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Adoption of Human Resource Information System in Organisations

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Abstract

Owing to the revolution of Information Technology, Human Resource Information Systems (HRIS) is of profound significance in managing Human Resources in the contemporary globalised knowledge economy. HRIS is a part of Management Information System that provides a pool of information that harmoniously integrates with the other functions of HR striving for business excellence. The last decade has seen a significant increase in the number of organizations gathering, storing, analysing, and distributing human resources data using Human Resource Information Systems. This is a conceptual paper that focuses on comprehensive exploration of studies that detail on adoption of HRIS in organisations. The aim of this research paper is to identify various variables that influence adoption of HRIS or any Information Systems through a thorough literature study and consolidate them under four major factors namely Technological, Organisational, Environmental and Psychological factors. Validating this model would help the organisations to understand the essential focus areas for successful adoption of HRIS. It visualises that though HRIS utility is in its infancy stage, the complexity and strategic planning required by present day organisations, reinforces to rely on HRIS for futuristic approach.

Keywords: human resource information system, information systems, technological factors, organisational factors, environmental factors, psychological factors

1. Introduction

The innovation of information technology through Management Information System (MIS) has paved way for emergence of HRIS or Human Resource Information System. It is also referred to as Human Resource Management System or Human Resource Management Information System which now, in today's industrial scenario acts as a significant tool to fulfil the goals of every organisation. HR department is emerging as an information centre, internal consultant, change agent, service provider, cost manager, business partner, facilitator, and consultant. HRIS has become a necessary criterion to rejuvenate the organisations efficiently and is considered an integral part of every organization.

India is in the era of developing stage in usage of HRIS for managing people in today's globalised village. Almost all industries including small and medium enterprises now depend on Information Technology for their HR functions and processes. This calls for a detailed study on the various factors that would influence adopting such information and management systems in organisations. Literature focuses on adoption of HRIS in a number of foreign countries; this paper identifies various factors that influence the adoption of HRIS in Indian context. The study analyses a number of factors that are comprehensively grouped into four major factors namely Technological Factors, Organisational Factors, Environmental Factors and

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Psychological Factors. This paper also finds solutions to the organisations that need to introduce any new technological systems like HRIS.

The mushrooming of HRIS revolutionized the contemporary corporate levels as it brought solutions for inaccuracy, unsecured, procedural delay, out dated method of manual system adopted by the organisations. HRIS acts as a prominent integration tool to manage organizations effectively and is a system with enormous applications in personnel administration, salary administration, absence recording, skill inventory, medical history, performance appraisal, training and development, HR planning, recruitment, career planning, negotiations platform. Therefore in today's technological environment, information is wealth and HRIS is an essential spectacle for competent management of human resources. Kavanagh, Gueutal, & Tannenbaum, (1990) defined HRIS as a system used to acquire, store, manipulate, analyse, retrieve, and distribute information regarding an organization's human resources. As the whole world is in globalised arena, HRIS system makes a robust support for sustenance of a proficient organisation. The role of HR is becoming pivotal in this 21st century.

Most of the organizations have increased reliance on innovative and hi-tech practices like HRIS. This has not only amplified the efficacy of the organization but also the effectiveness of management tasks. It makes human resources to adapt to the constantly fluctuating global scientific environment and creates the organisation to endure in a pioneering manner. Beckers & Bsat (2002) identified five reasons why companies should use HRIS, namely, increase competitiveness by improving HR practices, produce a greater number and variety of HR operations, shift the focus of HR from the processing of transactions to strategic HRM, make employees part of HRIS, and reengineer the entire HR function.

2. Literature Review

The review of literature portrays the evolution of HRIS from 19th century till modern era and enlists the various factors that influence the adoption of HRIS in organisations.

2.1 HRIS in 19th Century: IS and HRM equals HRIS

The origin of HRIS gives a shape in a marvellous way by the intersection of Information Technology and HRM. HRIS has its origin since the 1960s. The advancement of Computers in 1960 emerged in a slower pace and with limited functionality (DeSanctis, 1986). In the late 1970s, surging complications mainly due to ever changing global environment, liberalisation and increasing the number of white collar workers relied on the essentials of HRIS as it paves the way for HR professional's efficacy. In the mid-1980s (DeSanctis, 1986) described that 'Human Resource Information Systems (HRIS) have become a major MIS sub- function within the personnel areas of many large corporations'. In 1986, most organisations 'were using IT as a workhorse of the personnel function, rather than the agile thoroughbred forecasting, analysis and supporting decision making' (Hall & Torrington, 1986). HR and IS act as a node in many firms as HRIS facilitates the concerned management with crucial information related to work matters.

DeSanctis (1986) gave an early definition of HRIS as a 'specialized information system within the traditional functional areas of the organization, designed to support the planning, administration, decision making and control activities of human resource management'. Information systems, thus enhances organisational efficiency and improves decision making skills (De Sanctis, 1986) and HRIS paves way for a robust and sustainable organisation.

