-

HRIS AS A TOOL FOR EFFECTIVE DECISION MAKING IN SELECT SOFTWARE COMPANIES IN BANGALORE, KARNATAKA, INDIA.

Dr M Nishad Nawaz
MBA,MHRM,MPhil,PhD.

Assistant Professor
College of Business Administration, Kingdom University, Bahrain.

ABSTRACT: *21st century is acknowledged for its information outburst, technological innovation and also for transmission of such information through Human Resource Information System for successful functioning of organizations. HRIS facilitates retrieval of information quickly and accurately which allows quick analysis of HR issues and gives good information for decision makers. HRIS acts as an effective tool for managers to take effective decisions. With this background, an attempt has been made to assess the impact of human resource information systems usage on decision making process in the select software companies. For the purpose of the study 50 companies were selected based on purposive sampling method through a structured questionnaire administered. The sample included 350 IT professionals from different designations. Statistical tools like descriptive statistics, ANOVA and t-test have been used. The IT professionals and their designations have been considered as independent variables while the decision making process has been treated as dependent variable. The results of this research would help software companies to better understand the usage of HRIS to facilitate the decision making process in their organizations and also would help to identify how the decisions are taken by the employees with the help of HRIS.*

KEYWORDS: Human Resource Information Systems, Decision Making, Employee security, Recruitment, Strategic information, Application Tracking.

INTRODUCTION

In a competitive business environment as today, the effective and efficient functioning of an organization depends heavily on the spontaneous and timely decisions taken by the managers. The decisions have to be made based on past experiences and focusing their impact on the development of the future for gaining competitive advantages and to withstand in the dynamic organizational world. This depends mainly on the potential skills of the employees selected though the application of HRIS on scientific lines. HRIS helps the managers to take timely decisions by providing information at the right time. Each decision taken by the managers has a great impact on the organizations and HRIS forms the backbone of all such vital information. Many significant researches have been done on the usefulness of HRIS and its role in effective decision making. Some of the following prominent researches substantiate the impact of HRIS on decision making, Sprague and Carlson (1982) have noted that DSS helps the top management and individual managers to take effective decisions. Kavanagh (1990) states that HRIS not only includes hardware and software, but also people, forms, policies, procedures and data. Tannenbaum (1990) defines HRIS as a technology that helps in performing all the activities related to human resources. F.John Reh.D (1997) views HRIS as a system that lets you keep track of all your employees and information about them. Ritesh (2014) using of HRIS develops the

-

effectiveness of human resources functions processes in educational organizations and suggested that similar organizations have to adopt the usage of HRIS to get into effective process of human resources. Kovach et al.(1999) defines HRIS as a systematic procedure for using the employee related data effectively in the organization. Haines, Victor Y et.al. (2000) states that HRIS aids in the systematic storage of information which helps employees in efficient decision making and report submissions. According to Beckers & Bsat (2002) there are several advantages to firms in using HRIS as it provides for comprehensive database thereby providing structural connectivity across units and increases the speed of information transactions, Lengnick-Hall & Lengnick-Hall, (2006). It also states that HRIS increases competitiveness by improving HR operations and also management processes by conversion of raw data into information for timely and quality decision making and aids in reengineering of all HR administrative functions which results in employee satisfaction thus paving the way for strategic HRM. With this background an attempt has been made to assess the usage impact of Human Resource Information Systems on decision making process in the select software companies under study.

REVIEW OF LITERATURE

Abdul Kader et.al, (2013) they made a study by distributing the questionnaire to HR personnel among the employees of private universities of Bangladesh and concluded that due to lack of infrastructure, high cost, lack of experience and lack of training HRIS usage is low in the universities.Astrid (2002) concluded in his article that the decision support system model was developed for evaluating the HRIS. Decision Support System provides an organization with a competitive advantage and guides an organization down the path towards improving the value of what the organization brings to the marketplace. Brijesh Kapil (2007) explained about IT impact on recruitment process among 1200 scientists in Ranbaxy Laboratories and concluded that the HRIS plays more strategic role in human resources and proved that HRIS acts as a wonderful decision making tool.

Chen Wei (2014) did a study on streaming data, which has been used in real time monitoring of employee. This study concluded that with out existing data, dynamic human resource management data can not be achievable. Dr.L.M Mujeeb (2012) observed that usage of human resource information system enhances the effectiveness of HR practices in health care industry.
Gary S. Fields (2002) conducted a study on Engineering Solutions Company with 100 engineers with the help of HRIS data to know the employees' promotion, job performance, decision making and psychological assessments. The researcher found that HRIS was the best tool for measuring the performance of employee for promotion. Huo.P.Y. and Kearns (1992) was of the opinion that Human Resource Information System has a true value and acts as a powerful analytic tool for decision making especially in IT sector.Lado & Wilson (1994) discussed the extent to which HR managers and professionals could enable or constrain the strategic decision-making process by providing or withholding critical information with the help of HRIS concerning people related business issues.

Latha Chakravarthi et.al (2013), they examined the employee perception and satisfaction towards usage of Human Resource Information System in Bharat Sanchar Nigam Limited, Vadodara Telecom District by distributing questionnaire with sample size of 90 and concluded that Human Resource Information System usage showed varying results among the quality of system and information. Manar Al-Qatawneh ,Bandar Abutayeh Fawwaz A and Al Hammad (2012) analysed the effect of the implementation of Human Resource Information Systems on job related

decisions in commercial banks in Jordan and concluded that all Human Resource Information System implementations have a positive effect on the quality of job related decisions. K P Tripathi (2011) analyzed the role of Management Information System (MIS) in Human Resources and developed an MIS model to keep control on working of the staff at various levels. The system has been tested in Birla Corporation Ltd and it helped in taking effective decisions concerned with human resource in attendance recording and capturing.Yasemin Bal et.al, (2012), they made a study by distributing the questionnaire to HR employees working in different organizations. They found that HRIS supports the functions of top management, middle management and operational management effectively.

