Employing AI Technologies in Drafting Public–Private Partnership Contracts in the Field of Healthcare Improvement

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ABSTRACT: Sustainable development within a nation focuses on improving all governmental facilities within the nation as fully as possible. One of the sectors that has experienced positive development is the health sector. It focuses on optimizing the facilities and patient care services to meet public health needs. At the same time, global legislative developments have accelerated the use of Artificial Intelligence (AI) and its integration into the design, implementation, and supervision of public-private partnership (PPP) contracts to enhance healthcare delivery through a strong legal-health governance framework. This study develops a doctrinal-comparative analysis concerning the legality of using AI technologies for the drafting, execution, and management of PPP contracts within the healthcare sector. More specifically, this study analyses the legal ramifications of the incorporation of AI into healthcare PPPs and intends to lay the foundation for the development of an administrative legal framework concerning the practice. The study aims to assess the administrative legality of the practice in terms of accountability, transparency, and protection of the public interest concerning patient safety, data protection, compliance, and regulation. Ultimately, the study aims to support the efficient operation of public healthcare facilities and the proper and legal use of AI in medical partnership contracts. The study seeks to examine the legal boundaries for the use of AI in the drafting, execution, and management of contracts, and the legal frameworks governing cross-border healthcare PPPs. This study assists scholarship by establishing a starting point for the administrative law framework of AI in PPPs concerning drafting partnerships in the context of derived services. The balancing of administrative law and the technological innovations of AI to address the incessant demands of the healthcare system aims to advance the administrative laws governing healthcare. The sustainable incorporation of AI in healthcare Public-Private Partnerships (PPPs) is understandable from a technological perspective as well as from an adequate legal perspective that sustains the institutional legitimacy, public accountability, and protection of the patients' interests.

Keywords: administrative contracts; partnership contracts; public healthcare facility; Artificial intelligence.

I. INTRODUCTION

Though the technological and health care sectors are developing rapidly and becoming more precise and accurate, the direction and control technological changes in health care remains problematic for many countries. Most often the problem is found at the level of the state administration with responsibility for managing the technological sector and at the level of the clinical management of hospitals and health care institutions [1]. The problem requires the responsiveness of the legislators that, for the state of the health care system, the sustainable development is possible through the control of the competent legislatives, as equal supervision of all the branches of the health care system may be possible, so that the application of medical

Artificial Intelligence and other information technologies may be employed for the performance of medical functions within the system of positive legal regulation. Fulfilling the principles of sustainable development in the healthcare sector, especially in light of the AI gap which stems from the technological, financial, or infrastructural constraints in health systems, requires the implementation of a regulatory framework once the relevant capacities have been developed. This pertains to the engagement of AI in healthcare systems of low-income, developing and also rich and developed countries. It is these considerations that have justified the need to bridge the aforementioned collapse of innovation and technological development in the healthcare sector, by engaging the private sector, with its creative IT resources, in the public and/or private healthcare systems [1, 2].

This research integrates existing literature with original doctrinal and comparative scholarship by developing a legal structure for the intersection of artificial intelligence and Public-Private Partnership (PPP) contracts in the healthcare industry. Unlike prior studies which have centered on the technological or policy aspects of artificial intelligence in healthcare, this research examines and classifies the legal ramifications of AI use in contract drafting, elucidates the relevant issues of administrative law, and proposes a set of positive law instruments to mitigate the risks to accountability, legality, and sustainability. Additionally, the research undertakes a comparative legal assessment of a select number of jurisdictions to elucidate the regulative frameworks of AI-enhanced PPP contracts.

1. RESEARCH IMPORTANCE AND OBJECTIVES

The significance of this research comes from the appropriate investigation of the possible use of AI technology to compose Public-Private Partnership contracts to improve healthcare services and the legal protections and risks these contracts might provide to healthcare organizations. In this sense, the research also addresses the public interest, as it leads to the seamless and uninterrupted provision of healthcare services to the beneficiaries. Thus, the specific aims of this paper are the following:

- Analyze and provide explanation regarding the phenomenon of the public–private partnership agreement and its primary legal characteristics.
- Analyze the scope of the use of artificial intelligence technologies in developing public–private partnership agreements to enhance the healthcare system.
- To analyze the public authority to sign partnership agreements with the private sector and to determine the scope and limits of administrative policy in such agreements.

In addition, the study aims to identify best legal practices, regulatory safeguards, and legislative gaps in the governance of AI-assisted PPP contracts, with particular emphasis on liability allocation, human oversight, and data protection obligations.

2. RESEARCH PROBLEM AND QUESTIONS

The research problem is about the legality and feasibility of using AI technologies in drafting PPP contracts in the healthcare sector. Given this, the study problematizes the question 'to what level do the AI integrated PPP contracts contribute to the healthcare industry?'

The scope of the problem requires the study to pinpoint a number of sub research questions, which can be formulated as follows:

- What is the standing of the legal regulatory systems in the countries of the legal order regarding the consummation of public partnership contracts for the purpose of the integration of AI in healthcare systems?
- To what degree are healthcare facilities and equipment, irrespective of their types, able to accommodate public private partnership contracts which focus on the use of AI in the enhancement of healthcare services?
- How can legal responsibility and accountability be allocated in cases where AI-assisted contract drafting leads to contractual defects, regulatory violations, or harm to patients or public interests?

