

# TOWARDS A LEGAL FRAMEWORK FOR CORPORATE GOVERNANCE AMID ARTIFICIAL INTELLIGENCE

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## Abstract

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This paper addresses the procedures to develop a legal framework for corporate governance amid artificial intelligence technology in Jordanian legislation. The analytical and descriptive approach is adopted to analyze the texts of the Jordanian Companies Law No. 22 of 1997, its amendments, and Instructions for the Corporate Governance for Shareholding Listed Companies for the year 2017. Though the Jordanian legislation has established rules and principles of governance, whether, in the corporate law or governance instructions, the Jordanian legislation does not incorporate legal texts that simulate the artificial intelligence into these principles (Yazid, 2016). The results demonstrate that the Jordanian legislation is still in the process of organizing and legalizing the concept of artificial intelligence in the Jordanian Companies Law and the principles of commercial companies' governance. With that, this article recommends that the Jordanian legislator should amend the law that regulates artificial intelligence issues in the governance of commercial companies to keep up with the development in the era of the digital economy. This would protect commercial companies and those with interests in them by enhancing the principles of transparency, independence, and disclosure, and preserving information security in them according to the artificial intelligence.

**Keywords:** Artificial Intelligence, Commercial Companies, Corporate Governance, Jordanian Legislation

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## 1. INTRODUCTION

Artificial intelligence is a relatively new domain and topic, as interest in these methods is still rising. The concept of artificial intelligence has a place in numerous arenas in the current era. However, at the legislative level in Jordanian law, it has yet to receive extensive legislative attention from the Jordanian legislator. The said lack of attention results from either the need for more stability of this concept in legal and legislative jurisprudence or its overlap in many aspects. Despite this, Jordan is one of the countries moving towards comprehensive legislative regulation of artificial intelligence in all

branches of law and on a large scale in various fields (Rissland et al., 2003).

Conversely, Western jurisprudence has focused on law and artificial intelligence to address new legal problems and issues through artificial intelligence technology. All at once, Western jurisprudence has focused on formulating legislation in light of the technologies adopted in artificial intelligence, so that the legislator, judiciary, and legal personnel can deal with these technologies (John, 2023), especially in serious issues within the scope of law such as criminal law or commercial law (Weber, 2023).

Regarding the scope of Jordanian regulation of artificial intelligence, the Jordanian government has recently approved the Jordanian Artificial

Intelligence Strategy and Executive Plan (2023–2027) to regulate artificial intelligence at various levels, including several pieces of legislation. Of course, legislation relating to commercial companies and their governance is among the most prominent of these pieces of legislation due to their direct connection to the Jordanian national economy (Michel, 2023).

Given the significance of organizing legislation relating to the governance of commercial companies according to artificial intelligence technology, whether in the Jordanian corporate law or the principles and rules of governance regulated by the Jordanian legislation, it is now necessary to develop an integrated legal regulation according to this technology, as the principles and rules of corporate governance are among the most important principles upon which commercial companies are based (Steen, 2021). Governance aims to achieve optimal management in the work of commercial companies by providing strict legal protection for the company and the security of its information, in addition to providing legal protection for all stakeholders in commercial companies, such as shareholders and others.

Accomplishing optimal management in the work of commercial companies can only be achieved by providing principles related to independence, transparency, and disclosure related to artificial intelligence technology, as artificial intelligence is one of the most prominent means that guarantees these principles, which is what the majority of international and Arab legislation seeks at present. The research subject addresses the mechanisms of establishing legal regulation of the rules of corporate governance for commercial companies by including artificial intelligence methods in these rules to keep pace with international and Arab legislation in this field. Recent studies are moving towards regulating the rules of corporate governance in light of artificial intelligence technology to protect all stakeholders in commercial companies. The Jordanian legislator has established rules and principles for governance, whether in the corporate law or governance instructions. However, the Jordanian legislator has not included legal texts in these principles that mimic artificial intelligence technology.

The clear subject matter now is that the Jordanian legislator is still in the beginning stage of regulating and codifying the concept of artificial intelligence in Jordanian corporate law and the principles of commercial company governance. Moreover, Jordanian legislation, especially the principles related to the governance of commercial companies in the Jordanian Companies Law and corporate governance instructions, lacks legal regulation relating to the application of artificial intelligence in corporate governance, which would preserve the legal protection of commercial companies and their stakeholders.

