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## Employing Electronic Management in Human Resource Relations in the Modern Institution

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### **Abstract:**

The world today is experiencing a new scene based on the development and production of knowledge systems that have turned into a major production force. Given that information and communication technology is the main driver and the final decision-maker, modern institutions had to adopt and rely on it in all transactions and relationships. Therefore, electronic management emerged as a tool for improving management capabilities and facilitating procedures for citizens.

**Keywords:** electronic management, human resource, impact and effectiveness.

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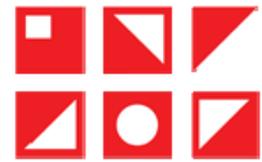
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## 1- Introduction:

Recently, there have been rapid and unprecedented developments in all aspects of life. The most prominent of these developments, which characterized our time, is the dynamism of the technological field. This is especially related to those related to information processing and transmission, or what has become known as information and communication technology, and the increasing and intense dependence on its use and employment strongly in most human activities, which is the so-called electronic management. The latter came as an alternative to the traditional administration and as a result of the negatives that it caused to the organization and the citizen, including bureaucratic complexity, difficulty in carrying out administrative tasks and transactions, difficulty in providing information and making decisions in a timely manner.

With the advent of the Internet, the development of information technology and communication methods, the transformation of marketing and accounting functions and various operations into electronic operations, and the increase in the digital technological transformation of organizations, it has become necessary to convert tasks and paper files into electronic files. In addition, relations between the government, business organizations, unions, workers and customers are made through internal and external networks and the Internet. It has also become necessary to use technology in human resource management, and this means the application of web-based technologies in systems related to human resources and their functions.

Human resources within the organization represent one of its most important resources, and one of the most important assets it owns. The goals of the organization cannot be achieved without the human resources that the organization has to strive hard to take care of. This is through employing data and information and communication technology in its relations and in all its dealings within the institution, so that it is able to achieve its goals effectively and help it face changes and challenges. The modern organization cannot neglect a very important matter, which is to keep pace with the technological dimensions of this renaissance, and it must stand at a distance that enables it to achieve its goals and aspirations for survival. Therefore, modern organizations must adopt information and communication technologies in their internal and external relations, especially in their dealings with human resources, in order to achieve a greater competitive advantage, including achieving effectiveness, positivity and distinction at the level of the organization as a whole. Accordingly, we ask the following main question: **How does electronic management affect human resources in particular and the modern institution in general?**



## **2- Study Objectives:**

The study aims to determine the impact that the electronic management makes on the performance of human resources and on the effectiveness of the modern institution, especially that the adoption of electronic management reflects the true image of it and is the living proof of its capacities and capabilities to compete.

## **3- Study significance:**

The following study derives its significance from the great interest in human resources within modern institutions on the one hand, as well as the role of electronic management on the other hand, and considering the latter as a fundamental determinant of the success or failure of institutions, especially in light of globalization. In other words, the study aims to highlight the impact of electronic management on human resources in the modern institution and to extract its advantages.

## **4- Defining the study terms:**

### **1. Electronic management:**

In view of the obstacles faced by traditional management, a more advanced and flexible model has been adopted. The latter is electronic management, which is defined as: "the use of modern information and communication technology systems, especially the Internet, in all administrative operations of a given enterprise, in order to improve the production process and increase the efficiency and effectiveness of performance in that enterprise." (Muhammad Samir Ahmed,(2013), p. 42).

Hence, it focuses on completing administrative transactions and providing public services via the Internet, without customers having to go to the departments in person to complete their transactions without wasting time, effort and energies." (Jean françois, Chantaraud, et al.,( 2003),p p 37,38).

In addition, electronic management is a new alternative that depends on the use of modern technologies for information and communication in the conduct of the administrative operations of a facility, and the exercise of its basic functions. This is in order to increase the efficiency and effectiveness of performance and strengthen its relationship with other organizations on the one hand, and to reduce the trouble and waste of time, effort and energies during the personal transition of departments by clients. (Hisham, Mohamed Ibrahim,( 2012), p. 70).

Thus, electronic management is a new model for the conduct of administrative work within an institution and it is based on the effective use of communication technologies.