3. RESEARCH METHODOLOGY AND STRUCTURE

The adoption of an analytical method provides an invaluable approach to assessing and understanding the legal principles that determine the use of AI technologies in drafting public–private partnership contracts. And this method is fundamental to the analysis and interpretation of primary sources of legislation and provides an accurate comprehension of their legal value. Moreover, the character of this research requires that the legal systems of other jurisdictions be considered in relation to the use of AI technologies in the drafting of public-private partnership contracts for the improvement of healthcare. Therefore, the researcher employs a comparative approach to studying the legislation of several countries, to the extent that these countries are able to eliminate the voids that the legislation of such contracts contains and resolve the problems arising from the legislation of the regulatory issues of the improvement of healthcare services.

Table1. Comparative mapping of legal instruments relevant to AI governance in healthcare public–private partnerships.

Jurisdiction	Legal Instrument Reviewed	AI–PPP Integration Related Framework
France	PPP Statutes, Administrative Contract Law, Health Care Regulation, EU governance frameworks on AI	Comes with a developed administrative law, which has a strong focus on legality, accountability, and safeguarding the legality and public interest of the contracts with the state.
Egypt	PPP Law No.67/2010, Health Care Legislation, public procurement regulation, emerging AI policy	A particular sectoral regulatory framework with little or no AI-related safeguard in the healthcare partnerships.
Jordan	PPP No. 23/2021, Administrative Regulation, Health Care Law, Digital Governance Law	How's an emerging legal regime, where the regulation on the use of AI in the preparation of PPPs is still absent.
European Union	Public Procurement Directives, EU AI Act, GDPR, Health Care Policy Frameworks	Provides supra-national standards on the transparency, accountability of the public sector, and governance of AI in a risk-based manner, especially in the public sector.

This study is based on a doctrinal and comparative legal methodology, which is based on legal statutes, administrative regulations, policy papers, and the relevant legal doctrines as the primary, and not empirical or quantitative evidence. The comparative study analyzes France, Egypt, Jordan, and the European Union. These countries were selected for having developed public–private partnership frameworks, the European Union and Egypt having relevant controlling frameworks for digital health, and Jordan having relevant health care PPP frameworks. The primary legal materials used were statutory law, administrative law, policy documents, and court decisions pertaining to health care PPPs and the regulation of artificial intelligence. The primary method of analysis for the study was doctrinal and comparative, with a focus on the functional approach to the law.

The study also makes a distinction between AI as a decision support tool (assisting human drafters by recommending clauses, analyzing risk, and checking for compliance) and AI as a self-drafting system (where AI writes contracts without substantial human input). This distinction becomes relevant for considering the legal accountability, validity, and oversight of such systems. The study proposes a structured legal framework based on the following principles: (i) transparency of the drafting process to the stakeholders, (ii) human oversight of the system, (iii) regulatory protections for the privacy of data, (iv) unambiguous attribution of liability to the public sector, the private partner, and the tech companies, and (v) operational responsibility for the public partner. A comparative chart is included to illustrate the different countries' approaches, gaps in regulation, and illuminates best approaches to the integration of AI into public–private partnerships.

Two main parts constitute this study. The first part deals with the definition and legal nature of the public–private partnership contract, whereas the second part analyses the contribution of AI technologies in the drafting of public partnership contracts in relation to the enhancement of health services. There is also a concluding part where the findings and recommendations of this study are presented.

When analyzing the legal aspects of AI-assisted PPP drafting, there are notable legal distinctions across jurisdictions. In France, there is a focus on administrative auditability and control with public interest safeguards stemming from the administrative law tradition, which strengthens oversight of the AI usage within public contracts. On the other hand, in Egypt, there is a more sectoral regulatory approach, which balances healthcare governance but does not have specific AI drafting standards for PPPs. In Jordan, the legal system is primarily concerned with general PPPs with little regulatory guidance on AI, and accountability frameworks. Regarding the European Union, the AI governance instruments focus on regulation and transparency but remain silent to the drafting of AI assisted contracts within the PPP scope. There is a direct relationship between these disparities and the legal scope of integrated AI in healthcare partnerships. Systems with more administrative law frameworks are more transparent, accountable, and provide judicial review, whereas more control law systems are less transparent and lack in review mechanisms.

The law of the public administrative side of PPP contracts is critical because they are governed by public law and not private contractual autonomy. In other words, there are more critical legal requirements to be observed, including public interest, transparency, and the law. AI will have to be used subject to these requirements. In contrast to private contracts, administrative contracts are more subject to the scrutiny of the courts and the public, and because of the non-delegable duties of oversight, there must be a rational account of the use of AI systems.

II. THE CONCEPT OF THE PPP CONTRACT AND ITS LEGAL NATURE

1. THE CONCEPT OF THE PPP CONTRACT

The primary objective of PPP contracts is to develop and manage long-term Public Sector Infrastructure Projects that the public sector is unable to undertake independently because of the lack of technical know-how, institutional capacities and financial constraints of government units. Consequently, the private sector becomes a key strategic partner in fostering growth and development by undertaking the execution of large-scale projects that the public sector is unable to timely accomplish, thus, advancing the enduring development goals. This role becomes more crucial with respect to AI and its growing applications, particularly in vital sectors and projects like healthcare, in public and private hospitals and clinics. Its contribution to the health dimension of sustainable development is significant. This is because the public and private sectors are the two main pillars of the economy, and, in turn, are based on the principles of complementarity and competition [3]. Consequently, the use of AI applications Partnership Contracting has been adopted by most states as an approach to achieving greater efficiency in the provision of public services and to a lesser extent mitigating the costs incurred by the public purse as a result of transferring the financial control and spending responsibilities to the private sector [4].

