

An Empirical Study on Perception of E-HRM Tools for the End Users

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Abstract: There is no exception that organization and Human Resource Management were greatly influenced by the Information Technology. There is no doubt about it that the use of information technology brings benefits such as cost reduction, time savings and strategic transformation. The term E-HRM can be described as the plan schedules for systematic dimensions, proper implementation of those corollaries and usage of applied sciences in the networking web applications helping the personnel in performing of the HR activities. The E-HRM process is an easy to use tool which is reliable and efficient so it's reachable to a broad assemblage of diverse workforces. Therefore the electronic human resources management process is the new change practicing the HRM functions on a globalized scenario. The different organizations are adopting different HR software modules for integrating their HR functions. The information technology has changed from management information system to enterprise resource planning and then cloud computing environment.

This current particular research work in its essence exemplifies the perception of software application (electronic savvy tools) for the end users in selected organizations in Orissa. The study indicates that the different organization having different application tools for electronic human resource management. It has found that the major organization implementing the E-HRM tools such as Human resource - functional application, integrated-Human-resource software suite-applications, Interactive-voice response, Human resource-intranet application, self service application, employee self service application, manager self-service application, HR extranet application, HR portal application are satisfied and easy going through its usage and enhancing their (end user) self-development as well.

Keywords: E-HRM, E-HRM software application tools, HRM, Satisfaction level of end user, Self-development of end user.

I. INTRODUCTION

An organization is very well run by its policies and procedures but then the introduction of E-HRM has made the whole over processes simpler and stratified. The policies, guidelines, norms that affect the strategy planning gives rise to new thoughts of strategy implementation. The HR strategies are influenced by the usage of E-HRM and therefore there is wise usage of E-HRM software tools and applications in organizational strategy planning, executing policies and procedures and thorough practices. These can only be possible by the on-going as well as direct help of complete usage of software applications mediums and networks. In the context of "implementation of E-HRM" signifies a broader aspect of its meaning such as innovating the idea to work, making an effort to put the idea into practice or acquiring some new concept. Therefore, it can be very rightly said as "the concept of electronic HRM basically defined as the path/pavein practicing HRM". The process of managing the workforce/personnel, change management, decision-making processes, controlling, evaluating and finally co-ordination of the task forces are managed by the E-HRM business solution which is solely designed to be practiced the HRM processes. In a way it involves the active participation of the employees within the organization as well assuring of tracking up records of the essentials.

For the smooth functioning of the HRM processes and accomplishing its purposes the organizations have been relatively using web based applications software which are named as "Electronic Human Resources Management (E-HRM)". And in this way various factors is expected from the functions of E-HRM by the working personnel like improvising the quality of HRM, more and more contribution towards enhancing the company's goodwill and performances along with decreasing the administrative loads of the admin professionals. These all enables the motivational zeal of the task forces in a way empowering them to perform rest of the selective HR functions. Those empowered personnel full-fledged can focus more on the

strategic planning of the organization rather than much more on the operational part. This helps the top level management to reduce the head counts in handling HR functions and resulting in strict staffing. As each and every organization exists within a degree of its own organizational culture the adoption of E-HRM concept anticipates prominent changes but then has to stick to achieve certain statistical measures. According to a survey conducted by CIPD in the year 2007 stated that “the expected development related to shared services, outsourcing and E-HR hardly created any impact on costs or the staffs personnel”. For the survival of an organization customer satisfaction is the only thumb rule. So all an organization needs to do is create a healthy ambience for its employees so that they work under a white roof and revert the sparkling ratios. This charging statistical graph can depict that an organization is well managed and running on its wheels. Where employees are satisfied the organization blooms in drizzling colors. Employees no doubt are considered the “heartly-assets” of an organization so is there satisfaction level in the form of feedback as well. The introduction of E-HRM to the employees (end-users) should be proving them as a boon to perform the organizational functions in a smooth condition. If there is reluctances found in feedback so collected then there needs to be an urgent call for changes in strategic planning within the organization. This proves that the perception of the employees (end-users) towards the implementation of E-HRM tools is very much needed for the functioning of an organization.

II. LITERATURE REVIEW

The changing trends in information and communication technology are quite unpredictable about its destination. It's even worth not destined because the scope, arena and the platform that the advancement in Human Resources Information System is providing in the job opportunities sector, economical sector and invention and innovation sector is a boon to the living being as in the context of development and IT progress. The intervention of information technology in almost all the facets of business reflects a multi-dimensional, multi-tasking picture of e-commerce.