**2.Human Resources:** The group of individuals who are able to perform work in an organized, serious and committed manner within a particular organizational entity. The more this group is exploited in a good way the more success will be achieved for the organization.

Here, it can be said that the human resource is the active human energies, employees and workers, in the organization that are capable of conducting various business in the institution.

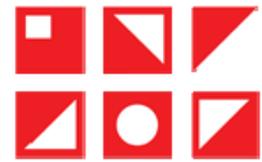
**3.Modern institution:** is every consciously organized and coordinated social entity that is financially independent, and is subject to both the legal and social framework. It seeks to optimize the use of material and human resources by relying on modern information and communication technologies in order to achieve the goals of the organization efficiently and effectively. And it is a part of modern organization which means boundaryless organization which are networking together and collaborating more than ever before. its main concept is to diversify its activities and connectivity as a result it can accept new challenges and can set a goal frequently. ( Safinaz Jahan, [www.linkedin.com](http://www.linkedin.com), 05/10/2021.15 :00)

Based on the foregoing, we conclude that the contemporary institution is an organized social entity based on the use of modern information and communication technologies in its internal and external relations.

### **5-Electronic management features:**

Electronic management has a number of basic features that are: (Abdelkarim Achour, (2009-2010), pp. 12,13).

- Paperless management: It is a computer-based administration that does not depend on papers except in a secondary and supplementary way, for example, the administration has electronic archives, mail, electronic diaries, and automated follow-up applications systems.
- Placeless management: It depends on modern means of communication such as the Internet. The administrative official can take the decision while s/he is anywhere in the world, and his/her decision-making is not necessarily linked to his/her presence in the physical headquarters of the public facility. This adds flexibility, which is the case in



developed countries today, where citizens can pay bills, make orders, and buy items from their home without moving.

- **Timeless Administration:** The electronic management does not necessarily adhere to the official working hours, for instance, the public employee can take a decision outside working hours to deal with some urgent developments. Thanks to the electronic management, the world is now able to work in real time twenty-four hours a day, and that is taking into account the interests of citizens. (Ibid., p. 13).
- **Management without rigid regulations:** Thanks to electronic management, we can talk about smart regulations that are flexible and capable of keeping pace with all urgent changes, in contrast to the traditional administration that is characterized by stagnation, routine and slowness. (François, Cholley, , (2006), p182).

The most important **objectives of electronic management** are: (Amina, Benhamed,( 2012-2013), pp. 29-30.)

In order to increase the efficiency and effectiveness of the performance of administrative work, many countries are working on the application of information and communication technology to manage business and projects and run various departments, thus gradually abandoning traditional work methods. The purpose of applying electronic management techniques is not just to run the administration, but to achieve certain goals as they affect the lives of individuals. This is especially since one of the characteristics of the administration's work is the social characteristic, that is, the human capital that exists in any administrative entity, because the administration is socially responsible for achieving a benefit for society in general by achieving a balance of interests and expanding the circle of beneficiaries. Accordingly, the basic objectives of electronic management can be summarized as follows:

1. **Providing the best services to citizens:** Serving the citizen requires creating a work environment characterized by skills and competencies, prepared professionally for the use of modern technology in a way that allows identifying a problem to be treated. In addition, this also requires the selection of information on the substance of the topic, accurate and honest analyzes of the available information, identifying the system of strength and weakness, drawing conclusions and proposing appropriate solutions for each problem.



2. Focusing on results: the electronic management's interest is focused on transforming ideas into results embodied on the ground. to achieve benefits for the public represented in reducing the burden on the citizen in terms of effort, money and time, and providing continuous service around the clock. The interest of electronic management is to transform ideas into results embodied on the ground and to achieve benefits for the public represented in reducing the burden on citizens in terms of effort, money and time, and providing continuous service around the clock.

3.Ease of use and access to everyone: that is, making electronic management techniques available to everyone in homes, work, schools and libraries so that every citizen can communicate.

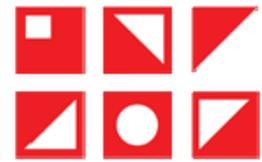
4. Reducing costs: that is, the investment in information technology and the multiplicity of competitors to provide services at low prices leads to a reduction in costs.

