HRIS AND ITS IMPACT ON ORGANIZATIONAL EFFECIENCY

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ABSTRACT: Human Resource Information System (HRIS) is an efficient and response system for managing the human resource of an organisation. It includes hardware, software, forms, policies, procedures and data. Through HRIS organisations collects, maintains, analyses and reports information on people and jobs. The linkage between HRIS and organisation performance is understood theoretically but very few empirical works are done. In this context the present study aim to explore the impact of HRIS on organisation performance in select organisation belonging to IT industry. The dimensions of HRIS and organisational performance are conceptualised first through review of literature and then operationalised by a questionnaire. The data is gathered on the necessary variables are identified through a structured questionnaire from 63 respondents who are involved in HRIS activities at firm level. Multiple regression model was used to track the relation between HRIS and firm performance. Results of the study shows that, for all hypothesis except hypothesis-IV the p-value is less than 0.05 and we accepted Alternative Hypothesis (H₁).

Index Terms: Human Resource information system (HRIS), Firm performance, Training and Development, Skill enhancement, Performance management system, Compensation administration, Competitive Advantage

1.INTRODUCTION

While the other functional units in organizations received budgeting for IT and were automated with the newest technology, the HR function was the last to receive such support, mainly because of its complexity and multitude of data from recruitment to termination of employees. Despite its delayed automation, HR has managed to move from the dark and paper driven age to state-of-the-art information systems in a short period of time. Technology can vastly improve the information available to HR, allowing the department to raise the value of the organization's human capital. Furthermore, by focusing on using such technology to continuously improve the quality of the work environment, HR has the ability to reduce turnover, better develop employees, and attract the best in new recruits. However, the benefits of the Human Resource information systems (HRIS), if not effectively implemented, may not be realized or may only be randomly achieved in certain areas in an organization thereby making the investment unprofitable and questionable. The converse of achieving a

valuable, long term investment for an organization can only be realized if the HRIS successfully impacts on all facets of the work environment in an integrated and holistic way. Hence, this study assesses the success of the impact of HRIS on organizational efficiency in the perspective personnel who work upon the HRIS.

2. RESEARCH PROBLEM

HRIS can make a tremendous impact on the HR function as it allows companies to store and retrieve large amounts of information quickly and efficiency. This results in the elimination of work duplication and ensures streamlined processes, thereby minimizing cost. As a result of the HRIS, HR staff also spends less time on administrative tasks and engage rather on strategic decisions on organizational strategy. Most important, HRIS can assist a company achieves competitive advantage and this leads to overall organizational efficiency. Effectively achieving such goals will ensure managerial satisfaction with the HRIS. In this context, the present study aims at examining the study of HRIS and its impact on the organizational efficiency.

3.THEORITICAL FRAMEWORK

With the increasing development in technology in the recent years, it is possible to create a real-time information-based, self-service, and interactive work environment (Farukn Bhuiyan 2014). Employee Information Systems have developed from the automated employee record keeping into more complex reporting and decision systems. The last decade observed a remarkable increase in the number of organizations acquiring, storing and analyzing and using human resources data with the help of Human Resource Information Systems. The recent emergence of HRIS automates and works out regular administrative and compliance functions that would traditionally perform by corporate HR departments and can facilitate the outsourcing of HR. HR performs traditional HR activities with IT. Since, employees are not just one of the means of production rather a key source of competitive advantage in the 21st century.

In today's knowledge economy, the success of organizations depends mainly on the performance of their human resources (HR). Human resource management is about the procedures and practices that encompass the human resource aspect within organizations. Such practices should be connected to the overall strategy of the organization. This was discussed by Bratton and Gold (2003) who stated that "the strategic approach to managing employment relations which emphasizes that leveraging people's capabilities is critical to achieving sustainable competitive advantage". Many researchers supported this and commented that the change from a primarily administrative personnel function to a more strategic position attends to re-design the nature of the HRM functions.

The result is Strategic integration was hypothesized to have a significant relationship with human resource management functionalities. The result of this study found that this hypothesis was not supported. This result does not agree with the fact that human resource management plays an important role in the implementation of corporate strategy within an organization as Markova (2012) commented that "for a long time, HRM has been seen as a key functional area that assures strategy implementation. HRIS plays a significant role ensuring that human resources objectives are connected with the organizational overall strategic objectives. Strategy is considered to be a crucial factor in the success of any organization. Not supporting this hypothesis can be argued by the fact that banks in Jordan plan for their strategies but fail to properly implement them.