Research Gap:

The integration of HRIS and Human Resource Management enhances and facilitates decision making process by accelerating the flow of vital information in the organizations whenever and wherever required. An effective and efficient decision taken by HR managers contribute to the performance of the organization. Most of the studies are focused on other industries leaving the software companies, which also contribute sizably to the nation's economic growth. Therefore it is proposed to conduct an in-depth study of select software companies operating in Bangalore. Hence "HRIS as a tool for effective Decision Making in select software companies in Bangalore", Karnataka, India has been taken up for detailed investigation and analysis.

Research Objective: To assess the usage impact of Human Resource Information Systems on decision making process in the companies under study.

Major Null Hypothesis: There is no positive relationship existing between Human Resource Information Systems (HRIS) and Decision Making.

METHODOLOGY:

The research was conducted in top 150 software companies in Bangalore City listed by DQ India Survey of 2008. Out of 150 companies 50 companies responded positively and accorded permission and 500 questionnaires were administered at the rate of 10 respondents from each company by email and informal discussion out of which 350 respondents were finally selected by adopting purposive sampling method. The data have been collected from primary and secondary sources and have been analyzed by using descriptive statistics, Oneway ANOVA &'t' test.

Results & Discussions:

An effort is made in this paper to present the HRIS impact on Decision Making. For this purpose two variables viz dependent and independent variables have been considered. The IT professionals selected and their designations are considered as Independent variables while the Decision Making process has been treated as dependent variable for the analysis.

Table-1 Respondents' opinion on HRIS usage for Strategic Purposes

N = 350

Sl.No	Designation of Employee	Opinion				Total
		To Great Extent	To Some Extent	Uncertain	Not At All	
1	IT Recruiters	44 (30.1)	10 (7.8)	0 (0)	2 (11.8)	56 (16)
2	HR Executives	56 (38.4)	25 (19.5)	12 (20.3)	0 (0)	93 (26.6)
3	Asst. HR Managers	10 (6.8)	31 (24.2)	17 (28.8)	0 (0)	58 (16.6)
4	HR Managers	24	21	12	9	66

-

		(16.4)	(16.4)	(20.3)	(52.9)	(18.9)
5	HR staff	5 (3.4)	12 (9.4)	5 (8.6)	0 (0)	22 (6.3)
6	Managers of other departments	7 (4.9)	29 (22.7)	13 (22)	6 (35.3)	55 (15.6)
7	Total	146 (41.73) (100)	128 (36.57) (100)	59 (16.85) (100)	17 (4.85) (100)	350 (100)

Source: Data collected through questionnaire by the Researcher

Note : Figures in parentheses represent percentages to the respective vertical totals and horizontal grand total

Table 1 shows the designation-wise opinion of the respondents about the HRIS usage for strategic purposes. Thus, it is observed that majority of respondents opined that HRIS provides useful information for strategic purpose and whether it was used to a great extent or to some extent. Hence, there is evidence to reject the null hypothesis due to considerable influence of HRIS on decision making. In other words it may be constructed that there is a relationship between these two variables.

Table-2 Respondents' opinion on HRIS Usage for Recruitment / Selection Purpose

N = 350

Sl.No	Designation of Employee	Opinion			Total
		To Great Extent	To Some Extent	Uncertain	
1	IT Recruiters	39 (24.5)	16 (8.8)	1 (11.1)	56 (16)
2	HR Executives	34 (21.4)	52 (28.6)	7 (77.8)	93 (26.6)
3	Asst. HR Managers	32 (20.1)	25 (13.7)	1 (11.1)	58 (16.6)
4	HR Managers	30 (18.9)	36 (19.8)	0 (0)	66 (18.9)
5	HR staff	9 (5.7)	13 (7.1)	0 (0)	22 (6.3)
6	Managers of other departments	15 (9.4)	40 (22)	0 (0)	55 (15.6)
7	Total	159 (45.43) (100)	182 (52.00) (100)	9 (2.57) (100)	350 (100)

Source : Data collected through questionnaire by the Researcher

Note   : Figures in parentheses represent percentages to the respective vertical totals and horizontal grand total

Table 2 demonstrates the designation-wise opinion of the respondents about the HRIS usage for recruitment and selection plan purpose. Thus, it is evident that majority of the respondents expressed the opinion that HRIS is useful for recruitment / selection purpose to some extent closely followed by a great extent.

-

Table-3 Respondents' opinion on HRIS generated information for new technology adoption

N = 350

Sl.No	Designation of Employee	Opinion			Total
		To Great Extent	To Some Extent	Uncertain	
1	IT Recruiters	6 (7.7)	47 (21.5)	3 (5.7)	56 (16)
2	HR Executives	26 (33.3)	52 (23.7)	15 (28.3)	93 (26.6)
3	Asst. HR Managers	14 (17.9)	39 (17.8)	5 (9.4)	58 (16.6)
4	HR Managers	18 (23.1)	41 (18.7)	7 (13.2)	66 (18.9)
5	HR staff	5 (6.4)	13 (5.9)	4 (7.5)	22 (6.3)
6	Managers of other departments	9 (11.6)	27 (12.4)	19 (35.9)	55 (15.6)
7	Total	78 *(22.28)* (100)	219 *(62.58)* (100)	53 *(15.14)* (100)	350 (100)

Source: Data collected through questionnaire by the Researcher

Note : Figures in parentheses represent percentages to the respective vertical totals and horizontal grand total

Table 3 displays the designation-wise opinion of the respondents about the HRIS generated information for new technology adoption. Thus, it is evident that HRIS generated information is useful for new technology adoption to certain extent only in the select software companies.

