THE IMPACT OF ELECTRONIC HUMAN RESOURCE MANAGEMENT ON THE ROLE OF HUMAN RESOURCE MANAGERS

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Introduction

There is little or no room for argument of the notion that 'people' are one of the key assets determining the success or failure of an organization and hence the importance of the knowledge, skills, attitudes and behaviours of those people for the betterment of an organization. 'People' are the key asset that is capable of growth and development. Though a company does not have absolute power over this asset, they can make use of certain tools and techniques to exert some vital influence over the way they perform towards achieving the mission of the organization. The concept of Electronic Human Resource Management known as e-HRM meaning "the adoption of technology in delivering Human Resource [HR] practices due to the digital revolution in the world is such a tool that organizations can employ to manipulate the performance and behaviour of the people on whom they rely on to achieve business success"[13].

Since the dawn of the information era, organizations are increasingly incorporating Information Communication Technology [ICT] in their work processes through different tools and techniques. With the evolution of Human Resource Management [HRM] from largely a maintenance function to a source of sustainable competitive advantage, it has become a challenge for HR to transform from HR to electronic HR [13].

The term e-HR first came into use in the 1990s when e-commerce started dominating the business world [13],[16]. Recent technological developments have made 'business at the speed of a thought' and a 'paperless office' a reality and has created a real time, information based, interactive work environment. E-HR refers to conducting human resource transactions using the internet technology [13]. At the inception of e-HR, the HR professionals used technology to make accurate, detailed information available to managers and employees and today as it has evolved over the years, it is possible to deliver almost any HR service through the use of technology.

The expectation is that HR departments using ICTs may now "be liberated from the administrative shackles and be able to focus more on developing intellectual capital, social capital and managing knowledge to improve an organization's competitive advantage"[13]. E-HRM is a fully integrated, organization-wide electronic network of HR related data, information, services, databases, tools, applications, and transactions that are generally accessible at any time by the employees, managers and HR professionals [10]. An online HR system or e-HR may include Enterprise Resource Planning software [ERP], HR service centres, Interactive Voice Response [IVR], manager and employee portals and web applications. So, a modern online 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 [16].

Three forms/levels of online HR have been identified [13], depending on the primary focus of online HR.

- Publishing of information: This involves one-way communication from the company to the employees or managers. In this form of online HR, the company uses the intranet as the primary information delivery medium.
- Automation of transactions, with integration of workflow: In this form of online HR, paperwork is replaced by electronic input. Intranets
and extranets are used, frequently combining several different application programmes.

- **Transformation of the HR function:** In this form, online HR liberates the function from its operational focus and redirects it towards a strategic one.

E-HRM is a way of implementing HR strategies, policies, and practices in organizations through a conscious and directed support of and/or with the full use of web-technology-based channels [21]. The word 'implementing' in this context has a broad meaning, such as making something work, putting something into practice, or having something realized. E-HRM, therefore, is a concept - a way of 'doing' HRM [21]. The e-HRM business solution is designed for HR professionals and executive managers who need support to manage the work force, monitor changes and gather the information needed in decision-making. At the same time it enables all employees to participate in the process and keep track of relevant information [18].

The revolution of web based technology has gradually but inevitably affected the HRM function. The influences of this technology run throughout the entire function. As technology improves, organizations can use information systems to manage a larger number of HR processes in an increasingly effective manner to contribute to the availability of strategically significant information and knowledge, thereby potentially improving competitive advantage [17].

Personnel management was one of the earliest users of automated record keeping for payroll, benefits administration and employee record processing [20]. Recently, growth in a strategically focused HRM ethos has produced an increase in demand for useful information regarding human resources [1]. This has led to suggestions of perceived increase in the strategic influence of HRM and continued devotion to the line implying a central role for HRIS in supporting the HR function and increasing its value to the organization. However, despite the attention paid to the notion of the development of HR as a strategic business partner [19] and the view that technology should facilitate this shift, there is little empirical evidence yet to support the argument. There seems to be an absence of a comprehensive examination of the impact of technology on HR policies and practices and on the HR function itself [17].

The use of technology within HR has certainly increased over recent years with 77 % of organizations using some form of HRIS. In 2005 [4], research from Watson and Wyatt [21] showed that of the European companies surveyed, 70 % used internet or intranet to deliver HR services to employees with 25 % of them planning to enhance substantially their e-HRM capabilities over the two years after the survey. This suggests that the use of technology within HR will continue to grow. Recent research published by Cranfield School of Management [5] found even higher levels of use, with 82 % of organizations in the United Kingdom having some form of HRIS, although the nature of these systems varied considerably [17].