Apart from the “clicking “pattern the invention of time saving technology unveiled the “touch screen” approach. It somewhat to some extent proved to be an alien to some as the “touch screen” pattern do not read minds of the operator but touch sensitive. Thus the advancement proves to be an opportunity as well as challenge. The most challenging task is to catch hold of the changing web applications in the work arena. The automation as well as the digitization of the personnel administration functions to process the work faster is the latest trend. Wright and Dyer (2000) in their survey of work have stated that the emerging trends in the work culture of an organization areas rapid as per the changing time that the scope of e-commerce is spreading across. The other names for Information and communication technology with respect to Human Resource Management functions are world-wide-web human resources, HRIS, virtual- human -resource -management,

human- resource -intranet, computer -based- human -resource management -systems and human- resource- portals still the terminology “Electronic Human Resources Management” is in the trend flourishing. The E-HRM in Indian context is seen avidly by the world. The global changes obviously influence the changes across. Certain functional words related to the E-HRM practices are automation of work, e-office, transparency, and empowerment. There is an e-revolution over the delivery of the HR services and practices followed in the organization. This present research focuses on the e-HRM tools and application software used in various types of private and public sector organizations. It also focuses on to what extent those organizations practice the e-HRM tools in delivering of the HR services in the state of Orissa. The computerized human resource information system contents the full-fledged personnel administration facts and data structure, information sciences and services, databases, tools and transactions which creates the cocoon of an organizational structure as per Kelley and Reilly (2003). E-HRM has very avidly made its mark by the virtue of enhancement in Technology and its appliances. Organizations introduced technology into their domains in the form of Intranets (corporate intranets) and web-based Human Resource Information Systems. The E-HRM tools include HR portals, intranet, extranet, integrated HR suite software that has been evidently of rare use. But certain organizations prevailing in the Iranian borders or the Iranian regionals, if there has been the usages of those E-HRM tools then there would have been the optimistic effect upon the HRM output as per the expert's advices. According to Florkowski and Olivas-Lujan (2006) in the regions of North America and Europe there has been a tremendous improvement in the pattern of HR service delivery with the transformation in technological advancement briefing the diffusion patterns of eight information technological tools: Human-Resource- functional- applications, integrated- Human Resources- suites, Interactive- Voice-Response systems, Human Resource- intranets, employee and manager- self-service applications, Human Resource- extranets, and Human Resource- portals. In reign of the 21st century, the companies in some or the other ways would have adopted the advanced form of information technology from the advent tools of e-HRM.

HR Functional Applications (HRFA): The Human Resource Functional Application (HRFA) can be defined as the software based automation of the discrete tasks and added tasks and duties to the personnel administration functionalities (Florkowski and Olivas-Lujan 2006).

Integrated- Human Resources- Software- Suite -Applications (ISA): According to the Wikipedia- (2014), the integrated-software can be defined as the software application tool which can be used for the personal computers which integrates the shared commonality practiced operations in much more producing application software running in one developed software application. The Integrated Software Suite Application involves itself in deliverance of services like corporate analytics intelligence along with analytics, online analytical data processing, data mining, extracting information, and transformation of data, data warehousing and reporting of

data. Those integrated form of data application suite software helps in achieving the highest level of eligibility in efficiency and facilitating overall administration over each personnel administration factors by coordinating every of the company's along with employees information to serve the relevant data instantly as and when required during the operations of the organization starting from the employee's database and its policies to the payroll systems of processing adhered.

Interactive Voice Response (IVR): The Webpedia (2014) has stated that the Interactive Voice Response can be defined as the form of a communication technology that has been improvised through the usage of advanced form of application technology. The IVR functionalizes when an individual uses a touch-tone telephone to interact with a database to acquire information or enter data into the database systems.

HR Intranet Applications (HRIA): Weidenhammer (2013) in his defined statement stated that the intranet is the virtual hub of all confidential reports and information of an organization. All those confidential human resources information and processes are created as a single and secure repository within an intranet cocoon.

Self-Service (SS) Applications: Cedar Crestone (2013) in his viewpoint speaks that as per the survey report conducted on the HR functions and management, it's stated that the by implementing the e-HRM tools and applications 10% number of more employees can serve themselves with the help of advanced form of technology.

Employee Self-Service (ESS) Applications: Florkowski and Olivas-Luján (2006) states that the Employee Self Service (ESS) is that kind of e-HRM application software tool that maintains a group of personnel administration transactions which could be started for interpretation as well finished with proper ease and systematic function irrespective of donating any sort of irritation directly to the personnel department and head of HR.

Manager Self-Service (MSS) Applications: The Manager Self Service software application tool aims at increasing the organizational efficiency by minimizing the extra additional costs and time involved in human resources indulgence between the manager and the employee interactions.

HR Extranet Applications (HREA): As per Florkowski and Olivas-Luján (2006) the Human Resource Extranet Applications is the private network of the systems that channelizes the data/information of the client companies to the external buyers producing the amalgamation of sources or outsourced personnel administration rendering services. The Human Resource Extranets plays like the medium for e-commerce and transactional business flow.

