ADOPTION OF HUMAN RESOURCE INFORMATION SYSTEM IN AN ORGANIZATION IN INDIA

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ABSTRACT

Purpose: *Human Resources Information Systems (HRIS) is a combination of Human Resource (HR) and Information Systems (IS). HRIS helps HR professional to perform HR functions in a superfluous effectively and efficiently. The purpose of this study was to identify the relationship factors contributing to organizational decision making for the adoption of HRIS and also examine the relationship of six factors with the adoption of HRIS in organizations.*

Design/Methodology/Approach: *In this research study, investigates the factors that influence the adoption of human resource information system within the framework of advance adoption. Secondary data have been collected from different text books, study materials, various websites, journals and research articles on HRIS.*

Findings: *The findings of previous studies presented conflicting results, these factors needed to be examined theoretically at an aggregate and individual level.*

Research limitations/implications: *Limitation of this research study, the adaption of HRIS was expensive in terms of finance and manpower, inconvenient, Computer cannot substitute human beings.*

Originality/Value: *The paper is concluded by providing the result of the study it was concluded that* **Relative Advantage** *and* **Compatibility** *were positively related to the adoption of HRIS. Top Management hold up and HRIS proficiency were found to contributors to the decision of HRIS adoption. Finally, we have suggested a few recommendations for future researches.*

KEYWORDS: *HRIS, Innovation, Organizational*, *and Environmental Characteristics.*

Introduction

In the changing global era, organizations have been bound to integrate innovations to get the competitive advantage. As replace old technology was being introduced at a rapid pace, information technology (IT) had started playing a major role in the management of various functions of an organization, especially human resource (HR). Information technology was basically used to convert manual human resource operations to automated Human Resource Information Systems (HRIS). The human resource information system (HRIS) is "the complex of databases, computer applications, and hardware and software necessary to collect/record, store, manage, deliver, present, and manipulate data for human resources" (Broderick and Boudreau, 1992). HRIS gowned in popularity since the 1960s period of time (Lederer, 1984). HRIS is defined as a system which is used to acquire, store, manipulate, retrieve and distribute pertinent information about an organization hr department (Kavanagh, Thite, & Johnson, 2012). There are two important resources in organizations, people and information can significantly affect the overall performance of a business and the business success naturally requires the management of both (Martinsons, 1994; Teo, Lim, & Fedric, 2007). According to Teo *et al.* (2007) stated that HRIS combines these two resources, proper adoption of the system can drive the organization to a greater success.

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In the last more than two decades researchers have started to show interest in the field of HRIS though they focused more on areas such as preponderate of HRIS (Martinsons, 1994), conditions for successful usages and implementation (Haines & Petit, 1997), use of human resource information system (Ball, 2001) and current usages patterns (Hussain, Wallace, & Cornelius, 2007), and achieving competitive advantage (Browning, Edgar, Gray, & Garrett, 2009). Present research study investigated HRIS adoption determinants in Singapore and Australia (Teo et *al.,* 2007; Troshani *et al.,* 2011). However, these authors agreed upon there is a paucity of research in the area and especially it is needed to investigate to which extent those factors affect adoption of the system. According to Troshani *et al.* (2011) studied further research work is also critical in addressing HRIS adoption in private sector as research is currently lacking in those area. Most of the researchers aim to investigate influencing factors of HRIS adoption, identify to what extent those factors affect the HRIS adoption and finally, examine the relationship between factors influencing the adoption of human resource information system and apparent effectiveness of HRIS.

In this paper only focuses on a part of the whole research and aims to identify factors influencing HRIS adoption in organizations.

After an extensive review of literature, a research model was developed and conceptualization of HRIS and importance of the system. Afterward, there are the findings from secondary data specifically the factors influencing the adoption of HRIS which are divided into three categories naming organizational factors, technology context factors and environmental factors. Following this, the research framework and conclusion will be drawn at the following section.

This study would help human resource employees in any organization in comprehending the factors affecting adoption of HRIS. This study made a contribution to existing knowledge in innovation literature by studying adoption of HRIS in India.

