

Influence Of IT Infrastructure And IT Expertise On E-HRM Adoption

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Abstract: The present scenario has entirely been influenced by IT, which is inspiring the processes of HR and HRM departments. Digital opportunities are given the place of old methods of performing services of HRM inside the business organisations and public organisations. Routine tasks of the organisation have been enabled in innovative ways through the power of virtual work environment by Information and communication Technologies (ICT). In earlier 1980s HR functions are performed with the help of IT for administrative processes, preliminary pay roll functions, through additional attention heads to transformational HR practices (DeSanctis 1986). The collaboration between Human Resource and IT results in automation of tedious and time-consuming tasks in HR by speeding up transaction processing, and by decreasing information errors. It enhances the tracking and control of HR actions. (Bondarouk et al., 2009). Previous literature reviews provide adequate ideas about the factors which influence the attitude towards e-HRM adoption. Among many aspects, IT infrastructure of the company and IT expertise of employees are most influencing factors towards adoption of e-HRM in an organisation.

Key words: Administrative process, Digital opportunities, e-HRM, IT infrastructure, IT expertise, Information and communication Technologies, virtual work environment.

1. INTRODUCTION

Electronic HRM (e-HRM) is applying technology which will allow managers and employees who can straight away get HR information and related to another workplace. In today's organisations Human Resource Management is undergoing substantial changes. One among such changes found by researchers, is the application of internet and web technologies. This will make HRM as an enhanced HRM (Guetta and stone 2005; Legnick-Hallet a1., 2003; Lee, 2005). The above kind of application of internet technologies and web technologies is called as e-HRM. Electronic HRM is taking responsibility of all HRM functions to employees and managers. With the help of web interface, employees receive access to these HRM functions. At one corner, it is an easy web-based system to retrieve HR related Information and documents. At another corner, Electronic HRM is completely integrated throughout organisation with information, transactions, services, data, tools and applications. These are easily obtainable at any time by HR professionals and managers (Hussein et al., 2007). Progressive e-HRM comprises of planning the resources of the enterprise (ERP), Employee portals, web applications, Interactive Voice Response, manager portals and HRM service centres. The utility of technology within HRM is progressing a lot over recently 77 percent of organizations utilizes HRIS in some form (De Alwis 2010). Many organisations are employing technology to restructure their HRM functions and freightage. such an impact web technologies m on HRM functions that is being entitled as "transformational" (Legnick-Hall a1., 2003). Since eHRM obligatorily hints the use of Information Technology (I.T), e-HRM adoption refers to adoption of I.T. (Jeyaraj a1, 2006).

Communicating, performing, team management, reporting, knowledge management, learning with the insertion of organizational submissions (Watson Wyatt 2002:43).

The clear resemblance amongst definitions is lying on the reference of "totally cohesive organization wide electronic network of HR related data, information, services database, tools, applications and transactions" (Foster 2009). e-HRM is enveloping all ways of assimilating mechanism and contents between HRM and information technologies. It is trying to focus to get usefulness within organisation and across organizations for aimed management and employees. It is implying the combination of below four characteristics. "Elements of e-HRM (concentrates on method of HR procedures and IT used, and interconnection between these two. Adopting e-HRM (elaborates about the process of e-HRM adoption, appropriation of e-HRM by members of the organisation. Targeted managers and employees (participated in employing e-HRM) and finally Consequences of e-HRM" (Bondar Ouk & Ruel, 2009) Electronic Human Resource Management can be seen in bird view as an intersection amongst IT and HR. Hence, e-HRM is comprising of all application of web-based technologies for human resource management practices and strategies that has been aggressively improving with in organizational life.

1.1 Types of e-HRM

Lepak and Snell (1998), classified eHRM as Operational Human Resource Management, relational resource management, and transformational human resource management". Human resource management, right and Dyer (2000) also categorise as traditional, transformational, and transactional HRM. Legnick-Hall and Moritz (2003) view E-HRM as the "method of development and maturity". The first form of Electronic HRM is representing human resource data's publication. It is the one-way communication that is occurring from the organisation to the staffs and executives. Subsequent level allows the automated transactions, supply chain and sequential workflow integration and at the end it is getting matured into complete renovation of HR function.