Technology can be used to support HR activity across the entire employment cycle from acquiring human resources [recruitment], to rewarding [performance management, pay and benefits], developing [training and development, career management], protecting [health and safety, employee relations], and to retaining human resources [retention strategies, work-life balance] [6]. In a similar fashion, Martinsons [15] has divided the use of HRIS into 'unsophisticated' uses such as payroll, benefits administration, employee and absence records and 'sophisticated' uses such as recruitment and selection, training and development, HR planning and performance appraisal. The use of technology within HR may be different across organizations. This maybe evidenced by a recent CIPD survey [4] showing that the use of technology varied considerably with absence management being the most common function (85 %), followed by training and development (75 %), rewards (75 %), managing diversity (57 %), and recruitment and selection (51 %). One of the fastest growing trends in the delivery of HR information is Employee Self Service [ESS] with 80 % of large US companies delivering some information to employees via an ESS system by 2000 [8].

A number of authors have commented that the use of technology within HR not only makes HR activity more efficient, but may also facilitate a change in emphasis for HRM to become more strategic within the organization [12]. Recent literature has argued for the idea of HR as a strategic business partner [20] rather than in the adminis-
trative or transactional role that it has held historically. With the growth of information technology much administration can be accomplished using self service or automated systems. Therefore the HR function can, and increasingly does make significant contributions to building an organization that is staffed by the right human capital to carry out the work of the firm, and enable the accomplishment of business strategy [12]. Snell et al. [9] have observed that HR can meet the challenge of simultaneously becoming strategic, flexible, customer oriented and cost efficient by leveraging information technology. IT can lower administrative costs, increase productivity, speed response times, improve decision making and enhance customer service all at the same time.

Ensher et al. [6] noted, through an analysis of the literature and interviews with HR professionals, five trends or impacts regarding the shift from HR to e-HR. These were:

- Substantial reduction in cost and time for many HR activities.
- Transition of administrative activities from the HR department to the employees themselves.
- Increase in the information readily available to employees.
- Need for integrating HR with other organizational systems, especially information systems.
- Increased emphasis on HR as a strategic business partner.

The reasons behind an organization's decision to adopt technology within its HR function may vary. Kettley and Reilly [10] give the reasons for adopting e-HR as including cost cutting and adding operational efficiency, the desire of the HR function to change the nature of its relationship with employees and line managers, the transformation of HR into a customer-focused and responsive function and the ability to produce comprehensive and consistent management information. The Kettley and Reilly report [10] uses information from empirical research to divide the potential benefits of e-HR into three areas.

- **Operational efficiency** – Reducing overhead costs, enhancing the accuracy of data, eliminating the costs of printing and disseminating information, minimizing IT infrastructure costs by moving towards a common HR service platform and enhancing the ability to distribute HR information and services globally.

- **Relational impact** – Change the nature of the relationship between HR, line managers and employees.

- **Transformational impact** – Transform HR’s role into that of a strategic business partner, adding greater value to the business by increasing HR’s influence as customer focused consultants, enabling new, flexible and responsive methods for delivering HR services expanding HR’s reach as the experts of an organization’s people processes and developers of value propositions for different employee groups.

One of the most significant outcomes of the use of modern technology within HR appears to be the availability of accurate and detailed information. Kovach et al. [11] noted that as early as the mid 1900s HRIS began to be seen as an information resource and the data collected from HRIS can now provide the management with a decision analysis tool as well as a robust database as they can provide detailed information in a variety of areas. Therefore through the management of HR data, firms are now able to perform calculations that have effects on the business as a whole and can drive business decisions and strategies. Broderick and Boudreau [2] also argued that a common payoff to using technology in HR is more efficient information management. Bussler and Davis [3] noted that information systems can transform HR data and add value by turning it into usable information. HR can then take this information and use it strategically to drive organizational decisions [22]. This implies HRIS can produce data-driven HR strategies and encourage the shift from HRM being tactical and reactionary to instead of playing a more strategic role [17].

1. **Research Problem**

The biggest prospect for HR to add value to business is to play a vital role in the development and implementation of strategy. HR can earn significance by showing the vitality of human capital in the quest of an organization’s strategies. Ulrich [20] has argued that HR should move to the role of strategic business partner in addition to performing an administrative and transactional role, being a ‘change agent’ and ‘employee champion’.

The use of technology in HR is believed to be an opportunity for HR professionals to become strategic partners of the business. The assumpti-
on is that e-HR would allow HR to become more efficient and provide accurate information for decision making when and where they are needed. The association between e-HR and strategic partnering of the human resource function is that the e-HR system has the potential to allow HR department’s time to focus on more strategic initiatives. If HR services can be delivered through the use of technology, HR has access to data of strategic importance so that HR can contribute towards developing and implementing strategies.