Of note, there is a lack of a suitable digital environment for using artificial intelligence technology and linking it to commercial legislation that keeps pace with technological development, especially in light of the absence of a legislative environment that shows the subtleties of artificial intelligence technology in terms of advantages and disadvantages. On the other hand, Arab studies in

this field are limited because the subject of artificial intelligence and its legalization is still in the beginning stage of Arab legislation. With this in mind, the research problem is reflected in identifying the procedures to develop a legal framework for corporate governance amid artificial intelligence in Jordanian legislation.

Hence, the significance of this research is demonstrated through the necessity of establishing a legal mechanism that regulates the principles of commercial corporate governance in the corporate law and commercial corporate governance instructions in force in Jordan in light of artificial intelligence technology. More tellingly, what makes this research of high significance is that it is the first research work conducted at the Jordanian level hinting at the fact it can contribute to current legal scholarship and knowledge.

The rest of the paper is structured as follows. Section 2 reviews the relevant literature review. Section 3 analyzes the methodology that has been used to conduct research on the legal framework for corporate governance amid artificial intelligence, while Section 4 provides key results. Section 5 presents the related discussion. The conclusion is provided in Section 6.

## 2. LITERATURE REVIEW

Research has documented the role of a legal framework for corporate governance amid artificial intelligence. Solaimani et al. (2020) examine the impact of artificial intelligence on corporate control. Other researchers such as Mirone et al. (2021) explore how independent directors affect firms' performance and sustainability through an analysis of Italian firms. Moreover, Kalantonis et al. (2023) study the impact of corporate governance on firm performance by adopting evidence from the Greek listed firms. These studies demonstrate that the area of a legal framework for corporate governance amid artificial intelligence is of high significance.

Accordingly, the research's significance is reflected in the focus of the discussion about the procedures to develop a legal framework for corporate governance amid artificial intelligence technology in Jordanian legislation. One key point that demonstrates the significance of this research is the scarcity of specialized studies in this field in Jordanian legislation specifically and the majority of Arab legislation, in addition to the novelty of the topic of relating the governance of commercial companies and artificial intelligence.

## 3. RESEARCH METHODOLOGY

Due to the nature of the research study, the analytical and descriptive research approach is mainly adopted to analyze the texts of the Jordanian Companies Law No. 22 of 1997, its amendments, and Instructions for the Corporate Governance for Shareholding Listed Companies for the Year 2017. The comparative research approach is secondarily used in some of the research paper issues wherever necessary. This research study is limited to delving into the public joint-stock company because these companies in Jordanian legislation are specifically obligated, rather than other types of companies, to

apply the rules of governance, as the Jordanian legislator has not mandated other types of companies to apply them. The stakeholders in these companies deserve special legal protection due to the large capital, the large number of shareholders, and the large volume of investments in this type of company. Importantly, analytical and descriptive research was used in this research paper by comprehensively analyzing the Jordanian company law and Jordanian corporate governance instructions to demonstrate the possibility of the Jordanian legislator developing legal legislation in the scope of artificial intelligence, especially since developing legislation for artificial intelligence in the governance of commercial companies is one of the important issues that needs legal regulation.

#### 4. RESULTS

The nature of the research requires structuring the paper to be in two subsections. The first subsection discusses the nature and significance of artificial intelligence in commercial companies. The second subsection, however, gives an insight into the principles of corporate governance in light of artificial intelligence technology.

##### 4.1. The nature and significance of artificial intelligence in commercial companies

###### 4.1.1. Concept of artificial intelligence

Artificial intelligence contributes to strengthening the legal framework in its general sense by enhancing legal objectivity, accuracy, and transparency in analyzing legal issues and developing legal protection through this technology, making Western jurisprudence tend to consider artificial intelligence as an analytical jurisprudence (Rissland et al., 2003). At the Arab or international level, the concept of artificial intelligence is still in an unstable stage, both legislatively and jurisprudentially, despite the development of many concepts for artificial intelligence, whether in the legislative framework or the framework of legal jurisprudence based on its legal importance, especially in commercial law (Königstorfer & Thalmann, 2020). Undeniably, contemporary Islamic jurisprudence has developed several concepts for artificial intelligence to keep pace with developments taking place in the current digital age (Al-Borai, 2022).

