The Human Resources Information System and Information Technologies Requirement

Case study: a sample of Algerian telecom agencies

Le système D'information Des Ressources Humaines Et Besoin Des Technologies De L'information: Etude de cas un échantillon d'agences De Télécommunication Algériennes

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Abstract: We aim through this study mainly to measure the correlation between information technology and human resources information system through its dimensions. For that we have put a model that shows the relationship between the variables studied (information technology and human resources information system). This study has been conducted on a sample of 32 agencies of the Algerian east area, depending on survey method and discipline to collect and analyze the data by a set of statistical indicators such Cronbach's Alpha, One-Sample Kolmogorov-Smirnov Test, descriptive statistics such (Mean, Std. Deviation, Std. Error Mean) and correlation coefficient for testing the hypotheses, with SPSS V20. The main result of this study is: there is a positive- high correlation between information technology dimensions and developing the performance of human resources information system.

Keywords: Technology. Information technology, Human resources, Human resources information system, Performance.

(JEL) Classification : O15, O32.

Resume : Notre étude vise principalement à mesurer la corrélation entre la technologie de l'information et le système d'information des ressources humaines à travers ses dimensions. Pour cela, nous avons mis un modèle qui montre la relation entre les variables étudiées (technologie de l'information et système d'information des ressources humaines). Cette étude a été menée sur un échantillon de 32 agences de la région est algérienne, en fonction d'enquête, pour collecter et analyser les données à l'aide d'un ensemble d'indicateurs statistiques tels que le test de Cronbach (Alpha de One-Sample Kolmogorov-Smirnov), statistiques descriptives telles que (Moyenne, écart type, erreur standard moyenne) et coefficient de corrélation pour tester les hypothèses, avec SPSS V20. Le résultat principal de cette étude est le suivant: il existe une corrélation positive-élevée entre les dimensions de la technologie de l'information et le développement de la performance du système d'information des ressources humaines.

Mots-clés: Technologie. Technologie de l'information, Ressources humaines, Système d'information des ressources humaines, Performance.

(JEL) Classification : O15, O32.

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1. Introduction:

We may consider the Human resource management as a theory, methods, techniques, and tools for studying the people adjustment and their relations in the organization, also the connection between work and its relations, matching the people and work in order to fully progress human resource management, tap people's potentials, motivating people, promoting the work efficiencies and meeting the organizational objectives (***Babu& Eimani; 2014; p135***) .

Human Resources managers face in current era many and diverse challenges in present business scenario as diversity of Globalization workforce, technological advances and changes in political and different environments change in information technology. (***Kamal &Kumar; 2013***). Organizations to develop their effectiveness and efficiency must go ahead to two facilitators: Human Resource Management and Information Technology (***Talebi & al; 2014***). The technology evolution has encouraged organizations to adopt human resource information systems (HRIS). (***Karikari & al; 2015***). Human resource management is important especially in a knowledge-based economy, where the organization have to value the ideas and expertise, interest about the creative and innovative workforce to meet the challenges of this new economy, to achieve the Efficiency and effectiveness of human capital management (***Shiri; 2012***).

1.1. Research Problematic

Nowadays the human resources consider as the most valuable factor and the most important asset in production or creation value in any organization and they create human competencies of all organizations (Saberi &Khademi, 2015).This has not only developed the organization efficiency but also the effectiveness of management functions (***Sadiq & al; 2012***). The organizational change rate has not slowed in recent years, and perhaps even be on the rise. The speed and continual of technology innovation is driving changes to organizational systems and processes (***Ullah; 2012***).

From the Research we may observe that the similar to other professions, stress in information technology results from intensive work demands, complex relationships, career concerns, systems maintenance, ambiguity of role, and tedious administrative tasks (***Debra & al; 2007***).

The information technology topic, techniques is among of the core issues that the researchers looked for to highlight and studies various aspects thereof, in order to develop the subject and take advantage of the studies and research results that is being reached in the applications development in various business organizations. (***Hiyam & al; 2014***). Information technology was emerging as an effective contributor to organizational performance (***Misra; 2006***). From that we can ask the main question of this research as following: is there a significant correlation between the information technologies and human resources information system?