Table-4 Respondents' opinion on whether HRIS generates information that identifies the decisions related to Customer Services details

N = 350

Sl.No	Designation of Employee	Opinion			Total
		To Great Extent	To Some Extent	Uncertain	
1	IT Recruiters	12 (42.9)	44 (18.9)	0 (0)	56 (16)
2	HR Executives	4 (14.3)	68 (29.2)	21 (23.6)	93 (26.6)
3	Asst. HR Managers	2 (7.1)	49 (21)	7 (7.9)	58 (16.6)
4	HR Managers	8 (28.6)	28 (12)	30 (33.7)	66 (18.9)
5	HR staff	0 (0)	12 (5.2)	10 (11.2)	22 (6.2)
6	Managers of other departments	2 (7.1)	32 (13.7)	21 (23.6)	55 (15.7)
7	Total	28 *(8.00)* (100)	233 *(66.58)* (100)	89 *(25.42)* (100)	350 (100)

Source: Data collected through questionnaire by the Researcher

Note : Figures in parentheses represent percentages to the respective vertical totals & horizontal grand total.

Table 4 explains the designation-wise opinion of the respondents about the HRIS generated information for identifying the decisions related to customer services details. Thus, it is evident

-

that the HRIS generated information for identifying the decisions related to customer services details is used to some extent in the select software companies.

Table-5 Respondents' opinion on the Usefulness of HRIS Information for identifying gaps in Decision Criteria

N = 350

Sl.No	Designation of Employee	Opinion				Total
		To Great Extent	To Some Extent	Uncertain	Not At All	
1	IT Recruiters	12 (19)	32 (14.9)	12 (22.2)	0 (0)	56 (16)
2	HR Executives	16 (25.4)	54 (25.1)	19 (35.2)	4 (22.2)	93 (26.6)
3	Asst. HR Managers	10 (15.9)	34 (15.8)	11 (20.4)	3 (16.7)	58 (16.6)
4	HR Managers	15 (23.8)	45 (20.9)	1 (1.9)	5 (27.8)	66 (18.9)
5	HR staff	4 (6.3)	15 (7)	3 (5.6)	0 (0)	22 (6.3)
6	Managers of other departments	6 (9.6)	35 (16.3)	8 (14.7)	6 (33.3)	55 (15.6)
7	Total	63 *(18.00)* (100)	215 *(61.43)* (100)	54 *(15.42)* (100)	18 *(5.15)* 100)	350 (100)

Source: Data collected through questionnaire by the Researcher

Note : Figures in parentheses represent percentages to the respective vertical totals and horizontal grand total

Table 5 incorporated the designation wise opinion of the respondents about whether the HRIS information identifies gaps in decision criteria. Thus, it can be concluded that the usefulness of HRIS information in identifying gaps in decision criteria is to a certain extent only.

Table-6 Respondents' opinion on whether HRIS provides alternative Information for Decision Makers

N = 350

Sl.No	Designation of Employee	Opinion			Total
		To Great Extent	To Some Extent	Uncertain	
1	IT Recruiters	2 (6.5)	42 (17.9)	12 (14.1)	56 (16)
2	HR Executives	10 (32.3)	52 (22.2)	31 (36.5)	93 (26.6)
3	Asst. HR Managers	2 (6.5)	47 (20.1)	9 (10.6)	58 (16.6)
4	HR Managers	10 (32.3)	47 (20.1)	9 (10.6)	66 (18.9)
5	HR staff	3 (9.7)	16 (6.8)	3 (3.5)	22 (6.2)
6	Managers of other departments	4 (12.7)	30 (12.9)	21 (24.7)	55 (15.7)
7	Total	31 *(8.86)* (100)	234 *(66.85)* (100)	85 *(24.29)* (100)	350 (100)

-

Source: Data collected through questionnaire by the Researcher

Note   : Figures in parentheses represent percentages to the respective vertical totals and horizontal grand total

Table 6 reveals the designation-wise opinion of the respondents about the usefulness of HRIS in providing alternative information for decision makers. Thus, it observed that HRIS provides information for decision makers to some extent only in the sample companies.

Table-7 Usefulness of HRIS in providing Risk Analysis information for decision makers in select software companies

N = 350

Sl.No	Designation of Employee	Opinion				Total
		To Great Extent	To Some Extent	Uncertain	Not At All	
1	IT Recruiters	0 (0)	45 (18.6)	11 (14.5)	0 (0)	56 (16)
2	HR Executives	1 (5)	70 (28.9)	22 (28.9)	0 (0)	93 (26.6)
3	Asst. HR Managers	6 (30)	37 (15.3)	15 (19.7)	0 (0)	58 (16.6)
4	HR Managers	10 (50)	40 (16.5)	8 (10.5)	8 (66.7)	66 (18.9)
5	HR staff	0 (0)	14 (5.8)	7 (9.2)	1 (8.3)	22 (6.3)
6	Managers of other departments	3 (15)	36 (14.9)	13 (17.2)	3 (25)	55 (15.6)
7	Total	20 *(5.72)* (100)	242 *(69.14)* (100)	76 *(21.72)* (100)	12 *(3.42)* (100)	350 (100)

Source: Data collected through questionnaire by the Researcher

Note   : Figures in parentheses represent percentages to the respective vertical totals and horizontal grand total

Table 7 spells out the designation-wise opinion of the respondents about the usefulness of HRIS in providing risk analysis information for decision makers. On the whole a majority of the respondents opined that HRIS provided them risk analysis information to some extent only in the sample software companies.