Of the many legally and economically relevant mechanisms to obtain sustainable development to low resourced healthcare and technology systems in developing countries, one of the most impactful is the funding of virtual technologies in the healthcare and hospital management systems and PPP contracts [3]. These contracts, in theory, are meant to combine and facilitate the service to the healthcare system and provide the healthcare system to numerous high medical care demand population that constantly increases. most public sectors that provide medical care are understaffed and unequipped with the necessary advanced technology needed to meet the demands and provide care to the healthcare facilities.

The increasing use of AI in healthcare PPP contracts is due to the private sector's specialized technical knowledge, superior technology, and international experience. These attributes make the private sector more capable than the public sector in managing and operating healthcare technology. Thus, partnerships of this nature are likely to produce more efficient and effective outcomes than implementation by the government alone. PPP agreements can be defined as, Contracts signed between a public entity and a private entity,

determining the scope and objectives of collaboration, the proportions and responsibilities of financing and investment, and the duties of delivery, functioning, administration, and upkeep of the contract for the public good and the sustainability of the project [5].

Contracts for Partnerships can also be defined as the, "Mechanism used to fund large potential state infrastructure projects where the state is given the ability to grant a concession to a (domestically) legally recognized private entity as a project company via a contract between the state and the project company called a Partnership Contract. This project company is to supply the specified primary infrastructure provisions as established in the partnership contract along with provisions that specify control of the project, profit-sharing on the project, and all measures and control of the project for all actions in compliance with the contract [6].

From a legal standpoint, it is noteworthy that both intergovernmental and non-governmental international organizations have shown a clear interest in PPPs. For instance, the United Nations has clarified the significance of such partnerships, defining them as: a cooperative venture between the public and private sectors, built on the expertise of each partner, that aims to meet clearly defined public needs through the appropriate allocation of resources, risks, responsibilities, and rewards [7]. Furthermore, and in more precise and comprehensive terms, the International Monetary Fund (IMF) has addressed this type of agreement between sectors, explicitly stating that such partnerships represent 'arrangements where the private sector supplies infrastructure assets and services that traditionally have been provided by the government [8].

Under French law, it is evident that a PPP contract is defined under Law No. 179/2009, dated 17 December 2009, as: an administrative contract by virtue of which the State or one of its public institutions grants another party the authority to establish a project for a specified duration, conferring upon it, during this period, the rights of utilization, investment, and financing of the agreed-upon project in accordance with the pre-agreed terms, to accomplish the task legally assigned under the provisions of the executed agreement [9].

At the Arab level, the Egyptian legislator has played a pioneering role in defining PPP contracts. According to Article 1 of the Law Regulating Private Sector Participation No. 67 of 2010 [10], a "partnership contract" is referred to as: "a contract concluded by the administrative authority with the Project Company, under which the latter undertakes to perform all or part of the works stipulated in Article 2 of this law." Similarly, the Omain Law has defined partnership contracts as: "A contract that the competent body concludes with the project company through which it commits, for a specified period, to finance, establish, and prepare infrastructure and public facilities projects, and manage, operate, utilize, maintain, and perform its services, and contribute in performing its function in return for the consideration agreed in the contract, or in accordance with the principles and rules it specifies [11]. Additionally, the Jordanian legislator defined it as: "The agreement concluded by and between the Public Authority and the Project Company in accordance with the provisions of the Law for the purpose of implementing the PPP Project in which the terms, conditions, procedures, and the rights and obligations of the parties are specified" [12].

Having understood all the definitions, it is clear that the PPP extends across many economic and social sectors, primarily dealing with the civil work and management of hospitals, schools, roads, bridges, tunnels, street lights, airports, sea terminals, and water and electricity facilities. Therefore, it is understood that hospitals are the main pivot in the scope of the executed PPP agreements and are of great value in the integration of sustainable development in its optimum form [13]. Thus, it can be concluded that public–private partnership agreements are a specific type of administrative contract. In this type of contracts, a public administrative structure enters into a partnership with a private individual and/or entity for the execution of a contract that is fundamental and of great value, which is associated with a public property that is owned by the State, and which is fully governed by the provisions of the contract.

2. THE LEGAL NATURE OF THE PUBLIC–PRIVATE PARTNERSHIP CONTRACT

The prior explanations regarding the PPP contracts along with the details given in the first section motivate one to characterize a PPP contract as a type of governmental administrative contract. This is so because with one of the parties thereto being the State, one has a public authority who has a legal duty to serve the public interest in whatever contract he/she gets into [14]. Within the contract as public entity, the State operates solely within the domain of administrative law. This is most evident in the management of a partnership contract in

a public facility, for instance, a hospital, which is a public facility that provides a range of services to the public including primary healthcare, specialized medical treatment, and also the issuance of certificates of death. Thus, the legal nature of the PPP contracts shows us that it is a relatively stable type of administrative contract, where a private sector player is permitted to take on the responsibility of a task or to undertake a long-term project, at its own expense, while having the financial means, technical capacity to manage, operate the facility, and maintain, and keep it in good working order throughout the contract, under the supervision and control of the State, in accordance with the provisions of the contract and any subsequent governmental modifications that may be made.

The function of the private contracting party has two main aspects; one is the obligation to operate, manage, and further invest into the public facility for the duration of the contract, and the other is the right to receive the positive financial value that is predominantly of a profit nature, which the State is obliged to pay in conformance with the timeliness and other terms of the contract. The financial value of the contract is a key component and a prerequisite for the legitimateness of the PPP Contract [15]. In some cases, the contract may stipulate that the consideration consists of granting the private party the right to exploit and invest in the facility for a specified period, after which ownership reverts to the State [4].