HRIS connects the HR system by integrating all functions in an organisation. Ulrich (1997), for instance, has argued that, 'technology will change how work is done in general and how human resources management is practiced in particular'. This shows that the birth of HRIS was due to integration with Information Technology. Tannenbaum (1990) defines HRIS as 'the system used to acquire, store, manipulate, analyse, retrieve and distribute pertinent information regarding an organization's human resources'. These definitions give clear cut understanding of prominent emergence of HRIS. The advantages of HRIS and its importance

gives a lucid picture that implementing HRIS is a vital phenomenon. HRIS acts as a reputed platform with objectives of reduction of costs, quality satisfaction, customer satisfaction and innovation (Broderick & Boudreau, 1992).

2.2 HRIS in Modern Era

HRIS has become the vital life line of an organisation in the modern era. Haines and Petit (1997) contends that this system has transformed from routine paper tasks to easy access computerised system which promotes HR professionals to pave more attention in service orientation and in making strategic decisions. According to Ulrich (1997), HRIS utility ensures an opportunity for organisations efficacy and also enriches HR manager's performance in the organisation. The different IT tools being used in HR applications since the inception of computerised HRM include Improved Scanners, Optical Character Recognition, Interactive Voice Response, Internet, Computer telephony integration, and new programming languages such as Java and distribution devices as kiosks (Tessa, 1997). Today the IT era has enabled organisations to adopt specific human capital software's like People soft, ADP, Workday, Lawson, In-houses creations and SAP, and Spectrum.

Cloud Technology is a component that has found immense application in information system and hence contributes a facelift for HRIS. Cloud Computing is a Technology which maintains data and applications by usage of internet and remote servers. It facilitates the business people to use this technology without installation and access their personal data at the PC desk. According to Hayes (2008), Cloud Computing is a kind of computing application service like e-mail, office software, and enterprise resource planning (ERP) software and uses ubiquitous resources that can be shared by the business employee or trading partners. Thus, a user on the internet can communicate with many servers at the same time, and this server's exchange information among them. Hayes adds that Cloud Computing has an immense potential in the forthcoming years as it helps in reduction of processing time and cost of IT services, enhances processing, accessibility, consistency and flexibility.

2.3 Sustainable HRIS

The utilization of HRIS in an organisation ensures that it paves path for sustainable development. Bussler & Davis (2001) claims that the HR professionals need to update themselves according to the requirements of the global corporate world competency in the near future as they ought to become a data analyst or corporate consultant. Obviously, HRIS makes easy and fast access to get done for non-strategic works with reduction of costs and ensures lesser dependence on HR staff (Christie, 2001). Ultimately it enables HR managers to make a prominent cordial relation with employee and line managers which contributes to the proactive role in formulation of objective and its implementation. According to Sadri and Chatterjee (2003) computerized HRIS function enables faster decision making, development, planning, and administration of HR as data access is easier to store, update, classify, and analyse. It is a fact that from the above studies, HRIS acts as essential tool for today's organisations.

Additionally, it also includes skill testing, assessment and development; resume processing, recruitment and retention, team and project management, and management development (Fein, 2001). Snell, Stueber, & Lepak (2002) contend that with the usage of information Technology the HR can withstand with any task by adaptability, flexibility and customer oriented. They depict that HRIS is a management tool to reduce organisational costs, escalates productivity, enhances speed with easy access, accelerates customer satisfaction and ensures good strategic decisions. Therefore HRIS is expected to offer services in various areas of HR along with management of corporate strategies including people and organisational policies.

Due to the advent of technological environment any particular organisation's attainment relies on the enactment of human resources (HR). The firms are substantially increasing their dependence on HRIS utility to improve the efficacy of HRM. Therefore it is understood that HRIS facilitates a wide scope of advantages along with improved productivity. HRIS usage gleams not only in recruitment and retention strategies but also in the linkage of HRIS data in to massive scale

corporate strategy (Kovach, Hughes, Fagan, & Maggitti, 2002). According to Troshani, Jerram, & Hill, (2011), the adoption of HRIS in the public sector relies on environmental, organizational and technology context factors. (DePietro, Wiarda, & Fleischer, 1990; Dedrick & West, 2004) have proposed a useful TOE model that helps to differentiate between technological characteristics; Organisational competencies, motivations and environment tendencies which have its direct impact on adopters.

3. Objective Statement

The main objective of this paper is to make a thorough literature review on studies focussing on various factors that influence adoption of Human Resource Information systems and in general Information systems in organisations. On extracting the various variables, the authors have consolidated and presented them in diagrammatic formats under the four major factors that encompass all variables studied. Later the four factors are further presented as a single model that portrays the relationship between these variables and the consolidated factors.

4. Variables and Factors that Influence the Adoption of HRIS

A number of variables were identified while making a literature review on human resource information systems. The common and most often cited variables were taken for the study. Studies have cited perceived benefits and barriers of using HRIS, by users (Seyal, AbdRahman, & HjAwgMohamad, 2007; Chau & Tam, 1997; Alshawi, 2010), difficulty in adopting IT systems (Dixon, Thompson, & McAllister, 2002; Poon & Swatman, 1999; Fisher & Howl, 2004), structure of organisations (Cavaye & Hussain, 2007), characteristics of leaders (Mirchandani and Motwani, 2001), environmental conditions (Todd & Javalgi, 2007), and influences like privatisation, competition (Humprey, 2001; Decker, Schiefer, & Bulander, 2006) and government support (Chong & Ooi, 2008) for the adoption of HRIS systems also play a major role in adoption of HRIS systems.