5. Continuous change: It is a basic principle in electronic management as it regularly seeks to improve, enrich its content and raise the level of performance, whether with the intention of gaining customer satisfaction or with the intention of outperforming the competitors. (Amina, Benhamed, op.cit. p. 31)

### **The impact of electronic management on the effectiveness of the modern institution:**

An evolution in management is an evolution in organization. If planning is most related to time, then organization is most related to place in terms of organizational structure, as it is an arrangement of activities in a way that contributes to achieving management goals. It is this organization that gives the administration its personality and administrative advantage. (Mohamed,Benarab, (2014), pp. 9, 10).

The Internet requires doing business in a dynamic manner through multiple decision centers that do not fit the characteristics of a traditional organization based on a solid organizational structure, formal hierarchy, among others. The positive impact of the electronic management on the administration and its activation is shown by providing opportunities to identify the needs of citizens that vary according to the environmental and cultural conditions specific to each community. At the level of local administration, for example, it is required to have a degree of flexibility and speed in making decisions, in



addition to the availability of confidence, security and confidentiality in electronic services to bring the local citizen to electronic interaction. The authorities concerned with providing electronic government services to the local citizen are numerous and differ from one another in terms of legal and organizational form. In view of this, the local electronic management means achieving a real partnership with the community through coordination and integration between these parties to achieve cohesion between human resources in order to achieve development goals and bring prosperity to the citizen. (Najm, AbboudNajm, (2004), p. 251).

The use of information and communication technologies in electronic management allows the use of e-mail and business networks that link the various branches of local administration, dissemination of local council meetings on the Internet, and enabling interaction between levels of local administration on a large scale in a framework of participation and cooperation based on initiative to solve problems. This is in lieu of the limited interaction according to formal relations governed by rules and procedures that characterizes traditional management. Moreover, it also allows the development of the method of providing administrative services from the traditional method through papers and documents that are slow, stagnant and difficult to correct and modify, to flexible, innovative, high-quality electronic services provided through the Internet and through several channels. (Najm, AbboudNajm, op.cit, p. 9).

Furthermore, this positive effect is also shown through:

The aim: electronic management is based on managing information, digits, networks and relationships to achieve interaction and response. It is a given in the field of management that no development can be achieved without decisions with correct data and information that matches with reality, which is actually provided by electronic management techniques.

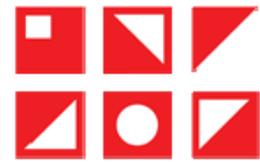
Organization: electronic management is based on networked organizational structures, and the organizational divisions are variable, as are multiple centers of power, self-working teams, and high-speed communications.



Planning: planning in electronic management is horizontal and shared between management and employees. Plans are prepared at short intervals, and these plans are flexible and changeable. Electronic planning may not differ in terms of general identification from traditional planning because they focus on setting goals and determining the means to achieve them. However, electronic planning is a dynamic process in the direction of broad, flexible, instantaneous, short-term goals, which are subject to renewal and continuous development, as well as digital information constantly flowing and giving continuity to everything in management, including planning. (ibid, pp. 267-260).

Monitoring: reports are immediate in the electronic management, and it is a continuous process in which more than one party participates through the electronic network. It is a results-based control with the help of the intranet that acts as an instantaneous channel to transmit information in real time, thus greatly reducing the time gap and the ability to know the variables of the implementation in real time. The information that is recorded immediately upon implementation is in the hands of the director at the same time, which makes the electronic control continuous and not periodic, enabling deviations to be addressed at the same time. (Al-Shibli, (2009), p 446).

Leadership: The leader in modern electronic management manages himself before managing others, provides advice and solves problems. This leadership is carried out using Internet technology in order to manage business and the various relationships that make the manager everywhere and has the same amount of information and communicates with all employees through the internal business network or with dealers via the external network. Electronic leadership is characterized as technology-sense leadership. Electronic management is an integrated electronic system that aims to transform the normal administrative work from manual management to computer management. This is based on powerful information systems that help in taking the administrative decision as quickly as possible and at the lowest costs. Electronic management can include both internal and external communications for any organization, and the goal is to introduce full transparency and accountability, which leads to the improvement of electronic management within any organization. The application of electronic management requires the following:



- Strong, fast and secure network infrastructure.
- Strong information architecture (robust and interoperable information systems)
- A human investment cadre trained in the use of modern technologies.
- A technical human cadre capable of carrying out continuous technical support operations and developing various information systems.

