The implications of artificial intelligence on the general theory of administrative decision (The algorithmic administrative decision as a model)

Dr. Suhaib Ahmad Eid El-manaseer

(Assistant Professor of Administrative Law)

Faculty of Law/ Zarqa University

Abstract: **Objectives: This study aimed to elucidate the implications of using and integrating artificial intelligence techniques in the process of managerial decision-making. Specifically, it focused on the impact of algorithms on the general concept of managerial decision-making, which revealed a novel depiction of decision-making known as "algorithmic managerial decision-making".**

Methodology: In this study, we will use the analytical approach and the descriptive approach of administrative legislation related to the subject of the study.

Results: This study reached a number of results centered on the importance and necessity of introducing and adapting artificial intelligence techniques of all kinds and forms in the administrative decision-making process.

Recommendations: This study reached a number of results, the most important of which is the recommendation of the Jordanian legislator to make amendments to the legislation governing the process of issuing administrative decisions in a way that allows the use of artificial intelligence techniques - especially algorithms in that process, similar to what he previously did by allowing resort to electronic means in that process.

Keywords: **administrative decision, algorithms, artificial intelligence.**

1. INTRODUCTION

The world witnessed multiple waves in terms of technical and technological development that led to an impact on various legal concepts and theories, and the public administration and related concepts and theories was not immune from these developments, and these developments were reflected in the general theory of the administrative decision starting from its electronicity with what is known as the electronic administrative decision So that it became the mainstay of the electronic public administration that all public administrations aim to apply. As a result of successive technical and technological developments, the so-called "artificial intelligence" has emerged as a technology that the public administration can resort to and use in making its administrative decisions, in the form of administrative decisions that base their work on logical processes and sentences that are eventually called "algorithmic administrative decisions."

1.1 Study importance:

The importance of this study lies in highlighting the impact that will result from the public administration's employment of artificial intelligence techniques in the field of issuing administrative decisions. This study also aims to show the role of these technologies and their impact on the general theory of administrative decisions and to show the impact that the public administration will reap from this employment in terms of clarifying the concept of the algorithmic administrative decision

and its pillars, and the role of artificial intelligence in achieving the quality of issuing that decision, In addition to drawing and attracting the attention of administrative leaders to the need to adopt artificial intelligence techniques in the administrative decision-making process and to indicate the financial and legal difficulties that may face the public administration in the event that it adopts the employment of artificial intelligence techniques in the field of making and issuing administrative decisions.

1.2 Study Problem

The problem of this study lies in the fact that the public administration will not be able to stand idly by from keeping pace with technical and technological developments at all levels that affect the work of public administrations in terms of administrative activities or legal actions, as happened with them at the start of the technological revolution, where electronic was included in these activities and actions. Considering that artificial intelligence technologies are the mutated version of these technologies, it is also envisaged that the public administration will resort to the use of artificial intelligence in its various areas of interest.

1.3 Study questions

1- What is the perceived legal concept of the algorithmic administrative decision?

2- What are the considerations and controls that the public administration can rely on in framing and legally rooting the algorithmic administrative decision?

3- What is the perceived effect of using artificial intelligence techniques on the general theory of administrative decisions in terms of concept?

4- What is the perceived effect of using artificial intelligence techniques on the pillars and quality of administrative decisions?

5- What is the intended benefit of using artificial intelligence techniques in the administrative decision-making process?

1.4 Study methodology

In this study, we will use the analytical approach by analyzing the various legal texts that the public administration resorts to in making its administrative decisions and showing the extent to which these texts are adapted and their ability to absorb developments in the field of artificial intelligence.

1.5 Study plan

This study was divided into two requirements, the first of which was devoted to talking about the nature of artificial intelligence, while the second requirement was devoted to talking about the nature of the algorithmic administrative decision.

1.6 Study difficulties

1- The scarcity of specialized legal and jurisprudential references or any previous studies related to the subject of the study, and this study is almost the first of its kind.