Apart from these variables, the study also identified that factors involving personnel also affected adoption of IS, say it depends on user satisfaction (Deng & Gupta, 2005; Kossek, Young, Gash, Nichol, 1994; Haines and Petit, 1997) and support of IT vendors (Chinyanyu, Yahsueh, & Mingchang, 2011). Financial obstacles (Cragg & King, 1993) and ability of the organisation to afford Chinyanyu (2011) to the required infrastructure were found as other major reasons influencing adoption of IS. These data were critically evaluated and categorised under major factors. The forthcoming sections detail on the content of the four major factors, namely, technological factors, organisational factors, environmental factors and psychological factors.

4.1 Technological Factors

Technology is one of the vital factors that influence adoption of HRIS. The findings from previous research (Seyal et al., 2007 and Alshawi, 2010) emphasise on perceived benefits by the users and the managers as a major factor influencing the adoption of IT technologies like CRM, ERP and web technologies. Apart from these benefits, the operationalization of the technology also influences in adopting a particular system. Operationalization of technology deals with operation of any new IT systems and measuring the technology. Chong et al. (2008) and Tan, Chong, Lin, & Eze, (2009) argue that the operationalization and potential realisation of benefits and existing organizational adoption capability i.e. how far the organisation has capacity for any adoption of IS like HRIS, has a great importance in adopting a technology.

The advantages of advanced IT adoption are decrease in costs and acceleration in productivity (Lymer, 1997). The adopters have a great tendency to adhere the innovations in terms of possible gains and barriers (Chau & Tam, 1997). Gains and Barriers are the significant characteristics which has a great impact on adoption of innovation technologies. Gains regards with improved levels of service quality, efficiency and reliability which acts as a beneficial tool in an organisation (Oliveira & Martins, 2010). Barriers include innovation complexity and its compatibility

with organizational technology competency and a legacy system that has a huge influence on adoption of technology (Rogers, 2003 and Chong et al. 2008).

In the Australian context, Crawford (1998) identified the inhibiting factors such as lack of awareness, skill, and realization of the benefits and infrastructure issues that has a drastic influence on its adoption. Packale´n (2010) found that the main hurdle for adoption of IT in small firms is shortage of IT skills. Security in the forms of confidentiality, integrity, and availability of information assets is the major barrier to the adoption of e-commerce (Lowry, Singh, & Scollary, 1999). Figure 1 shows that various technological factors derived from studies that influence implementing HRIS in organisations.

4.2 Organisational Factors

It was found that organisation size is a significant factor that influences success of an information system in an organisation. Larger organisations have earned benefits from the robust growth of IT applications. In contrast, SME sector has showed its rate of e-commerce adoption in a declined manner (Magnusson, 2001). When the systems initial set-up cost is high and due to lack of optimum financial resources, the SME poses a difficult task in adoption of IT systems (Dixon et al., 2002; Poon & Swatman, 1999). Moreover, larger firms have adequate financial and technical capability, flexibility and adaptability factors to opt for innovative IT systems in order to fulfil their strategies but not so in the case of SMEs. Thus, the adoption of Information Systems in SMEs is still in infancy stage than the mature industries in other countries. Cragg et al. (1993) identified that the major obstacles for IT adoption in small companies are financial deficiency and insufficient levels of technical capability.

Centralisation is the process of having authority of power in decision making particularly lies with the hands of top management in adoption of new IT technologies. High degree of centralization is one of the foremost factors that influence the organisation as the top management are responsible in making strategic decisions. Cavaye & Hussain (2007) have studied that it has a great responsibility for the owners or managers in adopting these technologies as they are the determiners. Studies have shown that larger the