1.2. Research Aims:

The world of software has become an important aspect of our lives such jobs, home works and Leisure time, and it is highly effects on business world (Francis***, 2013, 84***). Information Technology as a crucial factor and tools transforms design of organizations, especially business processes and communication, and is progression to integrated into human resource management. (***Ünal & Mete; 2012***). These technological developments are being driven mainly by strong demands from human resource professionals for empowerment over short time, effectiveness, and cost includes (***Mishra & Akman; 2010***). The utilization of information technology tools help not only to achieve the defined company's objectives but to optimize the work processes as well. (***Seyni &Joshi; 2014***). We aim through this study mainly to measure the correlation between information technology and human resources information system through its dimensions.

2. The study background:

One of the major changes has been the contemporary use of IS in support of the HR process (***Hussain; 2006***). The human resource information system (HRIS) is "the composite of databases, computer applications, and hardware and software necessary to collect/record, store, manage, deliver, present, and manipulate data for human resources"(***Ngai and Wat; 2004***) .The HRIS is designed to support the planning, administration, decision-making, and control activities of human resources management(***DeSanctis; 2014***) .HRIS can support long range planning, with information for labor force planning, and supply and demand forecasts; staffing with information on equal employment, separations, and applicant qualifications; and development with information on training program costs and trainee work performance (***Kovach and Cathcart; 1999***).

Human resource information systems (HRIS) usage allows the human resource (HR) professional to become a strategic player. With both increasing functionality and affordability, HRIS are being used extensively in organizations of all sizes. Despite this, surprisingly little is know about the current usage, whether disparities exist between companies of different sizes, or about the impact HRIS has on the general professional standing of the HR professional. Information technologies (IT), which provide enabling technologies to assist HR professionals in the delivery of services, have also simultaneously increased the expectations that employees, managers, customers, suppliers, and regulators have for the HR function (***Hendrickson; 2003***).

The study background consists the main modern available studies and views about IT and HRIS to build a model about the human resources information system has composed the interactivity of two variables (IT& HRIS) that transformed to from the paradigm of HRIS, explains the correlation between IT and HRIS.

2.1. The role of information Technology in Human Resources Management:

2.1.1. Information Technology Systems in the Human Resource Area.

National values have demonstrated the practices of HRIS and have supported the supposed interactive effects of national values and HRIS practices on absenteeism and turnover. The results have a strong impact on organizations concerned with how to maximize the compatibility of private cultures and HRIS practices as a basis for strengthening organizational performance indicators (***Hilla and Yitzhak 2011***).

2.1.2. Information Technologies in Human Resources Management.

Diversity of solutions applied in certain areas of human resources management. In the future, further development in this area, as well as the integration of individual HRM regions, should be expected to increase mobile-enabled human resources operations and transfer them to the cloud. The information technology solutions provided in human resources management are very innovative, which is of great importance because they can be implemented in other institutions (***Karasek; 2015***).

2.1.3. Role of computer in human resource management.

Computers should be considered as another human resources management tool, such as a growth program, a customization process that can be used when used correctly and can help us maximize the quality of our products and services.

In large organizations, one of the biggest problems is maintaining the current data file. One of the supporting pillars that can contribute to the achievement of personal policy has been the use of information technology in human resources management (***Kathuria; 2014***).

2.1.4. Information Technology Effects on Strategic Human Resource and Performances.

There is a need to know the results of the modest role of information to know if it can reduce or increase the strategic impact of strategic HR management on corporate performance. Where specialists seek to assess changes in the relationship between human resources management strategy and human resources performance (profitability, productivity, quality of service / product) with the important role of information technology (***Katayoon; and Rosmini, 2013***).