2- The scarcity of theses and legal research dealing with the subject of the study.

3- The lack of judicial rulings issued by the administrative judiciary regarding this study.

2. THE NATURE OF ARTIFICIAL INTELLIGENCE

Artificial intelligence is considered the product of steady technical and technological development, and the most important product of globalization and its repercussions on all aspects of economic, social, administrative, and legal life. Therefore, it has become imperative for the public administration to investigate these products and integrate them into its administrative system based on the flexibility of the rules of administrative law that were printed with that character so that the public administration can Meet the needs of individuals and satisfying their desires

Artificial intelligence technologies have had a positive role in developing the government contracting system through the use of "Blockchain" technologies [1], and it is worth noting that most of the international efforts are pouring into maximizing

the role of artificial intelligence technologies in various sectors - especially the vital ones, The public administration can also benefit from these technologies in the field of governance of its boards of directors and departments, as is the case in private sector companies that have become safe countries for investment [2], It is noteworthy that the Chinese government has placed artificial intelligence and the application of its system in aspects of life and various fields at the top of its priorities by promoting it through the thirteenth five-year plan (2016-2020), in addition to that it has allocated about 15 billion dollars to implement this vision, striving to achieve global leadership. In that field [3], and at the level of the research and academic aspect, it should be noted that the follower of research studies and academic circles specialized in the science of artificial intelligence will find that they have been divided between supporters and opponents as to whether this science has been generalized in all scientific and practical aspects, and we will in this requirement explain The concept of artificial intelligence and its advantages are as follows:

2.1 The concept of artificial intelligence and its Characteristics

There have been many efforts that have sought to define a concept of artificial intelligence, but this definition has faced many difficulties, as these efforts have varied, each according to its specialization and from the angle viewed by the audience of researchers and those international organizations or bodies that paid great attention to this topic, and reached the research of this concept and its implications on many vital sectors in all countries of the world, such as those implications related to national security and the future of public and private jobs, and it is worth noting that this concept has also attracted the attention of researchers and academics-especially – In the field of law, because of the doctrinal and legal controversy that this concept and its implications will raise, it has made voices clamor to find a legal organization to confront these repercussions on various branches of law, whether public or private.

2.1.1 The concept of artificial intelligence

Artificial intelligence is defined as:" science or technology based on the claim that it is possible to describe and simulate human intelligence in technical systems and devices"[4]. It is also defined as: "a branch of computer science, mainly concerned with the automation of intelligent behavior that may take into account this behavior from all areas of the human, animal, and plant world. It is also defined as:" a simulation of human intelligence and understanding of its nature by creating computer programs capable of simulating intelligent human behavior". Grewal defined it as:" a mechanical simulation system that is based on collecting, processing and disseminating knowledge and information related to various sectors in the world to benefit from it in the form of practical intelligence". If we examine the text of Article 2 of the Jordanian Electronic Transactions Law, we find that it contains a nucleus to define the concept of artificial intelligence through the legislator's concept of an electronic intermediary as an electronic program used to execute automatic orders in order to create and send information messages[5]. This is what the UAE e-commerce and Transactions Law states, considering an automated e-broker as an electronic program or system that works without human intervention in response times [6]. From our point of view, we believe that what the Jordanian and Emirati legislators mentioned in their legislations regarding the development of a legal concept of artificial intelligence is somewhat flawed due to the lack of a comprehensive concept of technical aspects on the one hand, and legal aspects on the other hand, and we see the reason for this is the novelty of starting to use the system and its introduction into various walks of life, which necessitates us to reconsider all those aspects from a technical and legal point of view, especially those related to the determination of civil and criminal responsibilities[7]. There is no doubt that the features of the government transformation process with regard to the management of Public Utilities will lead to demographic changes and the emergence of unique technical innovations based on artificial intelligence technologies. Self-driving modes of transport have begun to spread little by little, and specialists expect that public administrations will move from simply responding to requirements to an initiative for the development of modern technologies, especially in the field of administrative decision-making.