Literature Review

There are a few researchers who had tried to explore the area in terms of working papers and brief discussions on the subject. Last two decades researchers have started to show interest in the field of HRIS though they focused more on areas such as predominate of HRIS (Martinsons, 1994), use and implementations of HRIS (Ball, 2001) and current usages patterns (Hussain, Wallace, & Cornelius, 2007), areas in HRIS implementation (Ngai & Wat, 2006; Razali & Vrontis, 2010; Tansley & Newell, 2007), and achieving comprehensive competitive advantage (Browning, Edgar, Gray, & Garrett, 2009). Current studies have investigated HRIS adoption determinants in india, Singapore and Australia (Teo *et al.,* 2007; Troshani *et al.,* 2011). Many authors agreed upon there is a scarcity of research in the area and especially it is needed to investigate to which extent those factors affect adoption of the system. According to Troshani *et al.* (2011) studied further research work is also critical in addressing HRIS adoption in private sector as research is currently lacking in those area. In this paper, researchers aim to investigate influencing factors of HRIS adoption, identify to what extent those factors affect the HRIS adoption and finally, examine the relationship between factors influencing the adoption of HRIS and apparent effectiveness of HRIS.

Component of HRIS

The key functional components of HRIS are presented by (Kovach, Hughes, Fagan, & Maggitti, 2002) as input, data maintenance, and output. Personal information is entered into HRIS through input function. In the previous studies, data entry was one way, modern technologies used for scanning enabled scanning and storing actual image of original documents. After entry of information into the database of the information system through input function, the data maintenance function updates the database. The output is the most visible function of HRIS.

There are three components of HRIS are shown in Figure 1.

Figure 1: Component of Human Resource Information Systems

Objectives of the Study

- To identify various factors and examine their contribution to the decision making of HRIS adoption
- To examine the relationship of innovation factors of relative advantage, compatibility, and complexity on adoption of HRIS in organizations
- To study the relationship of organizational characteristics of support of top management and HRIS expertise on adoption of HRIS in organizations.
- To examine the relationship of an environmental characteristic of competition on adoption of HRIS in organizations

Theoretical Framework

The theoretical framework consisting of independent and dependent variables consisting of three categories: innovation characteristics, organizational characteristics and environmental characteristics which were hypothesized to be affecting adoption of HRIS in organizations. This model is an adapted version of the model developed by Thompson, Lim, & Fedric, 2007.
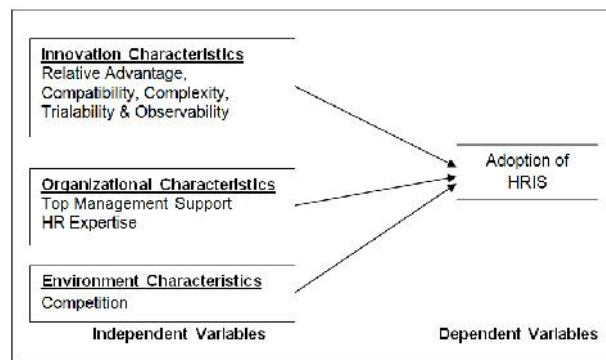
Figure 1: Theoretical Framework
Source: Thompson, Lim, & Fedric, 2007

Innovation Characteristics

Roger's orthodox innovation diffusion theory was used to provide a linkage between adoption decisions to five different attributes specific to innovation. These attributes were the relative advantage, compatibility, complexity, trialability, and observability. A **Relative advantage** was one of the most excellent predictors of rate of innovation adoption. Relative Advantage was defined as the degree to which an innovation characteristics was perceived as being better than the idea it supersedes. The relative advantage was the internal requirement for the technology, as perceived by the user. Research had established its importance in influencing the decision of adoption (Jeon, Han, & Lee, 2006; Pream kumar & Roberts, 1999). In this research study, a relative advantage was theorized will be having a positive relationship with the adoption of innovation. **Innovation Characteristics** further can classified, relative advantage included low initial cost, efficient in terms of time, increased efforts, and immediacy of reward.

An HRIS could automate managerial tasks, reduce paperwork, simplify processes, and distribute to the point required information to top management, hence improving the effectiveness of the HR department. **Compatibility** was defined as the degree to which it was perceived as being consistent with the existing values, past experiences, and needs of potential adopters. Compatibility of innovation with cultural & social beliefs, existing ideas, and client requirements or vice versa could be measured. Compatibility was the extent of consistency with current values, previous experiences, and requirements of the potential adopter organization, as perceived by (Rogers, 2003). Therefore, the relationship of compatibility and adoption of innovation was positively considered for this study. In this level **Complexity** was the extent of relative difficulty in understanding and using an innovation place, as perceived by the user (Rogers, 2003). Generally, Complexity had a negative relationship with adoption (Thong, 1999; Grover, 1993) so this study posited a negative relationship between adoption and complexity. It suggested the potential users were willing to acknowledge and use the systems that were less complex. The major hurdle to adoption was complexity. On the other hand, for many innovations, the most importance of complexity was less than that the relative advantage.