*Artificial intelligence in legislation:* The Jordanian legislator has not set an explicit definition of artificial intelligence or one of the methods associated with it in the current commercial legislation in force in Jordan. There is no reference to artificial intelligence in the Jordanian Companies Law No. 22 of 1997, as well as the Corporate Governance Instructions, issued for the year 2017, despite the legislative direction to establish a clear concept of artificial intelligence through the Jordanian Artificial Intelligence Strategy and Executive Plan (2023-2027)<sup>1</sup>. No explicit legislative definition of artificial intelligence has been found, except for some minor references to the concept of artificial intelligence in the Jordanian Law No. 15

of 2015 on Electronic Transactions. By referring to the text of Article 2 of this law, which is devoted to the definitions contained in this law, it was found that the Jordanian legislator has defined the electronic transactions system as “a group of programs and tools designed to create, send, deliver, process, store, manage, or display information by electronic means” (Law No. 15 of 2015 on Electronic Transactions, 2015, Article 2).

The concept of an electronic transaction system is close to the concept of artificial intelligence, as artificial intelligence programs are data processing programs and tools used in electronic transactions. The Jordanian legislator also established the concept of the electronic mediator, as defined in the same Article 2 of Law No. 15 of 2015 on Electronic Transactions as “the electronic program used to carry out a procedure or respond to a procedure automatically to create, send, or receive an information message”. In light of the Jordanian legislator’s definition of the electronic medium, some jurists have indicated that the legislator’s definition of the electronic medium is close to the concept of artificial intelligence, based on saying that it includes some technical features used within the scope of artificial intelligence methods, such as creation, reception, and transmission (Badr, 2022, p. 14).

With this in mind, it is believed that this view may be correct in part because it includes some means of artificial intelligence. However, artificial intelligence in its general sense is more wide-ranging and comprehensive than that, as will be shown in the second section of this research. In addition, it is not permissible to interpret the legislation in a way that is not intended, as the legislator’s definition is limited to the scope of the electronic medium and electronic transactions, while artificial intelligence, in the general concept, means self-control outside human control.

Among the Arab legislations that have paid attention to developing a concept for artificial intelligence is the legislation of the United Arab Emirates. Despite these efforts, it has not established a clear concept of artificial intelligence. However, the UAE legislator has referred to the concept of artificial intelligence when defining the automated driving system in Law No. 9 of 2023 regulating the operation of autonomous vehicles in the Emirate of Dubai in the UAE. The reason for selecting UAE legislation for comparison is because it is one of the first Arab legislations that referred early to the concept of artificial intelligence, as the UAE legislator addressed the concept of artificial intelligence in many UAE legislations due to its use of artificial intelligence in many fields in the UAE. The UAE legislator defines the automated driving system as a system consisting of a set of devices and programs approved by the manufacturer of the self-driving vehicle, which achieves communication between the vehicle and road elements, and controls its movement without human intervention.

Importantly, it should be noted that the Jordanian legislator has recently issued Personal Data Protection Law No. 24 of 2023. When examining the features of the law, it is found that it has not included any reference to artificial intelligence technology. Thus, a question is raised about the appropriateness of this law for researching

<sup>1</sup> <https://modee.gov.jo/>

artificial intelligence technology. It is also found that the legislator has referred to the concept of electronic processing as well as breaching the security and integrity of electronic data and databases (Law No.9 of 2023 regulating the operation of self-driving vehicles in the Emirate of Dubai, Article 2). Therefore, it would be preferable to refer to a legal framework related to the protection of personal data through artificial intelligence technology or develop a concept that contributes to two aspects: protection of personal data through artificial intelligence technology and protection of personal data from hacking through artificial intelligence technology.

On the other hand, if we ask in another context, what is the relationship between the Personal Data Protection Law and artificial intelligence technology in commercial companies? To answer this question, the researcher found that the legislator referred to the concept of the responsible person in this law, which is the natural or legal person, whether inside or outside the Kingdom, who owns the data. Logically, commercial companies are considered legal persons, and for this reason, it is seen that the legislator has not mentioned artificial intelligence technology in this aspect of the features of the law.