Table-8 Respondents'opinion on the Usefulness of HRIS Information to Decision Makers for reengineering of Recruitment and Selection Activities

N = 350

Sl.No	Designation of Employee	Opinion			Total
		To Great Extent	To Some Extent	Uncertain	
1	IT Recruiters	8 (10.8)	39 (15.4)	9 (39.1)	56 (16)
2	HR Executives	13 (17.6)	70 (27.7)	10 (43.5)	93 (26.6)
3	Asst. HR Managers	17 (23)	39 (15.4)	2 (8.7)	58 (16.6)
4	HR Managers	23 (31.1)	43 (17)	0 (0)	66 (18.9)
5	HR staff	2 (2.6)	20 (7.9)	0 (0)	22 (6.2)
6	Managers of other	11	42	2	55

	departments	(14.9)	(16.6)	(8.7)	(15.7)
7	Total	74 *(21.14)* (100)	253 *(72.28)* (100)	23 *(6.58)* (100)	350 (100)

Source: Data collected through questionnaire by the Researcher

Note   : Figures in parentheses represent percentages to the respective vertical totals and horizontal grand total

Table 8 depicts the designation-wise opinion of the respondents about the usefulness of HRIS information to decision makers for reengineering of recruitment and selection processes. Thus, it can be inferred that HRIS information is useful to decision makers for reengineering of recruitment and selection activities to some extent rather than to greater extent.

Table-9 Respondents' opinion on the Usefulness of HRIS information to decision makers in selecting competent professionals

N = 350

Sl.No	Designation of Employee	Opinion			Total
		To Great Extent	To Some Extent	Uncertain	
1	IT Recruiters	22 (18.3)	31 (14.6)	3 (17.6)	56 (16)
2	HR Executives	43 (35.8)	47 (22.1)	3 (17.6)	93 (26.6)
3	Asst. HR Managers	10 (8.3)	42 (19.7)	6 (35.4)	58 (16.6)
4	HR Managers	20 (16.7)	46 (21.6)	0 (0)	66 (18.9)
5	HR staff	8 (6.7)	10 (4.7)	4 (23.5)	22 (6.3)
6	Managers of other departments	17 (14.2)	37 (17.3)	1 (5.9)	55 (15.6)
7	Total	120 *(34.29)* (100)	213 *(60.86)* (100)	17 *(4.85)* (100)	350 (100)

Source : Data collected through questionnaire by the Researcher

Note   : Figures in parentheses represent percentages to the respective vertical totals and horizontal grand total.

Table 9 exhibits designation-wise opinion of the respondents about the usefulness of HRIS information to decision-makers in selecting competent work force. It can be concluded that HRIS is facilitating the mechanism for providing information and in taking decisions while selecting right kind of employees'.

-

Table-10 Respondents' opinion on the Usefulness of HRIS information to decision makers to identify when Training and Skill Development are necessary to an employee

N = 350

Sl.No	Designation of Employee	Opinion				Total
		To Great Extent	To Some Extent	Uncertain	Not At All	
1	IT Recruiters	18 (17.6)	38 (16.1)	0 (0)	0 (0)	56 (16)
2	HR Executives	23 (22.5)	62 (26.3)	8 (72.7)	0 (0)	93 (26.6)
3	Asst. HR Managers	21 (20.6)	36 (15.3)	1 (9.1)	0 (0)	58 (16.6)
4	HR Managers	24 (23.5)	39 (16.5)	2 (18.2)	1 (100)	66 (18.9)
5	HR staff	5 (4.9)	17 (7.2)	0 (0)	0 (0)	22 (6.3)
6	Managers of other departments	11 (10.9)	44 (18.6)	0 (0)	0 (0)	55 (15.6)
7	Total	102 *(29.15)* (100)	236 *(67.43)* (100)	11 *(3.14)* (100)	1 *(0.28)* (100)	350 (100)

Source : Data collected through questionnaire by the Researcher

Note   : Figures in parentheses represent percentages to the respective vertical totals and horizontal grand total.

Table 10 shows designation-wise opinion of the respondents about the utility of HRIS information in identifying the training needs and skills necessary to an employee. HRIS thus provides information to decision makers to a certain extent to identify when the training and skill development are necessary to an employee in the select software companies.

Differences in the means of Decision Making Scores (Dependent Variable) as per Differences in Designation Categories of (Independent Variables) the sample

For the study One-way ANOVA was done considering one independent variable (designation categories) and all the dependent variables. In case the 'F' value turned out to be significant 't' tests have been done for all possible pairs of means of the dependent variables, that have been obtained based on the independent variable and conclusions drawn. If 'F' did not turn out to be significant, no 't' tests were done, since they were not necessary. The results thus obtained have been interpreted.