Organizational Characteristics

An organization characteristic to adopt and effectively implement innovation, top management support was mandatory in the creation of a supportive environment and provision of required resources (Premkumar & Roberts, 1999). An expertise was importance factor in deciding for bringing new technologies into the organization (Kwon & Zmud, 1987). It was theorized to be adopted more easily.

Top Management Support

Top management support was recognized as an important element in adopting and implementing information technology. In top management support, the understanding of innovation, attitudes, and the extent of involvement in the adoption process could influence top management support. It played a critical role in the creation of a supportive climate and provision of adequate resource to adopt and implement new technology. Suggested by (Yap, 1989) that top management could identify future business opportunities by exploiting information technology. Moreover, with active involvement and support, the top management could foster the right direction for adoption of innovation. With their leadership role, top management could ensure allocation of required capital and human resource for the adoption of innovation. Top management support was required for continued success of human resource information system process.

HRIS Expertise

Expertise was a crucial factor in innovation adoption. The HR proficiency could be explained as knowledge of employees in HRIS. Human resource information system employees should be knowledge of more than one functional area, at least information system and human resource functions. Availability of skilled HRIS professionals was essential in ensuring success. Warren (2004) studied training and development enhanced in term of technology competency which could affect the speed and coverage of adoption of innovation

Organizations could delay adoption of innovation until the staff acquired sufficient technical skills and knowledge of operating HRIS. Research suggested that organizations with technology competency were more likely to adopt innovations. If the staff lacked HRIS knowledge and skills, the rate of application of IT to HR departments could be slow.

Environmental Characteristics

As organizations transcended to become knowledge - based, there was pressure on a human resource to reach cost-efficiencies and play an added strategic character in the organization (McCormick, 1999). So if the organization was faced with a greatly competitive environment, it would be pushed more to adopt HRIS to reap its benefits and competitive advantage.

Competition

The competition had forced organizations to realize the importance of effective management of human resource. As organizations move towards the knowledge-based economy, organizations were under pressure to better manage their human resource in order to be competitive. In this level, organizations relied on human resource information system for better decision making, better management of human resource and better allocation of human resource resources.

HRIS – Benefits

- Higher Speed of retrieval and processing of data.
- Reduce duplication of efforts leading to reduced cost.
- Ease in classifying and reclassifying data.
- Higher accuracy of information/report generated.
- Fast response to answer queries.
- Improved quality of reports.
- Better work culture.
- Establishing of streamlined and systematic procedure.
- More transparency in the system.
- Employee – Self Management.

HRIS - Limitations

- It can be costly in terms of finance and manpower.
- It can be frightening and inconvenient.
- Thorough indulgent of what constitutes quality information for the user.
- Computer cannot substitute human beings.
- Lack of communication
- No or poorly done needs analysis

Cornerstones of HRIS

HR managers always are worried about the following four areas which has been named as **4 Cornerstones** of Human capital
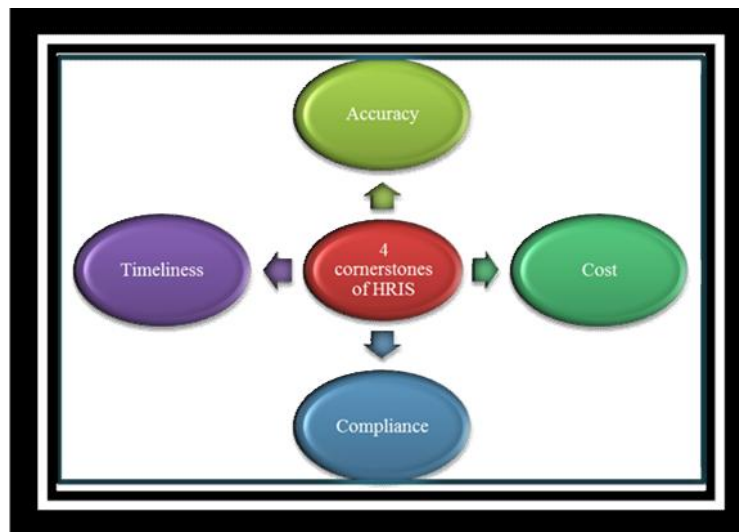
- **Accuracy:** The first cornerstone of Human Resource managers expect the HRIS to have accurate data about the employees since that information is of the highest consequence to the company for accurate calculations, promotion purpose, overtime calculation, etc. The inaccuracy of data may show the way to lot of problems as which may lower the morale of the workers.