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Fig.1. types of e-HRM

Source: businessjargons.com

The current eHRM literature differentiates three types of e-HRM

- a. Operational electronic HRM
- b. Relational electronic HRM
- c. Transformational electronic HRM

These divisions are based on the work of Lepak and Snell (1998). Let us discuss about the types of e-HRM.

a. Operational electronic HRM

Cost reduction and enhancing efficiency are two important targets every organisation is trying while taking the first step to automated HRM. people give excess attention to make the heavy administrative burden into simple tasks within HR with the help of automatic and systemized transaction processing system (Lepak & Snell 1998). Then, operational HRM extended activities till the boom of intranets. This form an one-way channel for communication between an company and its personnel. This approach of despatching the data or information, helps in minimising cost of paper and enhance delivery to upgrade the pace with better effectiveness than other previous conventional ways (Lengnick-Hall&moritz 2003)

b. Relational electronic human resource management

According to Bondarouk and Ruel(2006), relational e-HRM has stressed significantly the importance about how tools of HR are helping such basic step by step procedures like performance management ,recruitment or selection .Electronic human resource management provides an option to every organization to function in a modern way with the usefulness of HR portals, intranets, extranets, employee/managers self-service etc. Remote retrieval to Human Resource Database is established with an idea to support decisions, improve the adaptability and connections among users (Lepak&snell,1999) Foster (2009) observes relational eHRM as an enrichment, as a functional uplift of current procedures. For instance, better integration, self-

service that is aiming to put gradual development on overall model of HR service dispersal.

c. Transformational electronic human resource management

The transformation in general, is adding with the tactical affiliation through, producing centres of proficiency as well as outsourcing (walker 2001) which is seeking at extra deliberate initiatives. Technology is having the capability of bringing the change in HR processes in the name of transformation all the human resource processes and roles to higher level to assure the organisation to assure with extensive benefits. An "innovative redesigning of "HR service delivery model" shall emphasize the struggle of HR staff ,cooperation of line managers and employees while a portion of HR work load is moved to non-HR authorities(Foster 2009).Le Tart(1998) said , the transformation of HR may encourage an innovative culture , hence it creates advanced approaches in HR processes.

1.2 e-HRM adoption

Following literatures, firstly e-HRM is explained as the utilization of Information Technology to network as well as support in their apportioned working of various HR tasks (Strohmeier,2007). Regarding adoption, it has been commonly accepted that eHRM adoption comprises a multi-level wonder. Habitually, the individual level and the organisational level. Individual level means, the technology adopted by individual personnel in the company. Organisational level is referred as the technology adopted by the company or units of the company. The communication effects among these two levels are assumed(Jeyaraj et al 2006).In general eHRM adoption comprises a step by step procedure that consists of several phases(Jeyaraj,at,al,2006) .By following a leading suggestion ,Initiation and implementation can be viewed as a major phase of adoption.(Rogers,2003). Any explanation of adopting e-HRM, tries to unfold the wide-ranging reasons, which is triggering the commencement and execution of IT for the purpose of Human Resources, Many approaches aiming at such explanations. There are many approaches of information systems research which mention IT as an important trigger of adopting eHRM. They are, transaction cost economics (Williamson,1985) or institutionalism (DiMaggio)., "perceived usefulness" (Davis,1989) or" relative advantages" (Rogers2003), Diffusion of innovation approach (Roger 2003),Technology acceptance model(Davis,1989).

2 LITERATURE REVIEW

Technological aspects give attention on a way where adoption can be influenced by technological characteristics. Technology infrastructure offers a comfortable foundation on which internet technologies have been established. Previous literature reviews strongly suggest that technological willingness has been playing a vital role in creating a sophisticated IT Infrastructure. AS per previous literature reviews people factor also influences a lot in adopting e-HRM in a company. Employees IT knowledge and skills is an essential aspect of adoption of e-HRM. If the employees are not having familiarisation with IT, it is a major barrier towards adoption of e-HRM. Hence, from the previous literature reviews , IT infrastructure and IT expertise of the employees are influencing majorly in adopting e-HRM .

3 IT INFRASTRUCTURE

Technology infrastructure establishes a platform where internet technologies can be built on it. IT in Human Resources bring knowledge and skills to develop web applications (Kraemer and Zhu,2005). Technology readiness of organisation is created through IT infrastructure of the company. IT infrastructure of an organisation comprises of computers, email, own networks which are not the internet (own separate networks) wired Local Area Network (LAN), wireless LAN, Wide Area Network (WAN), intranet and extranet. The first 8 items refers traditional information technologies that creates higher level of technology based infrastructure(Kwon and Mud 1987).The last term refers IT human resources(Mata et al.,1995)in 21st century, most of the organisations in various industries have adopted higher level form of IT from the tools of e-HRM.