The researcher believes that artificial intelligence in abstract terms is: "a set of complex logical programs and sentences that form among themselves a computer system that is capable of carrying out human actions based on human intelligence through those programs and sentences that are capable of probabilistic prediction of human behavior." As for the field of administrative law, we can define it as: "The public administration's use of computer software and the logical sentence in the field of exercising its administrative activity and concluding its legal actions in a manner that achieves the public interest in order to satisfy the needs and desires of individuals."

2.1.2 Characteristics of artificial intelligence

1. Symbolic representation: Artificial intelligence software is characterized by its ability to use a logical sentence (algorithms), unlike what computers resort to in their work, as they do their work based on the use of language (1.0), and artificial intelligence is based in its work on binary non-digital codes [8].

2. Diligence: Artificial intelligence techniques do not have specific, known, or ready solutions to the problem to be solved or required to do so, as this process is based on the idea of diligence in finding the appropriate solution to the presented problem, taking into account the transition to other solutions in the event that the first method does not succeed [9].

3. Incomplete information: Artificial intelligence programs are characterized by their ability to find solutions to problems and maintain and achieve goals, in addition to their ability to make decisions in the absence of confirmed data or information, so these programs are able to search, recognize patterns, learn, plan and extrapolate, And this software has a fertile field for work, especially in the field of medicine, when there is no confirmed information about the patient and there is also no room for waiting, as these techniques diagnose the condition and then make the decision to diagnose the patient and as a result subject him to treatment ().

4. Representing knowledge: Artificial intelligence is based in its work on the possibility of finding a match between the reality or the problem that artificial intelligence software was asked to solve and the inferential operations stored on computer databases.

5. Conflicting data: Artificial intelligence software can deal with data related to the problem to be solved in the event that it contradicts or conflicts with each other based on its ability to analyze logically, cognitive representation and diligence, and with the help of incomplete information.

6. The ability to absorb, learn, justify, and correct all that is new: Artificial intelligence software is distinguished for its superior ability to absorb and learn what is new, through observing and benefiting from previous experiences that were stored through software and logical sentences according to certain storage arrangements.

2.2 The role of expert systems in administrative decision-making

Artificial intelligence systems form an extended family that includes many smart systems that can be adapted to the administrative decision-making process, such as expert systems, neural networks, natural language processing, and fuzzy logic applications. Logic, Case-Based, Intelligent Agent, and Genetic Algorithms.

The idea of expert systems is based on a computer system and software dedicated to replacing the human element in the field of decision-making, and some researchers consider these systems to be the key to success in the field of artificial intelligence despite many smart developments in the fields of human knowledge, but it is difficult to determine the level of effectiveness of these systems because of There is no general method to analyze that dependence and measure their adequacy, but another side of researchers sees the effectiveness of these systems and their ability to solve problems of whatever nature, they are able to solve problems and find alternatives and reach a level beyond the level and ability of human experts, especially in solving complex problems as a member of the extended artificial intelligence family[10].

2.2.1 The concept of expert systems

There were many opinions about defining the concept of these systems, but we did not find a specific concept for them. Some researchers believe that expert systems are: "computer-based information systems, consisting of parts that are a tool for interacting with the user, an inference tool, and stored experiences, and their purpose is to provide advice On finding a solution to problems in a particular field, these tips are similar to those given by a human expert" [11]. Another aspect of the researchers believes that expert systems are: "a set of software that is developed to collect tacit knowledge in a very specific area of human experience that they collect, as it is developed in the form of a set of rules and software that has the property of storage and retrieval" [12]. Others have defined it as: "systems that rely on human experience through rare means through integrated programs to mechanize traditional processes and benefit from knowledge and human experiences in preparing them and making these experiences, knowledge and experiences considered bases for solving problems and making decisions in some specialized fields such as the medical field, industrial control, making decisions, and so on [13]. From our point of view, we see that the expert systems in the field of administrative decisions are: "a set of software that is built on the basis of human experience, so that it takes the place of the human element in analyzing the stored data in the

form of programs in order to solve the problems presented to it and issue them in the form of administrative decisions with the aim of Managing state facilities, organizing the affairs of its employees, and assisting all administrative authorities at all levels in this.