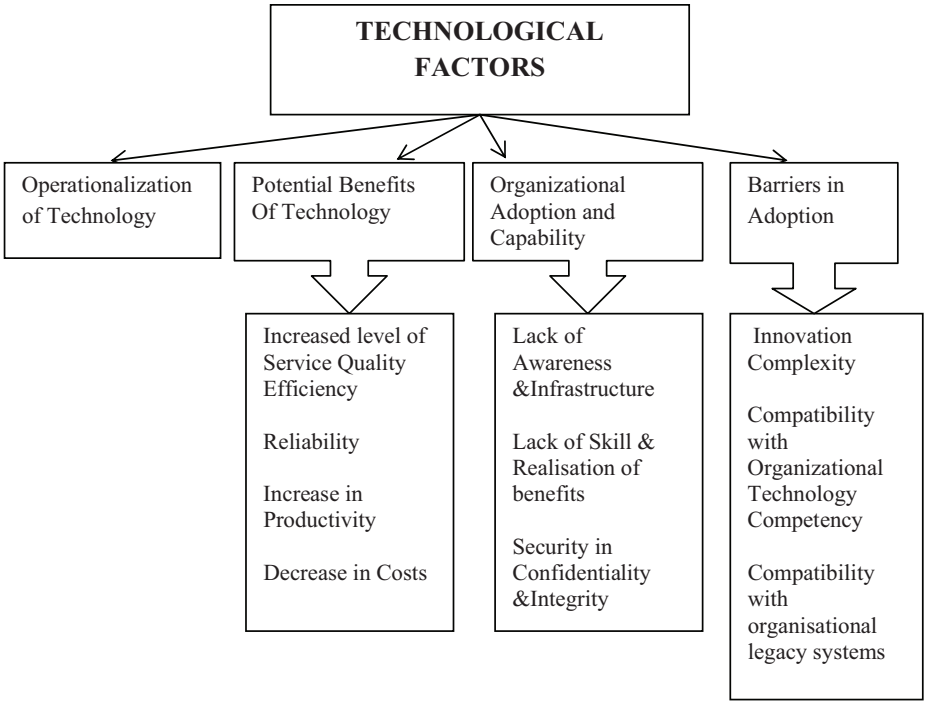

Figure 1. Components of Technological Factors that influence the adoption of HRIS

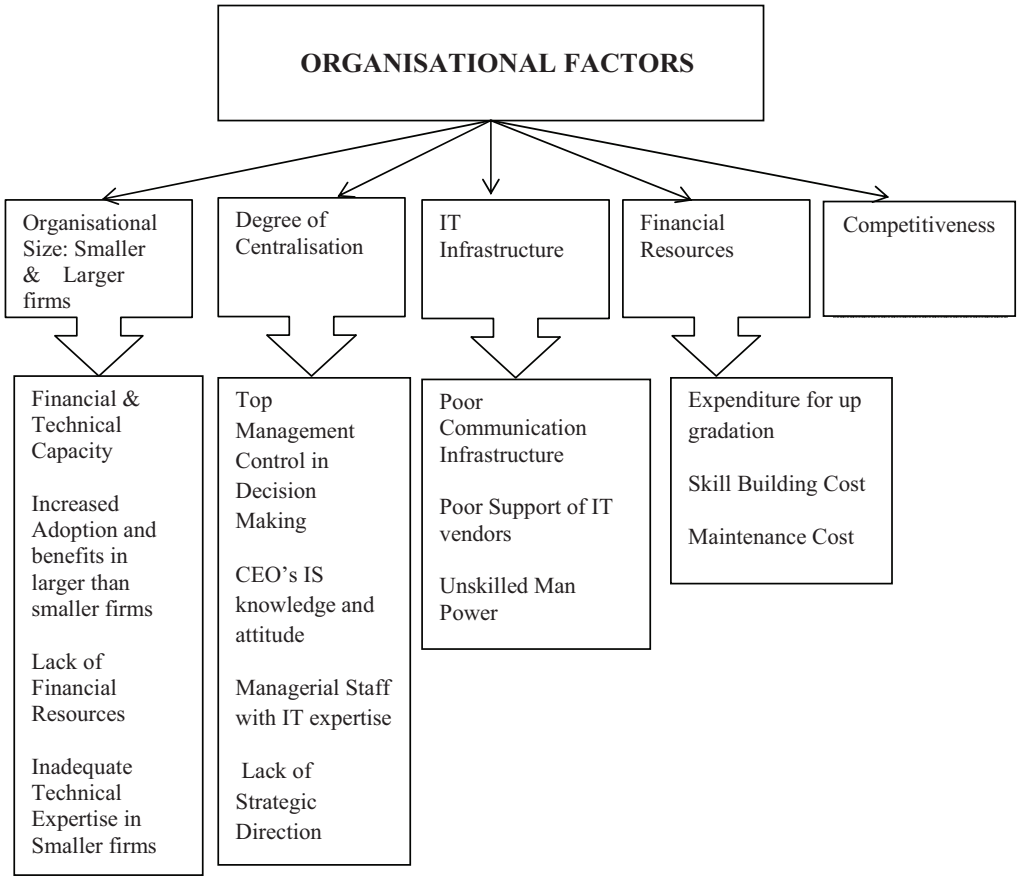

Figure 2. Components of Organisational Factors that influence the adoption of HRIS

support from the top management easier for adopting the technologies which lessens the complications in their adoption. Many studies (Mirchandani & Motwani, 2001) report that CEO's characteristics and his knowledge and attitude regarding information system plays a major role in IT implementation. Lack of Sufficient knowledge on IT systems for managerial and technical staffs has an enormous impact on the adoption of technologies (Levy et al., 2001).

Chinyanyu (2011) emphasizes that lack of IT infrastructure such as poor communication infrastructure, support of IT vendors and skilled manpower are some of the factors that affect the adoption of advanced IT. A Yes bank publication (2009) contends that there is a general belief that the expenditure escalates towards its up gradation, skill building cost and maintenance rather than it being seen as a one-time investment with some tangible return. The integration of various sub factors that influence the organisational factors are portrayed in Figure 2.

4.3 Environmental Factors

Environmental factors are mainly the external pressure and competitiveness from the globalised world which has a direct influence on the adoption of HRIS systems. The globalisation and liberalisation policies make an organisation to sustain with high-tech adaptable technologies like HRIS. Factors like privatisation, competitive capability, government commitment and robust support for the adoption of HRIS systems add to the external influences of adoption of HRIS systems. These environmental factors act as a platform for HR as external influence has a great impact in organisation's efficiency. Globalization and liberalization policies have made businesses more competitive and adaptable to the hi-tech environment (Todd & Javalgi, 2007). The impact of globalization has driven the organisations to sustain in the knowledge economy adapting to new technological environments.