When these requirements for electronic management are available, they provide speed in completing the work, and help in making the permanent decision of information in the hands of decision makers, and lead to reducing the costs of administrative work along with raising the level of performance. This helps to bypass the problem of the geographical and temporal dimensions, and to address bureaucracy and bribery, so that the work mechanism develops and the efficiency of employees in the administration increases. (Mohamed, Benarab, op.cit. p. 12).

In order to further clarify the employment of electronic management in human resource relations within modern institutions, for example, the General Directorate of Algerian Customs' use of the electronic management system in its administrative transactions and its impact on its practical paybacks:

Through the application of the electronic network system similar to the Internet, the process of transferring and exchanging information between the administrations and workers of the General Directorate of Algerian Customs became easy and quick, which has been positively reflected on the performance of the work that was characterized by accuracy and effectiveness. Intranet enabled internal communication between human resources and also provided protection for administrative and professional information where it remains preserved within the institution without being hacked or accessed, as it is considered one of the work secrets within the institution. In addition, the Internet also contributes to facilitating work methods and electronic communication, by transferring and exchanging data quickly, providing new knowledge, and saving time, effort and money as well.

In light of the transition to electronic management, the Algerian Customs General Directorate is experiencing a significant increase in the ability to store data and information in large electronic spaces, and to protect and secure it also from the danger of viruses, hacking, piracy and others. Compared to the past, when the transactions were traditional, there was difficulty in finding free spaces to store the large mass of papers and also difficulty in protecting them from damage, this transformation allowed the General Directorate of Algerian Customs to carry out its work with ease. The Directorate has quick security measures to confront electronic disruptions, and this is through its reliance on 18 people specialized in programming and maintaining devices on a regular basis. Moreover, the institution relies on effective protection systems such as antivirus, firewall, data encryption and electronic signature work. In the event of any defect occurrence in the



electronic systems, the institution resorts to paper transactions as an immediate alternative to conducting business.

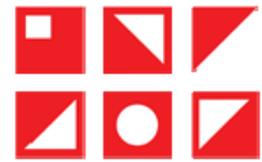
Most of the sub-departments, offices and departments of the General Directorate of Algerian Customs also have a basic device, which is a computer connected to the Internet, and its accessories such as a printer and a scanner, in addition to a fax machine, and a fixed telephone device. These devices are the most frequently used by the departments' employees, and used in carrying out business and administrative tasks. These devices cannot be dispensed with due to the help they provide to employees in terms of ease and saving time and effort. Through the adoption of these devices, the process of preparing and submitting reports takes place in a short time compared to the past, and this depends on the nature of the work. Sometimes it takes only one hour, and sometimes a day or two as a maximum.

Modern, diverse and multiple means of communication, characterized by effectiveness, flexibility and speed, make business and administrative transactions extremely accurate and efficient, and this is the result of the electronic transformation from classic management to electronic management. Among the means of communication that the General Directorate of Algerian Customs uses, we find: the telephone. It is used both internally and externally, through communication with all employees of the Directorate about work issues and affairs, and with external parties such as customers ,people with concerns, inquiries and others. The Directorate also has a reception system for immediate response to calls, which is constantly working.

In addition, the General Directorate of Algerian Customs has also a website on the Internet, which is activated and is constantly updated which contains information about the Directorate that the site visitors may need for the first time. This is including special information about the institution, such as the organizational structure, the latest work it has carried out or the dates for the work it will complete in the near future. It also offers them the various activities carried out by the Customs Administration in addition to electronic services as well.

## **6- Importance of Human Resources:**

Human resources are of great strategic importance to the success of any organization. The optimal use of other resources, such as financial and material resources, cannot be achieved if they lack skilled and qualified individuals who are able to perform their required functions. These resources must also be managed through certain methods and strategies that raise the performance of employees, solve work problems and achieve the organization's goals efficiently and effectively.



