Investigating Contractual Obligations in Islamic Jurisprudence and Iranian Law with a Case Study of the Application of Artificial Intelligence in Contracts

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Abstract

Obligation, in Islamic jurisprudence and law, refers to a legal relationship based on which a person becomes bound to transfer and deliver property or to perform or refrain from performing a particular act. The causes giving rise to such a relationship may include contracts, unilateral legal acts, or compulsory legal obligations. One of the most significant developments in the legal field in recent years has been the use of Artificial Intelligence (AI) in contract drafting. AI technology has revolutionary potential for the methods of creating, reviewing, and managing contracts, enabling processes that are faster, more efficient, and less prone to error. The concept of obligations in artificial intelligence is one of the novel, important, and attractive topics in the field of information and communication technology. This article examines the obligations related to this subject and their significance. Intelligent machines must fully comply with individuals' rights and privacy and refrain from any violation of such rights. Given the rapid growth of artificial intelligence, the importance of obligations in this field has also increased. The question of how artificial intelligence will function in relation to obligations must be examined from legal, ethical, and technical perspectives. The purpose of this article is to address the importance of artificial intelligence in contract drafting for the legal community. Furthermore, the manner of compensation for damages through artificial intelligence will also be examined.

Keywords: Contractual Obligations, Application of Artificial Intelligence in Contracts, Jurisprudential Contract, Artificial Intelligence Contracts

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1. Introduction

Fulfillment of covenants has been presented in divine verses as a fundamental principle and an explicit command, and human beings are regarded as bound and obligated with respect to their own covenants. This divine foundation became a basis for Muslim jurists to explain, in various legal issues, the rules concerning matters such as contract and liability, and to address contract and law as two principal sources in civil law. Reference should also be made to the general theory of obligations in the texts of Imami jurisprudence, particularly the hadith transmitted from Abdullah ibn Sinan, according to which a contract that does not generate an obligation cannot be regarded as a contract (Ibn Sinan). Accordingly, the theory of obligation may be considered the backbone of the general discussions of private law. Contracts have great importance in transactions and have long been a central concern in relations among individuals. According to Article 10 of the Iranian Civil Code, private contracts are binding upon those who have concluded them, provided that they are not explicitly contrary to law. In this article, contract is considered in its specific sense, namely innominate contracts. It should be noted that a smart contract may operate between a human being and artificial intelligence or between two artificial intelligence systems. Software based on artificial intelligence technology currently makes it possible to draft precise contracts, analyze existing contracts and legal documents, and predict judicial decisions. The subject of obligations, whether arising from contract or outside contract, and any form of compulsory liability, includes three areas: transfer of external objects, performance of an act, or omission of an act. On this basis, the object or subject matter of an obligation always requires an external object, whereby a specific external object and a specific act respectively apply to the concepts of transfer, performance of an act, and omission of an act. On the other hand, according to the definitions mentioned, the personal character of obligation distinguishes it from real rights and introduces two elements into the matter of obligation: the obligor and the obligee. In Article 140, the term appears in the plural form as “obligations,” and again in Article 183 in the singular form, where it is used in the definition of contract. This article states that “a contract consists of one or more persons undertaking an obligation toward one or more other persons concerning a matter, and that matter being accepted by them” (Katouzian, 2010; Shahidi, 2013). In this definition of contract, obligation itself is not defined and is merely mentioned as a term. Accordingly, it may be said that the Iranian Civil Code first addresses contract and the obligation arising from it, and then discusses the second category of obligations, such as usurpation, destruction of property, causation, and unjust enrichment. One of the common methods of compensation for damages in Imami jurisprudence and Iranian law is compelling the obligor to perform contractual obligations. According to this method, whenever the obligor refrains from performing contractual obligations, they will be required to perform and execute those obligations; such compulsion and enforcement are carried out by competent authorities pursuant to legal authorization. In Imami jurisprudence and Iranian law, compelling performance of an obligation occurs through two methods that stand in a hierarchical relation: direct executive action and indirect executive action, the latter itself being divided into financial compulsion, such as seizure of property, and bodily compulsion, namely imprisonment. Indirect executive action means placing the obligor, through recourse to legal methods and sanctions, in a position where they are compelled to perform the obligation. In light of Articles 220, 237, 238, and 239 of the Civil Code, compelling the obligor to perform the obligation through direct executive action takes precedence over other methods and has priority; where recourse to this method is impossible, other methods must be used. A general review shows that the Iranian Civil Code does not refer to crimes, quasi-crimes, or quasi-contracts; rather, like its initial definition, it divides obligations into two categories: those arising from contract and those arising outside contract. In recent years, the movement of globalization has become clearly visible in all legal fields. In presenting various foundational theories concerning the concept of obligation in civil law, contract and law have been introduced as the two principal sources; in the West, Thaller first referred to this issue, and Planiol, the French jurist, developed it further. Smart contracts are among the efficient and effective instruments for entering global markets (Planiol, 1920).

