

# The Effect of ICT on Human Resources Management Practices

## Case of Number of Organizations in Southwest Algeria (Bechar City)

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### ABSTRACT

The object of this study is to observe and analyze the impact of Information and communication technology (ICT) in Human Resource Management (HRM). After a review of the academic literature, we present the results of an empirical research conducted at an number of organizations in the southwest Algerian (Bechar city). Through this case study, we intend to highlight the impact of ICT on HRM practices including the essential practices of HRM (Rh planning, Training, Compensation... etc.).

### Keywords

Information and communication technology. Organization. Management, human resources

### 1. INTRODUCTION

The environments in which organizations operate today are divergent. The Algerian organizations have been facing unprecedented challenges with the wave of privatization and globalization of Algerian economy. The strategic management of human resources is one of the ways companies may use to increase their competitiveness in the new organizational landscapes. There is no underestimation of importance and effect of the Human Resources management at all. For over half a century now, human resource management, as a discipline and practice in the management of people in an organization, has evolved and developed into different areas. These disciplines and practices have gone through a process of trial and error, theory building and testing of various concepts by practicing managers and academics. The underlying forces behind the evolution and development of human resource management have been mainly environmental, and the quest for knowledge of better ways of acquiring and utilizing labor. The changing organizational environment in the marketplace pushed managers to improve efficiency in the production and service delivery processes by increasing their ability to use the best practices of people management at the time. That is, employee management techniques or methods that would improve production, reduce service delivery costs, and at the same time ensure sustained availability of competent staff in the organization.

Though the effect of ICT is obvious on the overall organization but in this research the focus will be on ICT related changes particularly associated with the Human Resource Management

practices. HR personnel are the managers of the ultimate resource of the organization that is "human resource" the workforce. The effect of technology has enhanced the competitiveness of the HR department. "HR professionals today do not have as much one-on-one contact with employees as they once did. Today managers and employees want results and answers to their questions. The organizations and their HR practices are almost changed and positively affected by ICT ranging from paperless office, time attendance, databanks, automating work practices, transaction processing, reporting and tracking applications, E-recruiting, using internet for staffing, employee development using internet. This list has no end and future is towards expecting more changes making work easier and efficient.

### 2. STUDY OBJECTIVES

This study explores the effect of (ICT) on Human Resource Management practices in Algerian organizations (Bechar city). The question to address in this study therefore is "what is the impact of ICT on Human Resource Management Practices in Algerian organizations (Bechar city)?".

### 3. LITERATURE REVIEW

#### 3.1 ICT

Stands for "Information and Communication Technologies." ICT refers to technologies that provide access to information through telecommunications. It is similar to Information Technology (IT), but focuses primarily on communication technologies. This includes the Internet, wireless networks, cell phones, and other communication mediums.

#### 3.2 HRM

HRM is the organizational function that deals with issues related to people such as compensation, hiring, performance management, organization development, safety, wellness, benefits, employee motivation, communication, administration, and training. HRM is also a strategic and comprehensive approach to managing people and the workplace culture and environment. Effective HRM enables employees to contribute effectively and productively to the overall company direction and the accomplishment of the organization's goals and objectives

#### 3.3 HRIS

Human Resource Information Systems (HRIS) is a process that utilizes the information technology for the effective management

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of human resource functions and applications. It is a computerized system typically comprising a data base or inter related data base that track employees and their employment specific information . It can be briefly defined as integrated systems used to gather, store and analyze information regarding an organizations human resources

### **3.4 E-HRM and HRIS**

E-HRM is the (planning, implementation and) application of information technology for both networking and supporting at least two individual or collective actors in their shared performing of HR activities. E-HRM is not the same as HRIS (Human resource information system) which refers to ICT systems used within HR departments. Nor is it the same as V-HRM or Virtual HRM - which is defined by Lepak and Snell as "...a network-based structure built on partnerships and typically mediated by information technologies to help the organization acquire, develop, and deploy intellectual capital." E-HRM is in essence the devolution of HR functions to management and employees. They access these functions typically via intranet or other web-technology channel.

### **3.5 HRM Practices**

- ***Recruitment and Selection***

Recruitment is the process to fully fill the offered work positions in sufficient number and qualities of the applicants, as well as to meet the expectations and requirements of the organization .Recruitment is using the analysis of the job in order to select and identify the needs and requirements of the organization

- ***Human resource planning***

Human resource planning is the process whereby organizations determine the staffing support they will need to meet business needs and customer demands. There are a variety of considerations that impact this planning, including impending retirements and transitions, the availability of employees with certain skills sets and changes in the environment that may require training for existing employees.