-

Table-11 Summary of One-way ANOVA results for Decision Making area the mean values for each Designations

Sl No	Description of the Dependent Variable	S.V	SS	df	M.S	F	Designation Means	't' Values
1	Strategic decisions	B.G	49.95	5	9.99	** 15.98	[ITR(M=3.71)]	** 5.65
							HRE (M=3.47)	
							AHRM(M=2.88)	
							HRM (M=2.91)	
		W.G	215	344	0.63		[HRS (M=2.45)]	
		T	265	349			MOD (M=2.89)	
2	Managerial decisions	B.G	13.18	5	2.64	** 5.22	ITR(M=2.82)	** 3.69
							HRE (M=2.76)	
							[AHRM(M=2.45)]	
							HRM (M=2.95)	
		W.G	173.7	344	0.51		[HRS (M=3.09)]	
		T	186.9	349			MOD (M=2.55)	
3	Decision criteria	B.G	19.43	5	3.89	** 10.58	[ITR(M=2.36)]	** 4.61
							HRE (M=2.57)	
							AHRM(M=2.83)	
							HRM (M=2.47)	
		W.G	126.3	344	0.37		[HRS (M=3.23)]	
		T	145.8	349			MOD (M=2.87)	
4	Recruitment / Selection plan	B.G	7.653	5	1.53	** 5.48	ITR(M=3.68)	** 4.07
							HRE (M=3.29)	
							AHRM(M=3.53)	
							HRM (M=3.45)	
		W.G	96.06	344	0.28		[HRS (M=3.45)]	
		T	103.7	349			[MOD (M=3.25)]	
5	New technology adoption	B.G	4.115	5	0.82	** 2.26	ITR(M=3.05)	** 1.94
							HRE (M=3.12)	
							AHRM(M=3.16)	
							[HRM (M=3.17)]	
		W.G	125.1	344	0.36		HRS (M=2.95)	
		T	129.2	349			[MOD (M=2.85)]	
6	Decisions related to customer services	B.G	13.77	5	2.75	* 10.23	[ITR(M=3.21)]	* 5.05
							HRE (M=2.82)	
							AHRM(M=2.91)	
							HRM (M=2.67)	
		W.G	92.6	344	0.27		[HRS (M=2.59)]	
		T	106.4	349			MOD (M=2.64)	
7	Making alternative decisions	B.G	8.445	5	1.69	** 5.72	ITR(M=3.23)	** 2.68
							[HRE (M=2.80)]	
							AHRM(M=2.97)	

							HRM (M=3.11)	-
		W.G	101.5	344	0.3		**[HRS (M=3.18)]**	
		T	110	349			MOD (M=2.98)	
8	In Risk Analysis	B.G	12.73	5	2.55	** 3.82	**[ITR(M=3.63)]**	** 3.32
							HRE (M=3.22)	
							AHRM(M=3.22)	
							HRM (M=3.18)	
		W.G	228.7	344	0.67		**[HRS (M=2.86)]**	
		T	241.4	349			MOD (M=3.42)	
9	Recruitment and Selection	B.G	6.15	5	1.23	** 5.07	**[ITR(M=2.98)]**	** 3.86
							HRE (M=3.03)	
							AHRM(M=3.26)	
							[HRM (M=3.35)]	
		W.G	83.42	344	0.24		HRS (M=3.14)	
		T	89.57	349			MOD (M=3.15)	
10	Training and Career development	B.G	5.061	5	1.01	** 2.72	**[ITR(M=3.55)]**	** 3.69
							HRE (M=3.35)	
							[AHRM(M=3.14)]	
							HRM (M=3.38)	
		W.G	127.9	344	0.37		HRS (M=3.41)	
		T	132.9	349			MOD (M=3.38)	
11	Decisions in choosing better people	B.G	5.203	5	1.04	** 3.52	ITR(M=3.34)	** 4.01
							[HRE (M=3.43)]	
							[AHRM(M=3.07)]	
							HRM (M=3.30)	
		W.G	101.5	344	0.3		HRS (M=3.36)	
		T	106.7	349			MOD (M=3.22)	
12	Operational decisions	B.G	9.159	5	1.83	** 4.31	**[ITR(M=2.70)]**	** 3.29
		W.G	146.2	344	.425		HRE(M=2.63)	
		T	155.3 60	349			AHRM(M=2.38)	
							[HRM(M=2.27)]	
							HRS(M=2.41)	
							MOD(M=2.64)	
13	Problem solving	B.G	3.1	5	0.62	** 2.48	ITR(M=3.54)	** 2.16
		W.G	85.92	344	0.25		HRE(M=3.66)	
		T	89.02	349			AHRM(M=3.45)	
							HRM(M=3.50)	
							[HRS(M=3.68)]	
							[MOD(M=3.42)]	
14	Record keeping	B.G	12.72	5	2.54	** 13.1	ITR(M=3.54)	** 2.01
		W.G	67	344	0.2		HRE(M=3.66)	
		T	79.72	349			AHRM(M=3.45)	
							HRM(M=3.50)	
							[HRS(M=3.68)]	
							[MOD(M=3.42)]	