**The aim of human resources management is to:**

- ensure that the organization is able to achieve success through people.
- enable the organization to obtain and retain the skilled, committed and well-motivated workforce it needs.
- Achieve the highest levels of efficiency in performance.
- Raise the motivation of employees and their commitment to work.
- Achieve a competitive advantage for human resources.
- Attract and hire the best human resources.
- Develop human resources.
- Reward employees for their achievements.
- Achieve harmony in work to raise the level of performance and the level of productivity.

The basic activities of human resource management are:

Analyzing and describing jobs, planning the organization's manpower needs, selecting new employees, training and directing new employees, wages and salaries, incentives and rewards, performance evaluation, training and development. (sth-about-human-resources-management. blogspot.com ,05/10/2021 13:13)

**7- The impact of electronic management on human resources:**

The electronic management of human resources is the sum of the electronic structures, decisions and relationships used to provide and practice the functions of human resource management within organizations. This is in terms of online selection and recruitment, where jobs are announced and applied for immediately online. Training and development are done using the Internet, multimedia, simulation. Wages and salaries are paid through electronic banks, and communications and negotiations between employees, managers and the government are done through business networks. As such, e-management of human resources has become a de facto application of information and communication technology. The latter contribute to the modernization of accounting and administrative issues, interaction between employees and help in decision-making through accurate and clear outputs, as well as by facilitating cooperation, training, motivation and participation in the organization.

In this context, e-management has been able to reduce costs and accomplish activities very effectively by providing services in a simplified, direct and fast manner, then satisfying employees by giving them the opportunity to formulate human resources work and highlighting their concerns concerning the future of the organization. Information technology occupies a large position in human resource management, as it helps through information systems to



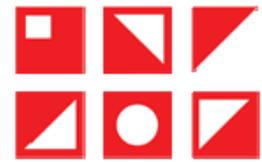
document contracts, record and save sick leaves, as well as keep pace with retirement and health coverage processes.

On another level, electronic management techniques for human resources are used in all stages of recruitment, from selection, operation and integration. It enables to specify an accurate job description and search for the required specifications, relying on Internet technologies, such as Webtracking, which searches for the right person for the position through keywords that indicate competencies, educational path and experiences. (Nada, Ali, (2017), p13).

In the same vein, the advanced status of the electronic management of human resources is recorded in the forward-looking measure of job opportunities and competencies in the institution. Vigilance and monitoring systems help to show urgent changes in the organization's environment, and determine their consequences on leadership trends. What is meant here is the political, economic, social, cultural, and regulatory developments of markets. After that, the use of information programs comes to determine the institution's needs of human resources according to age, gender, seniority, specialization and professional experience. Thus, this is reflected in the completion of the competency map as one of the informational applications, which draws the lines governing the human resources policy in the institution, and analyzes future scenarios and prospects for this administration.

The same applies to training activities in economic and social institutions, where information programs and communication applications interfere in the training structure. This is by doing a comprehensive study of the institution's deficiencies, and planning an annual training program that shows the institution's choices, its consistency with its strategic directions, the individuals involved in training, its duration, location and desired objectives. After working on the implementation of this program, a training evaluation process is conducted through a questionnaire about the extent of employee satisfaction and the extent of their benefit from training, as well as how to use those gains to improve the work of the institution. (Harkat, (2018), p7)

In addition, electronic management provides methods for developing access to information by describing electronic management using the distinguished application of web-based techniques in systems related to human resources. This application, along with



some other organizational changes, will make human resources information widely accessible and provide many opportunities to manage that information. It also leads to the databases access integration, thus expanding the scope of information, and increasing the access of individuals to databases through the electronic portals model, providing verification of the ability of workers to access the system.

### **8- Challenges posed by the electronic management system for human resources**

The activation of the electronic management system generates several challenges. Among them is the abolition of the boundaries between the human resources and information technology departments, and the improvement of the human resources department position. Hence, the focus of the human resources department shifts to customers, and the need for human resources workers to understand the nature of the company's work, and to secure information.

