

# THE EFFECTS OF ICT ON EMPLOYEE PERFORMANCE IN AN ORGANIZATION

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## **Abstract**

This study examines holistically the effects of Information Communication Technology on employee performance in an organization. This paper reviews some related literature alongside theoretical framework which have bearing on the subject matter. This paper adopts the descriptive survey design in achieving the stated objective. The population of this study consists of 50 staffs of the study organization with the sample size of 34 drawn via simple random sampling technique. The questionnaire method was used in collecting the data. The data obtained was analyzed with particular reference to the research questions using descriptive statistical tools such as tables and frequencies. The findings show that out that Information and Communication Technology has improved the skills of workers in the bank thereby improving the employee's performance, that Information and Communication Technology has brought new techniques in all Areas of the Banks by improving the banking operation. Based on the findings, the researcher recommended that banks should improve more on its information technology so as to enhance its productivity, the use of (ICT) in the banking sector should not only be restricted to the cities alone, rural banking should also be improved upon.

## **Introduction**

The rise of globalization developments in political, social, economic, technological areas crucially affects communal and organizational lives of individuals in the society. In parallel with these developments organization management are obliged to develop new management techniques to struggle even

harder competition conditions. These modern management techniques to a large extent aim to raise employees' performance by using the power of communication (Erogluer, 2011).

The rapid development of the Internet during the last decade has also boosted the implementation and application of electronic Human Resource Management

(e-HRM) Surveys of HR consultants suggest that both the number of organizations adopting e-HRM and the depth of applications within the organizations are continually increasing. An organization is a social arrangement which pursues collective goals, controls its own performance, and has a boundary separating it from its environment. It is a system that has been designed to achieve certain goals and objectives. The goals and objectives becomes the purpose for its existence. The objectives of an organization therefore, cannot be achieved without manpower, which assist in the operations needed to be carried out in an organization. The operations integrate the policies set in an organization with the goals of the employees. This results in a lasting relationship between the organization and the employees. One of the main goals of organizational theorists is, according to Simms (1994) "to revitalize organizations and develop a better conceptualization of organizational life."

Information and communication technology, ICT in organizations has many faces, such as office automation, production automation, telecommunication and electronic networks connecting organizations. The "C" in "ICT" refers to the fact that, besides information processing technologies, a rapid growth can be found in computer-assisted communication technologies and computer-supported co-

operative work. Organizations change as a result of socio-economic and technological developments.

New organizational forms and work arrangements are emerging, and ICT is adapted and designed to solve problems caused by these changes. The impact of the introduction of ICT becomes apparent in changes in work patterns, qualifications and decision-making procedures. Most businesses depend on employees with strong computer skills. Supervisors identify computer skills required for employees to perform their duties.

Typically, an employee and her supervisor establish performance criteria for computer skills that match her responsibilities. We have now entered an era when almost every part of our existence is affected by Technological innovations due to globalization and evolution of the knowledge economy. We are where Bill Gates was quoted saying in 1999 that... the internet is a tidal wave. It will wash over nearly all industries, drowning those who do not learn to swim in its waves'. ICT needs to become something that is easier for people to use. Until now, it has been as if people were the ones being used by computers due to the amount of data inputting required. However, with advances in cloud computing, sensor technology, multifunctional mobile terminals, and mobile communications technology, a wide variety of services have become available to

people. This is regardless of whether or not the user is aware of what is physically behind the technology. This would include cloud computing, which allows the use of computer resources without having to think about the server equipment and complex processing behind it.

### **Statement of the Problem**

The biggest challenge is in ensuring optimum utilization of human resource in relation to Information Communication Technology. There is the possibility of either underutilizing human resource or Information Communication Technology tools. This may be in form of misusing these tools by employees or underutilizing the potential of employees due to lack of the best information communication technology tools.

An organization may use lots of its capital in bringing modern technology to use but if not appreciated by employees, it can be disastrous and the objectives of such may not be realized in time mostly by lack of required skills in the organization. This, paper therefore aimed at examining the effects of ICT on employee's performance in an organization with particular reference to EcoBank Jalingo branch.

### **Objectives of the Study**

The main objective of this paper is to examine holistically the effects of ICT on employee performance in an organization. Other objectives include:

i. To evaluate the impact of

information communication technology in EcoBank Plc

ii. To examine the contribution of Information and communication technology to the growth of the banking sector.