Consequently, this type of contract is classified as an administrative contract subject to administrative law and constrained by the rules and regulations issued by the State in accordance with its national legislation [16]. French law has affirmed this position in defining PPP contracts through various decrees and regulations, including Decree No. 559/2004, as amended by Law No. 179/2009, Decree No. 515/2009, and Decree No. 177/2010 [16]. Similarly, did the Jordanian legislators, when defining it in Article 2 of the Jordanian Public–Private Partnership System, No. 23 of 2021 [17]. Furthermore, the forms of PPP contracts vary according to the nature of the project and the type of relationship between the parties. The most prominent forms include concession contracts, availability contracts, and build–operate–transfer (BOT) contracts [18].

III. AI IN HEALTHCARE PPP CONTRACT DRAFTING

The role of artificial intelligence in different sectors has continued to increase and diversify over recent years. In response to these technological advancements, most countries across the globe have developed and implemented new policies to regulate the use of these technologies. These policies consist of primary legal norms which specify the scope of activities permitted and the restrictions to be applied to prevent negative consequences, having in mind that such technologies, in particular, have already been developed and implemented in most critical sectors, such as health care. This, in turn, triggers the question: To what extent should the applications of AI be allowed in the preparation of PPP contracts, and what are the implications of such applications in the provision of services to ensure the attainment of desired health outcomes?

The use of technologies in the preparation of public private partnership contracts to enhance the quality of health services is, undoubtedly, of great importance and, to a large extent, should constitute the basis of advocacy and should receive scholarly attention, the need for which is undeniable at the practical and administrative levels. This must also be provided within the legal framework within which the implementation can be lawful and valid. This, in turn, should also bring about a positive qualitative change in the functioning and arrangement of public and private healthcare organizations, improving the delivery of healthcare services and the manner in which services are rendered within a framework of efficiency, order, and lawfulness. In addition, it should be able to resolve the possible issues of a practical and or an administrative nature in the functioning of healthcare services which may in some instances contravene the laws and regulations governing the sector. The challenges in this regard, do not alter the fact that the legal delegation of the preparation of public partnerships in the healthcare sector to AI is a major concern of many, as it greatly expands the scope of freedom and creativity in establishing the legal mechanisms to regulate public services. It also demonstrates the high level of administrative and legal aspirations of the public entity.

We contend that, now, it is the best time to employ AI technologies in the legislative domain, within a clear institutional vision and under the supervision and oversight of the competent authorities, to contribute to the preparation and drafting of well-crafted and robust legal contracts that are commensurate with the rapid

developments taking place in the medical field, in particular. This approach forms part of broader efforts to enhance the quality of healthcare and to ensure the optimal delivery of medical services [19]. Within this framework, numerous trained specialists in medicine such as doctors, along with specialists in the law, highlight the fact that in both fields, the impact of technology has, for quite some time, been a focus of attention. The impact of such a transformation is twofold. It has the capability of improving the efficiency of the provided medical services, as well as improving the design of the legal and statutory framework when applied to the preparation of administrative contracts that are entered into by the public and private sectors of the medical field.

What has been documented in practice until very recently indicates that the drafting of recently signed public–private partnership contracts of the sector in question, health care, has been done using traditional methods of law, with no use of technology. The opinions of professionals from the medical field and the legal field, and further analysis of such mechanisms in the raw, suggest that the use of such contracts is very inefficient in realizing contracts in health care, particularly in terms of time. The chain of events that accompanies the conclusion of the public–private partnership contract is long and complex, beginning with the announcement of the proposed contract by the relevant administrative authority, in this case the MoH, and ending with the final selection of the contract awardee and the signing of the contract.

In view of the profound changes in technology and given that it is already 2025, the use of artificial intelligence in drafting of joint administrative contracts of health care is no longer optional, and is a necessity if we are to move away from the methods described as traditional. This urgency stems from the high capacity of such technologies to analyses vast volumes of legal documents and prior contractual models concluded with the private sector in the healthcare field, thereby enabling the extraction of the most optimal and legally sound contractual formulations. Accordingly, AI can demonstrate its technological potential in preparing joint public administrative contracts that achieve the highest standards of sound legal drafting and ultimately contribute to the regulation and advancement of healthcare services.

1. AI AND THE DRAFTING OF HEALTHCARE PARTNERSHIP CONTRACTS

The conclusion of administrative contracts, particularly in the context of healthcare contracts between the Ministry of Health and the private sector both domestic and international, faces particular legal and procedural issues pertaining to the law. Due to the scarcity of some states' medical resources and supplies which cannot be provided or produced within the hospitals and healthcare facilities, the relevant health authorities, specifically the Ministry of Health, try to fulfill the medical resources and supplies through contracting with the domestic and international private sector. These actions are based on contingency planning in order to avoid and prepare health administrations for situations of scarcity of medical supplies and health crises. These studies evaluate and predict the timing and the quantity of the medical supplies which are projected to be necessary in the future.

Integrating these technologies and services will allow for the drafting of PPP contracts for the improvement of healthcare to be the first step to using AI in these processes. AI's abilities to analyze demographic data to determine and correlate the age of different sectors of the state and to predict the healthcare needs of these sectors is particularly relevant. Furthermore, AI allows for the digitization of data which can be stored in an organized electronic format, one that can be held by the Ministry of Health, and the other, by the healthcare service provider/contracted partner in the PPP.