2.1.5. Emerging Trends in Changing HR Technology and its Landscape.

The key components of an effective human resources team are to find solutions that address their greatest personnel and technology challenges. Using the best HR technology to stay ahead is logical. Experts are trying to identify the available technology and its usefulness in implementing the administrative functions and the challenges it faces. In fact, technology controls the world, and human resources people enjoy the great benefits of this technology, and can not abandon the organization that can adapt to attention, accuracy and creativity. It is undeniable that technology has made it easier and faster to gather and present information and communicate with employees. More importantly, it has the potential to reduce the administrative burden of human resources management so as to be more able to focus on the most important human resources activities, such as providing managers with the expertise they need to make more effective human resources management decisions. Mobile technology adds value to human resources and offers many web applications to HR personnel *(Muthu &al, 2015)*

2.2. HRIS As A Result of Using Information Technology.

2.2.1. E-HRM Prospective in Present Scenario.

Electronic Resource Management is an IT application of human resource practices that enables easy interactions within the employee and employers. It can be distributed from various human resources functions through the management of electronic human resources.

Competitive environments forced organizations to think quickly about innovation and excellence for their survival. Using computers, software, and databases, the organization can better keep records and information as well as recover them more easily. EHR is a relatively new term for this IT-supported system, especially through the use of web technology. EHR is a new field of technology that is widely deployed in organizations around the world. It aims to transform human resources functions into paperless, more flexible and resource-efficient functions ***(*Nenwani; 2013*)***.

2.2.2. Effectiveness of Human Resource Information System on HR Functions of the Organization.

There has been a significant increase in the number of organizations that collect, store and analyze their human resources information through the use of software that is the HR Information System. The increasing importance of HRIS is due to the recognition by human resource practitioners that an information and information technology system must be part of human resources functions primarily for the better development and use of human resources management programs. The adoption of the human resources information system by the institutions as the complexity of this program increases, the human resource function through new challenges requires that human resources professionals participate and contribute fully to their companies, as real strategic partners in the work. Experts are trying to determine the effectiveness and importance of using the Human Resources Information System (HRIS) in the HR functions of the organization. They include senior management, managers and executives of human resources operating in the manufacturing, services and information technology sectors. The results provide insights into the practice, impact and effectiveness of HRIS and show that HRIS is of direct relevance to the completeness of the HR function and provides HR staff with opportunities to enhance their contribution to the company strategic orientation ***(Shiri, 2012)***.

2.2.3. Human resource information system as a strategic tool in human resource management.

Organizations that divert concerted efforts towards HRIS adoption and use have a high organizations that shift concerted efforts towards the adoption and use the human resources information systems have a high potential of reduce cost and

control time, as well as to ensure better contributions to strategic decision-making. In addition, insurance organizations define a strategic plan before begins implementation. The financial and material resource assessment of the capacity to start and sustain the use of HRIS is critical.

The Human Resources Information System (HRIS) enables HR staff and supervisors to manage complex information entities and human resources planning efficiently as well, and organizations that intend to use HRIS must fully educate their staff - not only HR staff - so that internal awareness facilitates system acceptance **(*Ebenezer & Evans; 2012)***.

2.2.4. Human Resource Information System as an Important Element of Current Scenario.

Human Resources Information System is basically a cross between human resources and information technology through the solution of human resources software. This allows for the activities of human resources and operations occur electronically.

Generally, must HRIS provide the ability to plan more effectively, control and management of human resources costs. Achieve improved efficiency and quality in HR decision-making. And improve employee productivity and management effectiveness. In most cases, human resources information system will also increase efficiency when it comes to making decisions in the field of human resources ***(Gupt;, 2013)***.

2.2.5. Transitioning to a new HRIS: the reshaping of human resources and information technology talent,

We have to know how this transformation ultimately led to the restructure of the organization Understand the talent requirements in both the HR and IT functions resulted in a new approach to talent management. Through the application of social construction of technology (SCOT), we believe that it is important for those involved in the study and practice of transfer technology to take into account the potential consequences of talent management and talent ***(Wiblen &al; 2010)***.

3. Methodology.

In the following points, we're going to show the Methodology of our empirical study through its steps point by point from the objective to hypothesis tests.

3.1. Objective:

We try to know the nature of correlation between the information technology used within the Telecom agencies and the performance of their Human Resources Information System.

3.2. The hypothesis

We try to test the following hypothesis after sequential steps depending on deferent tools.

H: There is no significant correlation between using the information technology and HRIS performance.

3.3. Society& Sample:

The population of this study includes all the Telecom agencies in Algeria. The Sample studied includes 32 available Telecom agencies.