3.2 HR Functional applications (HRFA)

Florkowski is defining the Human Resource Functional Application as the software-based automation of doing discrete tasks. It is added to the tasks and duties to the personal administration functionalities” (Florkowski and Olivas-Lujan 2006)

3.3 Integrated Human Resource Software Suit Applications (ISA)

According to Wikipedia (2014), the integrated software can be viewed as software application instrument which can be used for personal computers that unites the shared commonalities, used functionalities of much more productivity software programs into a single developed application software. ISA is performing services like corporate analytics intelligence along with analytics, online analytical data processing, retrieving information and transformation of data, data mining, data ware housing and reporting of data. This integration form of data using suite software shows ways to at the enhanced eligibility level and higher level in efficiency. This facilitates over all administration on each personnel administration factor by coordinating company’s all the information and documents combined with employee’s information. This integration of documents and data will serve all the related data whenever it’s required during time of operations of the organisations beginning from the structured information of the employee and its policies for doing the payroll processing of the employees.

3.4 Interactive voice Response (IVR)

The webbed (2014) has described that Interactive Voice Response as a form of a communication technology. This is elevated with the usage of advanced form of usage technology. The IVR is functionalizing while an employee uses a touch tone telephone to exchange with a database for receiving information or feed data in the database system.

3.5 HR Intranet applications (HRIA)

Intranet is an imaginary hub containing all the confidential reports and information of the organization. All these confidential human resources information and processes are leading to create a single and secure central location where data is stored and managed within an intranet (Weidenhammer,2013)

3.6 Employee Self -service (ESS)applications

ESS is another type of e-HRM application software tool. It maintains the group of personal administration transactions which could be started for interpretation and finished with proper facility and systemised function.

3.7 Manager Self Service (MSS) applications

MSS tool tries to increase the efficiency of the organisation. This is done by shrinking the extra additional cost and time that is involved in human resources fulfilment between the manager and the employee interactions or information of the HR.

3.8 HR Extranet applications (HREA)

HR Extranet applications is the private network of the system. It channelizes the data or information of the client companies to the external buyers. This is creating an amalgamation of sources or personal administration that is outsourced which will be helpful for rendering services. The Human Resource Extranets are acting as the medium between e-commerce and transactional business flow(Florkowski and Olivas-Lujan 2006).

3.9 Human Resource Portal Applications (HRPA)

Human Resource Portal Application software e-HRM tools that are meant to be networking website medium of interface. It is helpful to the user. The users are employee, employer and the work force. This provides a private operating corner to each relevant sources of data information.

4 ARTIFICIAL INTELLIGENCE

Artificial intelligence now a days plays a role in HR functions in many organisations. Artificial intelligence refers to a branch of computer science that give prominence to construction of intelligent machines that work and react like humans. Few activities, computers with artificial intelligence have been designed to include

- Recognition of speech
- Planning
- Learning
- Skill of problem solving

Artificial Intelligence helps leverage intelligent machines to maintain HR managers focussed on needs candidates and employees. Artificial Intelligence outsource not just some of the administrative tasks in HR, but also uplifts our current efforts throughout the organisations. One of the tools of artificial intelligence in HR is, chatbots. chatbots are widely used in talent acquisition. Chatbots are AI-powered aides. They allow real-time and individual engagement with applicants. Applicants interrelate with these AI-drove aides by dialog box,email and text messages. For refining or enhancing the process of recruitment, the AI aides give feedback about the experience of the candidates or applicants, to the recruiter.Artificial Intelligence performs like human brain in many complex situations.having AI in IT infrastructure of an organisation, will increase momentum,by reducing tedious routine work of recruitment through AI chatbots

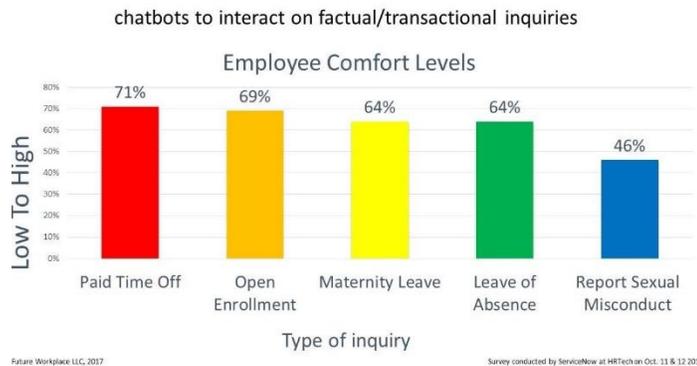


Fig.2. Two thirds of HR leaders believe employees are very comfortable using chatbots to interact on factual/transactional inquiries

