DETERMINING EMPLOYEES' PERCEPTION THROUGH EFFECTIVE HRIS: AN EMPIRICAL STUDY

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Abstract *Human Resource Information System (HRIS) refers to the systems and processes at the connection between Human Resource Management (HRM) and Information Technology (IT). The human resources department deals with administrative functions and is very common to all organizational activities. Every organisation has procurement, evaluation, and payroll functions. The HR function comprises tracking existing employee data that include personal records, skills, capabilities, achievements and compensation benefits and its maintained manually. To reduce the manual workload of these administrative activities, organisations began to electronically automate many of these processes by introducing specialized Human Resource Information System. In nutshell, HRIS can support various HR practices such as HR planning, staffing, compensation, salary forecasts, pay plans and employee relations.*

Design/Methodology/Approach: This research measures the effectiveness of Human Resource Information System in Banking Sector and also evaluates the underlying factors of HRIS in determining the employees' perception. The study is based on the primary data, collected from the employees of banking sector and is located in Delhi and National Capital Region. Data analysis was done using SPSS software. The statistical analysis method employed was Descriptive Analysis, Factor Analysis and T-test.

Findings: The findings show that HRIS is effective and efficient in banking sector. HRIS is not only assisting banks to increase its productivity but also brings positive change in banking sector. The finding also indicates that HRIS is not only time saving and cost effective but it also improves quality of work. So, it is clear that HRIS implementation has many benefits and it's proved convenient and beneficial to bank.

Keywords: *HRIS, HRMS, Security of Information, Banking Sector*

Introduction

The optimum use of information systems is undoubtedly one of the fastest changing and dynamic processes in today's business organisations. It is proven today that information technologies are among the most important tools for achieving business success. In earlier days, all the information flows were managed manually. Since last several years' business information is being kept, analyzed and processed in computerized and different electronic formats to communicate properly and manage the activities effectively. Due to the expansion of Management Information Systems (MIS) in business firms, HR functions increasingly started to deploy Human Resource Information Systems (HRIS) in their day-to-day work.

Human Resource Information System (HRIS) refers to the systems and processes which connects Human Resource Management (HRM) to Information Technology. It integrates HRM as a discipline and in particular its basic HR activities and processes with the information technology processes.

The function of Human Resources department is generally related to the day to day administration and management of personnel within organisation. To reduce the manual workload of different administrative activities, organisations started automation for many of the processes by introducing specialized Human Resource Management Systems and developing Human Resource Information Systems.

Literature Review

Human resource information system or human resource management systems are designed to support for planning to meet the personal needs of the business, development of the employees to their full potential and controlling all the personnel working in the organisation. Originally businesses used computer-based information systems to

maintain personnel records or to analyze the optimum use of personnel in business operations.

Most of the organisations have moved from the traditional personnel management functions to modern approach of human resource management systems or human resource information systems (James O'Brien, 2008). IT has become a major force for change in human resource management. HRM systems are designed to support the functions of HR department. HRIS or HRMS supports the strategic, tactical and the operational use of the human resource of an organisation. It allows the HR department to access and furnish round the clock services to its employees and organization (Ostermann, Staudinger & Staudinger, 2009).

Employees are asset for an organization and they need to be managed in the same way as other non-human assets in the sense that they are the productive source, requiring proper maintenance and balance in terms of guidance and motivation. Ulrich, D. (2007) explicates that the work structures define the structures of the enterprise and the functions that are carried out within it, and these HRMS models are put into the disposition with these structures and functions.

In modern corporate world human resources and human resource management systems are playing very critical role in business environment. From the hiring and firing of employees to employee motivation and training, the Human Resources department of any organisation now plays a central role from policy formulation, its execution and streamlining the business process. The technology is playing key role to make a human resource department more effective and efficient (Parry, 2009). They are now being introduced, modified and updated on a regular basis to make things much simpler and more productive. The Human Resources Information System (HRIS) is one of the latest human resource technologies which have been introduced today. This is an integrated information system which is designed to provide information for HR decision-making in their day–to-day administration work such as, recruiting, training, performance analysis and managing payrolls of the employees. Risk and security management are another important functions which are governed by HRIS in managing, analyzing and communicating private and highly sensitive individual data which are the most serious concerns in banking sector which need to be taken care of (Karakanian, 2000).