HRIS is an efficient and responsive system for managing the human resources. HRIS are of three types such as Electronic data processing (data processing, data, storage, processing payroll and basic personnel information, MIS management information system and third is decision-support system. Some organizations use all three while some use partially (M.A Sajid, 2012). The term data is very important in any kind of industries. Data is the collection of various related information. It will decrease costs, improved communication, and decreases in time spent on specific activities should create an environment where in the Human Resources (HR) department would play a more strategic role in the organization (Gupalasetty Sandeep 2016). HRIS is a human resource information system (HRIS) is software containing a database that allows the entering, storage and manipulation of data regarding employees of a company. It allows for global visualization and access of important employee information. HRM generally uses IT as HRIS. It is an integrated system acquiring and storing data used to make analysis, make decisions in the field of HR (Chakravarthy V, 2015). Although an HRIS includes hardware and software, it also includes people, forms, policies and procedures, and data. HRIS is a key management tool which collects, maintains, analyses and reports information on people and jobs. It is a system because it integrates all the relevant data, which otherwise might have been lying in a fragmented and scattered way at various points in the larger system; converts this data into meaningful conclusions or information and makes it accessible to the persons, who need it for their decisions (Saidique 2012).

The concept of HRIS is a key management tool which collects, maintains, analyses and reports information on people and jobs. It is a system because it integrates all the relevant data, which otherwise might have been lying in a fragmented and scattered way at various points in the larger system; converts this data into meaningful conclusions or information and makes it accessible to the persons, who need it for their decisions.

It is most important design aspect of business GUI like MIS, BIS, ES, and KBES and so on. Using information related to human resource which maintained and processed by HRIS by accepting HR-databases, HR-Knowledge bases, which helps to CEOS, MDs, VP of HR department to make strategic HR and related

business plans and decision, to forecast, to control HR process inside and outside of business organization. HRIS is a systematic way of storing data and information for each individual employee to aid planning, decision making, and submitting of returns and reports to the external agencies (Sabrina Jahan).

Asha Nagendra, Mohit Deshpande in their article Human Resource Information Systems (HRIS) in HR planning and development in mid to large sized organizations stated that the role of HRM has changed altogether from a traditional (popularly called personnel management) to a strategic one. Most medium and large scale organisations spend large amounts of money and reserves on HR software, but unfortunately many of them utilise it only for HR administrative purposes rather than for effective and efficient human resource planning. This study aims to explore the extent of usage of a Human Resource Information System (HRIS) in mid to large sized organizations and the advantages they derive from the implementation of the same in the Human Resource Planning (HRP) sub functions. HRIS outline the integration between Human Resource Management (HRM) and Information Technology (IT). The role of HRM has changed altogether from a traditional (popularly called personnel management) to a strategic one. Most medium and large scale organisations spend large amounts of money and reserves on HR software, but unfortunately many of them utilise it only for HR administrative purposes rather than for effective and efficient human resource planning.

Findings suggest that there is evidence linking HRIS recruiting subsystem to the workforce planning of mid to large sized organizations. It was found that higher usage of the training and development function of HRIS resulted in better training needs analysis and better predictability. However, it was seen that HRIS rarely helps in either predicting accurately or reducing the costs associated traditionally with the entire training process. The study revealed that the relationship between increased usage of HRIS results in an increase in both effectiveness and efficiency of the organization. Therefore, the overall contribution of HRIS to the recruitment and planning functions, as well as to training is beyond doubt.

4. OBJECTIVES

- 1. To assess the impact of HRIS on Organizational efficiency.
- 2. To examine the impact of Recruiting & Selection process using HRIS on Cost maintenance and Information Management in the organization.
- 3. To analyze how the Training and Development using HRIS impacts on Skill. Enhancement and Motivation of the employees in organization.
- 4. To evaluate whether Employee Retention Using HRIS has impact on the Employee motivation and Job Satisfaction.
- 5. To examine how the use of HRIS in organization gives it competitive advantage.