### **Literature Review**

#### **Theoretical Framework**

##### ***Theory of Reasoned Action (TRA)***

Older studies, in order to interpret the use of Information Systems (IS), were based on theories and models of behavioral decision. Ajzen I. and Madden T. (1986), Mathieson K. (1991). In particular the issues of the acceptance and adoption of IT use by the employees of the hotel industry, particularly those occupied in working positions relevant to technology, have been intensively researched in the past. Fishbein M. and Ajzen I. (1975), Ajzen I. and Madden T. (1986), Adams A. et al. (1992) have developed TRA, by introducing important (determining) factors that they have “borrowed” from the sciences studying human behavior, namely psychology and sociology. Their results have proven the existence of a statistically important positive correlation with actual behavior. The results of such searches prove that a positive intention with regard to the adoption of Information Systems is fundamental to their effective use.

##### ***Media Richness Theory***

In the 1980's, Richard L. Daft and Robert H. Lengel created the Media

Richness Theory (sometimes also called Information Richness Theory). Their argument was that the communication task and the communication media could be matched to improve communication performance. In their work, they claim that there are two main factors that affect communication process, *uncertainty* and *equivocality*. *Uncertainty* is the difference between the amount of information required to perform the task and the amount of information already possessed (Galbraith 1974). According to Daft, to minimize uncertainty, organizations must acquire sufficient information and distribute it to the right people. *Equivocality* means that there always exists ambiguity about the same information inside the organization. Therefore, for efficient communication to occur people need to understand the same information in a similar fashion. The difference between these two is that to reduce uncertainty information must be acquired, but to reduce equivocality people have to share and pool their knowledge to overcome disagreement and reach an common understanding. (Daft, Lengel & Trevino 1987)

According to these two factors, Daft et al. categorized communication media across a continuum of media richness. The other end has a very lean media while the other rich media, these two were named as either lean or rich media. The richness was defined according to (1) speed of feedback,

(2) ability to communicate multiple cues, (3) ability to present individually tailored messages, and (4) the capability of the channel to use natural language when conveying a message. The theory also implies that the richer a media is, the more social presence can be conveyed through it. In his article, Daft claims that equivocal tasks should use richer media while objective and well understood problems with low equivocality should use lean media. In his research, he concludes that the mismatch with the media is one reason behind communication and decision making failures and to reduce these, the message and media should be matched. (Daft, Lengel & Trevino 1987)

### **Conceptual Framework**

#### **Information and Communication Technology (ICT)**

There is more than one definitions of Information Technology were given by Information Technology specialists. The one of the definitions is, “All forms of Technology involved in gathering, storing communicating retrieving and processing of data” is called as information Technology (CIMA, Stage I, Study pack, 2002).” Technology is a set of knowledge, information, equipment, methods and operations which are used in converting raw materials to products (converting input to output). Based on this definition, organizations or even different organizational units have different

technology and it demands that various methods used to manage them. Based on the Contingency theory we cannot use one method for managing all organization with different technologies (Zareimatin, 2001, p.155

Information Technology (IT) refers to all forms of processing, storage and transmission of information that are used in an electronic format. Physical equipment that is used for this purpose includes: Computers, communication networks and tools, fax machines, and electronic software. Generally, IT covers a wide range of equipment, computers, tools, data storage, means of communication and networking, applications and services that are used by organizations to create data and knowledge. Before being considered as a hardware system and a set of patterns, IT is seen as an intellectual and cultural system that can be termed information production culture.

IT system is not able to survive without creating the information production culture. Therefore, the most important thing in IT is the information-oriented thinking. IT is composed of a combination of useful ideas created rather than being a set of computers, supercomputers, wires, cables, and tools. In information technology, it is the thinking of wise people that generates information. IT refers to methods of producing and collecting information. IT makes data accessible to

anyone from everywhere by making computer programs smaller, cheaper, more applicable, and simpler to the extent possible.

### **How ICT improves HR Management.**

#### **1 Cost reduction;**

ICT enables HR to supply their services to customers more effectively and with little constraint on time, place or availability (Alleyne, 2003). It reduces HR transaction costs by supplying HR information to a large number of people on a virtual basis; substituting physical capability by leveraging law of digital assets to use the information flexibly at no or at marginal cost (Martin et. al, 2003). In this way it brings about a reduction in headcount since not many personnel are required to do the jobs.