It is believed that the adoption of this new technology has gradually evolved over the years and as a result will shape the typical HR job shifting the focus from administration to strategy development.

The idea that technology can allow more time for practitioners who would otherwise have spent it on administrative tasks, could focus on more strategic issues, has been frequently observed in the literature [2],[19]. Even 10 years ago, there was evidence that by automating as many processes as possible, HR was able to significantly reduce the time spent on routine administrative tasks, a allowing HR staff time to concentrate on more strategic aspects of the HR role and to be seen as partners a in a business [7]. Research by Watson Wyatt [21] has demonstrated that the most commonly recognized business benefit of e-HR is ‘allowing HR to re-focus on becoming a strategic business partner’ [17].

Past literature has therefore proposed that technology may help to facilitate a change in focus for the HR function from administrative and transactional work to strategic work. However, this hypothesis has seldom been investigated empirically. Keebler and Rhodes [9] reported that while two-thirds of the survey respondents agreed that web self-service can speed HR’s transformation into a more strategic player within the organization and free staff from the burden of administration to take on critical people management activity, only 37% actually felt that they were seeing a shift in HR’s mission as a result of the move to the web. Lawler and Mohrman [12] found that there was no increase in the amount of time that HR spent on being a strategic business partner between 1995 and 2001 (the figure remaining over time at around 20%) but they did see a significant increase (29% to 41%) in the proportion of HR managers who said they were a full partner in the business strategy process. Their research showed that while HR is most likely to be a full partner in the strategic process where they have a completely integrated HR system, having such a system does not by itself ensure that HR will be a strategic partner since in their article 46% companies which have a fully integrated HR system did not describe HR as a strategic partner [17].

Against this background, the purpose of the study was to examine the use of e-HR in Sri Lanka, and to ascertain propose a framework of analysis of e-HR systems in similar countries. Specifically, its research problem is “to what extent HR departments have an adopted e-HR to their functions and whether this adoption has influenced the change the role of a HR professional.”

2. Objectives of the Study

Under this research problem, the following general objective and specific objectives have been identified.

**General Objective**
To examine thoroughly the level of technology adopted in HR and the way it has shaped the role of HR in Sri Lanka.

The research seeks to explore a e-HR journey of the companies under assessment and to find out what level of understanding they have about e-HR and whether they have completely incorporated e-HR into their business model or they are moving towards it.

**Specific Objectives**
- To determine the level and types of technologies that are used in HR in Sri Lanka [forms and level of online HR].
- Inquire into what types of technologies are prevalent in organizations to execute HR functions; what functionality do these technologies have and the level of usage of such technologies.
- To identify how e-HRM has shifted the focus of the role of HR.

In the olden days, HR played the role of an administrative expert burdened with the responsibility to look after the day-to-day operational HR but today HR is moving towards a more strategic role whereby it plays a main role in devising strategies for the company together with other top level managers. Hence, it is an objective of this article to explore whether the adoption of technology in HR has facilitated such a shift in the role of HR.
- To identify the drivers of adoption of technology in HRM.
Different companies may have different reasons to have adopted technology in HR. The article seeks to determine the most common drivers of adoption of electronic HRM.

3. Significance of the Article

It seems most likely that the adoption of technology in HR will continue to grow and all companies will eventually adopt a total technological solution to deliver HR services and those who have already been on this path for some time will continue to expand and upgrade their systems to deliver their services better [25],[5].

If that is the case, the number of researches regarding the adoption of technology in HR and its impact should continue to grow. Hence the following aspects justify the importance of this particular article.

This study would be a significant endeavour to discover the level of e-HRM adoption in the Sri Lankan context and the way it has shaped the role of HR. First, its target was to determine the level and types of technologies that were used in HR in Sri Lanka. For this purpose, it has delved deep into the subject to find out such important areas like the software that has been used by the companies at present, the functions or subdivisions shifted to e-HR, The level of application of internet and internet, The level of technology used by the HR departments and etc.

Secondly, it has paid its attention to how HR professional’s role has changed with e-HR adoption. This goal has been evaluated from three specific angles: the role of HR prior to adoption of e-HR, the role of post adoption of e-HR and the preference role of the respondents to be played by HR.

Finally, it has focused its attention to recognize drivers of adoption of technology in HRM and under it; it has evaluated driver’s adoption, critical success factors for implantation and finally identified the key issues that affected the performance of the whole system.

