

# The Role of Artificial Intelligence and its Impact on the Human Element in Business Organizations (Emirates Telecommunications Corporation as a Model)

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**Abstract:** *The study dealt with the concept of artificial intelligence and its impact on the human element in business organizations. The Emirates Telecommunications Corporation was intentionally chosen to conduct the study, and the study included all employees working in the organization as they are in direct contact with the subject covered by the study in order to find out the impact of using artificial intelligence techniques on improving the performance of the organization's work, reducing dependence on human resources, as well as shortening the time and costs. To determine these effects, four main hypotheses have been developed. The electronic questionnaire was used to collect data, where (80) questionnaires were distributed and (70) of them were fully retrieved, and the questionnaires were subjected to the Cronbach alpha test to know the validity and reliability of the tool, and the arithmetic means, standard deviations, and (t) and (F) tests were used in the statistical aspect of the study. A number of conclusions were reached, the most important of which is the significant positive impact of the use of artificial intelligence techniques in the Emirates Telecommunications Corporation on improving the performance of the organization, reducing dependence on human resources, as well as reducing operating and production time and costs, as the results were identical to the hypotheses of the study, as the study presented a set of recommendations, the most important of which was the need to expand the applications of artificial intelligence in order to advance the reality of the Emirates Telecommunications Corporation to a better level, and the need to introduce the employees of the Emirates Telecommunications Corporation in intensive courses in the field of artificial intelligence to keep abreast of the latest global developments in this field to raise the efficiency of employees in the organization, as well as a procedure More studies and research on evaluating the effectiveness of using artificial intelligence technologies and their impact on all job practices in various business organizations.*

**Keywords:** Artificial intelligence, organization performance, human resources, Emirates Telecommunications Corporation.

## 1. Introduction and Previous Studies

### 1.1 Introduction

Scientific developments and the information revolution have created an administrative reality different from what it was in previous decades, and the fact that artificial intelligence is considered one of the most important inventions of the modern era in the world of technology, artificial intelligence has become a clear and important role, especially after its entry into practical life, as it is one of the most important basic elements on which the technology industry depends at the present time, as artificial intelligence science is struggling to build itself, which makes artificial intelligence an important role in the future of humanity.

### 1.2 Research Significant

The existence of scientific opinions, initiatives and strategic plans of global programmers has not yet been implemented, and this is what prompted us to research everything that may lead to unemployment, especially after the success of artificial intelligence in a large number of fields, as well as providing solutions and shedding light on the role of humans

to adapt to artificial intelligence without allowing it to take away their jobs.

### 1.3 Research problem

Despite the obvious positives through the reflection of artificial intelligence on the performance of institutions and also their profitability, it may have a negative impact on the human element in those institutions as well as on the national economy and others.

This study came to show the role of artificial intelligence and its impact on the human element in business organizations (Emirates Telecommunications Corporation as a model), and specifically, the problem of the research is clear from the answer to the following main question: What is the impact of artificial intelligence (A.I.) on the human element in business organizations? Sub-questions arise from it:

1.4 Can A.I. replace HR in business organizations?

1.5 How can A.I. help organizations in their business?

1.6 What are the driving factors for business organizations' reliance on I.A.?

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## 2. Research Hypotheses

- 1) The use of A.I. techniques by organizations will improve the effectiveness of organizations' performance.
- 2) Organizations' use of A.I. techniques can reduce dependence on human resources.
- 3) Organizations' use of A.I. technologies can reduce operating and production costs.
- 4) There are statistically significant differences between respondents' opinions regarding the role of A.I. and its impact on the human element in business organizations due to the academic level, job and years of experience of the respondents.

## 3. Research Objectives

The research aims revolve around learning about A.I. and how it can affect our future as humans, and how we can secure our success in real life.

### 3.1 Research Methodology

In this research, the descriptive and analytical approach was used, which includes deduction and extrapolation to measure the opinions of a sample of employees working in the Emirates Telecommunications Corporation regarding the role of A.I. and its impact on the human element in business organizations, with the use of some statistical tests to determine the extent to which the research hypotheses are realized. The statistical analysis of the research and the extraction of its results were adopted through the statistical program (SPSS-26).

### 3.2 Previous Studies

- Al-Shawabkeh (2017) conducted a study aimed at identifying the role of A.I. applications entitled "**expert systems in making administrative decisions in Saudi banks**". To achieve the objectives of the study, the descriptive approach was used. The researcher used a questionnaire consisting of (28) items after verifying their validity and stability distributed to a sample consisting of (83) employees. The results of the study showed that all dimensions of the independent variable of A.I. applications "expert systems" suitable for the system, training and development, the smart program used and the security system, were high.
- Bargarai, Abdulazeez, Tirak & Zebaree (2020) conducted a study in Iraq that aimed to identify the impact of managing wireless communications systems using software-defined radio based on A.I. on administrative processes. The study used a critical descriptive methodology based on a review of a number of databases such as (Emerald) and (Science Direct) in order to analyze studies that dealt with the use of A.I. models and measure their impact on various administrative processes in companies. The results indicated that employing different technologies based on the use of A.I. positively affects the ability of companies to perform various administrative tasks.

- Chang (2019) conducted a study in China that aimed to evaluate the performance of environmental management systems based on A.I. The study sample consisted of (36) companies. To achieve the objectives of the study, a quantitative methodology based on the questionnaire and a qualitative methodology derived from the interview were used. The results indicated that the level of performance of environmental management systems based on A.I. was effective and competent in performing various administrative tasks, as the size of their companies expanded and they were able to improve their competencies.
- Zhao, Chen, Liu, Zhang & Copland (2019) conducted a study in China that aimed to reveal the impact of using A.I. based online teaching systems. To achieve the aim of the study, a critical descriptive approach based on the analysis of teaching systems was used in order to analyze studies that used teaching systems based on A.I. online. The results indicated that the use of online teaching systems based on A.I. positively affected the academic achievement score of students.
- The study of Kuo & Huang (2018), which was conducted in Taiwan, aimed to reveal the extent of application of the green energy program in energy management systems through a solar radiation prediction model based on A.I. To achieve the objectives of the study, the experimental approach was used, as the results indicated that the level of application of the green energy program in energy management systems through the solar radiation prediction model based on A.I. was high. The results also indicated that the application of the green energy program in energy management systems through the solar radiation prediction model based on A.I. positively affects the ability of institutions in performing various administrative tasks and improving their outputs.
- The study of Nabavi-Pelesaraei, Abdi, Rafiee, Shamshirband & Yousefinejad-Ostadkelayeh (2016), which was conducted in Iran, relied on the use of energy management and reducing global warming in an agricultural system based on A.I. The study used a descriptive methodology based on reviewing a number of databases in order to analyze studies that dealt with the use of energy management and reducing global warming in the agricultural system and measure its impact on various administrative processes in companies. The results indicated that employing energy management and reducing global warming in the agricultural system based on the use of A.I. positively affects the ability of companies in performing various administrative tasks. **Second Part: Research Theoretical Framework**