2.2.2 Elements and components of expert systems

A- knowledge base: - the knowledge base is represented by the human cognitive model and part of the expert system based on the following facts: "definitions, hypotheses, criteria, and probabilities from logical and mathematical rules and assumptions that are logically proportional to each other are collected through the expert system and by the so-called" knowledge engineer"[14].

B- Software resources [15]: - it is a set of software that expert systems rely on in their work and consists of the following:-

1. Inference Engine: It is based on securing the search and inference feature based on previously stored information, facts, and precedents, and compares them with the issue presented to it through an accurate sequence and harmonious dialogue and links it with stored rules so that it can find the appropriate solution to the issue presented to it and then issue advice and the appropriate solution.

2. User Interface Programs: It is a series of programs that allow the user to interact and communicate with expert systems, by allowing him to enter information and data related to the problem, and ask questions and answer them in the appropriate language for the user.

3. User Interface: It is software that facilitates the process of dealing, interacting and communicating with expert systems using a special language provided with inference interpretation services. It is software that aims to display the facts and knowledge bases used by that system in order to reach correct and accurate advice [16].

3. WHAT IS ALGORITHMIC ADMINISTRATIVE DECISION

The administrative decision is considered one of the most important actions of the legal public administration, as it is considered one of the most important legal actions for it, which is characterized by flexibility and development, allowing it to absorb all developments related to various aspects of life - especially - technical and technological ones, which makes the public administration in a constant race to keep pace with these Qualitative shifts in the world of technology, as a reflection of the reality of public administration in light of the global trend towards the introduction of artificial intelligence techniques in the system of work of public administration after it had gone through a similar experience when imprinting all its work in electronic capacity. It is possible to introduce it into the administrative decision-making system, in a manner known as the "algorithmic administrative decision." This is what we will address in this requirement by explaining the concept of the algorithmic administrative decision, and highlighting the impact of the implications of artificial intelligence on the pillars of the administrative decision, as follows:

3.1 The concept of algorithmic administrative decision

The legislation issued with regard to electronic transactions did not include a definition of the algorithmic administrative decision, as this is one of the logical outcomes of the task of the legislator whose task is centered on issuing legislation, leaving the task of developing concepts and the meaning of what is intended to the jurisprudence and judiciary [17], The follower of the provisions of the Jordanian administrative judiciary in this regard will see that these provisions are not exposed to the concept of the algorithmic administrative decision, and this is due to the novelty of concepts related to electronic public administration in the Hashemite Kingdom of Jordan, which is reflected in its practical applications and thus not being presented to the administrative judiciary to address its problems [18].

And in an attempt by jurisprudence to address the concept of the algorithmic administrative decision, a part of it came to define it as: "Delegating the process of making many administrative decisions to the computer according to several stages: it begins with storing huge amounts of data used in decision-making such as:" identity data, the results of the scientific path. Functional, positions towards tax interests..etc" [19], and another aspect of jurisprudence defined it as: "the administrative decision taken by means of an algorithmic processing system approved by the public administration for this purpose". Regarding the criticism of previous jurisprudential concepts, we see that these concepts do not fit into the concept of an administrative decision, as it is not conceivable that the administrative decision has arisen at the request of those concerned, and on the contrary, the administrative decision is always issued based on the expression of the will as the one with the sole

authority to issue the decision, which is not correct with the saying that there is an electronic request as one of the elements of the above definition, so It is necessary to mention, in addition, we see that most of these concepts focus on how to issue an administrative decision without addressing the objective elements of the administrative decision [20].