Instead of a centralized personnel team handling transactional tasks like pay, training, holiday/leave entitlements which can be handled by employees themselves or by their supervisors using technology mediated processes. It lowers cost of doing HR; improves response time; and improves quality and consistency of HR information.

#### **Redefining employee responsibilities in HR;**

The role of managers in the workplace has changed substantially in recent years, partly as a result of market developments, but also due to new technologies used by the organizations in which they work. As a result, there has been

a radical re-distribution of work that HRM managers used to do. Many of the reporting type activities previously performed by HR professionals are now performed by managers and employees (Ruel et al, 2004, Ruta, 2005, Martin, 2005). These include: performing appraisals, appraising employee costs, generating HR reports on turnover, absenteeism, processing training requests and overseeing competence management. Use of technology makes it easier for managers to be able to combine these roles with their other roles more effectively and also gives them greater accountability for people management. Technology has resulted in increased individualism at the workplace and also in society. With increased education levels, the employment relationship is gradually shifting in the direction of employees. They want to set their own career paths; and have lost traditional loyalty with any employer since they are guided by 'what's in it for me?'

### **Necessity of Using ICT**

For over two decades, information has been seen as a valuable resource along with other factors of production. Following the expansion of business activities, globalization, and rapid changes in the organizations' environment, information is considered as a strategic factor to the extent that today it is seen as a powerful tool in dealing with environmental problems and challenges as well as a tool that makes proper use of opportunities.

Accordingly, the establishment of an appropriate information system using ICT for collecting, processing and storing of data is of vital importance. Although ICT and the use of computer have never replaced for human decision making, their power to help managers and employees to make the right decisions using accurate information and speeding up tasks cannot be neglected. Many organizations have realized the importance of information technology and its impact on speeding up and accurate performance of tasks and increasing customer satisfaction, support systems, managers' decision-making, and especially the organization's effectiveness. Such awareness has caused most organizations to quickly move towards the application of IT (Yardley, 2005, p.1).

### **Applications of IT in organizations**

IT has different applications in organizations and most scholars have classified these applications into two categories: operational and informational use.

#### **I. Operational Application**

The use of IT in a profession is called "operational application". Preparing payroll lists, issuing personnel orders, forecasting inventory, planning for production planning, distribution and allocation of labor, industrial costing, and other specialized tasks are included in the operational applications of information technology. The use of computers for such

applications results in automation of tasks and administrative affairs so the tasks are performed more economically and rapidly.

## **II. Informational Application**

Informational use of IT will facilitate the collection, storage, and dissemination of information. In other words, the operational use of computers and IT serves as a mechanical tool to change inputs into outputs. While the informational use is seen as an element and a major factor in collecting, transferring and disseminating information (Ahmadi, 2002, p. 457).

### **Relationship between IT and Employee Performance**

Information and Communication Technology (ICT) is one of new technologies that has affected the organizational and industrial environment around us. Until a few decades ago, it was hard to imagine that such technology could affect the business environment around us in such extensive way. However, this technology has overwhelmed all aspects of our life and its impacts are increasing day after day even in a society like Iran that has a far way ahead in order to reach the required standards to benefit from information technologies.

In a classical sense, technology is the knowledge embodied in the means and methods of production. The effects of technology on the growth have long been the subject of much controversy and these effects can be divided into three categories:

In the first place, the impact of technology has embodied in the form of capital goods, resulting in the improved capital productivity. Secondly, technology improves labor productivity and finally, the overall productivity does not necessarily enhance labor or capital productivity

### **Employees' Performance**

“Individual within the Organizations are performing to best of their ability and developing their potential for improvement” is the employees' work performance. Human resource performance is intimately linked to technological change and technological innovation. Technological change could be effectively managed through human resource joint approach. Individuals can innovate and achieve great technological breakthrough but the complexities of modern technology require effective combination of different innovations based on different aspects of technology.

Hence human resources need to work as an individual and as a team and combine their innovation for production of new technology, goods and services. Individual innovation is meaningful and workable when combined with that of others. The collective innovation is also impossible without individual innovation, hence the two are separate, but could only work in the production process when they are combined and effectively managed to produce result, (Burns and Stalker, 1961); (Cimoli and Dosi

1988).