*Artificial intelligence in jurisprudence:* Despite the instability of the concept of artificial intelligence in international and Arab jurisprudence, many aspects of jurisprudence have touched on developing a definition of artificial intelligence. It is defined as “a science that aims to design intelligent systems that will make the computer simulate human thinking and deal with the same human ability, by feeding it with huge data and information or through self-learning” (Ibrahim, 2022, p.1038). Another trend of jurisprudence defined it as “A computer program based on algorithms fed into it that aims to create intelligence similar to human intelligence by making the machine supported by it capable of self- and automatic learning, planning, perception, and dealing independently according to the circumstances surrounding it” (Fath Al-Bab, 2022, p. 611).

On the other hand, international jurisprudence has touched on the concept of artificial intelligence as it is an automated system that makes the intelligent machine an independent, insightful entity in the computer environment. With that being said, the concept of artificial intelligence as “an information technology that depends on the information that is placed in it by specialists in its manufacture to make an effort equivalent to the human effort of collecting, analyzing and creating information in an automated technical manner according to the algorithmic inputs into it” (Hilb, 2020, p. 13).

#### *4.1.2. The significance of artificial intelligence in the scope of commercial companies and their governance*

Governance refers to a set of rules that aim to establish an integrated legal regulation for the work of commercial companies by establishing rules that achieve ideal management in the work of companies by enhancing transparency and independence. Governance also means organizing the company's

work and its executive management represented by the Board of Directors and the General Body to avoid deviation in the company's management. Moreover, the concept of governance is included in many matters of the company, from its foundation until its completion and liquidation through legal means and it has various names such as corporate governance or institutional control (Al-Dalmani, 2020).

Additionally, artificial intelligence in corporate governance plays a prominent role by providing legal protection for all parties in commercial companies. This legal protection is reflected in protecting the stakeholders in commercial companies whose rights may be affected by arbitrariness or damage to which they are entitled due to the arbitrariness of the administrative authorities in the company, whether the General Body or the Board of Directors. It also highlights the importance of artificial intelligence in commercial companies by providing legal protection to shareholders in these companies by enhancing transparency and disclosure rules. Hence, the significance of using artificial intelligence methods is also reflected in using the governance of commercial companies (Ammar, 2022, p. 1).

Artificial intelligence technology, for example, but not limited to, works on the mechanism of selecting members of the Board of Directors in a way that ensures the extent of the independence of these members, and these issues are discussed in detail in the second section of this research study. Artificial intelligence also works to contribute to reducing costs related to companies by providing studies and solutions with greater effort than human effort in this field. Artificial intelligence technology also enhances the improvement of the level of governance itself, in addition to creating a type of oversight over the company's work more effectively.

The significance of corporate governance through artificial intelligence is also highlighted by providing a legal mechanism to protect digital and electronic data for commercial companies, as artificial intelligence in this field contributes to helping commercial companies protect data that is extremely important and affects the company's work fundamentally. Commercial companies, within the scope of their work, need access to the information and data available to those dealing with the company to improve their ability to make decisions and automate their decision-making processes within the scope of their board of directors, which exercises actual authority in making decisions in the company (Al-Shammari, 2023).

Artificial intelligence technology also plays a major role in the range of securities, including company shares traded in the financial market. It is found that the Jordanian legislator has obligated listed joint stock companies to apply governance rules. One of the most prominent impacts of governance via artificial intelligence on the financial market is through supervising trading operations via these technologies to achieve a kind of advanced independence and transparency in this field (Steen, 2021). It is found that the Jordanian legislator has not yet stipulated these issues. The reason for this lies in the fact that Jordan is still in the beginning stage and there is no fertile digital environment for such technologies.

Despite the scientific and technological importance of artificial intelligence, most international and Arab legislation is still in the beginning stage regarding developing a clear legislative concept for artificial intelligence, whether within the scope of commercial law or all branches of law (Hilal et al., 2022). Indeed, artificial intelligence requires legislative intervention in most branches of science to confront the ongoing consequences associated with the development of artificial intelligence methods.

#### 4.2. The principles of corporate governance in light of artificial intelligence technology

##### 4.2.1. The degree of mandatory corporate governance in Jordanian legislation

According to the Jordanian Companies Law No. 22 of 1997, it is found that the Jordanian legislator has set the general framework for the government of commercial companies in this law, as the Companies Law is the general law for the work of companies of all types. However, the Jordanian legislator, within the framework of corporate governance, has placed it within the exclusive scope of the public joint-stock company specifically, as this aspect is clarified in Article 151 of the Jordanian Companies Law No. 22 of 1997. Consistent with the significance of this article, the Jordanian legislator has placed it within the mandatory scope of the public joint-stock company, which is the only one obligated to apply the rules and principles of corporate governance.