In this regard, the researcher believes that the sobriety of the new concepts comes through addressing the formal and objective elements of them, hence we see that the algorithmic administrative decision is: "the disclosure of the public administration of its desire by its own will with the aim of creating, amending or abolishing a legal status with its authority under laws, regulations, and instructions, whenever possible and legally permissible for the sake of public interest using artificial intelligence applications." it should be noted here that the principle of legality remains in place monitoring the subordination of public administration even under the introduction of means of communication and modern technology [21]. As we conclude from the above, the definition of an algorithmic administrative decision has several elements, as follows:

1- The expression issued by the administration.

2- Single will.

3- Place of contract algorithmic administrative decision.

4- Algorithmic software

3.2 The elements of the algorithmic administrative decision (the pillars)

The public administration's disclosure of its desire for its own management by means of artificial intelligence techniques, especially algorithms, is one of the emerging issues that have received widespread debate about how to adapt these technologies to serve the public administration, however, the issue of defining the adaptation or legal template for that new type of administrative decision has met with widespread controversy among modern administrative jurisprudence, and it should be noted here that the pillars of the algorithmic administrative decision do not differ in their content from the pillars of the administrative decision in its traditional form except through the impact of modern means and techniques. used in the algorithmic administrative decision-making process, and we will address the strength of that controversy by examining the impact of the implications of using these techniques on the pillars of the administrative decision, as follows:

3.2.1 The formal elements of the algorithmic administrative decision

The issuance of the algorithmic administrative decision requires that the public administration complies with the formal elements of the algorithmic administrative decision, which is the element of competence, form, and procedures, it should be noted here that the approach of jurisprudence and administrative judiciary in launching concepts without placing them in a specific template is considered a praiseworthy approach and behavior, and we believe that this forward-looking view contributed to keeping these concepts in line with all new developments that may affect different aspects of life.

A- The element of competence

The competence pillar is considered one of the most crucial aspects of administrative decision-making. The administration must always uphold it, regardless of the means through which the decision is made. It is not acceptable for the administration to use it as an excuse for an updated template or as a license to exceed the bounds of jurisdiction. Making an administrative decision in an updated manner does not give the public administration the right to violate jurisdictional rules due to their connection to public order. The significance of this pillar lies in identifying the competent authorities responsible for issuing administrative decisions. This is particularly relevant in light of the adoption of the administrative decentralization method, which involves the distribution of tasks and duties among various general administrations. Therefore, the competence pillar's role in relation to administrative decisions is to determine the legal capability, expertise, and validity of the appointed employee to issue such decisions [22]. To discuss the validity of this pillar, several elements must be considered, including personal, objective, temporal, and spatial factors [23]. Regarding the issuance of algorithmic administrative decisions, competence lies either with the supervising authority, the programmer, the software manager, or any other designated party responsible for issuing decisions in accordance with laws, regulations, and instructions [24]. Analyzing the impact of using these technologies on competence reveals that one reassuring factor is an administration's ability to issue administrative decisions confidently, without any concerns about jurisdictional defects, thanks to artificial intelligence techniques and algorithms. These technologies specifically assist in linking issuance procedures to authorized individuals, preventing

unauthorized parties from making administrative decisions. Algorithms equipped with technical capabilities and advanced technology can effectively distinguish specialists in the field, thereby positively impacting the competence pillar and eliminating the issuance of decisions by non-competent parties. It's worth noting that a technical defect could also be a potential cause for the aforementioned jurisdictional defect, which the appellant must substantiate in order to claim incompetence as its source.

