions and finally a change in the way human resource management is conducted in the organization by transforming HR into a business strategic partner. In their view, the evolution of HR as promoted by HRIS evolves from information to automation and from automation to transformation. While HRIS have been widely adopted, a transformation of human resource management service delivery has occurred in relatively few organizations hence appreciation of human resource services remains a key question.

Most public and private organizations have weaknesses in human resource service delivery because of the continued use of manual human resource systems. This explains the limitations faced during acquiring, storing, manipulating, analyzing, retrieval and distribution of critical human resource information. Although HRIS helps constitute activities involved in human resource management, not all organizations consider investing in it. For some managers and or employees the response and efficiency of the HRIS would be of greatest importance, for others the security and privacy issues might be more important, and still for others what matters most may be the system design and ease of use.

Technology and HRM have a broad range of influences upon each other, and 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. These technological advances are being driven primarily by strong demands from human resource professionals for enhancement in speed, effectiveness, and cost containment.

Snell, Stueber, and Lepak5 observe that HRMSs can meet the challenge of simultaneously becoming more strategic, flexible, cost-efficient, and customer-oriented by leveraging information technology. Many experts forecast that the PC will become the central tool for all HR professionals. Virtual HR is emerging due to the growing sophistication of IT and increased external structural options. IT is beginning to enable organizations to deliver state-of-the-art HR services, and reduced costs have enabled companies, regardless of the firm size-to purchase HR technologies.

One of the impacts of IT is that it enables the creation of an IT- based workplace, which leads to what should be a manager's top priority-namely, strategic competence management. Advances in IT hold the promise of meeting many of the challenges of HRM, such as attracting, retaining, and motivating employees, meeting the demands

for a more strategic HR function, and managing the "human element" of technological change in the future. HRM could support the efforts of technological innovation's to achieve high performance while such innovation; itself could serve as an approach to enable the HR function to focus more on value-added activities in order to realize the full potential of technology and organizational strategy. The biggest benefit of using IT in HRM to organizations is the freeing of HR staff from intermediary roles, thus enabling them to concentrate on strategic planning in human resource organization and development. Caudron has also observed that IT can automate other routine tasks such as payroll processing, benefits administration, and transactional activities, so that HR professionals are free to focus on more strategic matters such as boosting productivity.

Substantial benefits of communication and information technologies can seamlessly migrate to HR applications. Those managing the human resource functions have not ignored such advice and, as a result a widespread use of human resource information systems (HRIS) has taking place. An HRIS is a systematic procedure for collecting, storing, maintaining, retrieving and validating the data needed by an organization for its human resources, personnel activities and organization unit characteristics. HRISs can also provide the management with a decision-making tool rather than merely a robust database. Turek20 offers numerous examples of how HR technology has reduced the response time and enhanced the quality of HR service in the workplace.

INTRANETS IN HUMAN RESOURCES DEPARTMENTS

Some suitable technological developments are required to implement the idea of *employee self- service* we have mentioned in the previous paragraph. Among them stand out Intranets. The Intranet is a powerful tool which can, if correctly used, encourage communication and collaboration in the firm, tidy up procedures and provide its staff with permanently updated information, even if the staff are scattered all over the world. The reasons that have led large firms to install Intranets in their HR departments are not only linked with the transfer of HR data management to employees and functional managers themselves. A review of the specialised literature (Alberston, 1999; Ammenheuser, 2000; Burzawa, 1997; Geoffrey, 1997; Kristen, 1997; Rogers, 2000 and Stedman, 1999) gives us reasons like the following:

- Collecting, communicating and sharing information with employees.

- Automating access and administration to databases.

- Simplifying the distribution of complex information, presenting it much more thoroughly and graphically.

- Building an infrastructure which increases people's effectiveness in the accomplishment of their aims.

- Helping managers to identify experts on the basis of such criteria as skills, knowledge, experience and place of residence.

- Installing best practice files, which spares people who consult them from having to start each project from scratch and makes it possible to locate experts in one particular field within the firm.

- Creating *on-line forums* which allow an employee that is assigned to a project in a specific sector to connect with one forum and seek advice from the firm's experts.