With that being said, it is believed that the Jordanian legislator must include financial companies and companies mixed with governance principles to achieve the highest principles of transparency, independence, and justice in the work of these companies. Despite the above, the Jordanian legislator has not established a clear concept or definition of corporate governance in the company law. For our part, there is no tendency to define this concept due to the difficulty of developing a comprehensive concept for it because governance applications are intertwined in the work of public joint-stock companies and all their aspects.

The Jordanian legislator has regulated corporate governance through special instructions for this aspect. In 2017, the Instructions of Corporate Governance for Shareholding Listed Companies were issued by the Securities Commission under Resolution No. 146/2017, as these instructions include a set of regulatory foundations for the work of companies by these principles. According to the provisions of these instructions, it is found that the Jordanian legislator has included many texts in these instructions, especially about the Board of Directors to achieve transparency in the company's work in terms of the tasks and responsibilities of the Board of Directors and in a way that ensures fair treatment of all shareholders in the company.

Besides, these instructions include a mechanism for establishing internal and external oversight over the company's work, as mentioned in Articles 4-6 of the Jordanian Instructions of Corporate Governance for Shareholding Listed Companies for the Year 2017, as the outcome of these principles is the establishment of a set of oversight foundations

that guarantee fair treatment for all shareholders and ensure transparency in the work of the authorities of the public joint-stock company. The Jordanian legislator, in stipulating the rules of corporate governance, aims to achieve a set of legislative objectives, most notably protecting the rights of stakeholders in commercial companies and creditors, and encouraging investment in these companies. Also, "the Jordanian legislator aims to combat administrative and financial corruption, and governance rules contribute directly to reducing the amount of financial risks for shareholders and the company itself" (Al-Issa, 2014, p. 15).

##### 4.2.2. The most prominent legal applications of corporate governance through artificial intelligence technology

Artificial intelligence technology is utilized in numerous corporate governance rules and principles, which is what advanced legislation seeks in this field, such as its use in managing the company, workers, human resources, and the like (Cihon et al., 2021). Therefore, this subsection identifies the most prominent legal aspects used to activate governance rules through artificial intelligence technology.

*Enhancing the principle of independence in the company's work through artificial intelligence:* The principle of independence is one of the most important principles of corporate governance. According to the vision of the Jordanian legislator, the principle of independence means that the members of the executive management, represented by the company's board of directors, are not linked to an interest, whether material or moral that would influence the decisions made to improve the company's work. In other words, the members of the Board of Directors must be linked to the company according to their ownership of shares only, without any other consideration. Therefore, the Board of Directors does not have the status of independence if it has another existing interest that affects its independence indicated by the Corporate Governance Instructions (Instructions of Corporate Governance for Shareholding Listed Companies for the year 2017, Article 4-C).

Notably, an important related issue is how artificial intelligence technology can best contribute to and achieve the principle of independence. It is found that Western jurisprudence has addressed these issues in a way that may simulate the practical and future reality in the work of the company, especially its board of directors (John, 2023). For example, this is reflected in utilizing artificial intelligence to replace board members with artificial intelligence programs that work to manage the company without human intervention, which achieves direct independence for the work of the board of directors. In addition, "there is the possibility of using artificial intelligence technology to make important and sensitive decisions issued by the Board of Directors after providing it with algorithms specifically prepared for this purpose" (Hilb, 2020, p. 864).

As gleaned from the previous analysis, this can be applied in a specific part, although it is difficult to apply it in other parts. In terms of replacing all board members with artificial intelligence

technology, this is something that the researcher is not inclined to do. The reason for this is that even though artificial intelligence technology is equipped with programs capable of making decisions, it cannot override human thought, especially in cases that require exceptional and complex decisions in light of the company's practical reality. At the level of decision-making, it is seen that artificial intelligence methods can be a means of assistance in making decisions after providing them with the required reasons and that these decisions should be for guidance, but if they are absolute decisions, the researcher does not tend to encourage this direction at all.