Smart contracts are concluded under the supervision of artificial intelligence on the blockchain platform, and the contractual consideration in them consists of smart assets or digital cryptocurrencies. The element of intention is regarded as one of the pillars of the formation of every contract in legal systems, and its expression and verification are necessary conditions for the formation and execution of every contract. The validity of such contracts also depends on proving that the element of intention can be verified in a reliable and authentic manner. The expression of the parties’ intention in smart contracts occurs through mechanisms for allocating authorization to use digital signatures, mechanisms for allocating authorization to use virtual currencies, and mechanisms for benefiting from information systems. Moreover, in contracts concluded through artificial intelligence agency, the transaction is performed through representation as manifested in intelligent systems. Therefore, it may be said that, in addition to the intention of the parties in smart contracts, the conditions of validity and the method of verifying such intention are also of great importance (Rashvand & Naser, 2019). Ensuring confidentiality and the authenticity of the content and signature of a smart contract, as well as ensuring the capacity, serious intention, and solvency of the parties, has caused extensive intervention by public and governmental authorities, which has no precedent in traditional contracts. Thus, it may be said that the consensual principle has been set aside, and valid expression of will in such transactions has acquired a special character. A smart contract can be executed and enforced without the need for an individual or institution. It may therefore offer greater security and lower cost. Conversely, issues such as the possibility of human error when writing contractual code, the current lack of transparency in legal rules across different countries regarding this form of contract, and the high cost of drafting it by programmers are among the most important disadvantages of smart contracts. It should be noted that attention must be paid to whether compensation for damages in contracts by artificial intelligence is possible through the above-mentioned methods or whether new solutions can be proposed. In response, it may be said that, given the formal updating of contracts, their nature must also undergo changes through the enactment of new laws appropriate to new conditions, so that the current needs of society, both domestically and internationally, in the field of contracts can be met. Another fundamental question is whether, in the Iranian legal system, the obligee may rely on this theory and invoke sanctions arising from breach of contract before the due date for performance arrives. It seems that, through reasoning and reliance on established legal rules and principles such as the no-harm rule, reason, rational custom, and the content of implied terms, it can be argued that the obligee does not always need to wait until the time of performance of the obligation and then, in the event of non-performance, request the court to compel the obligor and, in the event of refusal, proceed to rescind the contract. Rather, by relying on the content of the theory of anticipatory breach, rescission of the contract by the obligee may sometimes be conceivable even before the contract reaches maturity (Ghazinia, 2022; Mansouri, 2021). Here, by explaining and analyzing the nature of this theory, an attempt is made to prove that its content is justifiable in Iranian law and that it can be accepted in Iranian jurisprudence and law (Pasban & Sadeghi, 2023). The proposed article is important because it defines concepts for the discussion of obligations that may be considered significant in the field of contracts. On the other hand, with the modernization of the world, the need for artificial intelligence has become an important matter and is regarded as a novel and highly challenging issue in contemporary societies. Therefore, addressing this subject in the form of a scientific article is of particular importance. The objectives of this article include explaining the importance of obligations in Islamic jurisprudence and Iranian law, explaining the importance of contracts in Islamic jurisprudence and Iranian law, and clarifying the effects of artificial intelligence on contracts.