3.4. Methods:

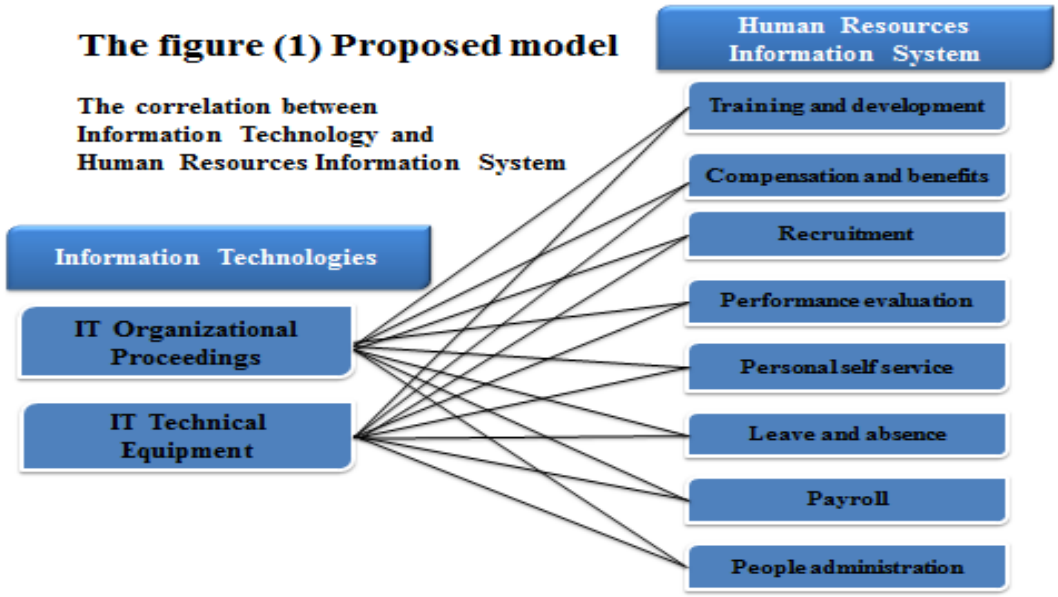
We'll depend on the Surveying descriptive and empirical discipline by design a proper questionnaire based on the Likert scale. In addition, the interviews with some of the Telecom agencies responsible.

3.5. Tools & Software

To test the hypothesis, we are going to use the correlation coefficient. Before that we test the Reliability of tool and Normality of observations. Then the descriptive Statistics, by SPSS V20

3.6. The model & its variables

The following figure is the proposed model that shows the variables, dimension and the relationship between them.



By the researchers depend on the previous studies

The variables of this study defined as follow:

- The first variable is IT (IT organizational proceedings and IT technical Equipment),
- The second variable is HRIS (Training and development, Compensation and benefits, Recruitment, Performance evaluation, Personal self-service, Leave and absences, Payroll, People administration).

3.7. Reliability Statistics: Information technology & Human resources information system.

At the first stage, we are going to test the reliability of research tool by Cronbach's Alpha

Table (1) Case Processing Summary& Reliability Statistics

Variables	Valid	%	Excluded[a]	%	Total	%	N of Items	Cronbach's Alpha
IT : Organizational proceedings	32	100,0	0	,0	32	100,0	5	**,776**
IT :Technical Equipment	32	100,0	0	,0	32	100,0	5	**,767**
Training and development	32	100,0	0	,0	32	100,0	3	**,746**
Compensation and benefits	32	100,0	0	,0	32	100,0	3	**,753**
Recruitment	32	100,0	0	,0	32	100,0	3	**,793**
Performance evaluation	32	100,0	0	,0	32	100,0	3	**,711**
Personal self service	32	100,0	0	,0	32	100,0	3	**,722**
Leave and absences	32	100,0	0	,0	32	100,0	3	**,786**
Payroll	32	100,0	0	,0	32	100,0	3	**,805**
People administration	32	100,0	0	,0	32	100,0	3	**,709**
All the dimension	32	100,0	0	,0	32	100,0	34	**,787**

By the researchers depend on SPSS V20 results

The table (1) shows the number of respondents (32), missing values (00), and their proportion (100%). The coefficient of Cronbach's alpha value is high (more than 0.6) for all the parts of **IT** &**HRIS,** which shows the high reliability coefficient; therefore the tool is able to address the problematic studied.

