

**Paradigm Shift in the Human Resource Management System using
Human Resource Information System in India with special reference
to the Manufacturing Organization of South-East Rajasthan**

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Abstract:

Nowadays, the HR software market is projected to grow to \$33.57 billion by 2028 at a compound annual growth rate of over 10%. On average, companies spend 15 weeks selecting an HRIS. When selecting an HR information system, 98% of companies were considering a cloud-based HRIS. 30% of companies use 10 or more different HR systems. A human resources information system (HRIS) is a software solution that maintains, manages, and processes detailed employee information and human resources-related policies and procedures. As an interactive system of information management, the HRIS standardizes human resources (HR) tasks and processes while facilitating accurate record-keeping and reporting. The purpose of the research paper is to study the effectiveness of HRIS in the manufacturing organization of South-East Rajasthan.

1. Introduction

HRIS software is widely used in large-scale organizations in India to manage HR operations. Most of the large-scale manufacturing organizations in Rajasthan (India) are using HRIS to manage HR functions efficiently and effectively. Technological advancements have enhanced the use of the HRIS in almost all areas of HR. Manufacturing industries in Rajasthan include cement, marble, textiles, edible oil, fertilizer, and chemical industries. The industries in the south-east region of Rajasthan are also using high-end technology-based HRIS to manage their large workforce.

HRIS offers more seamless, streamlined, and efficient interactions between employees and the companies they work for, while freeing HR professionals to perform more strategic and high-value work. HRIS originally referred to a basic system for keeping administrative employee records. As HR functions became more complex, HRIS

incorporated processes such as talent acquisition, recruitment, and ongoing employee data management and processing.

2. HRIS in Manufacturing Companies of Rajasthan

The eight large-scale, prominent manufacturing units are selected for the purpose of understanding HRIS functions and collecting information about the modern HRIS.

Chambal Fertilizer and Chemical Limited (CFCL): The Company is using SAP software to manage Human resource operation and they recently implemented the latest version of SAP HANA. They are presently using a face recognition attendance system for both on-roll employees and contract workers. Chambal Fertilizers and Chemicals Ltd. represents almost 15% of the overall urea produced in the nation.

DCM Shriram Ltd.: The total number of employees at the Kota plant is approximately 2500, with over 2000 contract workers. The company is using SAP software to manage human resource operations, and they recently implemented HRIS HANA. They are presently using a face recognition attendance system for their on-roll employees and contract workers

JK Cement Ltd.: The total number of employees at the Nimbahera plant is approximately 1000, with an additional 1000 contract workers. The company is using SAP software to manage its human resources operations. They are presently using a face recognition attendance system for their on-roll employees and contract workers.

Mangalam Cement Limited: The total number of employees in the Morak plant is approximately 500, with over 500 contract workers. The company is using SAP software to manage human resource operations, but some of the LAMP applications are still in use for things like attendance and other things. They are presently using a face recognition attendance system for their on-roll employees and contract workers.

Shriram Rayons: The total number of employees at the Kota plant is approximately 600, with over 600 contract workers. The company is using SAP software to manage human resource operations, and they are migrating to a new HRIS solution, i.e., people strong. They are presently using a face recognition attendance system for their on-roll employees and contract workers.

ACC Limited: The total number of employees at the plant in Lakheri, Bundi, is approximately 1200, with over 1000 contract workers. The company is presently using SAP software to manage human resource operations, and for employees, they have SAP ACCENT, through which employees can apply for leave. They are presently using a face recognition attendance system for their on-roll employees and contract workers.

Wonder Cement: The overall number of employees at the plant is approximately 1200, while the number of contract workers exceeds 1000. Currently, the corporation uses Darwin Box software to manage its human resource operations. They are currently using a facial recognition attendance system for both full-time and contract personnel.

Sangam India Ltd.: The overall number of employees in the Bhilwara facility of Sangam India Ltd. is approximately 9000, while the number of contract workers exceeds 3000. In 2020, they have implemented SAP HANA. The corporation is currently utilizing SAP HANA software to manage its human resources functions. They are currently utilizing a facial recognition attendance system for both full-time and contract personnel.

3. Objectives & Hypothesis of the Research

- To study the Human Resource Information System modules used by the organizations located in South east Rajasthan.
- To find the effectiveness of HRIS in managing HR operations.
- To identify the challenges and pitfalls faced by organizations in implementing and using HRIS for performing HR functions.

4. Research Methodology

Research Type: The present study is descriptive in nature and survey method has been used to collect data and analysis.

Research Area (Location): The research area is south-east region of Rajasthan.

Population: There are more than 10000 Employees working in the manufacturing organizations located in the south-east region of Rajasthan.

Sampling Method: Simple Random Sampling method has been used for data collection.

Sample Size: 620 employees have been selected to determine the effectiveness of HRIS on the HR functions in an organization and 22 HR professional from the selected organization. Employees have been selected from the manufacturing organization located in the south-east region of Rajasthan such as.

