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**FACTORS INFLUENCING SUCCESSFUL ADOPTION AND USE OF
HUMAN RESOURCE INFORMATION SYSTEM: AN EXPLORATORY STUDY**

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ABSTRACT

Of late, Human Resource Information System (**HRIS**) is slowly gaining prominence in Nepal. Last decade has witnessed virtually a HRIS wave in a majority of Nepali organizations. It was implemented in some nascent form since early 90s by mid to large-sized firms largely due to individual, organizational, environmental, and technological factors. However, adoption of an Integrated HRIS is an exception rather than a reality. Information was elicited through interviews with 18 key informants working for MNCs, Government, and Private sector representing education and development domains. After the coding process, different HRIS themes emerged and they were further grouped to form sub-themes. The exploratory study could unearth not only the conditions necessary for successful adoption and implementation of HRIS but also the factors that pose as stumbling blocks in the process. After exploring the dynamics and various dimensions of HRIS domain, a Generic Model for conditions that are necessary for successful adoption and use of HRIS in Nepali organizations is designed. The limitations of the present study are mentioned and practical/research implications of the same are discussed towards the end. The researchers are of the opinion that the findings of this preliminary study can be taken up to the next level for carrying out quantitative research in HRIS domain in the context of Nepal.

Keywords: Human Resource Information System (HRIS), Adoption and Use, Conditions, Qualitative research, and Grounded theory.

INTRODUCTION

Staying competitive in the current workplace requires, among other things, an adequate and efficient use of technology. Human Resource Information System (HRIS) is one of the several tools that helps organizations remain competitive by providing technology, that can help to acquire, store, generate, analyze, and disseminate timely and accurate employee information. HRIS is an intersection of human processes and technology through a HR software solution that allows electronic processing of HR processes and activities (Gupta, 2013). In similar lines, Anitha and Aruna (2013) state that HRIS provides a pool of information systems that integrate different HR processes for business excellence. In organizations that have adopted Information Technology, HRIS has invariably become an essential part of it as it helps organizations in carrying out their HRM functions efficiently. HRIS has now become an integral part of organization information management along with the development of computer and database network techniques (Jie, 2014).

Research report published by Sage People (2017) found that though 83% of global HR leaders agree that all people decisions should be based on data and analytics, only 37% are actually using them. HRIS has not been implemented in Pakistani health sector owing to multitude of factors ranging from infrastructure, lack of expertise, low budget, and lack of maintenance (Kumar et. al. 2013). This suggests that adoption of HRIS and its use has not been fully functional in majority of organizations globally and we can surmise a similar situation in Nepal as well.

Further, there is wide gap between the intended and actual use of HRIS demanding an inquiry into factors that affect successful adoption of HRIS. There is no precise data on the number of organizations using HRIS or IT enabled HR systems in Nepal. Use of HRIS is increasing even more rapidly in the last five years compared to the earlier decades. Use of HRIS is found to be more in banking sector followed by other sectors such as Private, MNCs, Development, and Public. Among total number of businesses, only 250-300 organizations have HRIS in place. This information can be supported by the fact that there are 12-15 major developers of HR software in Nepal. Each of them has some 15-20 clients as listed in their websites on average and the cumulative number totals to 250-300. Even in the global context, literature on HRIS has remained limited wherein researchers have focused on the barriers and conditions for successful adoption that cannot be generalized for all sectors and contexts. Additionally, the models proposed by previous researchers in a developed context may not work well in a developing context. This sets fertile ground to carry out scholarly inquiry into the domain of HRIS in the context of Nepal.

➤ **STATEMENT OF THE PROBLEM**

Given the backdrop provided in the Introduction section, the basic research questions this study intends to explore in the context of Nepali Organizations are:

1. What is the current status of *adoption and use* of HRIS and the key HR functions for which it is used? What is the general understanding of HRIS among Nepali HR professionals?
2. What are the barriers/constraints in and facilitating conditions for the *adoption and use* of HRIS?

➤ **OBJECTIVES OF THE STUDY**

While the overarching goal of this study is to develop an initial understanding of HRIS in Nepal and its current usage status, it also aims to delve into issues related to constraints and factors for successful adoption and use of HRIS. *More specifically this research aims:*

1. To gain insights about HRIS use and its adoption status in Nepal and generate understanding of the same through practicing HR professionals.
2. To understand the factors that pose as barriers in the adoption and use of HRIS.
3. To understand the facilitating conditions for successful adoption and use of HRIS.
4. To explore the dynamics and dimensions of HRIS domain and design a Generic Model for conditions that are necessary for successful adoption and use of HRIS in Nepali organizations

➤ **SIGNIFICANCE OF THE STUDY**

The findings of the study have both theoretical and practical implications. On the theoretical side, it has the potential to add to the domain knowledge of HRIS besides filling in the research gap by identifying factors that lead to successful adoption and use of HRIS in the Nepali organizations. Organizations intending to adopt HRIS come to know about the required measures to be kept in mind before using it effectively. For the academicians, benefits lie in home grown knowledge about factors leading to successful adoption. It becomes the initial reference point for researchers and scholars for pursuing further quantitative researches by setting the tone on the existing condition of HRIS and its current usage status. Information about the barriers and conditions for its adoption can be used for subsequent empirical research and also by HR practitioners.