3.8. Normality Test: Information technology & Human resources information system.

At this stage, we try to test the normality of distribution of the observations in order to identify the type of tests used to test the hypotheses.

Table (2) One-Sample Kolmogorov-Smirnov Test of The IT& HRIS dimensions

		IT Organizational proceedings	IT Technical Equipment	Training and development	Compensation and benefits	Recruitment	Performance evaluation	Personal self service	Leave and absences	Payroll	People administration
N		32	32	32	32	32	32	32	32	32	32
Normal Parameters[a,b]	Mean	4.1146	4.0394	4.0879	4.1694	4.0067	4.1222	4.1515	4.2273	4.0147	4.0004
	Std. Deviation	.57666	.60274	.63341	.47154	.57666	.59301	.62593	.64426	.62057	.56613
Most Extreme Differences	Absolute	.125	.151	.125	.203	.112	.189	.184	.149	.139	.156
	Positive	.116	.122	.089	.139	.103	.189	.184	.108	.128	.116
	Negative	-.149-	-.151-	-.125-	-.203-	-.112-	-.165-	-.149-	-.149-	-.139-	-.156-
Kolmogorov-Smirnov Z		.853	.866	.718	1.165	.641	1.084	1.058	.853	.797	.898
Asymp. Sig. (2-tailed)		**.186**	**.428**	**.481**	**.124**	**.716**	**.118**	**.227**	**.231**	**.511**	**.286**

a. Test distribution is Normal.
b. Calculated from data.

By the researchers depend on SPSS V20 results

In the table (2) every coefficient of each variables studied 'IT & HRIS 'is significant, because all indicators are higher than 0.05. That shows the distribution of observations is normal according the Kolmogorov-Smirnov test, for that we use parametric tests to reach the results after test the hypotheses.

3.9. Structure validity

In this part we're trying to measure the correlations between IT& HRIS and their dimensions to improve the representation of the IT &HRIS to their components.

Table (3) the correlations between IT and its dimensions:

		IT organizational proceedings	IT technical Equipment	IT
IT	Pearson Correlation	.868**	.931**	1

**. Correlation is significant at the 0.01 level (2-tailed).

There is a significant -strong and positive - correlation between the IT and its dimension, so the variable IT able to represent its components - IT organizational proceedings and IT technical Equipment -.

Table (4) the correlations between HRIS and its dimensions

		Training and development	Compensation and benefits	Recruitment	Performance evaluation	Personal self service	Leave and absences	Payroll	People administration	HRIS
HRIS	**Pearson Correlation**	.899**	.917**	.901**	.904**	.923**	.919**	.913**	.927**	1

**. Correlation is significant at the 0.01 level (2-tailed).
By researchers depends on SPSS V20 Results.

There is a strong and positive correlation between the HRIS and its dimension, so the variable HRIS is able to represent its components: Training and development, Compensation and benefits, Recruitment, Performance evaluation, Personal self-service, Leave and absences, Payroll, People administration.

3.10. Descriptive Statistics: IT & HRIS

At this stage we're going to describe all the dimensions of IT& HRIS by Appropriate statistical indicators as the mean, Std. Deviation and Std. Error Mean.

Table (5) One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
IT Organizational proceedings	32	4.1146	.60384	.10388
IT Technical Equipment	32	4.0394	.63411	.11102
Training and development	32	4.0879	.50054	.07888
Compensation and benefits	32	4.1694	.57710	.10041
Recruitment	32	4.0067	.58991	.10298
Performance evaluation	32	4.1222	.61983	.11016
Personal self service	32	4.1515	.59926	.10995
Leave and absences	32	4.2273	.58957	.10798
Payroll	32	4.0147	.55993	.09799
People administration	32	4.0004	.58016	.10041

By researchers depends on SPSS V20 Results.