### 3.3 Artificial Intelligence (A.I.):

The concept of A.I. refers to the way in which the capabilities of human intelligence are simulated. It is a part of computer science that deals with the process of designing intelligent systems, which exhibit a set of characteristics that are linked to intelligence related to many human behaviors (Badaro, Valenzuela & Agüero, 2013). Grewal (2014)

defines A.I. as a mechanical simulation system that is based on collecting knowledge and information related to various sectors in the world and working to process it and disseminate it to benefit from it in the form of scientific intelligence. (Ocana-Fernandez, Valenzuela-Fernandez, Garro-Aburto, 2019) are defined A.I. as one of the aspects of computer science that relies on providing a variety of methods, techniques, and tools to create models and solutions to problems by simulating the behavior of individuals.

### 3.3.1 Types of A.I.

A.I. is divided into four basic categories, based on the type and complexity of tasks the machine can perform and understand:

- **Interactive machines:** They are capable of perceiving and interacting with the world around them in specific tasks, such as the chess game, where they are able to predict the next round of the game. Therefore, they are without memory and do not store previous information in order to predict future behaviors, but rather play immediately.
- **Memory intelligence:** These A.I. systems have memory, so they can store previous data and predictions to inform predictions of what might happen.
- **Theory of mind:** These are machines that rely on the mind's systems to operate, so they have social intelligence to understand emotions. So it is able to infer human intentions and predict behavior.
- **Self-awareness:** These are machines that are evolving to be able to operate with self-awareness, and they do not currently exist in abundance.

### 3.3.2 Applications of A.I.:

A wave of changes has caused a massive revolution in today's world. A health crisis has revealed other aspects of human life and revealed human innovations that have sparked a lot of controversy, most notably A.I. technology, which has emerged and imposed itself forcefully on today's world and has become a reality, even inevitable. The world has realized that there is no escape from dealing with it, but, there are many questions that modern people have about A.I. technology: Is it reality or fiction as depicted in movies and stories?, What are its implications for the economies of countries?, How does it affect jobs and the labor market?, Will A.I. always replace human intelligence?, What is the role of A.I. applications in providing health care?, Does it really help in predicting acute diseases and preventing sudden attacks?! How did it contribute to education, transportation, agriculture, and even language sciences services?, What policies will countries follow to deal with A.I. technology as a technology of the present and the future?, Will it become politically exploited and subject to international conflict between the strong and the weak?, And how will its use by individuals and institutions be regulated?. These questions and many others are presented by technology expert Dr. Muhammad Al-Hadi in the chapters of this book with a realistic scientific view that reveals facts and illuminates' insights (Al-Hadi, 2021). A.I. is used in many fields, the most important of which are the following:

- 1) Self-driving cars and drones.
- 2) Robot.

- 3) Non-linear control such as railway control.
- 4) Smart devices capable of performing mental operations such as examining industrial designs.
- 5) Cognitive simulation using computers (Al-Hadi, 2021).
- 6) We notice applications of A.I. in everyday technology, such as: video games, identifying fake emails, the iPhone's Siri program, and many others.

If we wanted to divide A.I. into sectors, it would be divided as follows:

- 1) The transportation sector, such as self-driving vehicles.
- 2) The education sector, such as the digital teacher.
- 3) The agricultural sector, such as devices for monitoring fertility and soil moisture.
- 4) Electronic security sector.
- 5) The defense sector, such as autonomous and semi-autonomous systems and weapons.

The government sector is an ideal place for A.I. applications: the United Arab Emirates has set an example in developing many e-government programs that make great use of machine intelligence in managing their operations. The idea of e-government is based on four pillars:

- 1) Gathering interactive activities, services, information, and exchanges in one place, which is the official government website on the Internet, in an activity similar to the idea of government department complexes.
- 2) Achieving a state of contact with the public (24 hours a day, 7 days a week, 365 days a year) with the ability to provide all information and service needs of citizens.
- 3) Achieving speed and effectiveness of connectivity, coordination, performance and achievement between the government departments themselves and each of them separately.
- 4) Achieving abundant spending in all aspects, including achieving better returns from government activities with a commercial content.

### 3.3.3 Advantages and Disadvantages of A.I.

There are many advantages of A.I. applications, which can revolutionize any professional sector. On the other hand, there are many negatives to A.I., as it may negatively affect the labor market through its applications, as we will mention later.

#### Advantages of artificial intelligence:

- 1) A.I. helps bring about continuous developments in computers and make them more useful and more capable of performing tasks in various business organizations.
- 2) A.I. provides a new and improved interface for human interaction.
- 3) It offers new and advanced techniques to solve new and potential problems in all business organizations.
- 4) It handles huge amounts of information accurately and efficiently than humans.
- 5) A.I. is considered very useful for transforming information into knowledge.
- 6) It reduces the time period for completing tasks compared to humans and thus improves work efficiency.
- 7) A.I. allows multitasking and reduces the workload on available resources.

- 8) Reducing the rate of human errors, as human error is considered a possibility in any field, but programmed computer applications do not make mistakes if they are programmed correctly.
- 9) Speed of decision-making: A.I. allows machines to make decisions faster than humans and deliver results as quickly as possible, while human decision-making is based on analyzing many factors, whether emotional or practical.
- 10) Facilitating daily life through daily applications such as Microsoft, various social media outlets, and Google, which allow searching for a specific place, communicating and interacting with people, responding to e-mail, and many others.