- ***Training and Development***

Organizations can develop and enhance the quality of the current employees by providing comprehensive training and development. Indeed, research indicates that investments in training employees in problem-solving, teamwork and interpersonal relations result in beneficial firm level outcomes

- ***Compensation***

Compensation is the bonuses submitted to the employee due to their services. Compensation process can be divided to direct financial compensation and indirect compensation whether it financial or nonfinancial . Compensation is a strategic policy in the organization, where it can affect on the employer's possibility to attract new applicants, gain employee's loyalty and ensure the maximum level of performance to meet the organization goal and objective from the employee. organization goal and objective from the employee . Compensation systems in the organization offer to the employees as to increase employee motivation . performance and productivity

- ***Performance Appraisal***

Organizations can monitor the development of desired employee attitudes and behaviours through the use of the appraisal mechanisms. This appraisal-based information could be used for changing the selection and training practices to select and develop employees with the desired behaviours and attitudes. However, the effectiveness of skilled employees will be limited unless they are motivated to perform their jobs.

## **4. Study Hypotheses**

### **Hypothesis 1**

There is a significant effect of ICT on Human Resource Management Practices in organizations in southwest Algeria (Bechar city)Thus, it was

hypothesized that;

Hypothesis 1(a): There is a significant effect of ICT on. Human resource planning in organizations in southwest Algeria (Bechar city)

Hypothesis 1(b): There is a significant effect of ICT on. Human Recruitment and Selection in organizations in southwest Algeria (Bechar city)

Hypothesis 1(c): There is a significant effect of ICT on Training and Development in organizations in southwest Algeria (Bechar city).

Hypothesis 1(d): There is a significant effect of ICT on. Compensation. in organizations in southwest Algeria (Bechar city)

Hypothesis 1(e): There is a significant effect of ICT on Performance Appraisal in organizations in southwest Algeria (Bechar city).

## **5. STUDY METHODOLOGY**

### **5.1 Sample and study population**

All managers and heads of departments of human resources management (N= 117)

**Table 1. Socio-demographic profile of the respondents**

Characteristics		Freq	%	
ORGANIZATIONAL ISSUES	Age organization (n=117)	5-10 yrs	38	32.48%
		11-15 yrs	30	25.64%
		16-20 yrs	16	13.67%
		>20 yrs	33	28.21%
	Number of employees (n=117)	From 30 to 45 W	12	10.3%
		From 46 to 60	42	35.9%
		>60	63	53.8%
	nature and activity (n=117)	Economic or financial	51	43.59%
		Agricultural	10	8.55%
		Medical or paramedical	16	13.67%
Educational or cultural		14	11.97%	
Social		26	22.22%	
RESPONDENTS	Academic qualification (n=117)	Baccalaureate or less	30	25.6%
		Baccalaureate+4	71	60.7%
		magister	15	12.8%
		Ph.D	01	0.9%
	specialty of qualification (n=117)	Law/Social/ Management	66	56.4%
		technical	35	29.9%
		other specialties	16	13.7%
	Professional Experience (n=117)	Below 5 yrs	49	41.89%
		5-10 yrs	12	10.25%
		above 10 yrs	56	47.86%

**5.2 Study Instrument**

A questionnaire was used to collect the data. It included closed questions and was organized into three sections. Section one concerning responder and organizations demographics. Section two focused on usage of ICT and the section three focused on HRM practices

**5.3 Validity and Reliability**

. Reliability test was conducted to Cronbach alpha correlation in each of the variables in the questionnaire.

variable	Cronbach alpha
Independent	0.811
dependent	0.841

**6. ANALYSIS AND RESULTS**

The following tools were used to test the hypothesis: frequencies, means, percentages and standard deviation were used as descriptive analysis to meet the study questions, while simple regression (enter) was used to test the main hypothesis and its branches.

Hypothesis 1 : There is a significant effect of ICT on Human Resource Management Practices in organizations in southwest Algeria (Bechar city).

**Table 1: Simple regression (enter) of ICT on Human resource management Practices**

. RESULTS OF ANOVA TEST					
T	beta	Sig	F	r <sup>2</sup>	r
16.890	0.868	0.000	126.872	0.610	0.868

The value of R2 for ICT is (0.61) and (f= 126.872, P= 000) which explain (61%) of variance in Human resource management Practices. Therefore, ICT was found to have a significant and positive effect on Human resource management Practices, the regression coefficient for ICT ( $\beta =0.868$ , P= 000). Based on the result we accept the study hypothesis that indicates a significant effect of ICT on Human resource management Practices in southwest Algeria (Bechar city)at level of (P≤ 0.05).