The same as reasons are diverse, it is also easy to find arguments in the specialised literature about the numerous advantages derived from the building of an Intranet from the point of view of HR management (Blair, 2000; Dawson, 1998; Hirschfield & Currie, 1997; Perussina, 1998; Perussina, 2000; Quinn, 2000). Among *hard* benefits, we can highlight the following: paper and edition savings; updating easiness; reductions in the number of answers to employees' repetitive questions; the possibility of consulting, at any given place and time, a wide range of reference materials.

However, before building an Intranet, any firm should have a clear idea of its future use. If an Intranet is developed only because it is in fashion, the Intranet runs the risk of being eliminated for not providing added value to the organization. The main value will appear when people change the way in which important organizational procedures are carried out. A successful Intranet project must be linked with the analysis of existing procedures in order to determine where it is possible to obtain the best profits.

When this has become clear for an organization, it will have to solve other more technical or operational aspects: changes in the organizational structure; *hardware*, *software* and security system requirements; responsibility assignation mechanisms, both regarding the capacity to publish and in relation to contents and updates; identification of potential users along with their levels of interest; methods to detect specific information needs; systems of solutions to conflicts derived from the excessive expectations the project can generate.

Impact of ICT and Internet on Organization

Information and communication technology and the Internet have not affected only the IT professionals and those employees that use IT for their work on a regular basis but also the environment of the organization, organization itself and the "social universe" (Drucker, 2001). Managers need to be aware of these changes, try to sense them in advance and adapt to them appropriately.

Especially in the field of employee-motivation we can expect essential changes. Even though visionaries predict deep and fundamental shifts in society, authors believe that first and foremost task of managers will remain motivating employees: firstly to arouse needs in employees and secondly to show them the way how to satisfy those needs in a manner, which contributes to achievement of organizational goals.

Yet if the fundamental concept remains the same, the changes will most definitely occur in employees' values and consequently in their needs and in a manner in which their needs are satisfied. It is expected that "traditional" needs, i.e. salary and benefits, guarantee for permanent situation, loyalty to the company etc., will gradually lose their meaning. Info world's research (2000), that was undertaken between IT professionals, reveals that most of them feel that the most important benefit, expected from a company, is possibility to work from home, with salary and chance for promotion being less important (Ba ttey, 2000). IT professionals are, naturally, more susceptible to novelties, therefore the cited research cannot be taken as representative situation in other professional fields, yet very similar changes can be expected elsewhere as well.

We can compare this finding with a survey of Slovenian employees (Siok, 2002). 51 different companies and over 5.100 employees (mostly middle management positions) participated in the study. The most interesting finding is that employees– out of 13 possible categories – ranked salary and chances for promotion as categories, which they were least satisfied with. Although the results cannot be directly compared with the Info world's survey due to different methodology and structure of population surveyed, this possibly shows that Slovenian companies as yet lag behind their US counterparts in that area and that the goals of Slovenian employees (higher salary, better chances for promotion) are still different (and more "traditional"). However further changes in the values and needs of Slovenian employees can be expected in the near future as we make further steps in knowledge economy.

Information and communication technology offers numerous possibilities to improve information management in organizations and therewith make better use of employees' knowledge. One of such options is use of intranet as internal information system of a company, which is based on Internet protocols and services (Turk, & Jaklic, 1998). It enables relatively inexpensive and simple storage, organization, processing, maintenance and sharing of information between organizations' members; all these tasks are essential for good information management, according to (Marchand et al., 2001). At the same time such information is (in technological manner at least) securely kept from the outside world.

DEVELOPMENTS IN THE UTILIZATION OF IT IN HRM

Given the scope of human resource management functions, an effective HRMS must address a range of administrative, statutory, functional and technological requirements in order to enable the HRMS to support the partnership between HR professionals, program managers, finance staff, executives and employees; while also providing accurate, reliable information for organization-wide planning and decision-making.

Companies are also advised to establish long-term relationships with technology vendors. Surveys have shown that more than 90 percent of HR departments operate with some form of computerized HRMS. In a survey undertaken by the Institute of Manpower Studies, a number of key changes were found to have an impact on the use of HRMSs. These changes included the development of the HR function itself, which resulted in the closure of many centralized IT functions, and today, the majority of HR applications are networked.