B- Form and Procedure Element

The established principle, both legally and legislatively, is that the administrative decision does not require a specific format or form to be valid unless the relevant legislation specifies otherwise[25]. In our view, this should be attributed to the expertise and administrative legislator, as well as a reflection of the characteristics of administrative law rules, characterized by their flexibility and ability to be amended and changed to accommodate developments in administrative work and the evolving methods of general administration in its activities and legal actions. The term "form" refers to the image in which the decision must be expressed at the time of issuance, i.e., the form through which the will, which is the essence of the administrative decision, is manifested [26]. It could be in the form of a written requirement for its issuance. As for "procedures," they encompass the stages that the decision-making process must undergo before it is actually issued. Procedures include all the information and steps that the administrative decision must go through from preparation to the finalization of its formulation in the format or framework in which it is issued [27], such as causation, attribution, and other procedures. One reason why the integration of artificial intelligence technologies, particularly algorithms, in the process of making and adopting administrative decisions, is possible is the aforementioned flexibility. Additionally, the principle of legality is capable of accommodating these newly introduced legal actions as long as they are consistent with the legislation regulating the process of administrative decision-making. The use of artificial intelligence algorithms raises questions about how to adapt these technologies technically in the process of issuing administrative decisions while preserving the aspect of form and procedures. In our response to this question, we believe that it is possible to issue administrative decisions using a computer system that relies more on the technical aspect than human presence, which is limited to inputting the necessary information and data to address a specific material and legal situation. These algorithms contribute to the making of administrative decisions as they possess independence, accuracy, and objectivity [28].

3.2.2 The objective pillars of the algorithmic administrative decision

The algorithmic administrative decision includes objective or internal pillars as called by an aspect of jurisprudence, and these pillars are represented by the place of contract, purpose, and reason, and the following is a statement of them as follows:

A. The place pf contract

Comparative administrative law scholars have discussed the definition of "Place of contract" as one of the elements of objective or internal administrative decision-making. Some have defined it as "the legal consequence that immediately and directly results in the establishment, modification, or cancellation of a specific legal situation [29]." Others have defined it as "the change that occurs due to the existing situation at the moment of issuance, creating a new legal position or modifying or canceling existing positions [30]." Still, others have defined it as "the legal effects resulting from the decision, whether it takes the form of establishing, modifying, or canceling legal positions [31]." Comparative administrative courts have also dealt with the concept of "Place of contract" in many of their rulings, providing definitions of administrative decision "Place of contract" as the establishment, modification, or cancellation of legal effects [32]. The question arises as to whether the administration is obliged to issue its administrative decision or not, and here the role and significance of discretionary power in this matter become apparent. The public administration has the freedom to issue its decision according to its discretionary power, which is based on the following elements:

1. Freedom of public administration to interfere or refrain from issuing

The basis of this element is that the public administration is not bound to issue administrative decisions even if the circumstances and facts permit it to do so. For example, if the public administration decides not to take any action against those causing disturbances in stadiums to prevent turmoil and maintain public order [33]. However, we find that the legislator, even though granting the administration a certain degree of freedom to take action or make decisions, has also limited it by requiring that such action or decision aim to achieve the public interest. It is conceivable that artificial

intelligence algorithms can be adapted in this regard through software and artificial logic statements so that administrative decisions or abstentions can be issued based on logical commands that correspond to the presented situation. Therefore, the adoption of general administration in its approach to issuing administrative decisions on artificial intelligence techniques, especially in assessing the public interest, whether constrained or discretionary, depends on the nature and volume of the data stored in decision-making machines. In our view, these algorithms will contribute to obtaining more consistent and high-quality results in the field of decision-making. Undoubtedly, the mutual use of human and artificial intelligence elements will contribute to enhancing the level of intelligence for public administrators, as they need the necessary skills and competencies to control and understand the applications and languages of artificial intelligence.

2. Determining the Appropriate Time for Issuance

One aspect of jurisprudence views this element as one of the most prominent aspects of discretionary power enjoyed by the public administration, alongside constrained authority [34]. It is established in both jurisprudence and legal rulings that the public administration has the authority to determine the appropriate time for issuing administrative decisions, without any conditions as long as it refrains from abusing its power. It also has the discretion to choose the suitable timing for issuance, as long as it is not legally restricted to a specific deadline [35]. However, the Jordanian legislator may specify the necessary time for the public administration to issue administrative decisions in certain cases, with a specific legal consequence in case of its failure to do so, as outlined in the Civil Service Law regarding the matter of resignation [36], or in the Public Meetings Law [37]. It is conceivable that artificial intelligence algorithms can be adapted in this regard through software and artificial logic statements, so that administrative decisions or abstentions can be issued based on logical commands that correspond to the presented situation, taking into account a specific time frame and the requirements of the legal provisions. In our view, these algorithms will contribute to achieving the highest standards of issuing administrative decisions in a timely manner.