To optimize health care through PPP contract to fulfil the demands of the modern medical revolution such as chronic disease or other medical emergencies as well as the modern healthcare demand, the application of Artificial Intelligence (AI) technologies to these PPP contracts is a condition sine qua non. Such integration will, with a high degree of legal certainty, foster the conclusion of adaptable contracts, which will better provide for the flexible governance of the implementing health policies of the Ministry of Health in times of peace and emergencies and crisis health situations. Consequently, as long as the utmost care and precision are practiced with respect to the health data generated during the conclusion or execution of the contracts and health services delivery, it is necessary to integrate the use of AI technology into the legal–health framework for the conclusion and implementation of PPP contracts. This encompasses the protection of ethical aspects and the full openness

in the identification, selection, and execution of administrative actions in the domain of health care, and, in this way, the confidence and legal legitimacy of such administrative contracts are obtained [21].

In closing this section, consider yet another undeniable fact of our time, the unprecedented and rapid evolution of intelligent technologies across generations and its impact on the social and institutional order. Thus, we urge health public administrative authorities to not only adapt to the present, but also to the near and distant future by harnessing AI for the drafting of public-private partnership contracts. This, in turn, will incorporate the latest technologies into the healthcare system and achieve the highest level of health possible.

2. FEATURES OF THE ROLE OF AI IN DRAFTING HEALTHCARE PARTNERSHIP CONTRACTS

AI has developed rapidly and significantly across all vital and sustainable fields and activities, including healthcare.[22] Its services have distinguished it from other traditional methods of managing crucial activities in the country. Its practical, field-based role can be summarized in the following points:

- First: Explaining Applicable Legal Health Data:

The role of AI is distinguished in this area, as it can extract the most prominent laws and regulations governing the healthcare sector. This is done by retrieving all algorithmic data from applicable national and international legislation, ultimately leading to a final model that combines the best applicable laws and regulations. This is done by providing a concise reference after reviewing the legal texts specific to the healthcare field.

- Second: Proposing, amending, and repealing legal texts governing the medical field and the return of medical partnerships:

AI also plays a positive role, providing legislative solutions to regulate the medical field. This is achieved by proposing health legislation and regulations following a review of local, regional, and international laws and regulations. Furthermore, it can propose legal amendments to existing laws and regulations, when necessary, based on the benchmarking analysis. It may even go so far as to provide national legislators with recommendations to repeal specific rules or regulations that conflict with the medical field, could disrupt its smooth and consistent operation and the delivery of medical services according to their intended course, could harm the government medical system through legal and financial accountability, or could negatively impact service recipients. This is one aspect. Conversely, the assistance of AI for the drafting of PPP contracts in the provision of healthcare and enhancement of healthcare services is also significant. The AI can suggest changes to contracts, or even suggest the removal of certain traditional clauses that are included in the contracts, as the AI is capable of researching a significant amount of data and using sophisticated tools.

Furthermore, AI can provide even more innovative alternatives in terms of drafting PPP contracts that is more proactive and prescriptive, where AI can synthesize the data and evaluate previous contracts entered by the government; specifically, the Ministry of Health in its administrative contracts in healthcare. With this, AI is able to provide an innovative alternative of PPP contracts that is responsive to the newer needs of the healthcare industry and also incorporated the existing available technologies [23].

3. LEGAL AND PRACTICAL FRAMEWORK FOR AI-ASSISTED PPP CONTRACT DRAFTING

The use of artificial intelligence technology when drafting PPP contracts in the healthcare field requires additional legal and doctrinal innovations. The challenges posed in this context involve the fusion of modern legal innovations with the administrative law, public procurement, and public interest/governance framework. AI, from the public law perspective, is not a legal actor and autonomous system. Instead, it is a tool and part of the system for a public decision-making body. Accordingly, the primary legal question concerning AI drafting is not a question of technology. The primary question is how the outputs of technology are integrated into the administrative decision of the contracting authority, and whether this integration is consistent with the values of law, transparency, accountability, and proportionate [24].

From a doctrinal standpoint, AI involvement in the drafting of PPPs can be situated along a functional continuum. In the first case, AI acts as a decision-aid system supporting legal drafters by suggesting clauses, checking internal coherence, cross-referencing regulations, and even modeling risks [25]. In this scenario, AI is fully dependent on human reasoning, and the public authority's intent and the responsibility attribution

doctrine remain unchanged. At the opposite end, AI acts as a semi-autonomous drafting system, which may be able to create a valuable part of the contract with little to no human involvement. This latter scenario is fundamentally problematic in terms of the authenticity of the administrative act, the imputation of the reasoning behind the decision, and the maintenance of legality in the formation of the public contract and PPP. [26] The more the drafting function allows for automation, the greater the risks to public law accountability, and the greater the need for guarantees [27]. AI technologies utilized in the drafting of healthcare PPP contracts can be categorized according to their roles, each associated with particular legal repercussions.

Table 2. AI technologies used in drafting PPP contracts and the associated legal risks.

AI Tool Type	Core Drafting Function	Legal implications
Contract analytics	Capture patterns and absent clauses in previous PPP contracts	Consistency, uniformity in the treatment of bidders, defensibility of standard terms.
Clause revision tools	Advocates optimal revision of particular clauses of the contract	Validity of clauses, transparency in the rationale, and risks of bias.
Compliance verification tools	Assess compliance with the law and sector regulations	Administrative legality and/or avoidance of ultra vires provisions.
Risk allocation engines	Strategically allocate and model financial and operational risks.	Protection of public interest and proportionality of the burden
Data management AI	Organize and redact sensitive health data	Confidentiality and compliance with data protection law.

These technologies should be seen, legally, as constrained tools rather than autonomous variables in the drafting process. The public contracting authority retains the final contractual intent and legal liability, thereby preserving the tension between the confines of administrative responsibility and the scope of judicial review.