#### Disadvantages of A.I.:

- 1) A.I. lacks thinking outside the box. A.I. is able to learn over time through data and previous experiences, but it cannot be creative in its approach and its applications perform the tasks for which they were designed.
- 2) The cost of implementing A.I. is very high.
- 3) With regard to developing programs to implement A.I., there are many difficulties, which are that developing programs is slow and expensive, and there are a small number of competent programmers capable of developing programs to implement A.I..
- 4) Robots are considered one of the most important applications of A.I., as they replace the human element in jobs and thus increase the unemployment rate.
- 5) Machines that operate according to A.I. programs and techniques may lead to dangerous results for humans if they are placed at the disposal of unsafe hands.
- 6) A.I. makes humans lazier by automating most activities and actions.
- 7) A.I. negatively affects jobs in manufacturing industries, the electrical appliances industry, and customer service.
- 8) One of the most dangerous negatives is that A.I. may threaten people's right to life through advanced combat systems and technologies, such as drones that carry weapons, and robots on the battlefield, and the danger here is that these technologies and robots were designed with the aim of destruction and killing.
- 9) A.I. has negatives on the human and ethical levels. A.I. technologies and programs may lead to the separation of a person from his human surroundings, the deterioration of his relationships and a decrease in the volume of his human interactions, which threatens human relationships (Emad, 2016).

#### 3.3.4 The Future of A.I.

A.I. is a blossoming technological development, from software like Alexa, to the basic human driving system. Every aspect of these techniques has been put to the best use. It is now becoming an essential part of people's lives. People need this technology in companies and even families. A.I. has made its way across all sectors of society. Everyone uses this technology in one way or another. Moreover, it is adjusted for different age groups and industry sectors. The future of A.I. is more fascinating than ever to many people. People seem to have been immersed in this debate for years now. Some say that robots are the future and they will replicate humans exactly.

Another opinion is that human dependency on this sector will increase diversity. However, one thing is certain, A.I. is advancing faster than ever, and no one knows what might come next. Among all the discussion, there are some predictions that one can take into consideration:

**Prediction #1:** Global use of A.I. is already part of various daily activities. The future may make humans completely dependent on this technology. For example, self-driving cars are being developed with A.I. There is no limit to this technology if it wants to make the human experience easier.

**Prediction #2:** Integrating A.I. and Robotics Many have predicted that by applying this technology in robots, multiple new inventions could be created. There are many effects this can have on humans. Such robots will completely change the course of medicine and may be able to be able to treat anything easily. **Prediction #3:** A Simpler work environment unlike any other prediction, this prediction says that A.I. will only improve your work environment. It will make tedious tasks simpler and humans will be able to focus on key tasks. This will help in utilizing human resources to achieve their best potential. Therefore, the future can be limitless and changes can be unpredictable. However, one thing is certain that this technology will change the dynamics of our lives.

## 4. The Research Applied Framework

### 4.1 The Research Tool

The research tool was a questionnaire that was designed with reference to the theoretical framework and previous studies related to the research topic. The questionnaire consists of two main parts : The first part: included some personal information about the respondents, which included (gender, age, educational level, job, and work experience).

The second part: consists of the three sections. The first section is the A.I. and organization performance, which consists of (7) statements. The second section represents the A.I. and human resources management, and consists of (6) statements. The third section is the A.I. and time and costs reduction, consisting of (5) statements. A five-point Likert scale (strongly agree, agree, somewhat agree, disagree, strongly disagree) was used in designing the research questionnaire, and in line with the statistical analysis of the respondents' answers, a score of (5) was given as a weight for "strongly agree" answer, a score of (4) was given as a weight for "agree" answer. a score of (3) for "somewhat agree" answer, a score of (2) "disagree" answer, and a score of (1) for each "strongly disagree" answer.

To determine the role of A.I, and its impact on the human element in business organizations, according to the opinions of the respondents, the answers were classified based on the average into five levels, where the categories corresponding to these levels were found as follows:

Range = maximum answer value - minimum answer value = 5 - 1 = 4 Class

length = range / number of  
classes = 4 / 5 = 0.8

Depending on this figure, the general trend of the respondents' answers will be interpreted according to table (1).

In order to exclude incomplete questionnaires and ensure accuracy in the process of transcribing and coding answers, in addition to shortening effort and time, the questionnaire was designed electronically based on Google Forms, and the link of the questionnaire was obtained, which was sent to those targeted in the research.

**Table 1:** Trends of respondents' answer

Average	Level	Trend
1.0 - 1.8	Very Low	Strongly disagree
1.8 - 2.6	Low	Disagree
2.6 - 3.4	Medium	Somewhat agree
3.4 - 4.2	High	Agree
4.2 - 5.0	Very High	Strongly agree

Source: Prepared by the researchers

## 4.2 Research Population and sample

The research population consists of all employees of the Emirates Telecommunications Corporation in the United Arab Emirates, while the research sample was randomly selected from the research population in the Emirate of Abu Dhabi, where the questionnaire link was sent to (80) members of the targeted research population, and (70) individuals responded by (87.5%).

## 4.3 Research Statistical Methods

- 1) Cronbach's alpha reliability coefficient ( $\alpha$ -Cronbach).
- 2) Weighted average
- 3) Standard deviation
- 4) Skewness coefficient
- 5) One sample mean t-test
- 6) One-way analysis of variance

To obtain accurate results, the statistical program SPSS-26, was used.

## 4.4 Research Tool Reliability and Validity

### 4.4.1 Tool Reliability:

The reliability of the tool is defined as the degree of agreement in the answers of the respondents when the test, or an equivalent version of it, is repeatedly applied to the same group. The reliability coefficient takes a value between (0) and (1). If the value of the reliability coefficient is high, this is considered a good indicator of the reliability of the questionnaire, and thus the validity and suitability of the questionnaire for research purposes. As is known in the field of humanities and social sciences, the reliability coefficient is acceptable starting from (0.60). To verify the reliability of the research tool, the Cronbach-alpha reliability coefficient (Cronbach- $\alpha$ ) will be calculated.

