Statistical Analysis and Significance of Information and Communication Technology based Improved Human Resource Information System (HRIS) in HR Performance for Banking and Financial Systems

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Abstract: HRIS complements reasonable values to the organization, by its superior potential of enhancing accuracy of essential information at all levels, sharpening planning and decision making process, reducing administrative and operational costs in most HR practices. The most admirable characteristic of HRIS is that transparency and clarity within the organizational system gets up which ultimately leads to job satisfaction within users groups and user community. The important constituents of HR system such as Planning and Recruitment Process, Training and Development Process, Promotions and Career Planning of Employees, Performance Appraisal, Leave, Payroll and Grievance Handling and Information Generation etc. can be supported, controlled and executed significantly by a properly installed HRIS in banks. The performance of any HRIS system may be estimated and assessed by these components together. In this research paper, research has attempted to torch upon these performance measures of HRIS in one of the largest bank in India.

Keywords: Human Resource Information System (HRIS), Strategic Human Resource Management (SHRM), Traditional Human Resource Management (THRM)

Introduction

Conventionally, Traditional Human Resource Management (THRM) practitioners were exercising the most significant amount of time and effort at the administrative level; followed by the operational level and strategy level. HRIS has always capability to renovate HR and potential to enable it to contribute value add to the organization as it has the quality of saving time at administrative and all other levels which can be dedicated to the strategic level. HRIS complements competitive values to the organization, by its excellence of refining planning, decision making, decrease HR operational and administrative costs and enhance transparency, accuracy of essential information at all levels. The most admirable attribute of HRIS is that transparency within the organizational system gets up which ultimately leads to both way communication within u[1]sers groups and collaboration with the user community. The priorities of the developed market has shifted as business and strategic oriented and less oriented towards traditional HR functions such as training, staffing, appraisal and compensation. The new priorities advocate Strategic Human Resource Management (SHRM) include team-based job designs, quality improvement practices, flexible workforces, employee empowerment and incentive compensation etc. and influenced by the impact of diverse levels of SHRM implementation on overall performance on market environment noticeable.

HRIS clutches enormous advantages for institutions and produces effective outcomes. Few advantages are given in brief in following chart:

Figure 1- Advantage of Human Resource Information System (HRIS)

Source: Self Constructed by Researcher

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Due to globalization Human resource management has become an essential component of any successful business model. HRIS is a platform for the organization to be more competitive through proper communication with other systems. It diminishes the boundaries of the system for both vertical and horizontal communication within the organization by making employees self-sufficient, to communicate and to share experience. The HRIS keep track on following activities:

- Time and Attendance
- Payroll
- Administration
- Appraisal Performance
- HR Management Information System
- Recruitment & Selection
- Learning & Training
- Career Planning
- Performance Record
- Employee Self-Assessment
- Work Assignment & Scheduling
- Retirement Benefits

Brief about Bank of Baroda:

Bank of Baroda is an Indian state-possessed International banking and financial service organization with more than 131 Million Customers across 18 Countries. It is the second biggest bank in India, second to State Bank of India. Its HO is situated in Vadodara (prior known as Baroda) in Gujarat, it has a corporate office in the Mumbai. As in July 2020, approx. 82850 employees were working in various capacities in more than 8000 branches of Bank of Baroda. In September 2018, the Government of India proposed the merge Vijaya Bank and Dena Bank with Bank of Baroda, which effected from 1 April 2019.

Review of Literature:

Ahmed, H (2020), worked upon efficiency and performance of HRIS in Banking Sector in Bangladesh, while working one of the biggest bank of Bangladesh, he exposed that few crucial key-points are not equipped with software though the bank was using HRIS, the inadequate featured HRIS raised several problems to the employees and as results, the bank could not reap out the benefit of HRIS software. This study contributed to the banking sector in Bangladesh to make their HR system operative and observed key problem areas helped the bank and others bank to rectify the same by initiating suitable remedies.

Chaudhary, S (2019), in her thesis submitted to Business Management, presented the study on HRM practice historical time period in Finnish Cooperative Bank Osuuspankki. Qualitative method using a semi-structured interview was applied for personal interviews which were recorded. The outcomes of the

study suggested the change in HRM system is achievable with the change in technology, trusted and responsible workers are essentially required for successful HRIS in every bank and artificial intelligence could partly substitute the human involvement when providing safety to the banks.

Shelke, T (2018), in his paper emphasized the emergent application of HRIS in banking sector. Acceptance of this system have been raised as record-keeper and information reservoir yet employees of banks have confrontation towards reception of the process munificently. The noticeable key-points which restrict them to be converted tech-friendly. Role of Organizational Development (OD) interventions as an effective manner supports in overpowering this resistance and upsurge the acceptance of employees towards transformation.