Managers need to provide enabling work environment that end only the human element can check the abuse of technology, which poses portent dangers to the survival of organisations, nations and humanity in general.

### **The Role of Information and Communication Technology in Banking Sector**

The role of ICT in the banking sector became of interest to this study due to the significant role it plays in the economy by stimulating economic growth through the intermediation of funds to economic agents that need them for productive activities. This function is very vital for any economy that intends to experience meaningful growth because it makes arrangements that bring borrowers and lenders of financial resource together and more efficiently too than if they had to relate directly with one another (Adam, 1998;)

The ICT system department is known as management information system MISORIS department. They are staffed with technically competent professionals that support the bank in critical areas which are as follows

**End User Technical Support:** Much of the banks computer processing is performed by endusers, using their desktop PC. When these end-users incur a computer problem [unable to log on, printer does not work est.] they call the ICT department for technical

support.

**Desktop Management:** Managing of desktop computers, laptops and peripherals is a cornerstone of ICT. Department task, management of computers includes: installation of new hardware components or software's, software license administration equipment repair and maintenance.

**Network management:** The ICT department makes sure that the computer network is always available with safe and secure data, not only does this involve the physical installation of cabling throughout the facility, but also the installation and monitoring of the fire wall, servers and other equipment to keep the network running at peak efficiency.

**Voice and data communication :** The ICT department maintains the telephone and computer system that allow customer system to connect with banks through the use of voice mail, e-mail, faxes, messages, boards, and internet. This includes co-ordination new requirement with third party service providers

**Business application :** Developing and maintaining the business system that operates the banks are essential tasks of the ICT department, this include software for financial manufacturing, sales and distribution system, as new as general office administration, such as word processing and spread and sheet applications

**Strategic Technology Planning :** The ICT department is responsible for creating and

executing strategic technological plan that keeps the bank up-to-date with technology advances and ensures that equipment and software do not become obsolete. The technological plan also focuses on the requirement needed to support new bank growth. The I.T. department have insight into the trends and the major change items of the new economy that are technology related and is best positioned to introduce these changes to the banks, in unit, the role of the I.T. department becomes the change agent responsible for reforming, restructuring, the architecting and transforming the bank and also deeply involved in strategy formulation process: They also influence details of the bank's strategy based on the direction of technology and known capabilities of the bank. They are also responsible for providing effective leadership and also managing the people in terms of administering and sometimes in developing the HR policy, staff recruitment, training and skills development, counselling and monitoring, performance management, culture change and compensation matters. The I.T. department must have wide range of leadership skills that would be put to use of different occasions. Based on the situations at hand these could be as diverse as promoting innovations to ensuring compliance with corporate standards.

### **Impact of Information and Communication Technology on Banking**

#### **Sector**

In today's banking, Information and communication technology cannot be separated from banking activities since it facilitates the whole banking process. According to Banigo (2001:25), information and communication technology can be defined as electronic based technologies which can be used to collect, store, process and package information and provide access to knowledge.

The internet has helped them in information management at the detriment of official effort at curbing their activities. Castells (2001) reveals that, new transactions worth billions of dollars can only take place in seconds in the electronic circuit throughout the globe by pressing a single button. Zagaris (199:8) reported that many Banks recognized that the growing integration of the world economy is facilitated by ongoing revolution in telecommunication and information technology, According to Ezeamama (2010:282) it is reported that Information technology is radically changing all over the world, the volume and speed of handling transaction have improved tremendously as a result of the growth in Information technology, which has created a lot of business opportunities, Application of information and communication technology is capable of enhancing optimal performance in service delivery if appropriately carried out. According to

Loonam *et al* (2008), ICT advancements, globalization, competition and changing social trends such as heightened customer proactiveness and increased preferences for convenience have caused intense restructuring of the banking industry.

However, banks have made huge investments in telecommunication and electronic systems, users have also been validated to accept electronic banking system as useful and easy to use (Adesina and Ayo, 2010).

### **Methodology**

To achieve the research objectives, both primary and secondary source of data was employed in this paper. Primary source of data was basically on administering of questionnaires to retrieve information. The questionnaires which were administered to the Bank provided wide range of options for them to choose from.

Simple random sampling was used to select the respondents. In all thirty four (34) respondents from the Bank were chosen for the study. Secondary source of data for the study include textbooks, business articles and journals, the internet.