2. A Look at the History of Obligations

The history of obligations and contracts in Iranian law is rooted in the long history and rich civilization of this land. To examine this issue, several important periods may be identified. The first is antiquity, in which the law of Hammurabi and similar legal systems may be mentioned. In ancient Iranian civilizations, rules existed that regulated contractual relations and obligations. Although Hammurabi's law is not directly related to Iran, as an example of the ancient laws of the region, it indirectly influenced the legal rules of that era. There is also evidence showing that during the Achaemenid period, contracts and obligations existed in various forms and were respected (Shariati, 2011). The next period is the Islamic period, which concerns the influence of Islamic jurisprudence. With the arrival of Islam in Iran, Islamic jurisprudence, as the principal source of law, exerted a profound influence on the law of obligations and contracts. Concepts such as sale, lease, agency, guarantee, and similar institutions were formed and developed on the basis of jurisprudential principles (Jafari Langroudi). Ultimately, reference may be made to nominate contracts in jurisprudence, as Islamic jurists discussed nominate contracts in great detail and determined their conditions of validity, effects, and rulings. These discussions constitute the foundations of contemporary Iranian contract law. Finally, the contemporary period may be mentioned. In fact, in the early fourteenth century of the Solar Hijri calendar, the Iranian Civil Code was drafted by drawing on European laws, especially the French Civil Code, while also taking jurisprudential principles into account. This code devoted an important section to the law of obligations and contracts and specified their general and specific rules (Katouzian, 2013). It should be noted that the influence of European law should not be overlooked, because the Iranian Civil Code was significantly influenced by European law. Concepts such as the principle of freedom of contract, the binding force of contracts, and civil liability entered Iranian law from European law. For example, under the principle of freedom of contract, Iranian law presumes that individuals are free to conclude contracts. Individuals may, by mutual agreement, conclude any type of contract unless it is contrary to law, public order, or public morality. With regard to the principle of the binding force of contracts, it should be noted that contracts validly concluded are binding upon the parties and cannot easily be dissolved. In the event of a dispute concerning the interpretation of contractual provisions, courts are required to interpret the contract in light of the intention and will of the parties (Rahpeyk, 2016). In general, in legal definition, obligation is a legal relationship under which a person is bound to transfer and deliver property or to perform or refrain from performing an act. In brief, the history of obligations and contracts in Iranian law is a combination of the influences of ancient civilizations, Islamic jurisprudence, and European law.

