

## **The Effect of New Technological Changes in Improving the Environment of Human Resource Management**

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### ***Abstract***

*Changes in the environment of human resource management are very wide and it plays a crucial role in organizations. These changes include work force diversity, technological changes, globalization, conflicts, professional bodies, changes in the nature of jobs and work organizational culture. This research study aims to predict the effect of adopting new technologies in improving the environment of human resource management. For achieving this purpose, number of 40 questionnaires has been designed, circulated by hand to a randomly selected sample of information technology department and board of directors at the Jordanian Industrial Companies listed at Amman Stock Exchange, SPSS package applied for the purpose of statistical analysis; arithmetic means, standard deviations, percentages and Simple Regression. Finally, the study concluded that, adopting new technologies has a significant positive effect on the environment of human resource management, and the new technologies will make management more effective, and can save time and money.*

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**Keywords:** *Technological changes, Human resource Management, Human resource environment.*

## **1. Introduction**

The management process includes many important functions such as, planning, organizing, staffing leading and controlling. The staffing function is called today (HR) Human Resource Management function. Human Resource Management (HRM) refers to the practices and policies needed to carry out the people or personnel aspects of management job (Gary Dessler, 2005) which include recruiting, screening, training, rewarding, and appraising.

The successful manager is not always the one who laid brilliant plans, draw clear organization charts, setup modern assembly lines and use sophisticated accounting controls most managers whether presidents, generals, governors, or supervisors, have been successful even with inadequate plans, organization or controls. They were successful because they had the knack for hiring the right people for the right jobs and motivating, appraising and developing them. In other words, the work force and the company's inability to recruit and maintain a good work force that does constitute the bottleneck for production, and if the company is in shortage of cash, this will not stop good ideas, vigor, and enthusiasm of a good selected, trained labor force.

Changes in the environment of human resource management are very wide and it plays a crucial role in organizations. These changes include work force diversity, technological changes, globalization, and changes in the nature of jobs and work (External Factors). The internal factors are unions, Organizational culture, conflicts and professional bodies.

A change in the work force is a continuous process, since the last two decades we are noticing such changes. For example the structure of the women working force is widely increasing in organizations. In USA women working force increased from 42.1% in 1979 to 47.7% in 2003. and projected to reach 92 million in the year 2050 (Toossi, 2002).

Increased diversity will place tremendous demand on HRM function. As the work force ages, employers will have to invest more in the health care and the pension contributions. With more females in the work force the employers will have to establish more child care facilities on or near company premises and to accommodate the travel, scheduling, and moving needs of dual career employees.

Technological changes will continue to shift employment from some occupations to others while contributing to a rise in productivity. For example changes are taking place in office automation, where personal computers, word processing, and management information systems continue to change the nature of office work. Also telecommunications already makes it relatively easy for many to work at home. Robots are also taking man place especially in the heavy industries.

Globalization refers to the tendency of firms to extend their sales or manufacturing to new markets abroad, and to spread the business everywhere. Production is becoming globalized; manufacturers around the world are putting their manufacturing facilities where they feel it is more advantageous.

## **2. Study Problem**

The strengths and weakness of a company's human resources can have a determining effect on the viability of a company's strategic options. Unique HR capabilities serve as a driving force in strategy formulation. A company may build its new strategy around a competitive, advantage stemming from its human resource. The current study will try to answer whether the change in technologies will be useful to the workplace and what impact they will truly have in the long term, and discussing some of the emerging issues associated with the technology explosion; and speculate on the long-term effects technology will have on the workplace.

### **2.1 Study Importance**

New technologies such as cell phones, the Internet, and wireless services, has irrevocably changed every facet of life from the home to the workplace. It has spawned a new kind of global economy where the letter "e" is routinely attached to words like commerce, business and learning. The importance of the study arises out of questioning the necessity of providing of new technologies to which are currently available and whether it will affect the human resource function in the short and medium term.

### **2.2 Study Objectives**

The study aims to predict the effect of adopting new technologies in improving the environment of human resource management:

## **3. Literature Review**

Technological changes are producing changes in the nature of jobs and work. Technological changes including fax machines, information technology and personal computers have allowed companies to relocate operations to locations with lower wages. An enormous change from manufacturing jobs to service jobs is taking place in the world. The percentage of work force in the field of producing and delivering services is increasing. The production is limited now to certain types of industries such as heavy industries and food industries and most of the industries will be in such service industries as fast food, retailing, consulting, teaching and legal work. These jobs, in turn, will demand new types of workers and new human resources management methods to manage them (SHRM, 2014).

Most people believe that because technology is developing so quickly, it is impossible to accurately predict what to expect in the way of new applications within the next three to five

years. Trying to predict the future seems to be human nature, however. Therefore here are some of the technological advancements and consequences scientists expect within the next five to ten years:

Ray Kurzweil, author of *The Age of Intelligent Machines*, predicted in the year 1990 that within the next ten years, computer screens will be placed directly on the retina, on eyeglasses, or on clothing. Web sites and chat rooms will become three-dimensional meeting places, rich in detail and accessible at the speed of thought. He also predicted that telephones that can simultaneously translate languages (for example from Japanese to English and back) will be perfected, allowing two different language-speakers to communicate instantly, greatly enhancing global communications. Although we are in the year 2014, but most of Ray's predictions had come true.