The Operational Logic of Framework describes how a given process works. Suppose a Ministry of Health engages a private partner to build a digital hospital. An AI tool is used to analyze the legal framework (laws governing PPPs and procurement, healthcare, and data protection), compare previous PPP contracts, and draft a contract with optimized provisions on risk allocation, service quality, and performance metrics. After the AI tool generates the draft, a legal expert reviews it to ensure compliance with the principles of administrative law, such as legality, transparency, and fairness (both proportionally and in a balanced manner). [28] This process describes how, to a certain extent, preemptive administrative integrity and the potential for post-judicial defensibility are improved. From an administrative law perspective, the AI-assisted PPP contract's legality hinges on the fulfillment of key safeguards, which must be present in the PPP process. Public entities must be in a position to justify that the terms of the contracts result from an intentional and rational administrative exercise. If an AI contract is approved with little to no human input, the draft is a candidate for legal action on the grounds that there is no real intention, insufficient rational thought, or neglect of the common good [29].

Legitimacy of AI-assisted drafting is grounded in transparency as well. In public contracting, the reasoning obligation is, for the purpose of procedural fairness, justify equal and non-discriminatory treatment and the reviewability of decisions. In the absence of adequate justification for the reasoning of certain AI-produced contractual provisions, the drafting of the PPP could appear as a concededly arbitrary exercise in drafting. Hence, the use of AI tools in drafting should be supplemented with records explaining the selection, alteration, or elimination of particular contractual provisions, including the alignment of these decisions with the prevailing laws and policies in the healthcare sector.

When dealing with risk, financial responsibilities, and performance requirements, the use of AI during PPP drafting also intersects with the principle of proportionality. Although AI may generate and suggest risk allocation and distribution models that are either standard or derived from historical data, public authorities still have the responsibility to determine if the model is appropriate for each specific healthcare project, especially concerning patient safety, continuity of care, and public access. Failing to conduct this specific

assessment may result in contracts that unduly benefit the private partner(s), result in poor quality services, or unfairly place financial or operational risk on the public side.

Accountability when using AI to assist in drafting public private partnerships needs to be approached from a functional rather than a technological perspective. Since AI systems do not have legal personhood, no system can be assigned responsibility for the results of a contract. The responsibility for the system must be apportioned to the human actors who build, implement, and depend on the system. It is the public authorities who have the responsibility to ensure that the contracts are legally compliant, and that they advance the public good [30]. The private partners are always responsible for performing the contract, and for meeting any performance requirements. Technology providers can be responsible for certain types of liability, including any AI system deficiencies, false claims regarding what the AI can do, or technical and security claims that do not meet the specifications that were contractually agreed to. These are the types of liability that are correctly assigned in legal theory to the person or entity that has the greatest degree of control or the greatest degree of knowledge or ability to avert the risk

The balancing of liability is important in healthcare because contractual performance may create risks to patients, including their safety, the privacy of their data, and the uninterrupted provision of services. AI systems that generate text for contracts with clauses on clinical governance, service standards, or data management must be scrutinized by more than one human. The public authorities still have an obligation to protect fundamental rights, such as the right to health, the right to privacy, and the right to access essential services, and this obligation cannot be delegated, even if there has been an AI system that has been used to draft contracts.

The Drafting of AI aided PPPs must be governed by a set of relevant rules. The rules must embody both the substantive and procedural aspects of the integrity of public contracting. The integrity of public contracting can be preserved by substantive and procedural aspects of integrity. The substantive aspect of integrity is the consistency of the contracting by the drafting of the public contracting to the laws, rules, and regulations of the given sector to the health care and the public policy goals. The procedural assurance of integrity is the establishment of a contracting process that is able to be tracked, is reasoned and is overseen. This includes the construction of a trail of audits, the designation of accountable persons, and the establishment of oversight structures that can formulate the right judgments and correct errors in the content of AI-generated documents [31].

Multiple levels of mechanisms must be established. From the inside, the public authorities must have a structure of reviewing processes that includes legal audits and compliance reviews before the AI-generated documents are signed. From the outside, the bodies of governance and the courts must have the capability of reviewing the content of the PPP contracts and the procedures of drafting the contracts. If the use of AI is unregulated, the use of AI will erode the mechanisms of accountability in the systems of public governance.

Table 3. Summary of regulatory framework for AI and public private partnerships.

Country / Region	PPP Legal Framework	AI Regulation Status	Key Gap in AI-Assisted PPP Drafting
France	Administrative PPP contracts	EU AI governance	o clear auditability or explainability in AI drafting
Egypt	PPP Law No. 67/2010	Emerging AI policies	Prescriptive contracts for healthcare AI lack sufficient protections
Jordan	PPP Law No. 23/2021	Developing digital governance	No accountability or transparency in AI drafting
European Union	Procurement Directives	EU AI Act	No specific guidelines for PPP on AI-assisted contract drafting

A comparative legal analysis shows that while numerous jurisdictions have developed frameworks for PPPs and public procurement, there are still few explicit laws governing the use of AI in contracting. Current instruments that govern AI are, in the best case, focused on an anemic set of issues such as protection of data, ethics, or high-risk AI, and make no attempt to engage with the reality of administrative contracting [32]. Such a gap in regulation means we have no clear standards on the transparency, accountability, and liability of AI in public private partnership drafting, especially in volatile areas like health care.