Globalization paved way for rapid innovation, easy entry, lesser trade barriers, privatization and

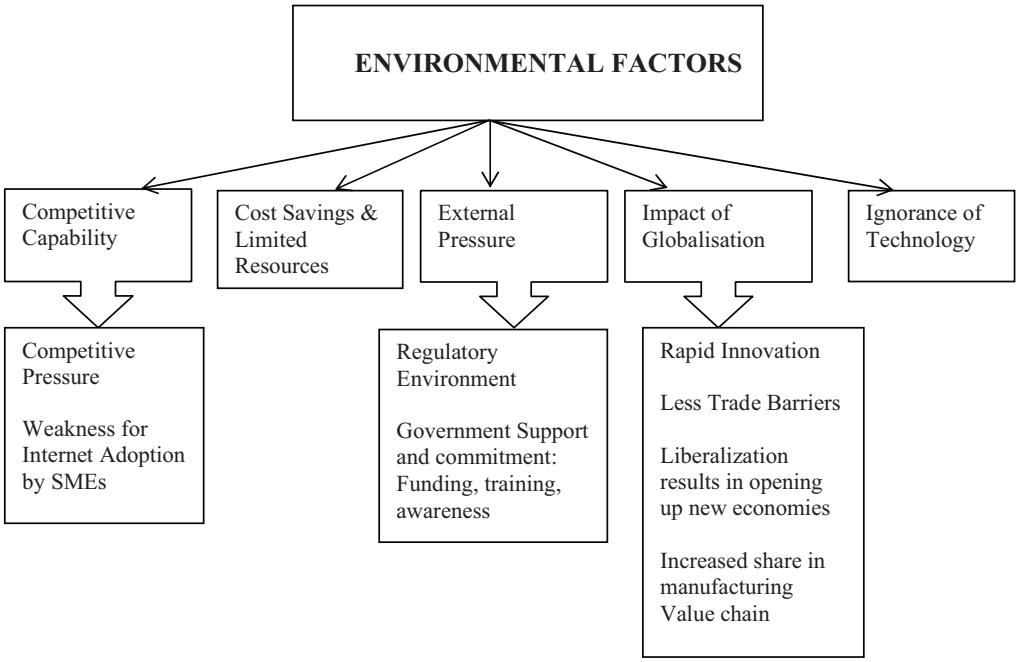

Figure 3. Components of Environmental Factors that influence the adoption of HRIS

liberalization opening up of new economies, increased share in manufacturing of developing countries and provoked a cordial relationship between partners along the value chain (Humprey, 2001; UNDP, 2005; Decker et al. 2006). Mendo & Fitzgerald (2005) suggest that ignorance about the dramatic changes that takes place in industry is one of the factors which pose a great weakness for internet adoption by SMEs. SMEs have to excel its competitive capability in an effective manner for its survival in a collaborative global environment. Any firm has to enable itself for adoption of advanced technologies to compete in the competitive industry.

Typically, government play a vital role in emboldening the technology adoption by raising awareness, providing training and support including funding (Chong et al. 2008). A number of studies have investigated that the available legal or regulatory environment, government support and commitment are the key factors that determine the e-commerce adoption by SMEs (Chang and Cheung, 2001). Therefore these studies result in the factors enlisted in Figure 3, as significant environmental reasons for HRIS implementation in organisations.

4.4 Psychological Factors

Psychological factors are essential components to be considered for any new system adoption, which includes emotional feeling, perception, and inner satisfaction that influences organisation's efficiency. Kossek et al. (1994) suggested that perceptions of potential users of a new technology have a critical impact on the success of its implementation. These resulting impressions can influence emotional reactions and behaviours and accordingly the success of organizational systems and interventions. Besides customer satisfaction as a success criterion, user satisfaction is a major factor which determines attitude and beliefs (Haines and Petit, 1997). Social side of organization change may be one of the most important factors that affect user's satisfaction (Deng et al. 2005) and as Greenwood (2002) suggests perception is one of the criterions which determines the success or failure of socio-technical projects.

Fisher & Howl (2004) has found that people who lack of technical background and people with lower level of computer efficacy have faced difficulties due to the complexities and technical details of new human resources information system. Human resources professional have a tendency to fear that new introduction of HRIS may replace their jobs or they have critics for already not doing good job (Brooks, 2006). According to Reactance theory, removal of personal freedom by an authority leads individuals to certain reactions and these reactions are quite often in the opposite direction

(Bushman, 1998). Hence taking care of psychological factors and providing a secured feel is a major responsibility of concern while implementing HRIS. Figure 4 summarises the influential psychological factors in adopting HRIS.

The above factors lead to this conceptual study considering that these factors influence the adoption of HRIS in an organisation which is clearly depicted in Figure 5.