HRIS performs and executes a number of functions and activities from the storage of information, to meaning communication and complex transactions. As there is advancement in technology, the level of functions that an HRIS deals in increases (Ruël, Bondarouk & Looise, 2004). The commencement of HRIS is an opportunity for human resource managers to become more effective and productive strategic partner for top management. It instruments the HR function to become more efficient and to communicate in effective manner for business decision making (Beadles, Lowery & Johns, 2005).

Today, HRIS plays an important role for every organisation in effectively managing its people and human resource functions. Many organisations have implemented HRIS to manage their day to day human resources activities (Strohmeier, 2009). HR departments need to understand some of the limitations of information technology and its integration to the HRIS functions. Security of private HR information is a top priority (Karakanian, 2000). So, it is very important to check and ensure for HR managers that HRIS must line up and address the concerns of the organisation and its users in order to produce error- free, effective and meaningful results (Noor & Razali, 2011).

The objectives of the study are:

- To measure the effectiveness of HRIS.
- To evaluate the underlying factors of HRIS in determining the employees' perception.

Research Methodology

Research Design

The study was descriptive in nature and survey method was used to complete the study.

Data Collection Instrument

- The data for the study were gathered through an undisguised questionnaire during November 2013.
- The questionnaire used for the sample survey is a structured and non-disguised questionnaire and consisted of three major sections. The first section is intended to capture the demographic profile of the respondents, the second part contains features of HRIS, and the third part is concerned about the employee's perception towards HRIS. The scale used for collecting data was 'Five Point Likert Scale' ranging from 5 for 'strongly agree' down to 1 for 'strongly disagree'.
- Data analysis was done using SPSS software. The statistical analysis method employed is Descriptive analysis, t-test to identify the significance difference in the average employee perception towards performance. Descriptive statistical analysis test was used to determine the differences according to demographic qualifications.

Sampling Design

- The sample was collected using Non-Probability Convenience Sampling Technique for the current research.

- **Sampling Unit:** The sampling unit consists of the employees (male and female both) in banking sector.
- **Sample Size:** Primary data were collected with a sample size of 30 respondents from banking sector in and around the National Capital Region and Delhi. The choice of this geographical area has been done with this assumption that Delhi being the capital city of our country may be a suitable representative of the expected data.

Data Analysis

Socio-Demographic Characteristics of Respondents

Table 1: An Overview of Respondents Demographic Profile

Gender			
Male	15	50.0	50.0
Female	15	50.0	100.0
Qualification			
UG	6	20	20.0
PG	24	80	100.0
Work Experience			
Less than 5 yrs	8	26.7	26.7
5-10yrs	7	23.3	50.0
11-15 yrs	5	16.7	66.7
16-20 yrs	6	20.0	86.7
Above 20 yrs	4	13.3	100.0
Income			
200001-300000	5	16.7	16.7
300001-400000	18	60.0	76.7
400001-500000	4	13.3	90.0
Above 500000	3	10.0	100.0

Table 1 summarizes the frequency distribution of the gender of respondents. There is equal number of respondents in terms of gender as the sample was collected in view of equal representation of both male and female staff. 26.7 % respondents had worked in the organisation for less than 5 years, and 23.3 % had worked for between 5- 10 years. The educational background of the participants are: 20% have graduate degree and 80% have postgraduate degree. The income-range of participants are: 16.7% are from 2.1 to 3 lakhs, 60.0% from 3.1 to 4 lakhs, 13.3% from 4.1 to 5 lakhs and 10 % are from above 5 lakhs.

Kolmogorov-Smirnov test was used to determine the normality of data and the results showed that data were distributed normally and it is possible to make parametric tests (Table 2).

Table 2 : One-Sample Kolmogorov-Smirnov Test

		Gender
N		30
Normal Parametersa	Mean	1.50
	Std. Deviation	.509
Most Extreme Differences	Absolute	.337
	Positive	.337
	Negative	-.337
Kolmogorov-Smirnov Z		1.847
Asymp. Sig. (2-tailed)		.002
a. Test distribution is Normal.		