### 4.4.2. Statistical validity:

The validity coefficient is an indicator of the internal consistency of the questionnaire statements. Statistically, it represents the square root of the reliability coefficient. The following table shows the reliability and validity coefficients for each section of the questionnaire and for the all-questionnaire sections. It is noted from table (2) that the reliability coefficients exceeded (0.70), and the validity coefficients exceeded (0.80). Based on the scale mentioned by George and Mallery, it can be said that the research tool has a high level of reliability and validity, which makes the respondents' answers to the questionnaire credible and thus the results that the research will reach can be relied upon (George & Mallery, 2013).

**Table 2:** Research tool reliability and validity

Sections	No. of statements	reliability coefficient	validity coefficient
Artificial intelligence and organization performance	7	0.73	0.85
Artificial intelligence and human resource management	6	0.85	0.92
Artificial intelligence and time and costs reduction	5	0.8	0.89
Overall	27	0.82	0.9

Source: SPSS-26 package results

## 5. Results and Discussion

### 5.1 Description of the respondents' characteristics:

Table (3) shows the numbers and percentages of respondents according to their characteristics. According to the nature of the gender distribution in the study population, the majority of the respondents in the sample were males (58; 82.9%), while females constituted (12; 17.1%). In terms of age, (44; 62.9%) of the respondents are from the age group (30-49 years), and the remaining (26; 31.1%) are from the age group (50 years and above). Regarding educational level, the majority of the respondents in the study sample had university educational level or above, as (32; 45.6%) of the respondents held a bachelor's degree, and the same number held post-bachelor's degrees. In addition, the sample included (5; 7.1%) respondents who held a diploma, and (1; 1.4%) who held a secondary school. The job of the majority of respondents in the sample are technicians (53; 75.7%), and the remainder (17; 24.3%) are administrators. As for practical experience, the vast majority of the respondents in the sample have (more than 10 years) of experience and their number is (65; 92.9%), and (4; 5.7%) of the respondents have (5-10 years) of experience, and there is (1; 1.4%) who has experience (less than 5 years). It is clear from the above that the majority of the respondents in the sample are middle-aged, hold high educational levels, work as technicians, and have many experience years, which leads to giving relatively correct and reliable perceptions and opinions regarding the role of A.I. and its impact on the human element in business organizations.

**Table 3:** Respondents' characteristics in the research sample

Characteristics	Groups	No.	%
Gender	Male	58	82.9
	Female	12	17.1
Age	18-29 years	-	-
	30-49 years	44	62.9
	50 years & more	26	31.1
Educational level	Secondary	1	1.4
	Diploma	5	7.1
	B.Sc.	32	45.6
	Post graduate	32	45.6
Job	Technicians	53	75.7
	Administrative	17	24.3
Practical experience	Less than 5 years	1	1.4
	5-10 years	4	5.7
	More than 10 years	65	92.9

Source: SPSS-26 package results

**5.2 Respondents' perceptions of the role of A.I. and its impact on the human element in business organizations:**

**5.2.1 Respondents' perceptions on the A.I. and organization performance statements section:**

The results of table (4) show that the respondents in the research sample believe that the Emirates

Telecommunications Corporation is interested in introducing modern and advanced technological software to improve the quality of production and service provided. A.I. technologies also provide the necessary information that serves the decision-making process, in addition to enabling A.I. to provide support technical level of the institution, as their levels of conviction were very high with averages ranging between (4.34 and 4.54) on a scale (5). The respondents in the sample also believe that the A.I. techniques used are proportional to work requirements, and that these techniques are characterized by effectiveness and their ability to predict danger or a problem, and that the use of these techniques has the ability to perform work in the organization efficiently, in addition to that there is satisfaction with the results of the decisions taken and approved. On A.I. techniques, their levels of conviction were high, with averages ranging between (3.91 and 4.14) on a scale (5).

In general, the respondents believe that the level of use of A.I. technologies improve the effectiveness of the Emirates Telecommunications Corporation's performance to a very high degree, at a rate of (86%), in light of the overall average of their answers on the statements of the A.I. section and the organization's performance, which was (4.31) on the scale consisting of (5) grades.

**Table 4:** Averages and standard deviations of respondents' perceptions on the A.I. and organization performance section statements

Statements	Average	Standard Deviation	Skewness Coef.	Significant	Level
1) The organization is interested in introducing modern and advanced technological software to improve the quality of production and service provided	4.54	0.630	-0.661	1	Very high
2) A.I. technologies provide the necessary information that serves the decision-making process	4.36	0.708	0.127	2	Very high
3) The A.I. techniques used are proportional to business requirements	4.11	0.941	-0.126	6	high
4) A.I. technologies are characterized by their effectiveness and their ability to predict danger or a problem	4.13	0.850	0.876	5	high
5) To use A.I. technologies, the ability to perform work in the organization efficiently	4.14	0.905	-0.041	4	high
6) A.I. enables the provision of technical support to the organization	4.34	0.778	-0.384	3	Very high
7) There is satisfaction with the results of decisions made and based on A.I. techniques	3.91	0.830	0.456	7	high
A.I. and organization performance section	4.31	0.753	0.815		Very high

Source: SPSS-26 package results

It is also clear from table (4) that the values of the skewness coefficients for all the section statements were limited between (-1) and (1). This ensures that the respondents' answers to these statements follow a normal distribution, and this ensures the validity of conducting the required statistical tests, including the one-sample mean t-test and F-test by one-way analysis of variance.

**5.2.2 Respondents' perceptions on the A.I. and human resources management statements' section**

The results of table (5) show that respondents in the research sample believe that: Emirates Telecommunications Corporation uses electronic recruitment programs to search for job applicants, and the Corporation has a strategy for digital transformation in human resources practices, and the Corporation supports the shift towards the use of A.I. techniques, and the use of A.I. it leads to the elimination of

some jobs in the organization, in addition to the fact that the use of A.I. leads to an increase in unemployment in society, as their levels of conviction regarding this were high, with averages ranging between (3.47 and 4.11) on a scale (5). The respondents in the sample are also neutral about the fact that A.I. can replace the human resource in the organization, with average of (3.03) on a scale of (5). In general, the respondents believe that the use of A.I. technologies can reduce reliance on human resources in the Emirates Telecommunications Corporation to a high degree (74%) in light of the overall average on the statements of the A.I. and human resources management section, which is (3.71) on the component scale. Out of (5) degrees.