5. Discussion

The above studies have highlighted a number of variables and factors that has a significant influence on adoption of HRIS in organisations. The paper has tried to consolidate the variables into four main factors that will encompass all the factors studied. This consolidation is based on the researcher's perspective, where it was decided to critically view the studies focussing on

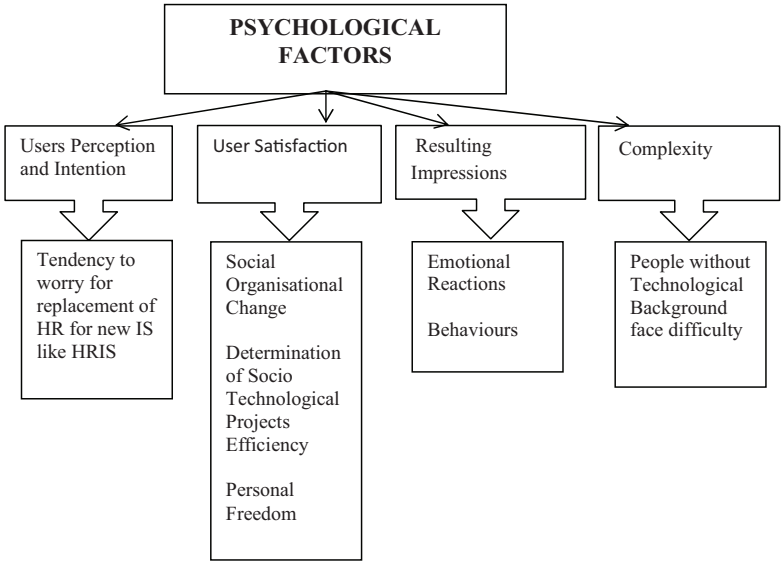

Figure 4. Components of Psychological Factors that influence the adoption of HRIS

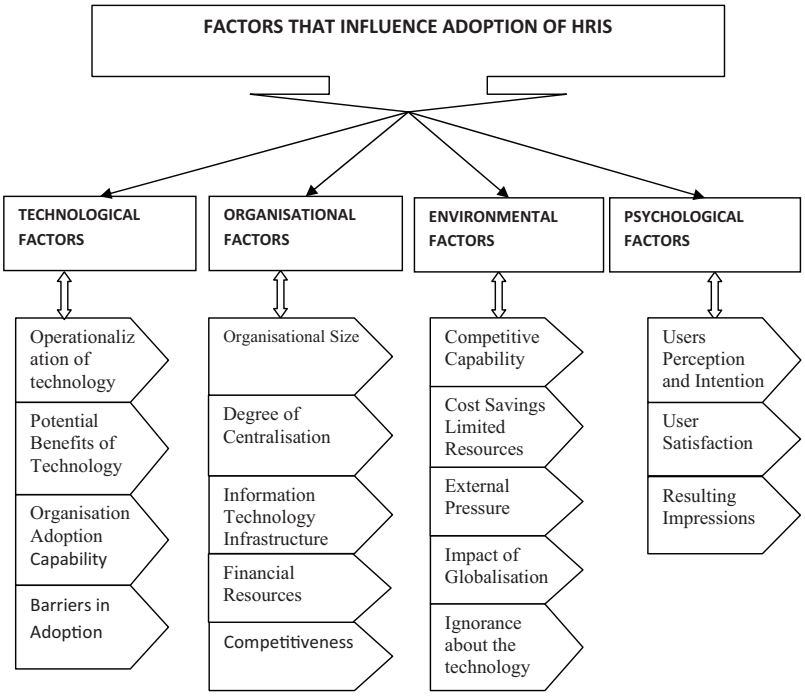

Figure 5. Conceptual model depicting Factors that influence the Adoption of HRIS in Organisation

these variables and then bringing them under any one of these four major factors. The same needs to be measured separately and examined for factor analysis to make sure if the factors are factorised appropriately.

The factors comprising operationalization or the operational processes variable as well as that of the adoption capability of the organisation variable, required to implement the information system is highly technical and depends on matching the domain information to the systems perspective. Say for instance, HR processes like Payroll, which is a commonly adopted function through IS, leave management, training and development modules, performance appraisal module and similar such processes need to be transformed and manifested using information systems. The adoption capability may include aspects like skill of the personnel in IT, training given to the personnel and the level to which the department is able to equip itself with HR information systems. Similarly two other variables brought under Technological factors, namely, benefits and barriers in adopting of IS, clearly determines how far the technical transformation plays an important role in serving as a benefit or a barrier. The information system may give a quick access to information and reduce paper work on one hand, but then it may also pose risks based on security of information and cost of installation. All these variables represent technological factors that depend on the actual information system that is under consideration for HR processes in the organisation.

Organisational size is the key phenomenon which has a significant effect on HRIS adoption. It is pertinent that larger the firm, larger is the need for its technological systems. It is the owner's attitude and decision making power that influences particular firm, either to adapt or not. The managers should be an expert in technological skills. Apart from that, the owners support like technological infrastructure, financial capability has a great impact in its adoption. It is obvious that strategic direction from top management towards the employees makes successful adoption of HRIS.

The external pressure particularly the market fluctuations are of great importance in environmental factor. The competitiveness among the firms forces each organisation to look forward for adopting technological systems like HRIS. As our country is in globalised era, the globalisation and liberalisation policies has brought the whole world in a small village which shows that HRIS usage ultimately integrates the global system just by online transactions. The government support and its commitment towards adoption of HRIS is essential because if all the public sector companies relies on HRIS, then the government can save employees time and manger can concentrate on strategic planning.