CFCL (Chambal Fertilizers & Chemical Limited), DSCL (DCM Shriram Consolidated Limited), SHRIRAM RAYONS, MANAGALM CEMENT, WONDER CEMENT, ACC CEMENT, JK LAXMI CEMENT, SANGAM INDIA Ltd.

Sample Size: The total of 620 employees and 22 HR professionals has responded on the human resource information system in their organizations.

5. Data Presentation and Analysis

Table 1. Showing a Brief Profile of Selected Companies, Sample Collected and HRIS used

Company Name	Address	Employees Numbers	Total Selected	HR Employees Selected	Softwares
CFCL	Godepan,	1200	74	3	SAP

	Kota				HANA
DCM	Kota	2500	84	3	SAP HANA
JK CEMENT	Nimbhaheda	1000	71	2	SAP
MANGALAM CEMENT	MORAK	500	72	2	SAP and LAMP Application
ACC	Bundi	1200	72	3	SAP Accent
SHRIRAM RAYONS	Kota	600	73	2	People strong
Wonder Cement	Nimbhaheda	1200	78	3	Darwin Box
Sangam India Ltd.	Nimbhaheda	9000	96	4	SAP HANA
	Total Employees	17200	620	22	

Table No.2 Employees are very comfortable with computer based technology system

Employees are very comfortable with computer based technology system		Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		GT	%
		F	%	F	%	F	%	F	%	F	%		
Gender	MALE	113	19.89	259	45.60	98	17.25	61	10.74	37	6.51	568	100
	FEMALE	12	23.08	21	40.38	9	17.31	6	11.54	4	7.69	52	100
	Total	125	20.16	280	45.16	107	17.26	67	10.81	41	6.61	620	100
Age	20-35	32	23.02	59	42.45	22	15.83	17	12.23	9	6.47	139	100
	35-50	71	19.45	172	47.12	66	18.08	35	9.59	21	5.75	365	100
	50 & Above	22	18.97	49	42.24	19	16.38	15	12.93	11	9.48	116	100
	Total	125	20.16	280	45.16	107	17.26	67	10.81	41	6.61	620	100

		5	6						1				
Ex per ien ce	0-5	9	26.4 7	12	35.29	7	20.59	4	11.7 6	2	5.88	34	100
	5-15	93	19.8 7	220	47.01	79	16.88	49	10.4 7	27	5.77	468	100
	15 & more	23	19.4 9	48	40.68	21	17.80	14	11.8 6	12	10.17	118	100
	Total	12 5	20.1 6	280	45.16	107	17.26	67	10.8 1	41	6.61	620	100
Ed uca tio n	Non- Graduat e	9	12.5 0	16	22.22	6	8.33	22	30.5 6	19	26.39	72	100
	Graduat es	11 6	21.1 7	264	48.18	101	18.43	45	8.21	22	4.01	548	100
	Total	12 5	20.1 6	280	45.16	107	17.26	67	10.8 1	41	6.61	620	100

As shown in the above table the out of the total respondents 568 were male and 52 were females. More than 65% of the males are agreed that they are comfortable with the computer based technology solutions (HRIS). More than 63% female employees are agreed that they are very comfortable with the computer based technology solutions (HRIS). Therefore, most of the male & female respondents are comfortable and having self-efficacy to understand HRIS.

As shown in the above table the most of the respondents are of above 35 years of age and more than 65% of them are comfortable with the computer based technology solutions (HRIS). With rising age brackets the efficacy also decreased and it was highest in the employees of age less than 50 years of age.

Most of the employees are having experience of more than 5 years. The more than 60% of the employees of different experience having good self-efficacy with the technology based solutions. Only the employees having high experience but crossed 55 years of age having low self –efficacy. Similarly, most of the employees are well educated and having a high self-efficacy.

Table No. 3 HRIS is very effectively used to manage the HR functions

HRIS is very effectively used to manage the HR functions		Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		GT	%
		F	%	F	%	F	%	F	%	F	%		
Gend er	MAL E	99	17.43	319	56.1 6	53	9.33	76	13.38	21	3.70	568	100
	FEM	11	21.15	26	50.0	5	9.62	8	15.38	2	3.85	52	100

	ALE				0								
	Total	110	17.74	345	55.65	58	9.35	84	13.55	23	3.71	620	100
Age	20-35	32	23.02	55	39.57	21	15.11	24	17.27	7	5.04	139	100
	35-50	57	15.62	229	62.74	25	6.85	43	11.78	11	3.01	365	100
	50 & Above	21	18.10	61	52.59	12	10.34	17	14.66	5	4.31	116	100
	Total	110	17.74	345	55.65	58	9.35	84	13.55	23	3.71	620	100
Experience	0-5	9	26.47	17	50.00	2	5.88	5	14.71	1	2.94	34	100
	5-15	79	16.88	270	57.69	45	9.62	61	13.03	13	2.78	468	100
	15 & more	22	18.64	58	49.15	11	9.32	18	15.25	9	7.63	118	100
	Total	110	17.74	345	55.65	58	9.35	84	13.55	23	3.71	620	100
Education	Non-Graduate	7	9.72	14	19.44	17	23.61	23	31.94	11	15.28	72	100
	Graduates	103	18.80	331	60.40	41	7.48	61	11.13	12	2.19	548	100
	Total	110	17.74	345	55.65	58	9.35	84	13.55	23	3.71	620	100
GT		440	17.74	1380	55.65	232	9.35	336	13.55	92	3.71	2480	100