It is also clear from table (5) that the values of the skewness coefficients for all section statements were between (-1) and (1). This ensures that the respondents' answers to these

statements follow a normal distribution, and this ensures the correctness of conducting the required statistical tests.

**Table 5:** Averages and standard deviations of respondents' perceptions on the A.I. and organization performance and human resources management section statements

Statements	Average	Standard Deviation	Skewness Coef.	Significant	Level
1) The organization uses electronic recruitment programs to search for job applicants	3.67	0.974	0.745	4	high
2) The organization has a strategy for digital transformation in human resources practices	4.04	0.859	0.321	2	high
3) The Foundation supports the shift towards the use of A.I. technologies	4.11	0.843	0.125	1	high
4) The use A.I. leads to the elimination of some functions in the organization	3.73	1.034	-0.342	3	high
5) The use of A.I. increases unemployment in society	3.47	0.959	-0.251	5	high
6) A.I. can replace the human resource in the organization	3.03	1.154	0.258	6	neutral
7) A.I. and human resources management section	3.71	0.617	0.457		high

Source: SPSS-26 package results

### 5.2.3 Respondents' perceptions on the A.I. and reducing time and costs statements' section:

The results of table (6) show that the respondents in the research sample believe that the use of A.I. techniques leads to reducing operating and production costs, and the use of these techniques leads to a shortening of completion times, and the use of these techniques can lead to accelerating the time to market, as the use of these technologies in service institutions can reduce waiting times and reduce customer service costs, in addition to the fact that the use of these technologies leads to the rapid provision of solutions to the problems facing the Emirates Telecommunications Corporation, as their levels of conviction were very high regarding this, with averages ranging between (4.34 and 4.54) on scale (5). The respondents in the sample also believe that the A.I. techniques used are proportional to work requirements, and that these techniques are characterized by effectiveness and their ability to predict danger or a problem, and that the use

of these techniques has the ability to perform work in the organization efficiently, in addition to that there is satisfaction with the results of the decisions taken and approved. On A.I. techniques, their levels of conviction were high with averages ranging between (4.21 and 4.49) on a scale. (5)

In general, the respondents believe that organizations' use of A.I. technologies reduce operating and production costs in the Emirates Telecommunications Corporation to a very high degree (88%) in light of the overall average on the statements of the A.I. section and reducing time and costs, which was (4.41) on the scale consisting of (4.41) on the scale consisting of (5) degrees.

Averages and standard deviations of respondents' perceptions of the statements related to A.I. and reducing time and costs.

**Table 6:** Averages and standard deviations of respondents' perceptions on the A.I. and reducing time and costs section statements

Statements	Average	Standard Deviation	Skewness Coef.	Significant	Level
1) The use of A.I. technologies lead to reducing operating and production costs	4.39	0.728	-0.345	3	Very high
2) The use of A.I. techniques lead to shortening completion times	4.49	0.654	0.452	1	Very high
3) Using AI techniques can speed up time to market	4.24	0.806	-0.105	4	Very high
4) The use of A.I. technologies in service institutions can reduce waiting times and reduce customer service costs	4.4	0.623	0.745	2	Very high
5) The use of A.I. technologies lead to rapid provision of solutions to problems facing the organization	4.21	0.74	0.658	5	Very high
6) A.I. and reduce time and cost's section	4.41	0.625	0.387		Very high

Source: SPSS-26 package results

It is also clear from table (6) that the values of the skewness coefficients for all section statements were limited between (-1) and (1). This ensures that the respondents' answers to these statements follow a normal distribution, and this ensures the correctness of conducting the required statistical tests.

### 5.3 Research hypotheses testing

#### 5.3.1 Testing the first research hypothesis:

The first research hypothesis states that "organizations' use of A.I. technologies improve the effectiveness of

organizations' performance". To test this hypothesis, we use a t-test for one-sample mean, assuming that the hypothesized mean is (3.4) as it represents the upper limit for the category of answers with a "neutral" or "somewhat agree" level. The basic condition for using this test is that the data must follow a normal distribution and this is confirmed by the values of the skewness coefficients presented in tables (4), (5) and (6). Table (7) displays the results of this test for the A.I. and organization performance section statements.

**Table 7:** t-test of respondents’ perceptions average about the statements of the A.I. and the organization’s performance statements section (hypothetical mean = 3.4)

Statements	Mean	S.E. for mean	t-test	Prob.
1) The organization is interested in introducing modern and advanced technological software to improve the quality of production and service provided	4.54	0.075	15.182*	0
2) A.I. technologies provide the necessary information that serves the decision making process	4.39	0.085	11.649*	0
3) The A.I. techniques used are proportional to business requirements	4.11	0.112	6.351*	0
4) A.I. technologies are characterized by their effectiveness and their ability to predict danger or a problem	4.13	0.101	7.172*	0
5) To use A.I. technologies, the ability to perform work in the organization efficiently	4.14	0.108	6.864*	0
6) A.I. enables the provision of technical support to the organization	4.34	0.093	10.139*	0
7) There is satisfaction with the results of decisions made and based on A.I. techniques	3.91	0.099	5.187*	0
Overall	4.31	0.09	10.164*	0
* The test is significant at level (0.05)				

Source: SPSS-26 package results

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to which A.I. technologies provide the necessary information that serves the decision-making process in an organization Emirates Telecom is “very high”

- There is a significant difference between the mean of the third statement and the hypothetical mean, based on the probability value of the t-test, (0.000) which is less than the (0.05) significance level. Therefore, the degree of use of A.I. techniques in the Emirates Telecommunications Corporation, which is commensurate with the work requirements is "high."
- There is a significant difference between the mean of the fourth statement and the hypothetical mean, based on the probability value of the t-test, (0.000) which is less than the (0.05) significance level. Therefore, the A.I. techniques used in the Emirates Telecommunications Corporation are distinguished by their effectiveness and their ability to predict risk or a problem with a “high” score.
- There is a significant difference between the mean of the fifth statement and the hypothetical mean, based on the probability value of the t-test, (0.000) which is less than the (0.05) significance level. Therefore, the use of A.I. techniques in the Emirates Telecommunications Corporation has the ability to perform business in the organization is efficient and has a “high” degree.
- There is a significant difference between the mean of the sixth statement and the hypothetical mean, based on the probability value of the t-test of (0.000) which is less than the (0.05) significance level. Therefore, A.I. enables the provision of technical support at the Emirates Telecommunications Corporation and the degree is “high.” very."
- There is a significant difference between the mean of the seventh statement and the hypothetical mean, based on the probability value of the t-test, (0.000) which is less than the (0.05) significance level. Accordingly, there is satisfaction with the results of the decisions taken and based on A.I. techniques in the Emirates Telecommunications Corporation. and a “high” degree.