Technology will help create new jobs. Corporate job titles of the future include "chief marketing officer," "chief knowledge officer" and "business etiquette advisor." The latter position will exist to create policies and procedures on the use technologies such as e-mail and cell phones. Telecommuting technology will increase, not just because it meets work/life issues, but also because rising real estate costs will push employers to use less office space (ITBusinessEdge, 2014).

Every organization has its own culture. Organizational culture is the products of all the organization's feature; its people, its success and its failures. Organizational culture reflects the past and shapes the future. It is the job of human resources specialists to adjust proactively to the culture of the organization. For example objectives can be achieved in several acceptable ways. This idea is called equi-finality, which means that there are usually multiple paths to objectives. The key to success is picking the path that best fits the organization's culture and environment (Werther & Davis, 2005). The environment often provides a mass of ambiguous information. What to make out of the information? What to accept and what to reject? To answer these questions, three related concepts are relevant; the enacted environment. The domain and domain consensus, and the task environment (Anthony, 2010).

An organization seeks to create its own environment out of the external environment. The environment, which the organization creates, is called enactment. Enactment implies that the organization creates a relevant environment for itself by aggressively scooping, narrowing and scanning the external environment. In effect the organization creates the environment to which it reacts. It does not react to the entire environment.

There is a danger in the enacted environment. An organization may define its environment so narrowly that is likely to ignore significant forces that may affect its fortunes.

The positive benefit of an enacted environment is that it makes an organization to become proactive in its approach in dealing with its environment. The organization takes an active and aggressive role in actually defining its environment. On the other hand a reactive approach implies that the organization is not aggressive, but merely reacts to its environment (Anthony, 2010).

The domain is that part of the environment which the organization carves out for itself (Wikipedia, 2014). The organization delineates its own territory out of the environment. The delineated territory comprises the range of products offered, population served and services rendered. The organization focuses its efforts on these three areas while paying less attention to other areas. Domain consensus is formed when all the organization stakeholders agree upon the domain of the organization. When domain consensus is not reached, conflicts can arise regarding parts of the environment, which should be monitored.

Task environment represents the third concept related to knowing the environment. This significant portion of the domain has the greatest impact on an organization's goals because it includes all groups that can influence the organization. Specifically, the task environment specifies the range of products to be offered, the technology to be employed, and the proactive strategies to be used to counter competition. When competitive firms such as, Sharp and Samsung entered the market the task environment of Sony Company, which market share decreased, Sony has to launch a new collection of electronics with a competitive prices and qualities (Verso, 2014). The following Graph-1 illustrates the Task Environment.



Source: [www.verso.co.nz](http://www.verso.co.nz)

Environment scanning involves general surveillance of the environment to determine trends and projections of factors that will affect the fortunes of the organization. The scan focuses on the firm's task environment. Elements outside the task environment are not ignored, but are paid less attention (Gordon & Glenn, 1994)

Scanning is done to prevent information overload for decision makers. It should focus on providing relevant information for planning and decision-making. With regard to HRM, the relevant areas to be scanned for planning and decision making are the labor market, legal

environment, constitutional provisions and technology. This does not mean that other elements, such as globalization, should be ignored. But it does mean that the four factors identified tend to have a major impact on HR decisions. If a company has overseas operations, these four factors need to be examined.

Human resources development is a part and parcel of human resource management. It is the main function of human resource management. Every organization and its management have the responsibility to develop its human resources if at all it wanted to remain in business, face the competition and go on towards prosperity and growth. In the modern times of growing awareness the human resource development is the task number one for any organization (Albert & Maria & Virginia, 1994).

The survival and growth of the organization depend on human resource development. Human resource development programs have become routine now in the organizations. The days when employees were treated as part of the machine are gone. Now new awakening has emerged. Organizations have now realized that employees are human beings and if they are treated well and their talent is developed they can be of immense help to them in fostering organizational growth. This has given rise to the emergence of new relationship between employees and management. Autocratic ways of supervising are gone. Employees are looked as having a tremendous potential. This potential needs to be developed and exploited for the organization's growth and prosperity by rewarding the employees suitably. Now all round efforts are devoted to employee development.

The organizations are making efforts to increase workers influence. Committees are set up to study their problems and are finding new approaches to solve their problems. An open door policy is being adopted to redress their grievance. Efforts are made for their career development. Human resource development (Albert & Maria & Virginia, 1994) is the center point of human resource management.

All activities of human resource management are aimed towards development of human resources. There are many ways of human resource development which include training and development of employees and executives, career planning and development and conducting workshops for that, development of technology, job enrichment, various job experiences, team building, leadership development, building up of better subordinate- supervisor relationship.