In these circumstances, this study was beneficial to different interested parties, especially to the top management of the companies, HR professionals, software vendors and academics. Top management could use this research findings when they are going to make a decision for investing in this transformation, because this has delivered precise knowledge from two angles of the issue. On one hand, the transformation was encouraged by showing the benefits and on the other hand it has helped to minimize the risk incurred with this massive fund investment. The study findings also support HR professionals in two ways. It has given confidence to the HR professional to adopt e-HR and secondly, it would help to build up his division as a strategically important section of the business. Software vendors in this segment and those who are expected to diversify the business towards e-HR solutions have benefited, because this has helped them to recognize present circumstance of the business. Finally, it has helped academics to realize the background of the e-HR adoption and the relationship between e-HR adoption and change in the role of HR professionals.

4. Methodology

The population of the study represented all large companies which have more than 1000 employees in and around Colombo, the biggest commercial city in Sri Lanka. These companies have been identified as establishments that have benchmark HR practices and a good reputation for development in e-HRM. The reason for choosing the companies in and around Colombo is due to the fact that many large established companies are found in this region, which is the commercial centre of the country. And also the corporate offices of any large company are mostly situated in this area and HR functions of a company are mainly driven through the corporate offices. Hence, it was worthwhile selecting this region as the population for the purpose of this study which was aimed at studying the extent of adoption of technology in HRM.

The simple random sampling technique was being used to select the sample (30) for the study for which a number of companies within the defined population was selected for examination. These organizations spanned many different industries such as transportation, apparel, telecommunication, banking and finance, information technology and insurance.

The primary technique of data collection was through a descriptive questionnaire addressed to HR Managers and HR Professionals of companies. The questionnaire was divided into two sections. Section one focused on demographic information about the respondents and companies and section two ascertained information regarding the extent of adoption of technology in HR and associated benefits and problems of the system.
In designing the questionnaire, Hussain et al., [10]'s model of research questions, Watson and Wyatt [23]'s B2E/eHR survey, CIPD survey [5] and Boateng [2]'s survey questions were used. The decision to use the above stated questionnaire models and some of the questions directly were the fact that their research area supported this study area as well. Hussain et al., [10] studied the use and Impact of Human Resource Information Systems on Human Resource Management Professionals while CIPD surveys [5] were on People and Technology. Boateng [2] studied the Role of Human Resource Information Systems in Strategic Human Resource Management.

The questionnaire was distributed through e-mail or personal visits to companies. Few selected companies were visited in order to gather information through interview. The data was analyzed through percentages of responses that were calculated for each question and presented using pie charts, bar charts and tables.

5. Findings

Objective no 1: To determine the level and types of technologies that are used in HR in Sri Lanka [forms and level of online HR].

- The level and types of technologies that are used in HR in Sri Lanka

As per the data collected, 70 % of the sample have 'Moderate knowledge and usage' of e-HR while 30 % have 'Very high knowledge and usage'. All 30 companies have HRIS in place and on an average, 87 % of the respondent companies have had it for less than 5 years while only 13 % have had it for 5-10 years. Different companies make use of different vendors for their HRIS and the usage is as follows (figure 1):

The most commonly used HRIS is HRM enterprise (67 %) and around 13 % use PeopleSoft and 10 % use Micro Image. 77 % of the HRIS are Tailor-made bespoke systems while 23 % are Generic off-the-shelf packages. Figure 2 shows that the most commonly used modules in HR department. Training and Development, Recruitment and Selection and Performance Appraisal are been utilized all the companies (30 nos). Other common models are respectively absent management (18 nos), HR planning (11 nos) and rewards and recognition (5 nos). The most common technologies for HR related activities in Sri Lanka is intranet.

The most common technologies for HR related activities in Sri Lanka are with intranet 100 % and Internet 60 % of the sample. As per figure 3 technology usages in the organizations in the sample are as follows, they show that in the majority of companies, Intranet (70 %) and Internet (53 %) has medium usage.

The current level of functionality of the prevalent e-HR technologies can be explained as follows. It is clear that there is no company that provides static level of functionality going beyond that point. Almost 77 % companies provide that e-HR technologies give access to and model

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**Fig. 1: Usage of HRIS software in organizations**

Source: Survey Data
Fig. 2: Modules handled by HRIS in HR function

- Payroll: 100%
- HR Planning: 37%
- Performance Appraisal: 100%
- Recruitment & Selection: 100%
- Rewards & Recognition: 17%
- Training & Development: 100%
- Absence Management: 60%

Source: Survey Data

Fig. 3: Level of technology usage in organizations

- Intranet: LOW = 3, MEDIUM = 12, HIGH = 6
- Internet: LOW = 18, MEDIUM = 21, HIGH = 2

Source: Survey Data

Fig. 4: Proportion of budget to be allocated to e-HR in the year 2010 - 2012

- Less than 5%: 160%
- 5-10%: 33%
- 11-25%: 7%

Source: Survey Data

Personalized information without being able to change it and the balance 23% of the companies say that e-HR technologies enable the amendment of personal data to interact online. These companies have plans to upgrade their e-HR systems and the proportion of the budget to be allocated for this purpose in the coming three years (From 2010 – 2012) is shown in figure 4.