From the results above of indicators descriptive of the IT & HRIS dimensions. We have observed through these results, the Availability of these indicators fairly in Algerian Telecom agencies. Where the means of all the dimensions are fairly high whether IT or HRIS that indicates the Telecom agencies use the IT as a tool to achieving their goals and objectives, and manage their operations and system components. And small standard deviations that indicate the answers and opinions homogeneity about the availability of these indicators in the integrated system and Management procedures.

3.11. Correlation between IT and HRIS dimensions

The table below shows the correlation between IT and HRIS dimensions. For test the above hypothesis, we're going to use The Pearson Correlation coefficient in all the dimensions of IT uses and HRIS performance.

Table (6) correlation between IT and HRIS dimensions

Pearson Correlation	Training and development	Compensation and benefits	Recruitment	Performance evaluation	Personal self service	Leave and absences	Payroll	People administration
IT: Organizational Proceedings	.778**	.809**	.719**	.779**	.709**	.727**	.771**	.738**
IT: Technical Equipment	.750**	.807**	.739**	.721**	.701**	.809**	.801**	.813**

**. Correlation is significant at the 0.01 level (2-tailed).

By researchers depends on SPSS V20 Results.

There is significant correlation - positive and strong - between the IT dimensions (IT organizational proceedings & IT technical Equipment) and the performance of HRIS (Training and development, Compensation and benefits ,Recruitment, Performance evaluation, Personal self-service , Leave and absences ,Payroll & People administration), that proves the relationship between the different uses and benefits of IT and improve HRIS and develop its performance.

4. Findings :

From the foregoing we may conclude that, all the hypothesis of this study: the main and the sub-hypothesis are accepted, thus there is a significant - positive and strong - correlation between information technology (IT) and human resources information system (HRIS) performance after describe the variables and test each sub-hypothesis as follow:

a. There are many indicators of IT applications in terms of infrastructure or systems that show the efforts of Algerian telecoms agencies to provide technologies aimed at improving performance, such as data provision, information transfer and speed and efficiency decision-making

b. Extensive use of technology and reliance on modern tools in terms of databases and communication tools such as intranet and extranet, indicating the ability of Algerian telecommunications agencies to acquire technological means to facilitate the work process

c. Algerian Telecom agencies conform in terms of its reliance on information technology and its spread within its relationships as a means accredited to manage and seek to develop it as a means of supporting the various decision-making and facilitate the work.

d. Algerian telecoms agencies rely more on tools and devices than on good control and manage of information that indicates these agencies use techniques rather than management manners and methods that significant of absence the management mentality.

e. Telecom agencies use technology tools primarily to improve vertical and horizontal industrial relations to ensure integrated work, followed by compensation and profits as the second goal of their importance as a tangible resource by workers perception, also training and development sought by telecom

operators as expertise and skill for their staff despite neglect by the Algerian director, in the last we find safety and health through the lack of awareness of telecom staff , safety culture in particular.

f. Information technology plays a crucial role to announce the employment and allow the organization to receive potential workers files electronically and make tele-interviews that gain time and reduces costs. Also the information technology work to control the different situations of employees that contribute to facilitate the social compensation and distribute profits in the good time and manner.

g. Good People administration based on the speed and continuity of communication. Information technology plays an important role in that interactivity instead the traditional tools as face to face communication or Paper correspondence in order to gain time and develop the flexibility of transactions and relationships. Information technology plays also a key role in providing new techniques and methods to receive different service without officers also develop the skills and creativity through high tech access to information and knowledge transformation.

h. Information technology provides the necessary information about the rules and informing about the HR live and frequencies of their absence in time and with correct ways. Information technology also works the control of different situations of employees that contribute to facilitate the social compensation and distribute the profits in appropriate time and good manner.

i. Technologies based on the transformation of the data, information and explicit knowledge, where allow the improvement training and employees level as well as it contributes to the development of all the ways, tools and methods of production, marketing and organization. Where IT works to create the coordination and integration of all the functions and as well as facilitate the transformation of information about all the activities in organization to create synergies among all the parts of Telecom agencies in achieving the goals and objectives. Thus improving the performance finally. It enables us also to evaluate performance by tracking all activities within the organization at all times.