15	Decisions related to competitive advantage	B.G	24.04	5	4.81	** 15.5	[ITR(M=2.46)]	** 8.45
		W.G	107	344	0.31		[HRE(M=3.24)]	
		T	131.1	349			AHRM(M=3.03)	
							HRM(M=3.02)	
							HRS(M=3.05)	
							MOD(M=2.75)	
16	Updating job vacancies	B.G	14.53	5	2.91	** 8.97	ITR(M=3.00)	** 3.53
		W.G	111.4	344	0.32		HRE(M=3.11)	
		T	125.9	349			AHRM(M=3.09)	
							HRM(M=3.18)	
							[HRS(M=3.18)]	
							[MOD(M=2.69)]	
17	In framing Company policies and procedures	B.G	33.43	5	6.69	** 12.6	[ITR(M=2.02)]	** 5.83
		W.G	182.8	344	0.53		HRE(M=2.11)	
		T	216.2	349			AHRM(M=2.57)	
							HRM(M=2.70)	
							[HRS(M=3.05)]	
							MOD(M=2.51)	
18	HRP	B.G	12.63	5	2.53	** 6.15	ITR(M=3.41)	** 3.44
		W.G	141.3	344	0.41		[HRE(M=3.58)]	
		T	153.9	349			AHRM(M=3.38)	
							HRM(M=3.55)	
							HRS(M=3.45)	
							[MOD(M=3.27)]	
19	Staffing	B.G	8.307	5	1.66	** 4.47	ITR(M=3.32)	** 4.39
		W.G	128	344	0.37		HRE(M=3.22)	
		T	136.3	349			AHRM(M=3.43)	
							[HRM(M=3.48)]	
							HRS(M=3.27)	
							[MOD(M=3.02)]	
20	Employee promotions	B.G	12.36	5	2.47	** 8.95	[ITR(M=3.02)]	** 7.84
		W.G	95.07	344	0.28		HRE(M=3.44)	
		T	107.4	349			AHRM(M=3.22)	
							[HRM(M=3.58)]	
							HRS(M=3.32)	
							MOD(M=3.18)	
21	Performance appraisal	B.G	2.77	5	0.55	** 2.46	ITR(M=3.25)	** 2.64
		W.G	77.6	344	0.23		HRE(M=3.10)	
		T	80.37	349			AHRM(M=3.24)	
							HRM(M=3.15)	
							[HRS(M=2.95)]	
							[MOD(M=3.27)]	

* Significant at 0.01 level for df (5,344) since the obtained 'F' value is equal to or greater than 3.06 the corresponding table value of 'F'

-
** Significant at 0.05 level for df (5,344) since the obtained 'F' value is equal to or greater than 2.24 the corresponding table value of 'F'

* 't' significant at 0.05 level of probability

** 't' significant at 0.01 level of probability

Note-1

ITR : IT Recruiters, HRE : HR Executives, Asst.HRM: Asst. HR Managers, HRM: HR Managers, HRS: HR staff, MOD: Managers of other departments

Note-2

SV: Source of variation, BG: Between Groups, WG: Within Groups, SS: Sum of Squares, df: Degrees of freedom, MS: Mean Square, SL: Significance level

Note-3

The 't' values have been given in the last column of Table 11 't' values with respect to the two means that have been shown in bold font form are the designation means.

The obtained 'F' values given in Table 11 are significant at the 0.05 level or at the 0.01 level indicating that there is a significant difference in the mean levels of different designations levels in respect of the dependent variables given in Table 11

Differences in the designations categories of the software professionals working in software companies in Bangalore city do differ significantly in their mean levels of usage of HRIS, the following variables are included (i) strategic decisions (ii) managerial decisions (iii) decision criteria (iv) recruitment / selection plan (v) new technology adoption (vi) decisions related to customer services (vii) making alternative decisions (viii) risk analysis (ix) recruitment and selection (x) training and career development (xi) decisions in choosing better people (xii) operational decisions (xiii) problem solving (xiv) record keeping (xv) decisions related to competitive advantage (xvi) updating job vacancies (xvii) for framing company policies and procedures (xviii) human resources planning (xix) staffing (xx) employee promotions (xxi) performance appraisal. In case the values of 'F' are significant, the significant differences between possible pairs of means (without repetition) should be tested using 't' test. Since many conclusions would emerge if results of all the paired means differences are considered, an attempt is made to compare the highest and lowest means. If the difference between them is statistically significant for each variable and tabulated as shown in Table 11 and the conclusions have been drawn.

CONCLUSIONS

i) The mean level usage of HRIS in strategic decisions aspect of decision making of IT Recruiters is more than the mean level usage of HRIS in strategic decisions aspect of decision making of Human Resource Staff.
ii) The mean level usage of HRIS in managerial decisions aspect of decision making of Human Resource Staff is more than the mean level of usage of HRIS in managerial decisions aspect of decision making of Asst Human Resource Managers.
iii) The mean level usage of HRIS in decision criteria of decision making of IT Recruiters is more than the mean level usage of HRIS in decision criteria of decision making of Human Resource Staff.

-

iv) The mean level usage of HRIS in recruitment / selection plan of decision making of Human Resource Staff is more than the mean level usage of HRIS in recruitment / selection plan of decision making of Managers of other department.

v) The mean level usage of HRIS in new technology adoption of decision making of Human Resource Managers is more than the mean level usage of HRIS in new technology adoption of decision making of Managers of other department.

vi) The mean level usage of HRIS in decisions making related to customer services by IT Recruiters is more than the mean level usage of HRIS in decision making related to customer services by Human Resource Staff.

vii) The mean level usage of HRIS in making alternative decisions by IT Recruiters is more than the mean level of usage of HRIS in making alternative decisions by Human Resource Staff

viii) The mean level usage of HRIS in risk analysis of decision making of IT Recruiters is more than the mean level of usage of HRIS in risk analysis of decision making related by Human Resource Staff

ix) The mean level usage of HRIS in recruitment and selection related decision making of Human Resource Managers is more than mean level usage of HRIS in recruitment and selection of related decision making of IT Recruiters

x) The mean level usage of HRIS in training and career development related decision making of IT Recruiters is more than the mean level usage of HRIS in training and career development related decision making of making alternative decisions of Asst Human Resource Managers

xi) The mean level usage of HRIS in decisions related to choosing better people by Human Resource Executives is more than the mean level of usage of HRIS in decisions related to choosing better people by Asst Human Resource Managers.

xii) The mean level usage of HRIS in taking operational decisions by Human Resource Managers is less than the mean level of usage of HRIS in taking operational decisions of by IT Recruiters.