Psychological factors are one of the important factors as it is related to employee's i.e., ultimate users who determine the success of implementation of any new system in organisations. User's perception before introducing any new system is essential. Even satisfaction of usage of new systems by employees is a criterion that has significant impact on its adoption. When the user has a technologically poor background, he/she may face difficulty and some may feel that introduction of any new system hinders personal freedom. It is essential to get consider the user perception and necessary to clarify them for uncertainties.

The above discussion clarifies that the qualitative factors derived through the thorough literature review made, are presented as a model that explains the relationships of a number of variables to adoption of human resource information systems in an organisation. The contribution of these variables in the form of consolidated factors towards adoption of HRIS shall be measured in order to validate the level of influence of the individual factors. The model will be used as a Structural Equation Model where the four major factors relationship with adoption of HRIS will be measured and validated. This will clearly give an indication of the level of importance organisations should provide towards the factors and in turn the variables identified. The validated model would be of great significance to organisations to focus on specific attributes that will lead to successful implementation of HR management and information systems.

6. Conclusion

HRIS is an emerging phenomenon in India which is an integration of managing people not only in business but also in all sectors. The above discussion depicts

that organisations and users need to adapt to all the factors when an organisation introduces any information system. The further scope of this research aims in validating the model and to find the amount of prediction of the four factors of adoption of HRIS. This will give a clear picture of the significant amount of focus to be given to the different factors at different levels. Further study also aims to validate how the model would suit for small scale units, medium sized industries and large scale companies separately to identify which factor plays a major role at each level. This will help the specific type of companies to focus and give due importance to specific factors analysed. Once the major factor is brought for focus, the different variables under the factor are to be dealt and measured in their present situation in the organisations; and specific action needs to be taken to enhance and improve upon the relevant factors.

References

Alshawi, S. (2010). Organisational, technical and data quality factors in CRM adoption: SMEs perspective. *Industrial Marketing Management*, *40*(3), 376–383.

Beckers, A. M., & Bsat, M. Z. (2002). A DSS classification model for research in human resource information systems. *Information Systems Management*, *19*(3), 41–50.

Broderick, R., & Boudreau, J. (1992). Human Resource Management, Information Bench marking ICT practice, competence and performance in small firms. *The International Journal for Library and Information Services*, *6*, 39–52.

Brooks, A. (2006). Dispelling HRs fear of technology takeover. *Employee Benefit Plan Review*, *60*, 6–8.

Bushman, B. J. (1998). *Aggressive Behaviour*, *22*(5), 391–392.

Bussler, L., & Davis, E. (2001). Information systems: The quiet revolution in human resource management. *Journal of Computer Information Systems*, *42*(2), 17–20.

Cavaye, M., & Hussain, H. (2007). IT alignment and performance in small manufacturing firms. *Journal of Strategic Information Systems*, *11*, 109–132.

Chang, J., & Cheung, L. (2001). An empirical analysis of the barriers to implementing E-commerce in small-medium sized construction contractors in the state of Victoria. *Construction Innovation*, *1*, 31–41.

Chau, P. Y. K., & Tam, K. Y. (1997). Factors affecting the adoption of open systems: An exploratory study. *MIS Quarterly*, *21*(1), 1–24.

Chinyanyu L., Yahsueh C., & Mingchang W. (2011). Understanding the determinants of cloud computing adoption. *Industrial Management & Data Systems,* 111(7), 1006–1023.

Chong, A. Y. L., & Ooi, K. B. (2008). Adoption of inter organizational system standards in supply chains: An empirical analysis of Rosetta Net standards. *Industrial Management & Data Systems*, *108*(4), 529–547.

Christie, M. (2001). E-HR helps make retention a walk in the park. *Workspan*, *44*(11), 54–60.

Cragg, P., & King, M. (1993). Small-firm computing: motivators and inhibitors. *MIS Quarterly*, *17*(1), 47–53.

Crawford, J. (1998). *NEWS – a project to get smaller enterprises on line*. Department of Industry. Science and Tourism, available at: www.noie.gov.au/publications

Decker, M., Schiefer, G., & Bulander, R. (2006). Specific challenges for small and medium-sized enterprises in M-business: A SME-suitable framework for mobile services. *Proceedings of the International Conference on E-Business*, 169–174.

Dedrick, J. & West, J. (2004). An exploratory study into open source platform adoption. *Proceedings of the 37th Hawaii International Conference on System Sciences, IEEE*. Big Island, HI, USA.

Deng, H., & Gupta, P. (2005). Critical Success Factors for Information Systems Implementation: An End-User Perspective. In: *Managing Modern Organizations with Information Technology*, Khosrow-Pour, M. (Ed.). Idea Group Publishing, USA.

DePietro, R., Wiarda, E., & Fleischer, M. (1990). The context for change: organization, technology and environment. In: Tornatzky, L.G. & Fleischer, M. (Eds). *The Process of Technological Innovation*, Lexington Books, Lexington, MA, 151–175.