As shown in the above table the out of the total respondents 568 were male and 52 were females. more than 70% of the males are agreed that HRIS is very effectively managing HR operations. More than 71% female employees are agreed that they more than 70% of the males are agreed that HRIS is very effectively managing HR operations. Therefore, most of the male & female respondents found that HRIS is an effective solution.

As shown in the above table the most of the respondents are of above 35 years of age and more than 72% of them agreed that HRIS is very effectively managing HR operations.

Most of the employees are having experience of more than 5 years. The more than 72% of the employees are agreed that HRIS is very effectively managing HR operations.

Similarly, most of the employees are well educated and agreed that HRIS is very effectively managing HR operations

Hypothesis Testing

The following are the proposed hypothesis which has been tested after the data collection.

First Hypothesis

H0: There is no significant difference between the employee's perceptions towards HRIS modules of different organization.

H1: There is significant difference between the employee's perceptions towards HRIS modules of different organization.

Table No. 4 ANOVA

ANOVA						
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	37.4163	7	5.34518	24.9795	4.7887E-30	2.02453
Within Groups	130.958	612	0.21398			
Total	168.374	619				

Conclusion: The p value is less than .05, therefore the null hypothesis is rejected. This shows that there is significant difference between the employee's perceptions towards HRIS modules of different organization.

Second Hypothesis

H0: There is no significant difference between improvement in performance of the employees of different organizations using HRIS through proper training.

H1: There is significant difference between improvement in performance of the employees of different

Table No. 5 ANOVA

ANOVA						
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	36.2064	7	5.17234	26.1216	2.36478E-31	2.02453
Within Groups	121.182	612	0.19801			
Total	157.389	619				

Conclusion: The p value is less than .05, therefore the null hypothesis is rejected. This shows that there is significant difference between improvement in performance of the employees of different organizations using HRIS through proper training.

Third Hypothesis

H0: There is a no significant between the motivation & support to the employees of the organizations.

H1: There is a significant between the motivation & support to the employees of the organizations.

Table No. 6 ANOVA

ANOVA						
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	25.5737	7	3.65339	21.4008	7.06783E-26	2.02453
Within Groups	104.476	612	0.17071			
Total	130.05	619				

Conclusion: The p value is less than .05, therefore the null hypothesis is rejected. This shows that there is a significant between the motivation & support to the employees of the organizations

Fourth Hypothesis

H0: There is no significant difference between effectiveness of using HRIS in manufacturing organization in South East Region of Rajasthan.

H1: There is significant difference between effectiveness of using HRIS in manufacturing organization in South East Region of Rajasthan.

Table No. 7 ANOVA

ANOVA						
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	44.0268	7	6.28954	31.5659	2.00792E-37	2.02453
Within Groups	121.942	612	0.19925			
Total	165.969	619				

Conclusion

The following conclusion has been drawn based on the empirical study conducted on large scale organizations in south-East Rajasthan including CFCL (Chambal Fertilizers

& Chemical Limited), DSCL (DCM Shriram Consolidated Limited), Shriram Rayons, Managalm Cement, Wonder Cement, ACC Cement, JK Laxmi Cement, Sangam India Ltd.

Manufacturing organizations taken for the study have well defined HR policies and functions which includes all the areas of the Human Resource. They have a dedicated HR department which is managing all the operation of the HR from recruitment to retirement through HRIS.

Early in the 1990s, DSCL was the first company in South-East Rajasthan to install the Oracle ERP with HRIS module system to manage its operations, and it was followed by other organizations. The large-scale organizations in South-East Rajasthan usually have 500 to 10,000 employees. Hence, HRIS is must to manage the information of such a large workforce. Most of the companies like DCM, ACC, Sangam Textiles, CFCL and Mangalam Cement Ltd. have SAP /Hana and only Wonder Cement has Darwinbox and Shriram Rayons has People strong. The HRIS is used to keep and manage employee information in large-scale organizations with a large number of employees, from recruitment to retirement. The system manages not only the information of current employees but also that of employees who have left the company. Therefore, Organizations have eliminated the need for paper by using the HRIS system. SAP / R4 Hana have been implemented in most of the large manufacturing companies selected for this study. Therefore, as it is evident that large scale manufacturing organization located in south-east Rajasthan are using SAP and similar software's for managing the HR functions and recording a real time data of the employees. HRIS is adopted at all levels of the organization i.e top-management, HR personals and employees to execute the operations and work as per the HR policies of the organization.

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