xiii) The mean level usage of HRIS in problem solving of decision making by Managers of other department is more than the mean level of usage of HRIS in problem solving of decision making by Human Resource Staff.

xiv) The mean level usage of HRIS in decision making related to record keeping of Human Resource Staff is more than the mean level usage of HRIS in decision making related to record keeping Managers of other department.

xv) The mean level usage of HRIS in decision related to competitive advantages in decision making of Human Resource Executives is more than the mean level of usage of HRIS in decision related to competitive advantages in decision making of IT Recruiters.

xvi) The mean level usage of HRIS in decision related to updating job vacancies in decision making of Human Resource Staff is more than the mean level usage of HRIS in decision related to updating job vacancies in decision making of Managers of other departments.

xvii) The mean level usage of HRIS in decision related to framing of company policies and procedures in decision making of Human Resource Staff is more than the mean level of usage of HRIS in decision related to the framing company policies and procedures in decision making of IT Recruiters.

xviii) The mean level usage of HRIS in decision related to the human resources planning of decision making of Human Resource Executives is more than the mean level of usage of HRIS in decision related to the human resources planning of decision making of Managers of other departments.

xix) The mean level usage of HRIS in decisions related to the staffing by Human Resource Managers is more than the mean level of usage of HRIS in decisions related to staffing in by Managers of other department.

-

xx) The mean level usage of HRIS in decisions related to the employee promotions in decision making of Human Resource Managers is more than the mean level of usage of HRIS in decision related to the employee promotions in decision making of IT Recruiters.

xxi) The mean level usage of HRIS in decisions related to the performance appraisal by of Human Resource Managers is more than the mean level of usage of HRIS in decision related to the performance appraisal by IT Recruiters.

Null Hypothesis: Differences in designation of software professionals working in companies would not account for significant differences in their mean usage levels <u>of all the variables of Decision Making.</u>

In Table 12 the 't' values pertaining to mean differences of possible pairs of means of different designation categories are given.

Table-12 Analysis of all Variables in the area of Decision Making

	ITR (N=56) (M=121.89) (SD=3.46)	HRE (N=93) (M=120.91) (SD=3.03)	AHRM (N=58) (M=121.75) (SD=4.25)	HRM (N=66) (M=123.27) (SD=4.94)	HRS (N=22) (M=122.90) (SD=3.87)	MOD (N=55) (M=119.34) (SD=4.75)
ITR (N=56) (M=121.89)		NS 1.75	NS 0.19	NS 1.8	NS 1.07	** 3.22
HRE (N=93) (M=120.91)			NS 1.32	** 3.44	** 2.26	* 2.2
AHRM (N=58) (M=121.75)				NS 1.83	NS 1.15	** 2.84
HRM (N=66) (M=123.27)					NS 0.35	** 4.44
HRS (N=22) (M=122.90)						** 3.41

* 't' more than or equal to 1.98 at .05 level for respective df
** 't' more than or equal to 2.61 at .01 level for respective df

i) The mean usage level of HRIS in Decision Making of IT Recruiters is more than the mean usage level of HRIS in Decision Making of Managers of other departments.

ii) The mean usage level of HRIS in Decision Making of Human Resource Executives is more than the mean usage level of HRIS in Decision Making of Managers of other departments and lesser than Human Resource Managers and Human Resource Staff.

iii) The mean usage level of HRIS in Decision Making of Asst.Human Resource Managers is more than the mean usage level of HRIS in Decision Making by Managers of other departments.

iv)The mean usage level of HRIS in Decision Making of Human Resource Managers is more than the mean usage level of HRIS in Decision Making by Managers of other departments.

iv)The mean usage level of HRIS in Decision Making of Human Resource Staff is more than the mean usage level of HRIS in Decision Making by Managers of other departments.

-

FINDINGS

The data were analyzed using statistical tests that have been described earlier and the results drawn based on these tests are given below:

- ❖ The mean usage level of HRIS in Decision Making by IT Recruiters is more than the mean usage level of other departments.
- ❖ The mean usage level of HRIS in Decision Making by Human Resource Executives is more than the mean usage level of Managers of other departments and less than Human Resource Managers and Human Resource Staff.
- ❖ The mean usage level of HRIS in Decision Making by Asst.Human Resource Managers is more than the mean HRIS usage level of Managers of other departments.
- ❖ The mean usage level of HRIS in Decision Making of Human Resource Managers is more than the mean HRIS usage level of Managers of other departments.
- ❖ The mean usage level of HRIS in Decision Making of Human Resource Staff is more than the mean HRIS usage level of Managers of other departments.
- ❖ The HRIS mean usage by Managers of other departments in the area of decision making is less than the HRIS mean usage of other five designations.

Suggestions:

- ❖ The organizations should reward and promote those managers who use HRIS to the maximum extent and also give them more training related to HRIS to gain more expertise.
- ❖ The select software companies have to explain the significance and importance of HRIS in decision making by conducting seminars, role plays, discussions, & presentations to their staff
- ❖ The organizations have to guide their employees to enroll for certification courses
- ❖ All select organizations have to conduct training programmes before and after implementation of HRIS
- ❖ Organizations should opt for revised versions of HRIS which would keep the employees updated with latest technology.

The utilization of HRIS in software companies, enhances the effective and efficient decision making process. While taking decisions, decision makers access right information at right time for right decisions. In addition to this it leads to the organizational effectiveness. Therefore organizations have to use more and more of HRIS in all the functional areas of human resources.