Based on figure 5 almost all companies have policies on e-mail and internet usage which restrict their level of usage of these technologies.
Fig. 5: Policy on e-mail and Internet access

- Freely accessible: 10%
- Freely accessible (some sites are barred): 20%
- Essential non-work purposes: 13%
- Work purposes only: 57%

Source: Survey Data

Fig. 6: Purpose of the use of internet system

- To provide facility for staff feedback: 60%
- To provide facility for downloading forms: 87%
- To provide access to HR information: 87%

Source: Survey Data

57% of companies use e-mail and internet only for work purposes. These companies use their intranet system for several purposes. Based on figure 6, the majority (87%) uses intranet to provide facility for downloading forms etc while more than half of the sample (60%) also use it to provide access to HR information and provide staff feedback.

Objective no 2: To identify how e-HRM has shifted the focus of the role of HR

This can be looked at from three angles as the role of HR prior to adoption of e-HR, the role HR post adoption of e-HR and the preference of respondents of the role to be played by HR.

Table 1 shows that prior to e-HR, the majority (60%) highly agrees that Human Resource Manage-
Tab. 2: Role of HR post adoption of e-HR

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<td>Strategic Partner</td>
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<td>Employee Champion</td>
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Source: Survey Data

Fig. 7: Preference of the role to be played by HR professionals

Objective no 3: Drivers of adoption of technology in HRM

According to Figure 8, all companies (100 %) are driven towards investing in e-HR by the desire to be the leading edge while a majority of 83 % are driven by recognition of business benefits. Some others are also driven by the need to keep up with competitors and due to employee expectations.

How to successfully implement e-HRM in the Sri Lankan context

Based on Figure 9, it is clear that 100 % agreement is that employee attitude is the most critical factor in implementation of e-HR while organizational characteristics and culture (67 %) and collaboration of HRM and IT (60 %) too play a significant role. 43 % of the respondents believe that Management commitment towards e-HRM is vital for successful implementation while a minority of 33 % say that individuals' IT skills are critical.

According to Figure 10 all respondents agree that the key issue affecting the performance of an e-HR system is the appropriateness of the system installed and a majority (100 %) also agrees that company IT infrastructure and accuracy of data obtained also play an important role.
6. Discussion

Out of the sample, 70% of the companies having a moderate knowledge and usage of e-HR and a 30% having very high knowledge and usage indicate that the 70% of Sri Lankan companies are rapidly moving towards adopting technology in managing Human Resources but it will take a few more years to move towards complete incorporation of e-HR strategy into the business model.

All companies have e-HR in operation for more than four years on average, which implies another step ahead of the use of Internet and Intranet applications. The most widely used e-HR is “HRM Enterprise” with more than one half of the sample making use of it. However, in comparison
Different companies may have dissimilar reasons to adopt technology in HR. Thus, the study tries to determine the most common drivers of adoption of e-HRM. There are several reasons for driving organizations towards the adoption of e-HRM in Sri Lanka and the most common of which are desire to be the leading edge, recognition of business benefits which could be achieved through e-HRM implementation, need to keep up with competitors and employee attitudes in order of popularity. The critical success factors for the implementation of e-HRM in the Sri Lankan context in order of importance are employee attitudes, organizational culture and characteristics, collaboration of HRM and IT, management commitment and individuals' IT skills. This may differ from country to country but in general it is expected that, for a change to take place it is important that the people are ready to change and the top management makes a commitment towards the initiative.

Conclusion

In this study, an attempt is made to find out the background of the e-HR adoption in the Sri Lankan context and its impact on the role of the HR professionals. 70% of large scale businesses in Sri Lanka have adopted a moderate level balance beyond that point. At the same time, budget allocation for this adoption shows an improvement of usage within the year 2010-2012. If an organization is going to adopt this, first of all they must evaluate employee attitudes, organizational characteristics, culture and the way of collaborating those with HR and IT. This adoption should not be done in an ad hoc way. It should be planned and implemented in the proper manner. An organization should identify the suitability of the select software through cost and benefit analysis, because it critically affects the post performance of the whole system. The adoption of e-HR by HR professionals will make a significant change in their roles by making them strategic partners in business.

References

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