Factors of HRIS in Determining the Employees' Perception

Factor analysis was performed to identify the key factors of HRIS in determine the perception of employee. Strength of relationship among variables is strong. It presents good idea to proceed for factor analysis of the data. Factor analysis with principal component by varimax rotation, that was performed to find out the factor structure, revealed 3 factors. The three factors explained 64.608 % of the total variance. Kaiser-Meyer-Olkin Measure of Sampling result was .642 (>.60) and significance level was p= .00 (<.05), Bartlett's Test of Sphericity value was found 91.275 (df= 45). Hence, the result was acceptable. All factors' factor loadings and variance values can be seen in Table 3 and Table 4 and reliability of the data is acceptable (.739) (See Table 3).

Table 3: Reliability Statistics

Cronbach's Alpha	N of Items
.739	10

Table 4: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.642
Bartlett's Test of Sphericity	Approx. Chi-Square	91.275
	df	45
	Sig.	.000

Rotated Component Matrix has been generated using Varimax with Kaiser Normalization procedure. All 10 variables along with the 3 extracted factors are given below in Table 6.

Table 5: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.241	32.411	32.411	3.241	32.411	32.411	2.710	27.103	27.103
2	1.627	16.269	48.681	1.627	16.269	48.681	1.945	19.454	46.557
3	1.593	15.927	64.608	1.593	15.927	64.608	1.805	18.051	64.608
4	.989	9.889	74.496						
5	.734	7.340	81.837						
6	.641	6.408	88.245						
7	.380	3.802	92.047						
8	.355	3.547	95.594						
9	.241	2.413	98.007						
10	.199	1.993	100.000						

Extraction Method: Principal Component Analysis.

Table 6: Rotated Component Matrixa

	Component		
	1	2	3
Datacanbeeasilyshared	.869	-.256	.027
Workpressurereduced	.818	.029	-.072
Improvesqualityofwork	.777	.234	.204
PropertrainingisprovidedforHRIS	.673	.447	.172
Convenientandbeneficial	.065	.771	.141
Easytoupdatedataandtransaction	-.030	.696	.097
Storecompleteinformation	.154	.613	-.391
Savestimeandcosteffective	-.071	-.125	.815
Reducespaperworkandmanpower	.146	.141	.728
SatisfiedwiththeimplementationofHRIS	.416	.365	.594

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

3 factors found are as: 1) Proficient & well-organized, 2) Expedient & Useful 3) Timely & cost effective

1. **Factor 1:** Proficient & Systematic

In this study it is observed that the first and most important factor determining the effectiveness of HRIS is Proficient & Systematic. Employees are perceived HRIS as ease of use that it improves quality of work.

2. **Factor 2:** Expedient & Useful

This study shows the employee perceive HRIS Expedient & Useful. Employees maintain record easily and update data and transactions accordingly.

3. **Factor 3: Timely & Cost Effective**:

It is identified that employee-perceived HRIS is a tool to save time and is cost effective.

T-TEST

ANALYSIS 1

User-Friendliness

Ho: No relationship exists between HRIS and user-friendliness.

H_A: Relationship exists between HRIS and user-friendliness.

Table 7: Factor Matrix (Common)

S. No.	Statements	Factor Name	Factor Loadings
1.	Data can be easily shared	Proficient & Systematic	0.869
2.	Work pressure among the employees is reduced due to HRIS.		0.818
3.	It improves quality of work.		0.777
4.	Training needs for operating HRIS is identified and proper training is provided.		0.673
5.	Implementation of HRIS is convenient and beneficial to use.	Expedient & Useful	0. 771
6.	Maintains record of employees and easy to update data and transactions.		0. .696
7.	It keeps track of each and every employee and stores complete information about them.		0. 613
8.	It saves time and is cost effective.	Timely & cost effective	0.815
9.	It reduces paperwork and man power.		0.728
10.	Employees are satisfied with the implementation of HRIS.		0.594

Table 8 (a): One Sample T-test

One-Sample Statistics				
Variables	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
User-friendliness	30	3.77	.430	.079
Security	30	4.73	.450	.082
Consistency	30	3.90	.305	.056
Efficiency	30	4.73	.450	.082
Reliability	30	4.77	.430	.079
Clarity	30	3.83	.379	.069
Accuracy	30	4.90	.305	.056