5.HYPOTHESIS

Hypothesis-I:

H₀₁ –HRIS doesn't has the positive impact on the organizational efficiency

H₁₁-HRIS has the positive impact on the organizational efficiency

Hypothesis-II:

 H_{02} Recruitment and Selection process doesn't has the positive impact on cost maintenance and Information management in the organization

 H_{12} –Recruitment and Selection process has the positive impact on cost maintenance and Information management in the organization

Hypothesis-III:

 H_{03} -Training and Development by using HRIS doesn't has positive impact on skill enhancement and motivation of the employees in the organization

H₁₃-Training and Development by using HRIS has positive impact on skill enhancement and motivation of the employees in the organization

Hypothesis-IV:

H₀₄ –Employee Retention using HRIS doesn't has the positive impact on the motivation and job satisfaction of the employee

H₁₄ –Employee Retention using HRIS has the positive impact on the motivation and job satisfaction of the employee

Hypothesis-V:

H₀₅–Using HRIS in organization doesn't has positive impact on competitive advantage

H₁₅-Using HRIS in organization has positive impact on competitive advantage

6. RESEARCH METHODOLOGY

To achieve the stated objectives of the study a simple random sample of 70 respondents were taken from Vijayawada, Bangalore, Chennai and Hyderabad cities by random sampling method. To collect the data, the targeted respondents were the personnel in middle level and higher level management, who access the HRIS software. A structured questionnaire was designed keeping in view the variables of the study to be measured. Data was collected from the respondents personally after explaining clearly the purpose of the study. Data thus gathered was coded and entered into excel spread sheet and based on non-responses and missing values only responses of 63 respondents were considered. The data obtained was used for sample profiling. After that descriptive data analysis with frequency tables and percentages along with bar charts was done. To test the

hypotheses, a simple linear regression method was used. To analyze data the software package R version 3.4.2 was used.

7. ANALYSIS OF DATA

Table 7.1

Gender	Frequency	Percent
Male	42	66.66
Female	21	33.33
Total	63	100
Age		
27	4	6.34
28	6	9.52
29	2	3.17
30	7	11.11
32	8	12.69
33	1 8	1.58
34	7	11.11
35	4	6.34
36	3	4.76
37	4	6.34
38	4	6.34
40	3	4.76
42	1	1.58
44	1	1.58
45	4	6.34
47	1	1.58
48	1	1.58
51	1	1.58
52	1	1.58
Total	63	100
Income(Per-annum)		
Less than 3 Lakhs	3	4.76

3 to 5 Lakhs	27	42.85
5 to 7 Lakhs	19	3.145
More than 7 Lakhs	14	22.22
Total	63	100
Designation		
Associate Manager	1	1.58
Asst General Manager	3	4.76
Business Analyst	10	15.87
Client Relationship Manager	12	19.04
Technology Head	5	7.93
Finance Manager	4	6.34
HR	20	31.74
Quality Assurance Manager	5	7.93
Training Head	3	4.76
Total	63	100

8.SUMMARY OF HYPOTHESIS TESTING

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S.NO	HYPOTHESIS	TEST	P-VALUE	DECISION
		USED	\mathbb{R}^2	1 6 3 2
1	H ₀₁ –HRIS doesn't has the positive impact on the organizational efficiency H ₁₁ –HRIS doesn't has the positive impact on the organizational efficiency	Simple Linear Regression method	<0.001 / 0.531	Reject H0 Accept H1
2	H ₀₂ –Recruitment and Selection process doesn't has the positive impact on cost maintenance and Information management in the organization H ₁₂ –Recruitment and Selection process has the positive impact on cost maintenance and Information management in the organization	Simple Linear Regression method	<0.001 / 0.436	Reject H0 Accept H1

Simple Linear Reject H0 Accept H1		T**	T ~	ı	1
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					1
			34		

In the analysis, we used Simple linear regression Method to find the hypothesis. In the regression method, R^2 / adjusted R^2 will tell how accurate the model is and P- value determines the hypothesis. We reject Null Hypothesis (H₀) by default when the p- value is less than 0.05 and vice-versa.

So in the results from the analysis are such, for all the hypothesis except hypothesis-IV the p-value is less than 0.05 and we accepted Alternative Hypothesis (H₁). But for hypothesis-IV the p-value is greater than 0.05 and adjusted R^2 value is negative, which says the model for this hypothesis is not accurate.

9. SUGGESTIONS:

From this study, it is evident that all the organizations based on technology must adapt to HRIS.

 Management needs to invest on HRIS technology that influences the operations and need to integrate HRIS in every department.

- 2. The updates should be made regularly to the HRIS application and feedback of employees about the application should be received.
- 3. The employees in the organization needs to aware of technical support team and use their services.
- 4. The information quality, system quality and system use are average and should be improved.
- 5. HR personnel should be trained regularly on the usage of HRIS technology.