Organization development is a part of overall development in general. It cannot remain unaffected by the development process. The organization has to change the beliefs, values, and its structure to accommodate the new ideas, beliefs and new technologies for progress. This is very essential. The organization must respond to changes. So that it can face the

challenges ahead. The management of human resources depends upon organizational effectiveness (Grant, 2007).

#### **4. Methodology & Statistical Analysis**

##### **4.1 Study Community**

The study community is formed out of 40 companies working in different fields, such as manufacturing, merchandizing, and services. A questionnaire has been developed and distributed among the management of these companies. Total of Forty (40) questionnaire was distributed, Thirty five (35), were recovered, which means that, Seventy percent (70%) of it was valid for analysis. Table (1) shows these results.

Table (1):	Items	No.	Percentages
	Questionnaires Distributed	40	100%
	Questionnaires recovered	35	87.5%

##### **4.2 Study Hypothesis**

H0: There is no statistical effect of adopting new technologies in improving the environment of human resource management:

##### **4.3 Statistical Measure**

Likert scale quintet has been used, five options for each question was identified. Table(2) shows these options.

Table(2)	Agree	Moderately Agree	Not Agree	Highly Not Agree
Highly Agreed				
1	2	3	4	5

Based on Likert scale, the statistical Median derived is shown in Table(3) as follows:

Table(3):	Low	Moderate	High
	1-2.49	2.5-3.49	Above 3.5

Many statistical measures was used to analyze the questionnaire, such as, Central tendency, Arithmetic mean, standard deviation, frequencies, t test, and percentages, for the purposes of description and analysis of the study data. The Statistical Methods used can be summarized as follows:

- 1- Descriptive Analysis: Arithmetic mean, standard deviation, and percentages, are the main tools of this type of analysis.
- 2- Cronbach Alpha: This measure was used to test the reliability, and the credibility of the study. As (Sekaran, 2003), explained, Internal reliability coefficient between answers that statistically acceptable, if the value for this measure is (60%) or more.

The results showed that, the reliability coefficient is very high, which indicates that, the questionnaire is reliable. The total reliability coefficient values (internal consistency) using Cronbach Alpha equals 0.723, which is a high value, and suitable for the objectives of the study.

### 5. Data Analysis of the Demographic Characteristics of the Respondents

Table(4), illustrates the demographic characteristics distribution of the study sample.

Table(4): Variable	Group	Frequencies	%
Sex	Male	33	94.3
	Female	2	5.7
Total		35	100%
Age	Less than 25 years	6	17
	From 25 years—35 years	14	40
	More than 35 years—45 years	12	34
	More than 45 years	3	9
Total		35	100%
Professional Certificate	PhD	2	5.7
	Master Degree	1	2.9
	Bachelor's Degree	32	91.4
Total		35	100%
Job Title	Manager	22	63
	Deputy Manager	13	37
Total		35	100%
Experiences	Less than 5 years	4	11.4
	From 5 years – 10 years	12	34.3
	More than 10 years – 15 years	13	37.1
	More than 15 years	6	17.2
Total		35	100%



## 5.1 Results and testing hypotheses

The study hypothesis stated that there is no statistical effect of adopting new technologies in improving the environment of human resource management. Regression test has been made in order to figure out whether there is an effect of There is a statistical effect of adopting new technologies in improving the environment of human resource management.

Table (5). Illustrates the Regression test results

Sig	R2	R	Calculated F	Tabulated F	Result
0.019	0.209	0.457	6.338	2.450	Reject

Table (5) refers that there is significance effect where the adjusted R2 equals (0.209) at the significant level ( $\alpha \leq 0.05$ ). As the calculated F value equals (6.338) which is higher than tabulated value (2.450), and as the level of statistical significance amounted to (0.019) which is less than the specified value 0.05, and therefore we accept the alternative hypothesis and reject the null hypothesis. This means that there is no statistical significant effect at the level of significance ( $\alpha \leq 0.05$ ). Which means that, There is a statistical effect of adopting new technologies in improving the environment of human resource management of these companies.

## 6. Conclusions

According to Data Analysis, and Hypothesis testing the study had concluded the following:

- a. Adopting new technologies has significant effect in improving the environment of human resource management.
- b. Change is happening so quickly and technologies are developing so rapidly.
- c. Finally, technology is currently available and it will affect the human resource function in the short and medium term.

## 7. Recommendations

According to the study conclusions the researcher recommend the following:

1. We have to choose the changing environment which suites the required changes and have the ability of full evaluation and monitoring process.
2. We have to choose the new technologies which enables periodical appraisal and monitoring of environmental threats in light of weakness and strength points of the organization.

3. Training programs should be carried out continuously on the new technologies, and through the one team efforts.
4. Encouraging creativity of HR, as creativity is the source of competitive new ideas and new technologies which strengthen the organization's rank among its environment.
5. Finally, we should encourage the concept of management by objectives to enhance the main idea of changing management.

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