• There is a significant difference between the mean of the first statement and the hypothetical mean, based on the probability value of the t-test, (0.000) which is less than the (0.05) significance level. Therefore, the degree of interest of the Emirates Telecommunications Corporation in introducing modern and advanced technological software to improve the quality of production and service is “very high”

• There is a significant difference between the mean of the second statement and the hypothetical mean, based on the probability value of the t-test, (0.000) which is less than the (0.05) significance level. Therefore, the degree

In general, we find that the answers’ averages of the respondents in the research sample to all the statements on the A.I. and organization performance section, as well as to the overall section, are greater than the hypothesized average (3.4), and this means that there is a significant difference between the average answers on the section and the hypothesized average, based on the probability value of the



t-test (0.000), which is (0.000) less than the (0.05) significance level. Therefore, the degree of use of A.I. in improving the performance of the Emirates Telecommunications Corporation is “very high”. Therefore, it can be said that the first research hypothesis, which stated that “organizations’ use of A.I. technologies improve the effectiveness of organizations’ performance” has been achieved. This result is consistent with the results of a study (Rakiq, 2015) that the use of A.I. techniques provide technical support to the organization, provides information that serves the decision-making process, and is effective and capable of predicting expected dangers (Raqiq, 2015).

**5.3.2 Testing the second research hypothesis:**

The second research hypothesis states that “organizations’ use of A.I. technologies can reduce dependence on human resources”. Table (8) displays the results of this test for the A.I. and human resources management section statements. The following is evident from the table:

- There is a significant difference between the mean of the first statement and the hypothetical mean, based on the probability value of the t-test, (0.023) which is less than the (0.05) significance level. Therefore, the degree to which Emirates Telecommunications Corporation uses electronic recruitment programs to search for job applicants is “High .”
- There is a significant difference between the mean of the second statement and the hypothetical mean, based on the probability value of the t-test, (0.000) which is less than the (0.05) significance level. Therefore, the degree to which the Emirates Telecommunications Corporation

has a strategy for digital transformation in human resources practices is “High.”

- There is a significant difference between the mean of the third statement and the hypothetical mean, based on the probability value of the t-test of (0.000) which is less than the (0.05) significance level.
- Therefore, Emirates Telecommunications Corporation supports the shift towards using A.I. technologies to a “high” degree.
- There is a significant difference between the mean of the fourth statement and the hypothetical mean, based on the probability value of the t-test, (0.000) which is less than the (0.05) significance level. Therefore, the use of A.I. in the Emirates Telecommunications Corporation leads to the elimination of some jobs in the institution has a “high” degree.
- There is no significant difference between the mean of the fifth statement and the hypothetical mean, based on the probability value of the t-test, (0.535) which is greater than the (0.05) level significance level. Therefore, there is some neutrality regarding the use of A.I. techniques in the Emirates Telecommunications Corporation to increase unemployment in society.
- There is a significant difference between the mean of the sixth statement and the hypothetical mean, based on the probability value of the t-test, (0.009) which is less than the (0.05) significance level, and since the value of the t-test is negative, this indicates that there is opposition from the respondents in the research sample raised the question that A.I. can replace the human resource in the Emirates Telecommunications Corporation, and that the degree of achieving this is “low”.

**Table 8:** t-test of respondents’ perceptions average about the statements of the A.I. and human resources management statements section (hypothetical mean = 3.4)

Statements	Mean	S.E. for mean	t-test	Prob.
1) The organization uses electronic recruitment programs to search for job applicants	3.67	0.116	2.332*	0.023
2) The organization has a strategy for digital transformation in human resources practices	4.04	0.102	6.264*	0
3) The Foundation supports the shift towards the use of A.I. technologies	4.11	0.101	7.085*	0
4) The use A.I. leads to the elimination of some functions in the organization	3.73	0.124	2.657*	0.01
5) The use of A.I. increases unemployment in society	3.47	0.115	0.623 <sup>n.s</sup>	0.535
6) A.I. can replace the human resource in the organization	3.03	0.138	-2.692*	0.009
Overall	3.71	0.074	4.260*	0

\* The test is significant at level (0.05) n.s The test is not significant

Source: SPSS-26 package results

In general, we find that the averages of the answers of the respondents in the research sample to all the A.I. and human resources management section statements, as well as to the overall section, are greater than the hypothesized average (3.4), and this means that there is a significant difference between the mean answers on the section and the hypothesized mean, based on the probability value of the t-test of (0.000), which is less than (0.05) significance level, the use of A.I. techniques in the Emirates Telecommunications Corporation can reduce dependence on human resources to a “high” degree. Therefore, it can be said that the second research hypothesis, which stated that “organizations’ use of A.I. technologies can reduce dependence on human resources,” has been achieved. This result is consistent with the results of the study (Al-Saleh, 2022), which demonstrated the positive impact of using A.I. techniques in human resources management, especially in

the processes of attracting and employing talent (Al-Saleh, 2022).

**5.3.3 Testing the third research hypothesis:**

The third research hypothesis states that “organizations’ use of A.I. technologies reduce operating and production costs”. Table (9) displays the results of this test for the A.I. and organization performance section statements.