Table 8 (b): One Sample T-test One-Sample Test

Test Value = 3						
Variables					**95% Confidence Interval of the Difference**	
	t	**Df**	**Sig. (2-tailed)**	**Mean Difference**	**Lower**	**Upper**
User-friendliness	9.761	29	.000	.767	.61	.93
Security	21.108	29	.000	1.733	1.57	1.90
Consistency	16.155	29	.000	.900	.79	1.01
Efficiency	21.108	29	.000	1.733	1.57	1.90
Reliability	22.494	29	.000	1.767	1.61	1.93
Clarity	12.042	29	.000	.833	.69	.97
Accuracy	34.106	29	.000	1.900	1.79	2.01

There are 30 valid cases with no missing values where mean user-friendliness is 3.77 with standard deviation 0.430. Here T calculated is 9.761 and degree of freedom is 29 with p-value 0.000 which is less then alpha (0.005), so **Ho** is rejected. Therefore HRIS is user-friendly.

Security

Ho: No relationship exists between HRIS and security.

H_A: Relationship exists between HRIS and security.

There are 30 valid cases with no missing values where mean security is 4.73 with standard deviation 0.450. Here T calculated is 21.108 and degree of freedom is 29 with

p-value 0.000 which is less then alpha (0.005), so **Ho** is rejected. Therefore, using HRIS is secure.

Consistency

Ho: No relationship exists between HRIS and consistency.

H_A: Relationship exists between HRIS and consistency.

There are 30 valid cases with no missing values where mean consistency is 3.90 with standard deviation 0.305. Here T calculated is 16.155 and degree of freedom is 29 with p-value 0.000 which is less then alpha (0.005), so **Ho** is rejected. Therefore HRIS is consistent.

Efficiency

Ho: No relationship exists between HRIS and efficiency.

H_A: Relationship exists between HRIS and efficiency.

There are 30 valid cases with no missing values where mean user-friendliness is 4.73with standard deviation 0.450. Here T calculated is 21.108 and degree of freedom is 29 with p-value 0.000 which is less then alpha (0.005), so **Ho** is rejected. Therefore HRIS is efficient.

Reliability

Ho: No relationship exists between HRIS and reliability.

H_A: Relationship exists between HRIS and reliability.

There are 30 valid cases with no missing values where mean reliability is 4.77 with standard deviation 0.430. Here T calculated is 22.494 and degree of freedom is 29 with p-value 0.000 which is less then alpha (0.005), so **Ho** is rejected. Therefore HRIS is reliable.

Clarity

Ho: No relationship exists between HRIS and clarity.

H_A: Relationship exists between HRIS and clarity.

There are 30 valid cases with no missing values where mean clarity is 3.83 with standard deviation 0.379. Here T calculated is 12.042 and degree of freedom is 29 with p-value 0.000 which is less then alpha (0.005), so **Ho** is rejected. Therefore HRIS is clear to understand.

Accuracy

Ho: HRIS is not accurate.

H_A: HRIS is accurate.

There are 30 valid cases with no missing values where mean accuracy is 4.90 with standard deviation 0.305. Here T calculated is 34.18 and degree of freedom is 29 with p-value 0.000 which is less then alpha (0.005), so **Ho** is rejected. Therefore HRIS is accurate.

Interpretation

Through the analysis of the data it is clear that the implementation of HRIS is beneficial to bank and it improved productivity as it provides accuracy, security, clarity, consistency, etc.

Conclusion

On the basis of research conducted, it can be concluded that HRIS is effective and efficient in banking sector. Implementation of HRIS software package has helped bank to increase its productivity. Implementation of HRIS is favourable for the bank, as it has bought positive changes in banks which will lead to become more effective in the banking sector. HRIS has reduced paper work and saves time as it favoured both the works so it's cost effective also. It stores complete information and updating records and are easy to do.

The research conducted also gives an idea that HRIS is not only time saving and cost effective but it also improves quality of work. The data obtained are more accurate and reliable. Based on the research conducted, it is clear than HRIS implementation has many benefits and it's proved convenient and beneficial to bank.

HR Implications of the Research

The differential perception factors demands, development of a new strategy by HR professionals. Good performance measurement system can be a significant contributor towards involvement and motivation. HR professionals must realize that employee engagement and commitment is directly proportional to performance measurement system.

Future Scope

With the results of the research, it is possible to give valuable insights about the importance of using HRIS and the satisfaction level of HR employees from this system. There is a lack of empirical study in the related literature. By considering the need of empirical studies in this field, it is obvious that both the theoretical and empirical results of this research will give an important contribution to the related literature.

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