In the mid-1990s, due to business process reengineering and integration of information from diverse applications, Enterprise Resource Planning (ERP) became popular among organizations. Watson Wyatt Worldwide (now Towers Watson) discovered in a survey of 649 firms that nearly every organization had made significant investments in some combination of enterprise resource panning (ERP), HR service centers, interactive voice response (IVR), voice recognition systems (VRS), Web applications and employee portals. The value of ERP is its ability to integrate other functions with HR under a single vendor and common technology standards. In the leading ERP systems some of the HRMS components permit the use of the internet to reduce transaction costs. For example, the HRM capability of the PeopleSoft package (one type of ERP software) was used to track the movements of 5,000 employees across 70 locations and calculate their salaries accurately. Consequently, when operational benefit in payroll processing was considered, cycle time was reduced from four days to four hours. Thus, accurate, time-effective information delivered to managers improved the speed and

quality of decision making and assisted cost control. Moreover, in keeping with changing demand patterns, most ERP vendors have introduced second generation Web-based HRISs that are easier to integrate with other applications.

With the "e-wave" also reaching the area of HRM, the terms e-HR or e-HRM are being used increasingly when referring to the next development stage in IT-based HRM.64 A recent development in the functionality of HRM systems has been the transition from client/server-based systems to Web-based access. This has resulted in

new options for "self-service" routines for various HR functions. In terms of e-business, the implications for the HR function are not yet fully visible, but it is certain that e-HR will revolutionize the HR function within the next few years. The main challenge in e-HR is the alignment of processes in the HR function according to the future e-business challenge. In most companies, the shift to e-HR from a paper intensive environment represents a significant cultural change, particularly for employees. These e-HR systems also offer various search capabilities, such as those for conducting organization-wide searches related to global staffing as well as extensive report generation options.

METHODOLOGY

The present study performs a systematic and exploratory analysis approach to investigate the impact of IT applications on HRM functions. The hypotheses were categorized according to the following empirical factors:

• Use of IT

• Type of IT tools

Use of IT : IT can bring numerous improvements to organizations. Snell, Stueber and Lepak pointed out that IT has the potential to lower administrative costs, increase productivity, lower speed response times, improve decision making and enhance customer service, simultaneously. The effective management of human resources also has an important role to play in the performance and success of organizations. However, despite evidence of the increasing use of HR-related technology by individual firms, there has been little theory development in this area and academia has failed to give the impact of IT on HR in organizations from different sectors the attention it deserves.

Types of IT tools : A computer that runs faster with a great deal of storage space and high resolution graphics capability is useless without software that fits the

organizations' needs. According to Calhoun et al., IT is an important component of the organizational decision process. The use of IT is always based on the needs of an organization and the nature of information systems varies depending on the particular form taken by the organization. Some researchers investigated the relationship between organization characteristics and the use of IT, and factors influencing the use of IT in organizations.

On the other hand, culture, control and competition as the constitution of subjectivity, determine the locus of IT application in organizations. These studies do not consider the relationship between types of software used in organizations and their internal operations. It is evident from previous studies that types of IT tools in HRM functions were given due consideration. Elliott and Tevavichulada bring some data that shed light on the types of software applications taking place in HRM and their integration to HRM activities.

CONCLUSION

Information technology lifestyle work, research, education, management and many other fields. changed and the strengthening and development of professional skills, Perceptual skills, decision making skills, Research skills and to help institutionalize change and innovation staff the role is managers to increase power and Development Authority requires the application of information technology the organizations are One of the parts that information Technology in the most on it affects human resource is in this regard, it is necessary director of Human Resources role that information technology can be used for human resource management to play, evaluated using the required fields In order to better provide staff duties, otherwise of Human Resources especially in terms of achieving goals be weak.

When assessing the critical human resources information systems required for effective human resource management service delivery, it was revealed that the staff in HR department did not possess the required competencies to operate the HRIS, much as the quality of services offered by our staff had improved as a result of the use of the HRIS, that as a result of the combined knowledge and skills on the HRIS, the performance of HR staff had improved, the core competencies of the HRIS were clearly defined, competent HR staff were the key to the future success of the HRIS and the ability to create, apply and extend knowledge promoted the success of the organization.

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.109 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.

Low levels of integration of software and HRM functions can be related to fear based on ignorance and low levels of knowledge and training in IT. 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 included in the analysis in Turkey and this situation is expected to continue in the near future. With this backdrop, HR departments should spend more attention to the education and training of employees in HRM departments in the area of IT.

Future empirical studies should examine the impact of IT on more HR functions in different organizations in other parts of the world to make a comprehensive assessment. Furthermore, in Turkey this study could also be conducted with more breadth and depth in terms of HRM functions and IT tools.

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