5. Conclusion

The various challenges increase the pressure on HR managers to attract, retain and care about talented employees. Human resources are the source of competitive advantage because of their ability to convert other resources such as money, machinery, methods and materials into production such as product and service. Human resources workers now have an increasing capacity not only to gather information but also to store and retrieve it at time and efficient manner

IT staff face many sources of global stress in different occupations and work environments. IT is recognized as a vital infrastructure in many organizations. The trends and results of contemporary studied and confirm the continued contribution of information technology tools to human resources

At the present, senior leaders are fully aware to the power of IT tools to reach business objectives. While information technology affects human resources, managers, employees, customers and suppliers increase their expectations for human resources functions. IT is often already to be successes in information technology because of continuity, effective communication and use systems. This finding indicates that human resources in the Organization play a crucial role. Information systems research has recognized the importance of human resources in the acquisition of information technology.

The Human Resources Information System (HRIS) is seen as factor contributed to the effectiveness of human resources planning activities in organizations. As a result, there is a significant increase in the number of organizations that collect, store and analyze their human resources information through the use of software, the Human Resources Information System (HRIS).

6. References:

1. *Abolfazl Saberi, Behbood Khademi; 2015;* ***Explaining the Role of Information Technology in Human Resource Development (Case Study: Staff and Faculty Members of Islamic Azad University, Darab)***, TI Journals, International Journal of Economy, Management and Social Sciences, Int. j. econ. manag. soc. sci., Vol (4), No (1), January, pp. 67-74

2. Alok Mishra and Ibrahim Akman; 2010; ***Information Technology in Human Resource Management: An Empirical Assessment***, Public Personnel Management Volume 39 No. 3 Fall.

3. Ama F. Karikari, ***Peter Agyekum Boateng, Evans O. N. D. Ocansey; 2015 The Role of Human Resource Information System in the Process of Manpower Activities,*** American Journal of Industrial and Business Management, , 5, 424-431 Published Online June 2015 in SciRes. http://www.scirp.org/journal/ajibm http://dx.doi.org/10.4236/ajibm.2015.56042

4. Amaeshi Uzoma Francis; 2013; ***Human Resource Management and Technology Transition for Firm Competitiveness in Nigeria's telecommunication industry***, International Journal of Advancements in Research & Technology, Volume 2, Issue 12, ISSN 2278-7763.

5. ANTHONY R. HENDRICKSON; 2003; ***Human Resource Information Systems: Backbone Technology of Contemporary Human Resources***, JOURNAL OF LABOR RESEARCH, Volume XXIV, Number 3 Summer.

6. Barkha Gupta; 2013; ***Human Resource Information System (HRIS): Important Element of Current Scenario***, IOSR Journal of Business and Management (IOSR-JBM), e-ISSN: 2278-487X, p ISSN: 2319-7668. Volume 13, Issue 6 , PP 41-46 www.iosrjournals.org.

7. Debra A. Major; 2007; D.Davis, Lisam. Germano, ***Thomas D Fletcher Janis Sanchez- Hucles, and Joan Mann, Management Human Resources In Information Technology: Best Practices Of High performing Supervisors***, Human Resource Management, Vol. 46, No. 3, Pp. 411–427

8. E.W.T. Ngai and F.K.T. Wat; 2006; ***Human resource information systems: a review and empirical analysis***, Personnel Review,Vol. 35 No. 3, pp. 297-314 q Emerald Group Publishing Limited 0048-3486 DOI 10.1108/00483480610656702.

9. Ebenezer Ankrah, Evans Sokro; 2012;, ***Human resource information system as a strategic tool in human resource management***, Problems of MANAGEMENT in the 21st century Volume 5.

10. Gerardine DeSanctis; 1986; ***Human Resource Information Systems: A Current Assessment***, MIS Quarterly, Vol. 10, No. 1, pp. 15-27.

11. Harekrishna Misra; 2006; ***Role of Human Resources in Information Technology Alignment In Organizations: a Metric Based Strategic Assessment Frameworks***, Journal of Information Technology Management Volume XVII, Number 3.