B. Purpose

The concept of "the pillar of purpose" refers to the goal or final outcome that the public administration seeks to achieve through issuing an administrative decision. It is worth noting that the public administration does not have the freedom to choose or determine the purpose of issuing the administrative decision. The general principle is that the public administration must comply with the purpose set by the law, and any deviation from that purpose would be considered an abuse of power [38]. Regarding the issue of determining the direction and purpose of the public administration when issuing algorithmic administrative decisions, it is still premature to discuss it, as it is practically impossible to apply independent will in determining the purpose of such decisions. This is particularly due to the fact that determining the purpose of public administration in issuing such decisions requires investigating the intention of the administrative official and stating their objective, which is not feasible due to the technical nature involved in issuing such types of administrative decisions[39]. In our assessment of the previous matter from a technical perspective, we believe that the possibility of determining the purpose of algorithmic administrative decisions will become clearer and more precise if the administration resorts to using logical statements (algorithms) that are predefined and inputted into the decision-making system. These statements should be connected to the public interest, which is known within a specific technical system for that process. This approach would significantly reduce the risk of deviating from the use of power, as the process of issuing decisions would be technologically and algorithmically constrained by the public interest.

C. Reason

The term "Reason" generally refers to the factual or legal circumstances that have led the administration to issue its administrative decision [40]. For example, a governing authority may exercise its powers to detain or issue a warrant for the arrest of an individual based on a reasonable belief that there is a person about to commit any crime or assist in committing it[41]. From our perspective, we see that adopting artificial intelligence algorithms in the process of issuing administrative decisions based on a valid and justifiable cause is both technically feasible and acceptable. It is worth mentioning that the success of this process depends on what is assigned to algorithmic data processing systems, such as loading specifications, data, legal conditions, official documents, or necessary personal documents for the process of issuing the administrative decision. Without such information, these systems may fail to carry out the decision-making process due to the lack of a valid cause or motive.

4. CONCLUSION

Keeping up with the developments and advancements in public life and the evolving practices of administrative work, especially in the realm of decision-making, has become crucial for public administrations. The measure of their progress now largely depends on their ability to adapt communication methods and information technology in various areas of administrative work. Undoubtedly, artificial intelligence techniques and algorithms have taken the forefront and garnered significant attention from legal scholars and experts. This has necessitated an examination of the impact and implications of using artificial intelligence techniques, particularly algorithms, in the field of administrative decision-making and the emergence of a new legal system known as "algorithmic administrative decision-making."

This study has yielded several findings and recommendations, summarized as follows:

4.1 Results

1. Artificial intelligence plays a significant and prominent role in the development of the administrative process, especially in the process of making administrative decisions. When these technologies are properly utilized, they can have a positive impact on the effectiveness of the decision-making process.

2. The use of artificial intelligence algorithms in administrative decision-making is likely to be welcomed and accepted by various sectors and entities within public administration due to the speed and accuracy that these algorithms offer in their operations.

3. Given that the rules of administrative law and related administrative regulations are adaptable and subject to change and development, they have the ability to accommodate technological advancements, including the applications of artificial intelligence, and adapt them to serve the process of decision-making and issuing administrative decisions.

4.2 Recommendations

1. We recommend allowing the integration of artificial intelligence enhancements, especially algorithms, into the process of issuing administrative decisions, similar to electronic administrative decisions.

2. We recommend that public administrations prepare their infrastructure and human resources and ensure their readiness for the new phase in the process of making administrative decisions.

3. We recommend that the Jordanian legislator amend the necessary legislation to establish a specific legal framework for such decisions.

4. Ensuring the necessary technical protection for administrative decision-making tools, especially against cyber attacks, is essential.

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