➤ **RESEARCH METHODOLOGY**

There is no single published or unpublished qualitative or quantitative research in the domain of HRIS conducted in Nepal. This has called for an exploratory research for inquiry into its nature, current adoption status, usage, barriers and conditions for successful adoption. Researcher aims to explore the dynamics and dimensions of HRIS in the context of Nepal through qualitative research.

• **Research Design**

Under the Grounded Theory approach, semi-structured in-depth interviews with key informants are collected. Semi-structured interview is chosen as it provides the required flexibility (Myers, & Newmann, 2007).

In-depth interviews are taken with the HR Managers and Professionals to unearth issues related to the conditions of HRIS usage and successful conditions for adoption and usage. Given the nature of HRIS, this method is appropriate as their adoption and use can be better understood from the perspectives of the users of such systems, consisting of HR managers and professionals. Using grounded theory approach, this study has explored themes that posed as barriers and conditions for successful adoption and use of HRIS. This can be developed into a model to depict conditions for successful adoption of HRIS. Based on interactions and discussions and with key representatives of HR and four key representatives of HR, including a software developer, organizations having a minimum 200 employees within Kathmandu valley that adopted HRIS or are in the process of adoption are considered. It is ensured that all informants are knowledgeable about HRIS and its adoption status or at least are influential in arranging the interview with the key informants useful for the study.

- **Population and Sample Selection**

Based on the preliminary discussions with the personnel concerned in the HR industry, the prospective informants are identified. Additional respondents are decided based on *snow ball technique* where one respondent also refers other prospective respondents.

- **Data Collection**

Once the interviews are taken, data is transcribed and open coding is done. Open coding is the first stage of qualitative data analysis (Myers, 2013). Data collection and data generation for production of qualitative information primarily relies on the method adopted for data analysis.

Semi-structured interviews are utilized as technique to gather information about the current usage status of HRIS, barriers for adoption, and conditions for successful adoption and use.

- **Interviews**

For the purpose of data transcribing, the number of respondents is 18. However, two respondents each from two organizations are considered as one respondent apiece as the responses obtained from them for that particular organization are similar.

- **Transcribing:**

Interview data collected are transcribed through the help of audio and researchers note. Attempt is made to produce a verbatim account with sincerity to the original language and also maintain the flow of information while transcribing.

- **Data Analysis**

Once all the interviews are compiled, themes and sub- themes are generated. Since grounded theory follows iterative process, data collection and analysis is done till the point where any additional data stopped generating any new themes or categories.

- **RESULTS**

Results derived from the Grounded Theory approach are presented here. As per the grounded theory methodology, the demographic profiles of the participants and background of the organizations have been presented. Then with the help of coding process and method of constant comparison, themes and sub-themes and categories generated during the data analysis have been presented. Themes for each case have been mentioned separately.

- **Contextual Analysis**

Characteristics of each of the participants and their organizations are analyzed to find out the contextual and situational relevance of the research. This information mainly has come through the predesigned fact sheet.

- **Participant Characteristics**

Participants for the study hailed from different age groups having different educational backgrounds and knowhow on the subject matter. Age of the participant varied from 29 to 57 years. Out of the total number of participants interviewed, six are female. Out of the 18 participants interviewed, two of them have Bachelor's degrees while all others have Master's degrees. They have minimum of three and a maximum of 25 years of experience having been involved in their current organizations for more than a year. All of them are aware of HRIS, its requirements, necessary conditions and have been involved in the implementation of the same.

- **Organization Characteristics**

The selected organizations for this study ranged from private, government, development, educational, and MNC sectors having their HRIS at different stages of its adoption—nascent stage to full scale. They also differ in terms of their investment appetite for procuring HRIS related software. All the organizations have a minimum of 150 and a maximum of 2500 staff members. Majority of the organizations procured software from local vendors while one or two used software from Indian vendors. The initial coding of interviews and grouping them according to different cases helped in identifying the major sub-themes related to current adoption status, barriers for adoption and use, and conditions for successful adoption and use.

It can be fairly surmised that when barriers for adoption and use are removed, it leads to facilitating conditions for successful adoption and use. The same are grouped under three categories viz., individual, organizational, environmental, and technological factors as identified through discussions with the people concerned. Summary of Findings is captured in the form of a Generic Model for Successful Adoption and Use of HRIS in Nepali organizations and is shown in **Table 1** below.