12. Hilla Peretz and Yitzhak Fried; 2011; ***Information Technology Systems in the Human Resource Area A Cross Culture Approach***, The International Journal of Management and Business, Vol. 2, No.1,.

13. Hiyam S. Ensour, Tareg M. alinizi; 2014; ***The Impact of Management Information Systems (MIS) Technologies on The Quality of Services Provided At The University of***

Tabuk , International Journal of Network Security & Its Applications (IJNSA), Vol.6, No.2.

14. Jaber Talebi, Karamollah Daneshfard & Morteza Khodabin; 2014***; The Impact of Information Technology on the Performance of the Human Resource In the Martyr Foundation and Veterans Affairs of Great Tehran***, Universal Journal of Management and Social Sciences Vol. 4, No.7.

15. Kamal and Ashish Kumar; 2013; ***Impact of Technology Advancement on Human Resource Performance***, International Journal on Arts, Management and Humanities 2(2): 43-47.

16. Karasek; 2015; ***Information Technologies in Human Resources Management - Selected Examples, World Academy of Science***, Engineering and Technology, International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering Vol: 9, No: 6.

17. Katayoon Pourmahdi, and Rosmini Omar; 2013; ***Information Technology Effects on Strategic Human Resource and Performances***, 2nd International Conference on Management, Humanity and Economics (ICMHE'2013) August 25-26, 2013 Kuala Lumpur (Malaysia).

18. Kenneth A. Kovach, ***Human Resource Information Systems (HRIS): Providing Business with Rapid Data Access, Information Exchange and Strategic Advantage.***

19. M. Ravi Babu & Asghar Eimani; 2014***; Human Resources Management: A challenging Scenario in The Indian Context, Impact***: International Journal of Research in Applied, Natural and Social Sciences (IMPACT: IJRANSS) ISSN (E): 2321-8851, ISSN (P): 2347-4580 Vol. 2, Issue 2, 135-142.

20. Md. Mamin Ullah; 2012; ***The Emerging Roles of HR Professionals in Driving Organizational Change***, Scientific Papers (www.scientificpapers.org), Journal of Knowledge Management, Economics and Information Technology, issue 3.

21. N. Muthu, K.R. Kishore Kumar, S. MuthuKumar; 2015; ***Emerging Trends in Changing HR Technology and its Landscape***, International Journal of Advanced Research in Computer and Communication Engineering, Vol. 4, Issue 3.

22. Ömer Faruk Ünal, Mehmet Mete***, the Impact of Information Technology on Human Resource Practices and Competencies***, 3rd International Symposium on Sustainable Development, May 31 - June 01 2012, Sarajevo,

23. Pinki J Nenwani; 2013; ***E-HRM Prospective in Present Scenario***, International Journal of Advance Research in Computer Science and Management Studies, Volume 1, Issue 7.

24. SEYNI Mamoudou, G.P Joshi; 2014; ***Impact of Information Technology in Human Resources Management***, Global Journal of Business Management and Information Technology. ISSN 2278-3679 Volume 4, Number 1, pp. 33-41,

25. Shammy Shiri; 2012; ***Effectiveness of Human Resource Information System on HR Functions of the Organization-A Cross Sectional Study***, US-China Education Review A 9 830-839, Earlier title: US-China Education Review, ISSN 1548-6613

26. Sharna Wiblen, David Grant & Kristine Dery; 2010***; transitioning to a new HRIS: the reshaping of human resources and information technology talent***, Journal of Electronic Commerce Research, VOL 11, NO 4.

27. Suman KATHURIA; 2014; ***Role of computer in human resource management*** ,International Journal of Engineering Sciences, Vol. 3

28. Usman Sadiq, Ahmad Fareed Khan, Khurram Ikhlaq, Superior University Bahaudin G. Mujtaba; 2012; ***Nova Southeastern University, The Impact of Information Systems on the Performance of Human Resources Department***, Journal of Business Studies Quarterly, Vol. 3, No. 4, pp. 77-91

29. Zahid Hussain , James Wallace, Nelarine E. Cornelius, ***The use and impact of human resource information systems on human resource management*** professionals, Information & Management 44 (2007) 74–89.