The data obtained was analyzed with particular reference to the research questions using descriptive statistical tools such as tables and frequencies.

### **Data Analysis**

**Table 1: Information and Communication Technology has improved the skills of workers in the organization.**

<b>OPTIONS</b>	<b>NO OF RESPONDENT</b>	<b>PERCENTAGE 100%</b>
AGREED	32	94.1
DISAGREED	2	5.9
TOTAL	34	100

**Source:** field survey 2017

Out of 34, 94.1% respondents representing 32 agreed that Information and Communication Technology has Improved the skills of workers in the organization, while 5.9% of respondents representing 2 disagreed. We can conclude based on the analysis that, **Information and Communication Technology has improved the skills of workers in the bank.**

**Table 2: Information and Communication Technology has bought new techniques in all Areas of the Banks.**

OPTIONS	NO OF RESPONDENTS	PERCENTAGE 100%
AGREED	32	94.1
DISAGREED	2	5.9
TOTAL	34	100

**Source:** field survey 2017.

Table 2 above shows that 94.1% of respondent representing 32 Agreed that Information Technology has brought New techniques in all Areas of banks, While 5.9% of respondents representing 2 Disagreed on that. We infer based on the analysis above that, **Information and Communication Technology has bought new techniques in all Areas of the Banks.**

**Table 3 Information and Communication Technology is effective in operation of the Banks.**

OPTIONS	NO OF RESPONDENTS	PERCENTAGE 100%
AGREED	31	91.2
DISAGREED	3	8.8
TOTALS	34	100

**Source:** field survey 2017

The table shows that 91.2% respondents representing 31 Agreed that Information Technology is effective in the operation of the Banks, 8.8% respondents representing 3 Disagreed on that. Hence, conclude that **Information and Communication Technology is effective in operation of the Banks.**

**Table 13: Information Technology has led to the Retrenchment of workers in banking sector**

OPTIONS	NO OF RESPONDENTS	PERCENTAGE 100%
AGREED	24	70.6
DISAGREED	10	29.4
TOTAL	34	100

**Source:** field survey 2017

Out of 34, 70.6% respondent representing 24 Agreed that Information Technology has led to Retrenchment of workers in Banking sector, while 29.4% respondent representing 10 Disagreed on that. We can say that **Information Technology has led to the Retrenchment of workers in banking sector despite its effectiveness**

### **Findings**

This paper examined critically the effects of ICT on employee performance in an organization with particular reference to EcoBank Jalingo branch. Based on the analysis of data collected, the following are the findings of the study:

- I. The researcher found out that Information and Communication Technology has improved the skills of workers in the bank thereby improving the employees performance
- II. Findings reveal that Information and Communication Technology has bought new techniques in all Areas of the Banks by improving the banking operation.
- III. Finding also show that Information and Communication Technology is effective in operation of the Banks.

### **CONCLUSIONS**

Information and Communication Technology departments in banks also play some roles in the banking sector like helping in critical area such as End-user

technical supports, Desktops management, Network management, voice and data communications, business applications and strategic technology planning. Information and Communication Technology (ICT) has helped in reducing the cost of doing business in banks, banks all over the world are involved in certain time consuming and routine task on a daily basis and it dependent on internet banking to ensure that such technology is not abused and not used to encourage fraudulent and unethical banking practices, various standards have been set in the guidelines to which such technology must conform.

Finally, banks must ensure that the Internet service provider (ISP) has implemented firewall to protect the banks website from unauthorized users and banks are also to ensure that they are properly configured and institute procedure for continued monitoring and maintenance arrangements.

### **RECOMMENDATIONS**

Knowing full well that information and communication technology cannot be separated from the banking sector and any other organization due to its immense contributions to the banking sector, and based on the respective responses gathered from the sample and contribution from authorities, the researcher therefore makes the following recommendation with the intent that if adopted would have positive effects on the banking sectors.

- i. The banks should improve more on its information technology so as to enhance its productivity.
- ii. The use of (ICT) in the banking sector should not only be restricted to the cities alone, rural banking should also be improved upon.
- iii. From time to time there should be enlightenment given to the general public through the various media on how to use some of the (ICT) equipment's like the smart cards, ATM etc and its importance should also be made known to the public.
- iv. Staff should be used side by side with ICT rather than reducing human capital which will in turn lead to unemployment in the country.

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