Judicial review is hindered by a lack of clear legal standards. Judges examining the legality of AI-assisted PPP contracts may not have clear standards to assess how AI may have eroded administrative consent, the reasonableness, or the proportionality of contract terms. Such ambiguity could lead to inconsistent rulings and a loss of stability in public contract law. The foremost principle for AI-supported PPP drafting is the upkeep of human accountability, record keeping of reasoning, and the adherence of AI outcomes to the fundamental principles of administrative law. Considerable legal certainty and low controversy can be accomplished through the inclusion of contractual stipulations clarifying the function of AI, the extent of human supervision, and the distribution of responsibilities for errors attributable to technology. On the contrary, the creation of public contracting frameworks addressing AI would balance practice and innovation, and ensure that accountability and the governing public interest of sustainable healthcare remain uncompromised in technologically advanced systems.

IV. CONCLUSION

Regarding the use of AI and its potential use in streamlining PPP contracts in the healthcare sector, the available literature indicates that even the foreign and Arab legislations are lacking in that integration. This is Pierre et al. (2022) [33], ascertains that there is no regulation regarding the legal frameworks that govern the use of technology in healthcare partnerships, especially focused in the execution of PPP contracts, as there is an absence of such partnerships. This inability results in the absence of legal shields that ought to be in place to ensure that there are adequate legal protections, even in instances of such partnerships, to ensure that there is adequate protection of patients. This is why this specific study has an in in distinct negligence by considering that he has made Romanian legislators have in place legal sanctions in order to provide for the protection of patients. In this case, this study proposes the form of regulations to be established the specific obligations of the AI technologies to be integrated in PPP contracts for the purpose of enhancing healthcare. Ultimately, this framework may be to operationalize the administrative and criminal accountability for the resulting damage that may be caused by breach of the contract and other forms of negligence.

This study furthers the existing legal discourse by considering the AI-facilitated drafting of PPP contracts through the lenses of administrative law, public accountability, and process transparency, instead of simply portraying it as a case of technological efficiency. By integrating AI into the established parameters of public contracting law, the author shows that the role of AI in administrative law must be limited to the exercise of human administrative discretion, rational reflective judgment, and advocacy of the public interest. This contribution CLS practitioners and scholars to fill a long-standing absence in the literature that has, in most part, concentrated on the technical and ethical aspects of AI, and particularly in the context of administrative consent, the completeness of the contract, and the availability of judicial review.

This research analyzed the utilization of AI technologies in drafting PPP contracts in the healthcare sector. Also providing a synthesis of the available legal structures surrounding the formation of administrative contracts in both the public and private sectors and strategies to advance healthcare. In conclusion, the study produced some results and recommendations, which are the following:

1. RESULTS

- AI and its rapid advancements represent a model that must be pursued steadily to achieve the desired healthcare outcomes. Most countries worldwide strive to benefit from AI, particularly through PPP contracts, despite legal challenges that remain a legislative gap in many countries, including developing nations that lack the use and application of AI technologies in the healthcare sector.

- The genuine lack of a unified legal and legislative framework worldwide for the use of PPP contracts in cross-border and transcontinental healthcare cooperation, on the one hand, and even at the domestic level, due to the absence of explicit legislative provisions clearly regulating such contracts in unequivocal legal terms.
- The lack of AI-specific guidelines for drafting PPP contracts leaves a lack of transparency, accountability, and regulatory liability, even more so within the high-stakes healthcare sphere, where contractual imperfections can jeopardize patient safety and a greater public interest.
- The use of AI in the administrative drafting of contracts, without defined parameters for human supervision, may diminish decision-making traceability and compromise the fundamental principles of administrative accountability and judicial control.

2. RECOMMENDATIONS

- It is hoped that the legislator has the initiative to implement legal provisions into the regulations governing hospitals and healthcare facilities, be it through sectoral regulations that govern all hospitals and healthcare facilities, or through particular provisions that extend to the privatized hospitals and healthcare facilities. Such provisions would govern the use of PPP contracts to improve the healthcare services offered by the state. In addition, it would require all medical institutions, regardless of their legal status, public or private, to shift their administrative and clinical processes to artificial intelligence systems in order to make the sector more technologically advanced in these areas.
- Hopefully, the legislator will put emphasis on the norms of complete openness. Also, we expect the legislator to instill true legal responsibility when dealing with PPP contracts, especially those pertaining to the use of AI technologies in the healthcare sector. This will promote equity and strengthen the legal responsibility of negligence and mistakes with respect to the healthcare technologies in question, whether in the administrative management of hospitals or in the provision of health services to patients.
- It is hoped that the legislator will develop the legal oversight environment by enacting internal regulatory frameworks and legislative rules aimed at ensuring specialized legal supervision whenever artificial intelligence technologies are used in governmental and private medical facilities, as well as in associated healthcare service entities.
- It is hoped that the legislator will explicitly affirm the right to protect health data through stringent legislation, ensuring this protection is carried out effectively and without negligence or laxity.
- Legislators are urged to implement more specific guidelines covering the use of AI in contract drafting in the PPP context. Such guidelines would encompass human review requirements, auditability, and documentation to preserve administrative legality and procedural transparency.
- There is a need for more detailed guidelines regarding the allocation of liability among public authorities, private partners, and tech providers in instances where AI contractual clauses lead to regulatory noncompliance, service deficiencies, or injury to a patient. The absence of such guidelines would erode legal certainty and create gaps in accountability in healthcare governance.
- At the institutional level, public contracting authorities must develop internal policies that delineate the acceptable use of AI in PPP contracting and drafting, the levels of human oversight, and the legal review steps pertaining to the healthcare and public law compliance of AI-generated clauses.
- Despite having the potential to improve the efficiency and consistency of PPP contract drafting in the healthcare sector, the use of artificial intelligence must be integrated legally within the boundaries of administrative accountability, transparency, and protection of the public interest. Therefore, the sustainable use of AI in partnerships in the sector of healthcare will depend, aside from the level of technology, on the existence of comprehensive legal frameworks that preserve institutional legitimacy and protect patients.