10. CONCLUSIONS

The main goal of this research is assessing HRIS impact on the organizational efficiency. Since there was a limitation to collect the quantitative data, the perception of the respondents has taken as a measure. So the findings of this research are

- 1. There is a positive and significant impact of HRIS on organizational efficiency.
- 2. Recruitment and selection process carried by using HRIS, will be the cost effective and also maintains the inventory of information of the candidates, which makes finding the right candidate will become easy.
- 3. Training and development using HRIS enhances skills of the employees as well as the motivation.
- 4. Employee retention using HRIS does not have any impact on Job satisfaction and motivation of the employee.
- 5. Using HRIS will give the competitive advantage to the organization.

11. REFERENCES

- 1. Raymond McLeod, JR.& Geradine DeSanctis (1995). "A Resouce-Flow Model of Human Resouce Information System" Journal of Information Technology Management, Vol. 6, No. 3, pp 1-15.
- 2. Spain, E., & Groybser, B. (2016). Making exit interviews count, Harvard Business Review. 94(4), 88-95.
- 3. John T. Delaney & Mark A. Huselid (1996). "The Impact of Human Resource Management Practices on Perceptions of Organizational Performance" Academy of Management Journal 1996, Vol. 39, No. 4, 949-969.
- 4. Yusra Yasreen Lazim, & Noor Azlinna Binti Azizan (2013). "The Influence of Human Resource Management Practices and Government's Role in the Organizational Performance of Small Business in Malaysia" Asian Journal of Management Research Vol. 4, Issue 2, pp 266-287.
- Usman Sadiq, Ahmad Fareed Khan, Khurram Ikhlaq, Bhaudin G Mujtaba, "The Impact Of Information Systems On The Performance of Human Resource Department" Journal of Business Studies Quartely 2012. Vol 3. No.4, pp. 77-91.

- 6. Mohammad Al-Tarawneh & Haroon Tarawneh(2012), "The Effect of applying Human Resources Information System in Corporate performance in the Banking Sector in Jordanian Firms", Intelligent Information Management, Vol.4, pp. 32-38.
- 7. Faruk Bhuiyan & Mohammad Osman Gani,(2015) "Impact of Human Resource Information System on Firm Financial Performance", International Journal of Business and Management, Vol. 10, No. 10, pp. 171-185.
- 8. Michael J. Kavanagh& Richard D. Johnson, (2012) "Human Resource Information Systems: Basics, Applications, and Future Directions" 4th Edition.
- 9. Ebrahim Mohammed Almatari, Abudullah Kaid, Faudziah Hanim Bt Fadzil (2014), "The Measurements of Firms Performance Dimensions" Asian Journal of Finance and Accounting, Vol. 6. No.1 pp. 24-49
- 10. Gill, J., Johnson, P., (2010). Research methods of managers, Sage Publications Limited., Fourth Edition.
- 11. Rajiv Kumar . (2012) Human Resource Information System: An Innovative Strategy for Human Resource Management , Gian Jyoti e-journal Volume 1, Issue 2. www.gjimt.com/GianJyotiE-Journal.htm
- 12. Bartel (1994) Measuring the Employer's Return on Investments in Training: Evidence from the Literature. Industrial relations, Vol. 39, No. 3 (July 2000). © 2000.
- 13. Historical Evolution of Human Resource Information System (HRIS): An Interface between HR and Computer Technology, FarukBhuiyan, Mustafa Manir Chowdhury, Farzana Ferdous, Human Resource Management Research 2014
- 14. Benefits and Barriers of Human Resource Information System In Accounts Office & Azad Jammu& Kashmir Community Development Program, SyedaQudsiaBatool, Dr. M.A Sajid, Dr. Syed Hassan Raza, International Journal of Humanities and Social Science Vol. 2 No. 3; Februaly 2012
- 15. Guppalasetty Sandeep, A STUDY ON HRIS AND ITS IMPACT ON IT INDUSTRIES, International Journal of Interdisciplinary Research Centre(IJIRC), Volume 11, Issue 2 February 2016
- 16. Chakravarthy V, Dr. R. Siva Rama Prasad , Role of Information Technology in Human Resource Management. International Journal of Advance Research in computer Science and Management Studies Volume 3, Issue 8, August 2015
- 17. Human resource information system (hris) designing needs for business application, Md. Sadique Shaikh, JSET: Volume 4 0 Number 1 'January-June 2012.