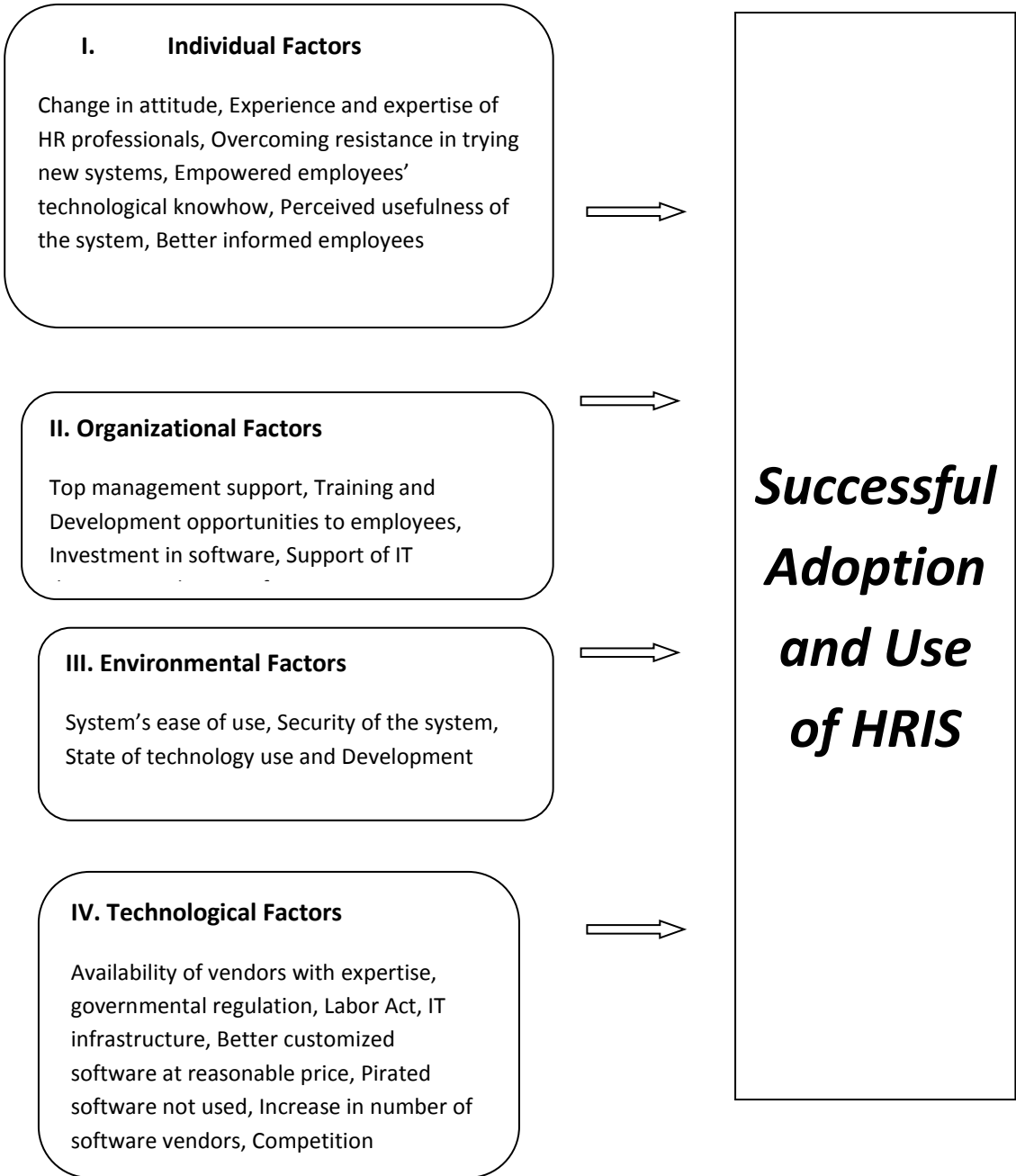


Figure 1: Conceptual Model for Successful Adoption and Use of HRIS

➤ **SUMMARY, DISCUSSION, AND IMPLICATIONS**

Here, we intend to discuss about the findings obtained through this exploratory study in the domain of HRIS in Nepal involving in-depth interviews with the HR professionals in the light of existing literature and presents the practical/research implications, limitations of the study, and a critique there of. An increase in organization's size and capabilities as well as advancements made in IT are making it imperative for organizations to migrate to automated HR systems and processes for better organizational productivity and efficacy. Even Governmental regulatory mechanisms and legal provisions under the Labor Act have mandated that the employees be duly compensated and provided with benefits. Tracking of employee's personal records, their compensation, and benefits is bound to become cumbersome in the absence of an automated system making the use of HRIS limited only to operational purposes than for strategic uses.