**Table 9:** t-test of respondents’ perceptions average about the statements of the A.I. and reducing time and cost’s section statements (hypothetical mean = 3.4)

Statements	Mean	S.E. for mean	t-test	Prob.
1) The use of A.I. technologies lead to reducing operating and production costs	4.39	0.087	11.326*	0

2) The use of A.I. techniques lead to shortening completion times	4.49	0.078	13.896*	0
3) Using AI techniques can speed up time to market	4.24	0.096	8.745*	0
4) The use of A.I. technologies in service institutions can reduce waiting times and reduce customer service costs	4.4	0.074	13.425*	0
5) The use of A.I. technologies lead to rapid provision of solutions to problems facing the organization	4.21	0.088	9.206*	0
Overall	4.41	0.074	13.570*	0
* The test is significant at level (0.05)				

Source: SPSS-26 package results

It is evident from Table (9) that:

- There is a significant difference between the mean of the first statement and the hypothetical mean, based on the probability value of the t-test, (0.000) which is less than the (0.05) significance level. Therefore, the use of A.I. techniques in the Emirates Telecommunications Corporation leads to reducing operating and production costs to a “very high” level.
- There is a significant difference between the mean of the second statement and the hypothetical mean, based on the probability value of the t-test, (0.000) which is less than the (0.05) significance level. Therefore, the use of A.I. techniques in the Emirates Telecommunications Corporation will lead to a shortening of completion times to a “very high” level.
- There is a significant difference between the mean of the third statement and the hypothetical mean, based on the probability value of the t-test, (0.000) which is less than the (0.05) significance level. Therefore, the degree of use of A.I. techniques in the Emirates Telecommunications Corporation can lead to accelerating time to market “very high” level.
- There is a significant difference between the mean of the fourth statement and the hypothetical mean, based on the probability value of the t-test, (0.000) which is less than the (0.05) significance level. Therefore, the use of A.I. techniques in the Emirates Telecommunications

Corporation enables reducing waiting times and reducing customer service costs are “very high”.

- There is a significant difference between the mean of the fifth statement and the hypothetical mean, based on the probability value of the t-test, (0.000) which is less than the (0.05) significance level. Therefore, the use of A.I. techniques in the Emirates Telecommunications Corporation will lead to the rapid provision of solutions to the problems that facing is “very high” level.

In general, we find that the averages of the answers of the respondents in the research sample to all the of A.I. and reducing time and costs section statements, as well as to the section overall, are greater than the hypothesized average (3.4), and this means that there is a significant difference between the mean of the answers on the section and the hypothesized mean, based on the probability value of the ttest of (0.000), which is less than the (0.05) significance level, the use of A.I. techniques in the Emirates

Telecommunications Corporation can reduce dependence on human resources to a “very high” level, and therefore, it can be said that the third research hypothesis, which states that “organizations’ use of A.I. technologies reduces operating and production costs,” has been achieved. This result is consistent with the results of the (Oracle, 2018) report, which showed that the use of A.I. techniques work to shorten time and reduce costs

**5.3.4 Testing the fourth research hypothesis:**

The fourth research hypothesis states that “there are statistically significant differences between the respondents’ opinions regarding the role of A.I. and its impact on the human element in business organizations, due to the level of education, job, and experience years”. To test this hypothesis, we use the F- test through one-way analysis of variance .

**The impact of the characteristics of the respondents on their perceptions about the A.I. and the organization’s performance section:**

Table (10) displays the results of the one-way analysis of variance to indicate the differences between the respondents’ perceptions about the A.I. and the organization’s performance section.

**Table 10:** One-way analysis of variance of respondents’ perceptions about the A.I. and the organization’s performance section according to for their characteristics

Characteristics	Sources of variation	Sum of squares	Degree of freedom	Mean of squares	F-test	Prob.
Educational Level	Between groups	3.249	3	1.083	2.678 <sup>n.s</sup>	0.054
	Within groups	26.692	66	0.404		
	Total	29.942	69			
Job	Between groups	0.029	1	0.029	0.067 <sup>n.s</sup>	0.798
	Within groups	29.913	68	0.44		
	Total	29.942	69			
Experience years	Between groups	2.102	2	1.051	2.530 <sup>n.s</sup>	0.087
	Within groups	27.839	67	0.416		
	Total	29.942	69			

n.s. The test is not significant

Source: SPSS-26 package results

The results of table (10) show the following:

- **Academic level:** The probability value of the F-test resulting from the one-way analysis of variance was (0.054), and this value is greater than the (0.05) significance level, which indicates that no statistically significant differences between the respondents' perceptions about the A.I. and the organization's performance section attributable to academic level. Meaning that no matter how different the educational levels of the respondents are, their impressions and perceptions about the role of A.I. in improving the organization's performance will not differ.
- **Job:** The probability value of the F-test resulting from the one-way analysis of variance was (0.798), and this value is greater than the (0.05) significance level, which indicates that no statistically significant differences between the respondents' perceptions of the A.I. and the organization's performance section attributed to the job, meaning that no matter how different the respondents' jobs are, their impressions and perceptions about the

role of A.I. in improving the organization's performance will not differ.

- **Experience years:** The probability value of the F-test resulting from the one-way analysis of variance was (0.087), and this value is greater than the (0.05) significance level, which indicates that no statistically significant differences between the respondents' perceptions about the A.I. and the organization's performance section attributable to the job, i.e. no matter how different the respondents' experience years are, their impressions and perceptions about the role of A.I. in improving the organization's performance will not differ.

**The impact of the characteristics of the respondents on their perceptions about the A.I. and human resources management section:**

Table (11) displays the results of the one-way analysis of variance to indicate the differences between the respondents' perceptions on the A.I. and human resources management section.

**Table 11:** One-way analysis of variance of respondents' perceptions about the A.I. and human resources management section according to their characteristics

Characteristics	Sources of Variation	Sum of squares	Degree of Freedom	Mean of squares	F-test	Prob.
Educational Level	Between groups	3.384	3	1.128	3.593	0.018
	Within groups	20.72	66	0.314		
	Total	24.105	69			
Job	Between groups	0.019	1	0.019	0.054 <sup>n.s</sup>	0.817
	Within groups	24.086	68	0.354		
	Total	24.105	69			
Experience years	Between groups	0.48	2	0.24	0.680 <sup>n.s</sup>	0.51
	Within groups	23.625	67	0.353		
	Total	24.105	69			
* The test is significant at level (0.05) n.s The test is not significant						

The results of Table (11) show the following:

- **Academic level:** The probability value of the F-test resulting from the one-way analysis of variance was (0.018), and this value is less (0.05) significance level, which indicates that there are statistically significant differences between the respondents' perceptions about A.I. and human resources management section due to educational level. The analysis showed that the average answers of respondents with an academic level (post-B.Sc.) of (3.90) is greater than the average according to the other categories (diploma; 3.67, B.Sc.; 3.47), which indicates that respondents with higher degrees believe more than others that the use of A.I. applications in the Emirates Telecommunications Corporation reduces dependence on human resources management, while others believe otherwise.
- **Job:** The probability value of the F-test resulting from the one-way analysis of variance was (0.817), and this value is greater than (0.05) significance level, which indicates that no statistically significant differences between the respondents' perceptions of the A.I. and human resources management section attributable to the

job, i.e. no matter how different the respondents' jobs are, their impressions and perceptions about the role of A.I. in reducing dependence on human resources will not differ.