As a result, it is believed that the Jordanian legislator should introduce legislative amendments to the company law or governance instructions that would allow the use of artificial intelligence technology to reveal the extent of the independence of board members and indicate the extent to which this characteristic is achieved in them on one hand. On the other hand, it is proved that the Jordanian legislator should allow artificial intelligence technology within the scope of board member meetings so that artificial intelligence technology contributes to making decisions that are not arbitrary or harmful to the company's shareholders.

In the same context, another important related issue is the possibility of using artificial intelligence technology in board meetings, meeting minutes, and the like. In this regard, it is noted that when the Jordanian legislator amended the Companies Law 19 of 2021, the Jordanian legislator, in Article 2 of this law entailing an amendment to Article 6 of the original law, authorized the General Controller of Companies to use electronic means to submit applications and deposit minutes of meetings and documents, including issuing certificates, copies, and signatures. It also clarified that the company has the right to invite and hold the General Body, the Board of Directors, and it is various bodies via electronic means (Amended Companies Law No. 19 of 2021, 2021).

From this perspective, it is seen that artificial intelligence technology is an electronic means, even if the legislator intended that the concept of electronic means is not an artificial intelligence technology. However, it is believed that the legislator can follow the example of artificial intelligence technology by using it to invite members of the board of directors, minutes of meetings, and the like, which would achieve independence in the work of public joint-stock companies. This is in line with the English jurisprudence demonstrating that this could be achieved by completing these invitations and meetings (Cunningham et al., 2023).

Unlike some leading European countries and some Asian leading countries in this field, such as China and Japan, which adopted this technology in many aspects of commercial companies, it is seen that these issues require a high-level digital environment, and therefore it may be difficult to apply some aspects in this. The European Commission has worked to approve the temporary law on artificial intelligence, which aims to enhance confidence in new technology, including artificial intelligence. The law also aims to reduce risks related to artificial intelligence, protect data, optimize the use of human resources, and enhance the principle of transparency (European

Commission, 2021). The European Union, through the Provisional Artificial Intelligence Act, also known as the Artificial Intelligence Regulation, has established several principles that contribute to enhancing corporate governance, particularly transparency. This includes examples such as the right of individuals to appeal decisions made by artificial intelligence, the implementation of specific compliance and safety measures, and the requirement that the data collected be transparent and legal and that individuals be informed about how their data is used to protect their privacy.

*Strengthening the principle of disclosure amid artificial intelligence technology:* The principle of disclosure and transparency is one of the most important principles in commercial corporate governance. Disclosure means a set of means through which information is made available to the company's shareholders and various stakeholders to identify the company's financial position, in addition to every piece of information that would affect dealing with the company itself and the areas of disclosure, whether in the Jordanian companies law or the regulations and instructions that have many forms and types (Yazid, 2016).

What concerns us in this regard is to what extent artificial intelligence technology can be used for disclosure and transparency. First, it is found that the Jordanian legislator aims to achieve this principle, whether in the Jordanian company law or governance instructions and other instructions related to disclosure and transparency. In detail, the law and instructions comprise many principles of disclosure in the company's work, including but not limited to what is stated in Article 14 of the Instructions of Corporate Governance for Shareholding Listed Companies for the year 2017, as this article enshrines the rules of disclosure related to governance.

The most prominent provisions of Article 14 of the Instructions of Corporate Governance for Shareholding Listed Companies for the year 2017 for the use of artificial intelligence technology are what is stated in Clauses (C, D, E) of this Article, which relate to the company's commitment to organizing its financial accounts and data by international standards and the company's use of its website on the Internet to enhance disclosure and transparency, as well as disclose its policies and programs towards the local community (Instructions of Corporate Governance for Shareholding Listed Companies for the year 2017, Article 14).

Moreover, one of the most noticeable applications of artificial intelligence in this scope that can be used according to the meaning of the previous article is the possibility of using artificial intelligence applications through the company's disclosure of its financial policy, as artificial intelligence technology plays an important role through the mechanism of retrieving and storing information very quickly. It also plays an important role by disclosing financial results and stock ownership, as well as voting rights and remuneration related to the Board of Directors and the like (Al-Shammari, 2023). According to the Instructions for Disclosure of Issuing Companies, Accounting Standards and Auditing Standards for the year 2004 and its amendments until the year 2019, it is found that these instructions included

many domains related to artificial intelligence to which governance can be applied.