- **HRIS in Nepali organizations:**

First, the answers derived from interviews were coded and sub-themes were generated for each interview. After analyzing the findings of each interview, major themes were derived. These major themes have been categorized as individual, organizational, environmental and technological factors. These are discussed in detail below.

- **Individual Factors Influencing Adoption of HRIS**

Majority of the participants believed that '*attitude*' holds the key in the adoption of HRIS along with the technical expertise and experience of the HR professionals for effective implementation and use. Fortunately current well-educated and informed employees are more open for experimentation and risk taking with new systems and are aware of the benefits of software.

- **Organizational Factors Influencing Adoption of HRIS**

Top management's non-ambivalent support in terms of the needed investment for enabling infrastructure such as cell phones and other hand-held devices for employees in the field and commitment for implementation is crucial. As long as the acquired software gives returns, cost ceases to be an issue for management. While Training and Development opportunities facilitate better adoption, the technical role of IT department in adoption of software and liaising with software vendors on a continuous basis can't be overemphasized.

- **Environmental Factors Influencing Adoption of HRIS**

One of the compelling factors for adoption of HRIS is the imperative of complying with a plethora of recent governmental regulatory and legal provisions.

The current fierce competition among the software vendors is undoubtedly beneficial to organizations as it helps in acquiring most economical and quality software along with more knowledgeable HR Software developers. As against cumbersome and costly manual systems, any HRIS adopted in large-sized firms is always hassle-free and cost effective in the long-run. However, organizations need to provide enabling IT infrastructure that is handy for employees travelling to remotest places. There is always a risk in adopting free or cheap pirated software and firms have to go for customized solutions offering the most critical *after sales support* especially when HR professional do not have the requisite knowledge of the software.

- **Technological Factors Influencing Adoption of HRIS**

It is no denying the fact that IT infrastructure has to be simple to understand, user-friendly, and robust to support the software and to facilitate easier and better HRIS adoption. Systems should be safe, secure, and free from privacy concerns maintaining end-to-end data about the employees from pre-entry to post-exit stages. Implementation of the software on online platforms or even in handheld devices requires reliable technology as some HRIS software is available as mobile applications.

- **DISCUSSION**

Findings of the study are similar to those from earlier studies. Under the organizational factors, top management support and commitment have been identified as key factors in influencing adoption of HRIS which was similar to the findings by (Ahmer, 2013; Chakraborty, & Mansor, 2013; Troshani, Jerram, & Gerrard, 2010) and contradictory to the findings by Al-Mobaideen, Allahawiah, & Basioni, 2013. Similarly, under the environmental factors, competition and governmental regulation were identified as factors influencing the adoption of HRIS. These findings were similar to the findings by (Anitha, & Aruna, 2013; Chakraborty, & Mansor, 2013). Likewise, under the technological factors, technology infrastructure or state of technology use were found to be affecting the adoption of HRIS which was similar to the finding by (Chakraborty, & Mansor, 2013). It was also found that HRIS currently has been used for operational purpose than strategic one. Hence, the better use of HRIS needs to incorporate strategic aspects in the days to come such as succession planning, competency mapping, linking their appraisal with training need assessment. This requires knowledgeable HR professionals, provision of technology and skilled HR software vendors who can understand the needs of clients better and serve them accordingly.

➤ PRACTICAL IMPLICATIONS

First, the findings of the research can be used by practitioners to suggest their management in adoption of software. Second, they can understand and realize the importance of creating necessary infrastructure for adoption and prepare beforehand. Third, this research will help HR practitioner to understand the relevance of HRIS in our Nepali organization by following the home-grown models and identify factors for successful adoption. Findings from the research have practical implications for those in education to share the home-grown model on adoption of HRIS.

• Research Implications

This research adds value to the existing domain of knowledge on HRIS by providing a home-grown model for adoption of HRIS. Digging into issues related to adoption requires exploratory studies especially in the developing nations' context (Zikmund, Babin, Carr, & Griffin, as cited in Rahman, Qi, & Jinnah, 2013) for which the method adopted for this study is justifiable. Additionally, this research now allows for further quantitative study in the area of HRIS in the Nepali organizations.

➤ CRITIQUING OF THE STUDY

Researcher, through this exploratory study, aimed to investigate the factors that influence successful adoption and use of HRIS in Nepal. The individual perceptions and judgments of the informant-HR professionals are bound to influence the answers. The environment, context, and timing of the study might also have impacted on the participants interviewed. The fact that the setting for interviews is their offices also might have restricted them to be very open about the systems, processes, and barriers in adoption. Samples for the study represent people with diverse backgrounds and hence the viewpoints are expected to be distinctly different. Approachability is the yardstick for targeting and selecting respondents initially on a convenience basis while the remaining ones are referred ones by the participants themselves causing selection bias on the part of researcher.

[2870 Words]

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