Conflicts of Interest

Data Availability Statement

No new data were created or analyzed in this study. Data sharing is not applicable to this article.

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REFERENCES

1. Mustainah, M., Haryono, D., & Nuraisyah, N. (**2025**). Strategies to improve the quality of public services with artificial intelligence (ai) in indonesia. *Qubahan Academic Journal*, *5*(1), 429-446.
2. Abdel-Razek, H. (**2014**). *Partnership contracts*. Dar Al-Jami'a Al-Jadeeda.
3. Dragi, S. (**2014**). Public–private partnership contracts: An effective mechanism for financing local development. *Journal of Human Sciences, (41)*, 310–320.
4. Abdel-Razek, H. (**2014**). *Partnership contracts*. Dar Al-Jami'a Al-Jadeeda.
5. Al-Qahawi, L., & Al-Wadi, B. (**2012**). *Public–private partnerships: Theoretical and practical framework*. Dar Al-Hamid for Publishing and Distribution.
6. Salman, O. (**2012**). Legal framework for public–private partnership (PPP) contracts. In *The legal framework for public–private partnership contracts and arbitration in related disputes*. Arab Organization for Administrative Development.
7. United Nations. (**1998**). *Public–private partnership: A new concept for infrastructure development*. Economic Commission for Europe.
8. International Monetary Fund. (**2004**). *Public–private partnerships*. Fiscal Affairs Department.
9. Burhan, S. (**2008**). Public–private partnership contracts in the French legal system. In *Public–private partnership contracts*. Arab Organization for Administrative Development.
10. Egyptian Law Regulating Private Sector Participation, Law No. 67 of 2010. *Official Gazette, No. 19 (Extraordinary A)*.
11. Sultanate of Oman. (**2019**). *Public–private partnership law, issued pursuant to Royal Decree No. 130/2019*.
12. Jordanian Public–Private Partnership System No. 23 of 2021.
13. Omani Ministry of Health. (**2025**). *Basma Al-Shifa Project*. Muscat Governorate.
14. Sultanate of Oman. (**2019**). *Public–private partnership law, issued pursuant to Royal Decree No. 130/2019*.
15. Dekrouri, M. (**2008**). *A study on public–private partnerships with a focus on the Egyptian experience*. Ministry of Finance, Research and Finance Department.
16. Hamash, A., & Al-Marashdeh, Y. (**2008**). Partnership contracts and state sovereignty. In *Public–private partnership contracts*. Arab Organization for Administrative Development.
17. Jordanian Public–Private Partnership System No. 23 of 2021.
18. Sultanate of Oman. (n.d.). *Medical City Project (Al-Buraimi–Barka)*.
19. Department of Health – Abu Dhabi. (**2019**). *MyMelfi digital health platform*.
20. Muscat Private Hospital & QPAY. (**2025**). *Healthcare digital payment partnership agreement*.
21. Fathallah, B. (**2024**). The role of artificial intelligence in achieving sustainable development. *Al-Haq Journal for Sharia and Legal Sciences*, 121–122.
22. Abdel-Baset, T., & Al-Sayed, M. (**2025**). Artificial intelligence and planning for improving the quality of healthcare in university medical centers. *Journal of Social and Applied Sciences, 6*(2), 464.
23. Bouguerra, S. (**2024**). Harnessing artificial intelligence technologies to develop healthcare: The case of Algerian doctors. *Qabas Journal for Human and Social Studies, 8*(2), 803.
24. Turan, T. (**2025**). *Legal and ethical issues in healthcare*, 17–41.
25. Beltrán, S. (**2025**). Artificial intelligence and making of contracts, 381–389.
26. Herbosch, M., & Claes, H. (**2023**). Artificial intelligence and contractual liability limitations: A natural combination? *European Review of Private Law, 31*(2/3), 469–496.
27. García Majado, P. (**2025**). Los sistemas automatizados en el ordenamiento jurídico: Tipos de programación, riesgos y control. *Revista de Derecho Político, 123*, 147–178.
28. Aduloju, T. D., Okare, B. P., Omolayo, O., Afuwape, A. A., & Frempong, D. (**2023**). Big data-enabled predictive compliance frameworks for procurement risk management in emerging and high-regulation markets. *International Journal of Multidisciplinary Research and Growth Evaluation, 4*(3), 1143–1154.

29. Aduloju, T. D., Okare, B. P., Omolayo, O., Afuwape, A. A., & Frempong, D. (**2023**). Big data-enabled predictive compliance frameworks for procurement risk management in emerging and high-regulation markets. *International Journal of Multidisciplinary Research and Growth Evaluation, 4*(3), 1143–1154.

30. Herbosch, M., & Claes, H. (**2023**). Artificial intelligence and contractual liability limitations: A natural combination? *European Review of Private Law, 31*(2/3), 469–496.

31. Awang, N. A. (**2024**). Contract law and artificial intelligence: Examine the implications of AI on contract negotiation and execution, including the challenges of automated contracting. *International Journal of Academic Research in Business & Social Sciences, 14*(11).

32. Zięba, B. (**2024**). AI Act and public procurement law – an opportunity or threat. *Teka Komisji Prawniczej PAN Oddział w Lublinie/Teka Komisji Prawniczej, 17*(2), 625–635.

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