In order to overcome these challenges, there must be methods and factors that have led to the success of many organizations in implementing this system:

- The first factor: developing a strategy for implementing the system.
- The second factor: preparing a case study.
- The third factor: determining the best available options.

The electronic management also works to save time and effort as it enables us to complete millions of works in very short moments, while achieving objectivity and accuracy in achievement. In addition, it contributes to raising the efficiency of follow-up and control and improving the quality and effectiveness of decisions in addressing problems in the performance of human resources. These technologies provide training and qualification programs that have led to the valorization of human capabilities and competencies thanks to distance learning and distance training services, in addition to facilitating the identification of training needs for employees. These technologies also contribute to the identification of training programs available globally to benefit from them at all times. (Ghaleb, Yassin Saad, (2005), p. 68).

These technologies have increased the strength, degree, creativity and innovation of human resources. It also led to the emergence of the so-called virtual universities and training centers.

Furthermore, new ways have also emerged that are open to customers, especially with their possession of personal computers and their connection to the Internet, such as electronic commerce. This forced the institutions to train and educate individuals and



provide them with new competencies in order to be able to dispose of its products and services effectively and quickly.

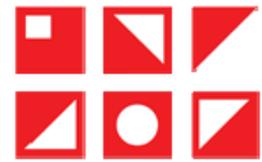
The computer has also contributed to the process of evaluating the performance of employees with objectivity and high accuracy, especially in the areas of retirement and insurance. The internal networks have also contributed to reducing costs and self-following the professional and costly path of each worker, which reflects his/her empowerment and his/her sense of responsibility.

The reliance on technologies in the different departments of human resource management provided many advantages. For example, in the selection sections, using technologies enabled the retention and possibility of retrieval when necessary for all information related to job candidates when necessary. With regard to the salaries department, it resulted in achieving accuracy and speed, avoiding errors, providing all facilities and accounting analyzes, discovering deviations and correcting them immediately on the other hand. (Fatima, Touihri, (2015-2014), p. 25).

The immersion of information and communication technologies in the world of business and the control of information systems over the content of activities within the organization, gave rise to the term teamwork. It enables a group of individuals, hundreds of miles apart, to form a group whose work is supportive and complementary to the work of the other, which ultimately leads to improved performance and increased productivity. This is in addition to ensuring that the right information arrives at the right time and to the right people, which is called the work flow, which leads to the rapid targeting of the right destination and the absence of information and documents loss thanks to the availability of electronic archives. (Ibid. p. 26).

### **9- Human resource and globalization:**

The spread of globalization and the intensity of competition that characterized the contemporary period in which we live, and the accompanying revolution in communications, information and trade doubled the need to provide efficiencies to improve the exploitation of these technologies. This is what produced episodes for the development of human resource management, as institutions do not suffer from a scarcity of information, but rather the difficulty in operating, analyzing and programming them. Hence, it is necessary to invest in the human resource, and make it more flexible and able to implement quality rules as the most successful way to adapt and respond to the accelerating changes. (Naima, Yahyaoui, (2015), pp. 5,6)



## **10- Conclusion:**

New communication technologies have produced new ways of organizing. It have also created an opportunity to change the behavior of the most important assets of the organization and one of the organization's competitive advantage components, which is the human resource.

Therefore, it can be said that electronic management gives a more responsive and strategic role to human resources, and contributes to satisfying employees. Thus, it leads to reducing administrative expenses, and helps to provide greater opportunities for participation and training. The basic areas of the electronic management system for human resources are the management of personal information, the provision of basic services, and the management of individuals more effectively, such as recruitment processes, time attendance recording, bonuses and performance management. This facilitates collaboration, training, interaction, sharing and dissemination of information, leads to communication with and motivates employees, manages job benefits and rewards, and improves the service provided to them.

Nowadays, the obsession of the modern institution is not only the generalization of the use of modern technologies or the creation of electronic management, but rather its localization in a way that gives it the added value. This is done by raising the levels of economic performance in general and the performance of the human resource in particular, especially if information and communication technology is exploited and directed effectively within the framework of economic growth and within the major objectives of the overall strategy of the institution.

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