Among these instructions is what is included in Article 4 of all its provisions, where artificial intelligence technology can be used by determining the company's financial position in the stock market and its stock trading operations, as this technology enhances the possibility of revealing the financial reality intelligently and technically, especially for those dealing with these companies. The role of governance can also be enhanced by activating the Securities Commission's oversight of the capital market through artificial intelligence technology by creating a type of oversight over the extent of listed joint stock companies' compliance with regulations and instructions and the extent of compliance with the rules of transparency, independence, and disclosure (Thuraya et al., 2021).

Accordingly, in this regard, some believe that artificial intelligence methods may replace human effort in monitoring commercial companies (Al-Khatib, 2020). Regarding the applications of artificial intelligence within the framework of disclosure rules, it is noted that these systems provide essential and accurate information to shareholders, especially within the scope of the disclosure and in cases where there is a conflict between the financial statements provided by the company's board of directors and the various bodies. Therefore, artificial intelligence provides tools for data analysis, especially within the framework of disseminating information, data, and records related to the disclosure of the company's financial position (Michel, 2023).

## 5. DISCUSSION

Several key results are attained. One of these results is that the Jordanian legislator has not set the parameters of the way for artificial intelligence technology and how to apply it in the governance of commercial companies, although it has drawn the legal boundaries for the formation of legal legislation capable of keeping pace with artificial intelligence technology amid the principles of governance.

Another key finding is that the Jordanian legislator neither establishes legislation aimed at using artificial intelligence technology to achieve the principles of independence, transparency, and disclosure in the governance of commercial companies, nor did it establish legislation obligating companies to protect their interests, workers, and shareholders from the danger of artificial intelligence technology.

Importantly, it is found that corporate governance through artificial intelligence technology contributes to protecting stakeholders in commercial companies and the company itself by using it to achieve optimal management in the company's work, absolute transparency, and preventing abuse of shareholders' rights. More importantly, artificial intelligence technology enhances the principle of independence of members of the Board of Directors and the General Body by using it in a way that achieves the principle of separation between share ownership and management in a way that the members of the Board of Directors are not linked to any direct interests with the company.

## 5. CONCLUSION

In a nutshell, this research study addresses the procedures to develop a legal framework for corporate governance amid artificial intelligence technology in Jordanian legislation. Importantly, the significance of this research paper lies in its contribution to the future research framework, as the topic of artificial intelligence is contemporary and necessitates ongoing legislative intervention by countries to address any changes brought about by artificial intelligence technology. Moreover, corporate governance through artificial intelligence technology contributes to the development of commercial companies, aligning them with the digital economy era, which is characterized by artificial intelligence and associated digital factors within the framework of corporate governance. Corporate governance through artificial intelligence directly helps prevent manipulations of corporate governance principles and enhances transparency more effectively, thereby protecting the interests of all stakeholders in commercial companies.

Given the said results, this research study recommends that the Jordanian legislator shall establish legal texts in the Jordanian corporate law and governance instructions to apply and use artificial intelligence technology in corporate governance, the management of the company, and its public bodies to achieve the principles of independence, transparency, and disclosure to the fullest extent. With that, this research paper suggests that the legislator shall add the following text to the Jordanian Companies Law No. 22 of 1997, stipulating public joint-stock companies are obligated to develop programs and plans to organize their business through artificial intelligence technology, provided that these programs are subject to the supervision of the Companies Control Department and under its supervision.

Another key recommendation is that the Jordanian legislator shall include legal texts in governance instructions aiming to establish a concept of artificial intelligence technology in all the texts included in these instructions and how to apply it in achieving governance principles. With that being said, the current research paper suggests that the legislator can generally establish a commercial legal system through which commercial legal legislation can be drawn up and linked to artificial intelligence technology to regulate the company's work through this technology and protect the company at the same time from the danger of this technology according to studying the advantages and disadvantages and linking them within the legislative framework. Moreover, the Jordanian legislator shall also develop legal texts that contribute to protecting company shares and their trading in the financial market by codifying artificial intelligence.

As for the limitations, a negative factor affecting this research paper, which is a direct drawback, is the novelty of the artificial intelligence topic in Jordanian law and its associated legislation. There is also no comprehensive legal legislation addressing corporate governance through artificial intelligence technology, in addition to the scarcity of specialized studies in this field within Jordanian legislation and the lack of references addressing this topic. The future directions of the study can be cybersecurity in commercial companies and artificial intelligence and its role in stock market stocks.

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