DeSanctis, G. (1986). Human resource information systems: A current assessment. *MIS Quarterly*, *10*, 15–26.

Dixon, T., Thompson, B. & McAllister, P. (2002). *The value of ICT for SMEs in the UK: A critical review of literature*. Report for the Small Business Service Research Programme. The College of Estate Management, Reading.

Fisher. S. L. & Howell A. W. (2004). Beyond user acceptance: An examination of employee reactions to information technology systems. *Human Resource Management*, *43*, 243–258.

Greenwood, D. M. (2002). Gaining and sustaining organizational support through a sociotechnical intervention. *Consulting Psychol. J. Prac. Res*., *54*, 104–115.

Hall, L. A. & Torrington, D. P. (1986). Why not use the computer? The use and lack of use of computers in personnel. *Personnel Review*, 15(8), 3–7.

Hayes, B. (2008). Cloud Computing. *Communications of the ACM*, *51*, 9–11.

Humprey, J. (2001). Opportunities for SMEs in developing countries to upgrade in a global Identifying opportunity, meeting challenges, and measuring success. *Proceedings of the 10th Australasian Conference on Information Systems*, 532–541.

Troshani, I., Jerram C., & Hill, S. R. (2011). Exploring the Public Sector Adoption of HRIS, *Industrial Management & Data Systems*, *111*(3), 470–488.

Tessa, J. (1997). Technology Redefine HR's Role. *Executive Capsule, 6*(3), 35–40.

Kavanagh, M. J., Gueutal, H. G., & Tannenbaum, S. I. (1990). *Human Resource Information Systems: Development and Application*. PWS-KENT Publishing Company: Boston.

Kossek, E.E., Young, W., Gash, D. C., Nichol, V. (1994). Waiting for innovation in HR department Go dot implements a HRIS. *Human Resource Management*, *33*(1), 135–159.

Kovach, K., Hughes, A., Fagan, P. & Maggitti, P. (2002). Administrative and strategic Advantages of HRIS. *Employment Relations Today*, *29*(2), 43–48.

Levy, M., Powell, P. & Yetton, P. (2001). SMEs: Aligning IS and the strategic context. *Journal of Information Technology*, *6*, 133–144.

Lowry, G., Singh, M. & Scollary, A. (1999). Electronic commerce initiatives in Australia: Identifying opportunity, meeting challenges, and measuring success. *Proceedings of the 10th Australasian Conference on Information Systems*, 532–541.

Lymer, A. (1997). The internet and small businesses: a study of impacts. *Fifth European Conference on Information Systems*, Cork Publishing, Cork.

Magnusson, M. (2001). E-commerce in small businesses – focusing on adoption and Implementation. *Proceedings of the 1st Nordic Workshop on Electronic Commerce*, Halmstad.

Mendo, F. A. & Fitzgerald, G. (2005). A multidimensional framework for SME e-business progression. *Journal of Enterprise Information Management*, *18*, 678–96.

Mirchandani, A. A. & Motwani, J. (2001). Understanding small business electronic commerce adoption: An empirical analysis. *Journal of Computer Information Systems Spring*, 70–73.

Oliveira, T. & Martins, M. F. (2010). Understanding e-business adoption across industries in European countries. *Industrial Management & Data Systems*, *110*(9), 1337–1354.

Packale´n, K. (2010). ICT capabilities and possibilities in micro-firms: A study of micro-firms in the A° land Islands archipelago. *23rd Bled e-Conference on e-Trust,* Slovenia.

Poon, S. & Swatman, P. M. C. (1999). A longitudinal study of expectations in small business internet commerce. *International Journal of Electronic Commerce*, *3*, 21–33.

Rogers, E. M. (2003). *Diffusion of Innovations*. 4th Ed, The Free Press, New York.

Seyal, A. H., AbdRahman, M. N. & HjAwgMohamad, H. A. Y. (2007). A quantitative analysis of factors contributing electronic data interchange adoption among Bruneian SMEs. *Business Process Management Journal*, *13*(5), 728–746.

Snell, S. A., Stuebner, D. & Lepak, D. P. (2002). Virtual HR departments: Getting out of the middle. In Henneman R.L, D. B. G. (Ed.) *Human Resource Management in virtual organizations*, Greenwich, Information Age Publishing.

Tan, K., Chong, S., Lin, B. & Eze, U. (2009). Internet-based ICT adoption: evidence from Malaysian SMEs. *Industrial Management & Data Systems*, *109*, 224–244.

Tannenbaum, S. I (1990). Human Resource Information Systems: User Group Implications. *Journal of Systems Management*, *41*(1), 27–32.

Todd, P. R. & Javalgi, R. (2007). Internationalization of SMEs in India. Fostering Entrepreneurship by leveraging information technology. *International Journal of Emerging Markets*, *2*(2), 160–188.

Ulrich, D. (1997). *Human Resource Champions: The Next Agenda for Adding Value and Delivering Results*. Harvard Business School Press, Boston, MA.

UNDP, (2005). *International cooperation at a crossroad: aid, trade and security in an unequal World*. Summary Human Development Report, United Nations Development Programme, New York, NY.

Yes Bank (2009). *Technology for financial efficiency*. YES BANK's Knowledge Banking Publication, *1*(1).

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