CONCLUSION

In this research paper an attempt has been made to measure and compare the HRIS usage in decision making and also to predict the usage level of HRIS in decision making. Need based priority of the selected respondents is identified and correlated with HRIS usage. The decision making is measured in terms of human resource planning, employee training and development, employment benefits and laws, decisions related to product quality, need decision, assigning leadership development and evaluate alternatives, select the best alternatives, weight to criteria, hiring new employees, position and classification, training and skill development decisions on goal oriented, compensation management, job evaluation and downsizing, legal labor management relations, agenda setting, competitive and strategic attitude. Hence, all the facets of decision making along with employee designations has also been explained in detail.

-

SCOPE FOR FURTHER RESEARCH

HRIS is an emerging area, especially in human resource management processes. Hence, there is a wide scope for further research in it by way of extending the same to different companies such as business outsourcing, hardware manufacturing companies, information technology, information technology enabling services companies, telecommunication, pharmaceutical companies, hotel, airlines, tourism and universities.

To make verify the results of the present study in a wider setting and wider acceptance, sample may be selected from south India covering software dominated cities like Hyderabad, Chennai, and Mysore by selecting more number of respondents.

The dependent variables selected for the study were more in number under each of the areas. These could be reduced by doing factor analysis and arriving at two to three factors that have higher levels of loading. Using such factors as dependent variable would be more meaningful both in terms of scoring as well as to have a better conceptualization of dependent variable.

Further the same study may be replicated selecting the companies that have been not included in the present study and by collecting data from larger sample size.

The studies of this type can also be conducted in wireless HRIS usage in software companies among the sub-modules of HRIS. Internet based HRIS usage in software companies and comparative studies can also be undertaken between Indian based and MNC's.

REFERENCES:

Abdul Kader et.al,(2013) HRIS Practices in Universities: An Exploratory Study on the Private Universities In Bangladesh, Global Journal of Human Social Science Research, Vol 13, No 7-G.

Astrid M (2002)"A DSS classification model for research in human resource information systems" Journal of information Systems Management,19(3),pp 41-50.

Beckers.A.M.&Bsat.M. Z.(2002),A DSS classification model for research in human resource information systems, Journal of Information Systems Management,19(3),pp 41-50.

Brijesh Kapil (2007),Focused Approach by Leveraging IT in HR, Intelligence Unit Publication India,12 pp 17-18.

Chen Wei, (2014) Management of Human Resource Information Using Streaming Model, Advanced Science and Technology Letters, Vol.45 (CCA 2014),pp.75-80, ISSN: 2287-1233 ASTL.
http://dx.doi.org/10.14257/astl.2014.45.15.

Haines,Victor.Y., and Petit, Andre. (1997).,Conditions for Successful Human Resource Information Systems. Journal of Human Resource Management.36,(2),pp 261-275.

Idid.,

Huo.P.Y& Kearns.J.(1992).,Optimizing the Job person Match with Computerized Human Resource Information Systems", Personnel Review,21(2), pp 3-18.

Gary S. Fields (2002).,"Predicting Potential for Promotion, How the Data in Human resource Information Systems Can Be Used To Help Organizations Gain Competitive Advantage", Center for Advanced Human Resource Studies,(CAHRS),CAHRS Working Paper Series, Cornell University ILR School,pp 02-14.

-

John Reh,(2006),Key Performance Indicators (KPI), How an organization defines & measures progress toward its goals".pp1-2.

Kovach, Kenneth.A.& Cathcart, Charles.E. Jr.(1999),Human resource information systems (HRIS),Providing business with rapid data access,information exchange & strategic advantage "Public Personnel Management,28,(2),pp275-282.

Lado,A.A.&,Wilson,(1994).,"HRIS impact" Academy of Management Review, Issue 19 pp 699-727.

Latha Chakravarthi et.al (2013), Examining Employee Perceptions and Satisfaction towards Usage of Human Resource Information System in Bharat Sanchar Nigam Limited, Vadodara Telecom District, International Journal of Organizational Behaviour & Management Perspectives, Volume 2, Number 3,pp 477-483, ISSN (P):2279-0950, (O):2279-0969.

Lengnick-Hall.C.A.&Lengnick-all.M.L.(2006).,HR, ERP, and competitive advantage. Journal of Human Resource Management,45,pp 179-194.

Manar Al-Qatawneh, (2012)The Effect of the Implementation of Human Resource Information Systems on Job Related Decisions in Commercial Banks in Jordan, European Journal of Economics, Finance and Administrative Sciences,48.

Mujeeb.L.M (2012), Importance of best Human Resource Management Practices and the need for a Human Resource Information System (HRIS) for the Public Health Sector in Sri Lanka, Sri Lanka Journal of Bio-Medical Informatics 2012;3(2):-55-62.

doi: http://dx.doi.org/10.4038/sljbmi.v3i2.2449

Kavanagh.D (1990)., British Politics Today, Manchester: Manchester University Press, pp 11-13.

K.P.Tripathi, (2011), Role of Management Information System (MIS) in Human Resource, JCST,2,(1),.

Ritesh Chugh (2014), Role Human Resource Information Systems in an Educational Organization, Journal of Advanced Management Science Vol. 2, No. 2, pp 149-153.

Sprague,H.R.,Carlson,E.D.,(1982).,Building Effective Decision Support Systems, Prentice Hall, Englewood Cliffs, New Jersey pp 23-27.

Tannenbaum.S.I (1990), HRIS information, user group implications, Journal of Systems Management,41 (1),pp.27-32,36.

Yasemin Bal et.al, (2012) The importance of using human resources information systems and a research on determining the success of HRIS, Management knowledge and learning international conference, pp 53-62.