HR Portal Applications (HRPA): The Human Resource Portal Application software e-HRM tool is meant to be a networking website medium of interface helpful to the user (employees/ employer/workforce) that provides a private operating corner to each and every relevant sources of data information, tools and systems.

III. RESEARCH OBJECTIVE

The perception of end users towards E-HRM tools are to some extent same and vary as well. The Electronic Human Resource Management can be well defined as the developed corporate professional business solution that offers a comprehensive online provision in the management of all procedures and processes, actions, statistics and facts and figures requisite to accomplish Human Resources in a contemporary business organization. The enactment and the execution of the E-HRM provide a prospect to serve the entered data to the employees in order to automate and supply HR processes as its web-based tool.

Our objective thus is to figure out the Electronic Human Resources Management tools practiced by various different private and public sector corporate worlds in Orissa.

IV. RESEARCH DESIGN

The research has been carried out through a well-defined systematic questionnaire in likert scale for this study. Before the final questionnaire we have done the pilot study through some open ended questionnaire. The data have been collected through different corporates like NIC, OCAC, NALCO, OCPL, RELIANCE JIO, TCS, EDUSOL and STL in Orissa.

The researcher has followed a Stratified Random Technique for the data collection. The strata have been framed by the companies and the respondents have been selected through the random technique. 456 records have been collected for the study.

The data has been analyzed through different statistical tools like Reliability through Cronbach Alpha Test to evaluate the questionnaire as well as the validity of the data set, descriptive statistics (Central tendency and Dispersion) to analyze the pattern and the characteristics of the data set, factor analysis to evaluate the end user's perception towards the ERP tools for implementation.

V. RESEARCH ANALYSIS

The Factor Analysis can be defined as the most evenly utilized facts and figures/variables education method. Such multivariate statistical method when applied in three vital factors such as decrease the count of variables, from more to less, constructing the factor variables from measured variables and constructs and Provide construct validity proof.

The purpose behind a reliability analysis is to determine how well a set of items, i.e., observed variables, go together into a single scale. This analysis also reveals how strongly each item in the scale is associated with the overall scale. This is called item-total correlations.

The statistic that results from a commonly used reliability analysis is the Cronbach's alpha coefficient. Generally speaking,

when a collection of items (i.e., a scale) has a Cronbach's alpha of .70 or larger; the scale is considered to be reliable. This type of reliability analysis refers to the internal consistency of a set of variables.

TABLE I: RELIABILITY - STATISTICS (RS)

Cronbach's- Alpha(CA)	Items in number
.868	9

As the reliability value is shown through the following Table I drawn below called as the "Reliability Statistics Table" and this particular Table 1 shows the Reliability value of .868 which signifies the validity of the questionnaire and data set are highly significant for the research analysis. The data set is valid and reliable for analysis.

TABLE II: DESCRIPTIVE

			Statistic	Std. Error
Aware of ERP	Mean		3.25	.125
	95% Confidence Interval for Mean	Lower Bound	3.00	
		Upper Bound	3.49	
	5% Trimmed Mean		3.28	
	Med		3.00	
	Vari		1.630	
	Std- Deviation(Sd)		1.277	
	Min		1	
	Max		5	
	Rng		4	
	Interquartile- Range		2	
	Skewness		-.309	.236
	Kurtosis		-.842	.467
Capable to Handle ERP	Mean		2.66	.129
	95% Confidence Interval for Mean	Lower Bound	2.40	
		Upper Bound	2.91	
	5%- Trimmed- Mean		2.62	
	Med		3.00	
	Vari		1.747	
	Std- Dev		1.322	
	Min		1	
	Max		5	
	Range		4	
	Interquartile- Range		3	
	Skewness		.225	.236
	Kurtosis		-1.068	.467

The Descriptive Factor Analysis defines itself as the altogether compatibility of variable components that can't get considered to be sketched out starting with a good-streamlined mass, the construction of communalities, mass parameters, and global factors isn't a rational consideration. A descriptive factor analysis could get initiated through weighting test vectors contrastingly as the components of total test variance unable to determine a test battery common factor. Those elements could be stated and a descriptive factor analysis considered upon

weighting by certain elements demands negligible assumptions regarding the mass and least predictions of communalities; this needs only those regressions be reasonably linear. In this Table II known as the "Descriptive Statistics", it indicates the mean of Awareness regarding ERP which is 3.25 that indicates the most of the end users are aware about the ERP (Enterprise Resource Planning) software tool by different environment like the top management, news, journals and some other sources. Even it's found that they are very much confident about their

awareness because it lies between 3-3.49. The standard error is quite negligible that is .125 which signifies the opinion of the end users. The Skewness and Kurtosis value signifies the Normality of the data set.