Singh, H.P., et al. (2011) worked upon the role and impact of HRIS in banking sector of selected developing countries, they suggested that the placement and usage of HRIS in banking is the result of advancement of IT field. It has appeared as an essential multidisciplinary instrument to achieve vital crucial HR objectives in companies. Discussing the significance of HRIS in transmuting the banking industry of developing countries such as India, Indonesia, Pakistan, Thailand and Sri Lanka, they suggested that HRIS works as a noticeable multidisciplinary instrument for efficiently management of HR workings in most of the organizations. On commenting on the scope of HRIS they said that it has an extensive scope in banks as personnel administrator, having assignments of salary administration, leave/absence recording, skill inventory, medical history, performance appraisal, training and improvement, recruitment, etc. In order to decide the suitable level of HRIS and optimal utilization of rare resources, it is essential to identify the system necessities before HRIS implementation.

Mohapatra S & Patnaik A (2011) in their study titles "Sustainability in HRIS implementation through effective project management", emphasized on benefits of sustainability of an executed HRIS framework in order to attain stakeholders' objectives. In some small organizations, having employee strength less than 2,000, conceptual frame work has been observed to be convincing. On the contrary, it was problematic to implement HRIS applications in large organizations, and success rate of proper implementations have been relatively low. It was because of lack of stakeholders' and end users participation and reception of various features. The benefits of such methodology are immense in terms of meeting business requirements.

Chalhoub (2009) in his study examined the relationship between selected dimensions of Banking Governance and Overall performance of major banks. Encompassing

governance as routine practice, code of ethics, governance literacy, shareholders' contribution in governance, training, shareholder involvement, clarity and responsibility were taken as independent Banking Governance factors and on the other hand, company's growth, profitability, and satisfaction of clients were selected as dependent performance factors. The outcomes revealed that each of the factor of Banking Governance was suggestively correlated with overall performance of banks.

Vallelado & Andres (2008) described the influences of different factors of board on the banks' performance. Sample of huge multinational commercial banks operating in various countries such as Spain, UK, Canada, France, Italy and the United States, were taken for study. Econometric models such as Pooled OLS was applied for analysis. The outcomes revealed that an inverted U-shaped association between bank performance and board size was found and equally inverted U-shaped association was also found between bank performance and proportion of non-executive directors. The authors recommended an optimal number of non-executive directors on the boards to make timely and suitable decisions in order to get wealth maximization of the banks.

Research Methodology:

In the present paper, researcher have used summated or Likert type scale, consists of a number of statements covering various dimension of study subject which marks a favorable or unfavorable perception towards the given subject. In the present study, the researcher has constituted a part of questionnaire, having 26 statements covering various dimensions of HR practices effectiveness with regard to HRIS in Bank of Baroda. Researcher's understating gathered by studying literature review was developed to be checked though this study. The significant dimensions were –

1.   **Planning & Recruitment**
2.   **Training & Development**
3.   **Promotions & Career Planning**
4.   **Performance Appraisal**
5.   **Leave, Payroll & Grievance Handling**
6.   **Information Generation**

All the scores have been used for analysis purposes using the IBM SPSS (Statistical Package for Social Science) version 22 were used to analyses. These responses were coded and a master data sheet was created using Microsoft Excel. Table and graphical representation of demographic data was prepared for a vide picture of representativeness. Since the Effectiveness and performance can be achieved by successful implementation operation of HRIS. A digitalized HRIS has few significant attributes which ensure quality and performance. As per the previous studies and discussion with experts, researcher selected important HR components (Planning and Recruitment Process, Training and Development Process, Promotions and Career Planning of Employees, Employee Performance Appraisal, Leave, Payroll and Grievance Handling and Facilitating Information Generation) for in-depth study which an ideal HRIS requires to achieve effective results. Each component has different 26 statements related to that particular component which the respondent was asked to scale. The respondents were given five point Likert Type rating scale and were asked to mark in appropriate box. The scale has been used to quantify the response and scores ranging from 1 to 5. These point were give as per their answers to the particular statement such as 1 to Strongly Disagree, 2 for Disagree, 3 for Neutral and 4, 5 for Agree and Strongly Agree respectively. The sum and mean score of all the statements related to each component was measured and also in the end mean of all the components were measured. Mean Score of all above HRIS dimensions has been added to calculate aggregate mean score of HRIS as Overall HRIS Performance.

Sampling:

Since the staff member or employees of bank are the end user of HRIS, they could be the best choice for most accurate response, keeping this in eye, researcher selected staff members for sample response. Random Sample of 300 online and personal interviewed responses were collected from various important branches of Bank of Baroda across the country for analysis. The selected sampling of unit comprised of Business Associates and Level I, II & III Officers Bank of Baroda.