Source: The future of work:How Artificial Intelligence will transform the employee experience Previous literature reviews state that IT infrastructure of the organisation is influencing eHRM adoption of the organisation. Another major factor determining eHRM adoption of an organisation is the IT expertise of the employees.IT expertise includes, employee's education level, their understanding of information systems and the type of the industry. These above three factors tend to play a vital role in adopting e-HRM. Employees in such firms readily took transition to the e-HRM systems and comfortable with making their information on a corporate intranet as well as with receiving online feedback and support from the HRM personnel. Technology Acceptance Model (Davis,1989), in IS research, which is viewing information systems from user's perspective (Davis 1989, Davis et al.,2002). If the employees are not having adequate knowledge about the IT infrastructure of the organisation which tends to e-HRM adoption, employees are not likely to use them. Consequently, e-HRM adoption process may not take place effectively. Previous literature reviews give a range of individual and user factors and IT expertise of them influence e-HRM adoption. System and Technological factors are forming a strong IT infrastructure. This strong IT infrastructure will be run and used by users because of their different skills and knowledge about Information Technology and also their previous experience in working with IT. The educational level of the users is viewed as an important aspect to be more comfortable in working with the Information Technology. In current scenario, there is a need for knowledge and trends about new technology that is rapidly changing in the IT market. With respect to IT portfolio and IT infrastructure, employee's Domain knowledge, Technical expertise are influencing extensively the e-HRM adoption of an organisation.

5 IT EXPERTISE

IT expertise can be described as a blend of IT familiarity, previous experience and problem-solving skills of employees. If employees do not have IT expertise to adapt the IT infrastructure which is implemented in the company, it's difficult to bring the attitude towards e-HRM adoption among employees. HR employees do not have comfort zone in working with such a technology, If they are not having adequate knowledge about the technology and

infrastructure. Hence, the tendency of the company towards e-HRM adoption is at a low level.

6 DISCUSSION

Studying many Literature reviews reveal that ,for any organisation to adopt E-HRM, the first and foremost factor is the top management support for investing capital on eHRM adoption for the valuable output .Next to the top management support, previous studies show that IT infrastructure of the organisation and IT expertise of employees play a vital role in eHRM adoption. Without a high IT infrastructure of the company and technical knowledge of the employees to adapt such high IT infrastructure. The attitude of the company towards eHRM is at a low level.

7 E-HRM ADOPTION IN INDIA

After liberalisation, globalisation and privatisation, India has been concentrating on more technological advancement in all aspects. Overseas countries are showing lot of interest in investing in Indian organisations for their business and growth. Many organisations have their head office or branch in some other countries. They are connected through e-HRM and communicating their information with each other with the help of electronic human resource management. There are various tackles of eHRM, practised in India commonly at present scenario, are e-selection-learning, e-recruitment and e-compensation etc... Several studies about E-HRM have shown that e-HRM is reliable. It reduces cost and lesser administrative work loads.

7.1 e-HRM in service industry

The utilization of e-HRM in service industry is considered to be an prospect for managers, HR professionals and employees since service industries are technologically driven. The application of e-HRM is required for the effectiveness of service industry. Many researches done on e-HRM application on service sector. One among them is the research on utility of e HRM on private banks. In private banks e-HRM application leads to cost reduction and administration workload has been reduced. Many e-HRM tools like e-recruitment, e-appraisal, e-training, e-selection are applied for carrying out their HR activities to improve the effectiveness of their performance.

7.2 Users attitude to eHRM adoption in Indian organisations

The users are the employees who are highly trained to adapt with the IT infrastructure of the organisation. They are very much familiar with the interface, software and service providers of e-HRM solutions are Manav, sampada, peoplesoft, IEMS,workday,finance e-muster, SAP ,Ice HRM, Orange HRM, oracle, Lawson software, epayslip,HR cloud, grey tip , Accenture portal,Afas etc.. These e-HRM tools are mainly used in applying leave, getting salary slip, to get information with respect to HR policies, for Mediciclaim, checking leave balances, give online skill tests, getting E-greetings, etc. Very recently Artificial Intelligence is also used by users in Indian organisations for mainly in recruitment process.

CONCLUSION

After going through many literature reviews about the major factors influencing e-HRM adoption, it can be concluded that

eHRM adoption in a company, comprises of many factors. Among them, IT infrastructure built in a company and IT expertise of employees are one of the crucial determinants for an organisation to have the tendency to adopt eHRM. With the help of top management support to invest in high IT infrastructure and training the employees to adapt with the organisation's IT portfolio, the attitude towards e-HRM adoption in an organisation will be higher.

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