Hypothesis 1(a): There is a significant effect of ICT on Human resource planning in organizations in southwest Algeria (Bechar city).

**Table 2: Simple regression (enter) of of ICT on. Human resource planning**

. RESULTS OF ANOVA TEST					
T	beta	Sig	F	r <sup>2</sup>	r
13.528	0.705	0.000	182.999	0.500	0.705

The value of r2 for ICT is (0.50) and (f= 182.999, P= 000) which explain (50%) of variance in Human resource planning. Therefore, ICT were found to have a significant and positive effect on Human resource planning, the regression coefficient ( $\beta =0.705$ , P= 000). Based on the result we accept the study hypothesis that indicates a significant effect of ICT on Human resource planning in organizations in southwest Algeria (Bechar city). at level of (P≤ 0.05).

Hypothesis 1(b): There is a significant effect of ICT on Human Recruitment and Selection in organizations in southwest Algeria (Bechar city).

**Table 2: Simple regression (enter) of ICT on Human Recruitment and Selection.**

RESULTS OF ANOVA TEST					
T	beta	Sig	F	r <sup>2</sup>	r
9.578	0.588	0.000	97.114	0.338	0.588

The value of r2 for ICT is (0.338) and (f= 97.114, P= 000) which explain (33.8%) of variance in Human Recruitment and Selection. Therefore, ICT were found to have a significant and positive effect on Human Recruitment and

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Selection, the regression coefficient ( $\beta = 0.588$ ,  $P = 0.000$ ). Based on the result we accept the study hypothesis that indicates a significant effect of ICT on Human Recruitment and Selection in organizations in southwest Algeria (Bechar city). at level of ( $P \leq 0.05$ ).

Hypothesis 1(c): There is a significant effect of ICT on Training and Development in organizations in southwest Algeria (Bechar city).

**Table 3: Simple regression (enter) of ICT on Training and Development.**

RESULTS OF ANOVA TEST					
T	beta	Sig	F	r <sup>2</sup>	r
9.578	0.688	0.000	107.103	0.612	0.688

The value of r<sup>2</sup> for ICT is (0.612) and ( $f = 107.103$ ,  $P = 0.000$ ) which explain (61.2%) of variance in Training and Development. Therefore, ICT were found to have a significant and positive effect on Training and Development, the regression coefficient ( $\beta = 0.688$ ,  $P = 0.000$ ). Based on the result we accept the study hypothesis that indicates a significant effect of ICT on Training and Development in organizations in southwest Algeria (Bechar city) at level of ( $P \leq 0.05$ ).

Hypothesis 1(d): There is a significant effect of ICT on Compensation. in organizations in southwest Algeria (Bechar city).

**Table 4: Simple regression (enter) ICT on Compensation.**

RESULTS OF ANOVA TEST					
T	beta	Sig	F	r <sup>2</sup>	r
9.447	0.509	0.000	104.887	0.559	0.509

The value of r<sup>2</sup> for ICT is (0.559) and ( $f = 104.887$ ,  $P = 0.000$ ) which explain (55.9%) of variance in Compensation. Therefore, ICT were found to have a significant and positive effect on Compensation, the regression coefficient for ( $\beta = 0.509$ ,  $P = 0.000$ ). Based on the result we accept the study hypothesis that indicates a significant effect of ICT on Compensation. in organizations in southwest Algeria (Bechar city). at level of ( $P \leq 0.05$ ).

Hypothesis 1(e): There is a significant effect of ICT on Performance Appraisal in organizations in southwest Algeria (Bechar city)..

**Table 5: Simple regression (enter) of ICT on Performance Appraisal.**

RESULTS OF ANOVA TEST					
T	beta	Sig	F	r <sup>2</sup>	r
9.447	0.625	0.000	98.857	0.393	0.625

The value of r<sup>2</sup> for ICT is (0.393) and ( $f = 98.857$ ,  $P = 0.000$ ) which explain (39.3%) of variance in Performance Appraisal. Therefore, ICT were found to have a significant and positive effect on Performance Appraisal, the regression coefficient ( $\beta = 0.625$ ,  $P = 0.000$ ). Based on the result we accept the study hypothesis that indicates a significant effect of ICT on Performance Appraisal in organizations in southwest Algeria (Bechar city). at level of ( $P \leq 0.05$ ).

## 7. CONCLUSIONS

The analysis of the data demonstrated that managers perceive the overall effect of ICT on human resource practices as positive and it is benefitting not only the functioning of Human Resource department but of the overall organization

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