Data Interpretation and Results:

HR is an all-rounder which plays role of talent selector, trainer and motivator. All of the assignments are networked at one place by HRIS. It have been confirmed that over the last decade, the use of technology has played a crucial role and taken a big leap forward. Analysing the responses on various modules, the researcher attempted to study the Overall Performance of HRIS. For this a null hypothesis was established (with an alternate hypothesis).

Ho The role of Human Resource Information System (HRIS) is significant in 'Overall Performance' of HR practices of Bank of Baroda.

Ho-a The role of Human Resource Information System (HRIS) is not significant in 'Overall Performance' of HR practices of Bank of Baroda.

The hypothesis was tested with descriptive analysis and to reconfirm it, One Sample T Test was applied. The One Sample T Test is applied to determine whether the sample come from the population with a specific mean (known or hypothesised). To test the below hypothesis, the researcher assumed that the hypothesised mean is 3.0 which is score for neutral in 5 point Likert scale. The

Overall Performance of HRIS was taken in One Sample t Test. It was applied on SPSS Version 22. On the basis of the mean scores, rank analysis was also done for various dimensions of HRIS.

HRIS Performance				
	Mean	Std. Deviation	Variance	Rank (Mean Wise)
Planning & Recruitment	3.9820	.71548	.512	Rank 2
Training & Development	4.0433	.75401	.569	Rank 1
Promotions & Career Planning	3.8192	.88725	.787	Rank 7
Performance Appraisal	3.9687	.74039	.548	Rank 3
Leave,Payroll & Grievance Handling	3.9667	.74352	.553	Rank 4
Information Generation	3.8794	.76650	.588	Rank 6
Overall Performance Score	**3.9431**	**.60729**	**.369**	

Table 1 HRIS performance Statistics
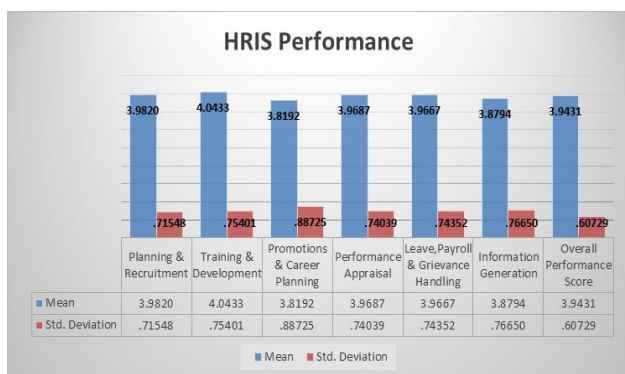
Graph 1- HRIS performance Statistics

In the above Descriptive Statistics table, we analysis the mean, SD and variance of various statements regarding Overall Significance and Performance of HRIS. The last rank with minimum score of Mean(SD)=3.8192(.8872) (Performance and Career Planning) and Rank 1 with maximum score was Mean(SD)=4.043(0.7540) (Training and Development). The most of the mean score were more than 3.5 which shows that the Overall Significance and Performance of HRIS is high in banks where it applied. Overall Significance and Performance mean score was 3.9431with SD= 0.60729, which is very positive. The results showed that the role of HRIS is effective and significant in HR system of Bank of Baroda.

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Overall Performance	300	3.9431	0.60729	0.03506

Table 2: One Sample Test Statistic

One-Sample Test						
	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Overall Performance	26.898	299	0	0.94309	0.8741	1.0121

Table 3: One Sample Test Results

The statistics of One Sample t Test in the table given below also suggest that the p Value (significance 2-tailed) is below 0.05 (p<0.05) at 299 degree of freedom and the mean value is 3.9431with SD= 0.60729, which is not equal (mean≠3) to test value of 3 (greater than test value of 3). The mean difference is .9431 which is significantly high enough to reject the null hypothesis Ho and to confirm that HRIS is effective and plays a significance role in HR system of Bank of Baroda.

Conclusion:

The above results suggests that HRIS is effective in HR Management of banks and it plays a significance role in HR system of banks. All the essential assignments of HR system such as Planning and Recruitment Process, Training and Development Process, Promotions and Career Planning of Employees, Performance Appraisal, Leave, Payroll and Grievance Handling and Information Generation etc. are admirably supported by a properly installed HRIS in banks. The suitable execution of HRIS not only smoothens the working functionalities of bank by improving quality and accuracy but also provide employees a flexible, comfort and transparent working environment which ultimately enhance their performance and satisfaction level towards the given responsibility at all level.

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