- **Experience years:** The probability value of the F-test resulting from the one-way analysis of variance was (0.510), and this value is greater than (0.05) significance level, which indicates that no statistically significant differences between the respondents' perceptions of the A.I. and human resources management section attributable to the job. Meaning that, regardless of the respondents' experience years, their impressions and perceptions about the role of A.I. in reducing dependence on human resources will not differ.

**The impact of the characteristics of the respondents on their perceptions about the A.I. and reducing time and costs section:**

Table (12) displays the results of the one-way analysis of variance to indicate the differences between the respondents' perceptions on the A.I. and reducing time and costs section.

**Table 12:** One-way analysis of variance of respondents' perceptions about the A.I. and reducing time and costs section according to their characteristics

Characteristics	Sources of variation	Sum of squares	Degree of freedom	Mean of squares	F-test	Prob.
Educational Level	Between groups	0.938	3	0.313	0.969 <sup>n.s</sup>	0.413
	Within groups	21.295	66	0.323		
	Total	22.234	69			
Job	Between groups	0.008	1	0.008	0.025 <sup>n.s</sup>	0.875
	Within groups	22.226	68	0.327		
	Total	22.234	69			
Experience years	Between groups	1.153	2	0.577	1.832 <sup>n.s</sup>	0.168
	Within groups	21.081	67	0.315		
	Total	22.234	69			
<b>n.s The test is not significant</b>						

The results of Table (12) show the following:

- **Academic level:** The probability value of the F-test resulting from the one-way analysis of variance was (0.413), and this value is greater than (0.05) significance level, which indicates that no statistically significant differences between the respondents' perceptions about the A.I. and reducing time and costs section attributable to academic qualifications. Meaning that no matter how different the educational levels of the respondents are, their impressions and perceptions about the role of A.I. in reducing time and costs will not differ.
- **Job:** The probability value of the F-test resulting from the one-way analysis of variance was (0.875), and this value is greater than (0.05) significance level, which indicates that no statistically significant differences between the perceptions of the respondents about the A.I. and the reduction of time and costs section attributable to the job, i.e. No matter how different the respondents' jobs are, their impressions and perceptions about the role of A.I. in reducing time and costs will not differ.
- **Experience years:** The probability value of the F-test resulting from the one-way analysis of variance was (0.168), and this value is greater than (0.05) significance level, which indicates that no statistically significant differences between the perceptions of the respondents about the A.I. and the reduction of time and costs section attributed to the job. Meaning that, regardless of the respondents' years of experience, their impressions and perceptions about the role A.I. in reducing time and costs will not differ.

From the above, we find that the fourth research hypothesis, which stated, "There are statistically significant differences between the opinions of the respondents regarding the role of A.I. and its impact on the human element in business organizations, due to the academic level, job, and experience years" was achieved to a small extent, specifically with regard to the impact of the academic level. For the respondents and the A.I. and human resources management section.

## 6. Conclusions

- 1) There is a significant impact of the use of A.I. techniques in the Emirates Telecommunications Corporation on improving the organization's performance through the interest in introducing modern and advanced technological software to improve the quality of production and service provided, as well as

the ability to provide the necessary information that serves the decision-making process, as well as the efficient performance of business in the organization. .

- 2) There is a significant impact of the use of A.I. techniques in the Emirates Telecommunications Corporation on reducing dependence on human resources through attracting talent, recruiting, analyzing and evaluating performance, monitoring attendance and working times, and automating human resources management task.
- 3) There is a significant impact of the use of A.I. technologies in the Emirates Telecommunications Corporation on reducing operating and production time and costs, accelerating time to market, reducing waiting times and reducing customer service costs, as well as quickly providing solutions to problems facing the organization.
- 4) The perceptions and impressions of employees at the Emirates Telecommunications Corporation regarding the axis of artificial intelligence and the organization's performance were very high, and regarding the A.I. and human resources management section, they were high, and with regard to the A.I. and reducing time and costs section, they were very high.
- 5) The perceptions and impressions of employees at the Emirates Telecommunications Corporation that A.I. can replace the human resource in the organization were neutral. Some human resources specialists believe A.I. aims to replace the human element in human resources management in organizations, while the other party views the role of A.I. as an assistant to human resources specialists in their jobs and saves them time and effort to allow them to focus on the deep tasks of resource departments humanity.
- 6) It was found that there is a significant effect of the educational level of employees at the Emirates Telecommunications Corporation in generating impressions for them that the use of A.I. works to reduce dependence on human resources, and these impressions increase as the educational level of employees increases.
- 7) There was no significant effect of the jobs and experience years of the respondents on their opinions and perceptions about the use of A.I. in improving the organization's performance and reducing time and costs.

## 7. Recommendations

- 1) The necessity of expanding the applications of A.I. according to the needs of departments and departments for each type of artificial intelligence in order to advance the reality of the Emirates Telecommunications Corporation to a better level.
- 2) The necessity of enrolling Emirates Telecommunications Corporation employees in intensive courses in the field of A.I. to keep pace with the latest global developments in this field to raise the efficiency of the organization's employees.
- 3) Opening the way for creativity and motivating employees to innovate in the use of A.I. technologies in human resources practices by enabling new practices in recruitment, attraction and selection that rely on A.I., and evaluating the impact of their use on the results. Hope from these operations.
- 4) At the level of scientific research, the research recommends conducting further studies and research on evaluating the effectiveness of the use of A.I. techniques and their impact on all functional practices in various business organizations.

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