- **Cost:** The second Cornerstones of cost come as the foremost priority of HR managers when it comes to implementing the software in any organization. The cost in this case would be the implementation costs associated with HRIS, transaction costs, the technical people involved with the software, up gradation of software, addition of features in the current software also increases the cost. So, human resource has to make sure the cost benefit ratio is maintained related to the software in any organization.

- **Compliance:** HR managers would expect the HRIS to be compliant with the laws of the land. In this level, the software should consider the laws applicable to the country and should have in built features regarding the same like tax calculation, retirement, pension, etc.

- **Timeliness:** This is the last level of time is the essence of human resource managers expect the HRIS to be up-to-date with all the information which will help in salary calculation, pay slip, promotions, deductions and increment calculations etc.

In the general perception is that the organization can do without its implantation. Hence, only large companies have started using HRIS to complement its HR activities such as HRP, Recruitment, Selection and training. The primary cause for delay in HRIS implementation in organizations is because of the fear phobia created by "technology" and "Information Technology" in the minds of senior management. Major HRIS providers are concentrating on the small, middle range organizations and also large organizations for their products. As per my perception, HRIS would soon be an integral part of HR activities in all organizations.

Discussion and Findings

From the above findings and discussions we convinced of HRIS bringing improvement in quality of work of human resource personnel. Most of the human resources had perceived that HRIS made completion of HR tasks easier. The technology-based HRIS automated the tasks, saved time, and managed information efficiently. The increase in job effectiveness due to HRIS adoption was commonly perceived, while the increase in job enhancement was even more common. HRIS provided required information for decision making as and when required, targeting the person in need which favored HRIS adoption. In this case a utilization of human resource and information system is called HRIS is support in decision making regarding human resource personnel. Interestingly, contrary to the traditional perception that HRIS was an expensive investment, the findings indicated that respondents were well aware of HRIS causing a reduction in operational costs.

We found that some difficulties in HRIS adoption were also revealed in the findings. Due to lack of awareness and limited knowledge, and natural resistance to innovation adoption in an organization, there was wide concern for complexity in using HRIS. Moreover, employees were reluctant to learn the innovation. Researchers found one more interesting finding from this study was that almost half of the respondents were convinced at the ease of integrating HRIS into current operations. However each and every organization considered their employees as having the best competent employees in field of computers. From this study showed that the changes that HRIS adoption brought into the existing system were compatible with existing operations; therefore, adoption of HRIS should be considered positively.

The consistency of organizational values and beliefs between existing system and HRIS were confirmed by majority. The computerized data resources were also considered compatible with HRIS. The training of employees was also dependent on encouragement of top management. HRIS was perceived strategically important for the organization. However, organizations were adopting HRIS due to internal as well as external competitive pressure, while few even admitted on inquiring about competitor's technological innovations.

Conclusion

We concluded that Relative Advantage and Compatibility were positively related to adoption of HRIS. Top Management Support and HRIS Expertise were found to contributors to the decision of HRIS adoption in an organization.

Recommendations

It is recommended that organizations should opt for new technologies. It would cut the cost of operating human resource department. It would also increase the efficiency of the human resource section. Quality work would be done in lesser time and high cost incurred on implementation of HRIS would be justified. Finally, we recommended that the organizations not having human resource information systems must adopt the latest systems after having HRIS expertise in pocket. Usefulness of HRIS is supported by results of this study. It will help organizations in understanding the advantages of implementing such systems.

Future Research

This study has made an original contribution to the existing knowledge base that can be used as a foundation for other researchers, particularly for cross-cultural research on adoption. This research has significant implications for multinational organizations that have adopted HRIS in some countries. This study is quantitative in nature but further mixed-methods studies are suggested as that is required for the adequate development of adoption of innovation. Further, if having data of a large number of respondents, various tools and few more advanced statistical tests may be applied to have an opportunity of better analysis.

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