Next, in the segment of “Capable to handle ERP”, it indicates the mean of capable of handling ERP which is 2.66 that indicates the most of the end users are capable of handling the ERP (Enterprise Resource Planning) software tool by different environment like the top management, news, journals and some other sources. Even it's found that they are very much confident about handling the ERP because it lies between 2.40-2.91. The standard error is quite negligible that is .129 which signifies the opinion of the end users. The Skewness and Kurtosis value signifies the Normality of the data set.

TABLE III: KMO AND BARTLETT'S TEST

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.862
Bartlett's Test of Sphericity	Approx. Chi-Square	549.347
	Df	36
	Sig.	.000

TABLE IV: COMMUNALITIES EXTRACTION METHOD: PRINCIPAL COMPONENT ANALYSIS

	Initial	Extraction
Aware of ERP	1.000	.745
capable to handle ERP	1.000	.800
IVR	1.000	.907
HR Intranet	1.000	.791
self-service& MSS	1.000	.761
HR Extranet	1.000	.794
HR Portal	1.000	.787
HR functional app	1.000	.797
Integrated HRM Suite app.	1.000	.666

Communalities define as when the Principles of oblique rotation could be extracted by cross entropy and its dual entropy. Communality: The total of the squared factor loadings for all factors for a given variable (row) is the variance in that variable accounted for by all the factors, and this is called

the communality. This Table indicates value lies between .662 to .907 and the commonness among these questions are highly cohesive. This is an indication of the validity of the questionnaire which may fulfill our research objective.

TABLE V: TOTAL VARIANCE EXPLAINED

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.741	52.677	52.677	4.741	52.677	52.677
2	1.264	14.041	66.718	1.264	14.041	66.718
3	1.044	11.602	78.320	1.044	11.602	78.320
4	.549	6.097	84.418			
5	.484	5.376	89.794			
6	.304	3.383	93.177			

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
7	.249	2.769	95.947			
8	.201	2.231	98.178			
9	.164	1.822	100.000			

The Total Variance Explained defines itself as the Total column gives the eigenvalue, or amount of variance in the original variables accounted for by each component. The % of Variance column gives the ratio, expressed as a percentage,

of the variance accounted for by each component to the total variance in all of the variables. This Table indicates the 9 parameters which we have taken for research analysis which can be reduced into 3 parameters and those 3 parameters represents 78.32 % of our objective.

TABLE VI: COMPONENT MATRIX

	Component		
	1	2	3
Aware of ERP	.464	.674	-.273
Capable to Handle ERP	.297	.841	.071
IVR	.265	.111	.908
HR Intranet	.853	-.177	-.176
Self-Service& MSS	.869	-.064	-.046
HR Extranet	.866	-.145	.151
HR Portal	.848	-.125	-.228
HR Functional App	.889	-.075	-.025
Integrated HRM Suite App.	.789	-.110	.177

The Component Matrix defines as- The First factor indicates Interactive Voice Response, Human resource-Intranet, Employee-self-service and Manager-self-service, Human Resource- Extranet, Human Resource- Portal, and Human Resource- Functional -Application and Integrated HRM Suite Application because their factor value is more than 0.7. This factors may be considered as the ERP tool. The Second factor indicates that the end user must be capable enough, aware about the ERP system as the end users are acquainted with the system, therefore it can be defined that the ERP tool is the combination of Interactive Voice Response, Human Resource-Intranet, Employee-self-service and Manager-self-service, Human Resource- Extranet, Human Resource-Portal, Human Resource- Functional Application and Integrated HRM Suite Application. The Third factor is the IVR (Interactive Voice Recording). Though we had taken it for ERP concept but then the end user perception is in the different segment or component of ERP.

VI. CONCLUSION

Therefore, from the research we can conclude that there were the mix responses from the perception point of view of the end users (human resources personnel) regarding the usage of Electronic Human Resources Management tools or the software application tools in the respective public and

private sector organizations within Orissa. The Factor analysis proved to be of the classic measurement tools and techniques to evaluate the satisfaction level into degrees of awareness, agreement, strongly agree, disagree and strongly disagree. The various techniques of the Factor Analysis tools table chart is followed by the Reliability Statistics Table, Descriptive Table, KMO and Bartlett's Test, Communalities Extraction Method finding out the Principal Component analysis, Total Variance Explained and the Component Matrix. Those all tabular degree of satisfaction measurement tool techniques helped in differentiating the degree of comparison between perception of agreement and disagreement in the context of E-HRM tools used within the organization. Each of the table drawn above and described has significant calculation respectively focusing on the level of perception of the end users regarding the usage of E-HRM tools within their respective organization (public and private) in Orissa. The research work of mine was quite healthy and co-operative by the respondents which boosted enough to exemplify with Factor Analysis tabular technical methods.

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