3. Concepts of Obligations and Contracts in Jurisprudential, Legal, and Smart Contexts

The word obligation derives from the root meaning covenant and undertaking, and lexically means assuming responsibility and entering into a covenant or pledge. Linguistically, obligation means a duty or guarantee toward someone or for something, and considering oneself bound to perform an act. Depending on the subject, the word obligation has been used as equivalent to condition, commitment, covenant, liability, and guarantee (Jafari Langroudi). It has most often been used in relation to contracts of guarantee, assignment, and suretyship. In Lisan al-Arab, Ibn Manzur, under the root "covenant," states that covenant means preservation, guarantee, and testamentary instruction. Accordingly, obligation means assuming authority and commitment in relation to the matter undertaken (Ibn Manzur, 1987). Raghib Isfahani also states that covenant is used for an emphatic pledge between two parties and appears in the Qur'anic expression commanding fulfillment of covenants (Raghib Isfahani, 1991). Obligation is one of the terms used in legal science and refers to a legal relationship under which a person is bound to transfer and deliver property or to perform or refrain from performing an act. The causes giving rise to such a relationship may be contract, unilateral legal act, or compulsory legal liability. Among the most important divine verses concerning the obligation to fulfill commitments and contracts is verse 34 of Surah al-Isra, which emphasizes the importance of obligations (Al-Hurr al-Amili, 1988; Raghib Isfahani, 1991). In presenting different foundational theories of the concept of obligation in civil law, two principal sources, contract and law, have been identified. In the West, Thaller first referred to this matter, distinguishing between obligations arising from contract and those arising from law, thereby laying the foundation for the modern theory of obligation (Thaller, 1901). Planiol, one of the early theorists of contractual obligations in French civil law, later completed this theory (Planiol, 1939). Signs of these concepts have a long history in Islamic thought, and their foundations have been explained in the Qur'an. A duty or obligation imposed on a person by law or contract may be financial, such as the husband's obligation to pay maintenance, or non-financial, such as custody of a child. The subject matter of an obligation may also be transfer, delivery of property, performance of an act, or omission of an act. Some legal writers consider the law of obligations to include debts, family duties, and non-financial matters as well, whereas another group of jurists restricts obligation to financial matters and debts. The concept of contract, in language, ordinary usage, and even legal terminology, has one meaning: the reciprocal cooperation of the wills of two or more persons in creating a legal entity. Contract, agreement, and transaction are in fact considered synonymous, as exemplified by Article 190 of the Civil Code (Katouzian, 2010; Shahidi, 2013). Contractual obligations are duties that the two parties to a transaction must assume after concluding the contract in order to perform its subject matter (Katouzian). Contractual obligations are highly important. When a contract is concluded between two parties, each party assumes duties in order to perform the subject matter of the contract and achieve the specified objectives; in legal language, these duties are called contractual obligations. They are also important in family law, particularly non-financial obligations such as custody, maintenance, and family responsibilities, which are discussed in Iranian law under the law of persons and incapacitated individuals (Safaei & Emami, 2019). If the parties to a contract fail to perform their obligations, consequences and effects will follow, and one party may file a claim before judicial authorities against the other party who has failed to perform their obligations and request adjudication.

At the beginning of his discussion of sale, Shaykh Ansari defines contract as offer and acceptance indicating the creation of two obligations or reciprocal commitments (Imam Khomeini). He also emphasizes that, from a jurisprudential perspective, a contract is the source of a legal effect and possesses a binding nature for the parties. Consequently, in jurisprudence, contract is not merely agreement but the creation of a legal and religious entity. In law, the term contract means that one or more persons undertake an obligation toward one or more other persons concerning a matter and that matter is accepted by them (Shahidi, 2013). In terms of instances, a distinction that may be made between the two in their specific meanings is that contract, in the narrower sense, is applied to nominate contracts such as lease and agency, whereas agreement is used for innominate contracts, although in the broader sense the two are equal in terms of their instances. Commentators have interpreted contract as the firmest form of undertaking, and jurists have interpreted it as a strengthened covenant, that is, a firm and inseparable undertaking. Although early jurists engaged in very extensive discussions of nominate contracts and the conditions of their validity and legal effects, they paid little attention to innominate contracts and discussed the generalization of the general rules of contracts less frequently. Traditional jurisprudential discussions show that early jurists generally considered the effects, rights, and duties arising from contractual commitment to apply only to nominate contracts. It may be stated with certainty that this theory was widely accepted as a juristic opinion among early jurists. The doctrine of fulfillment of contracts and the prophetic hadith that believers are bound by their conditions indicate the principle of the necessity of fulfilling covenants. Jurists have relied on this hadith to prove the obligation to fulfill commitments. For example, in the discussion of options, this hadith has been invoked as evidence for the necessity of fulfilling conditions (Al-Hurr al-Amili, 1988). Of course, it should be said that some jurists, in their jurisprudential works, refrained from relying on this verse to generalize its meaning to all nominate and innominate contracts and regarded the verse as ambiguous from this perspective. Another group considered the meaning of the verse to be general and inclusive of all contracts and held that its content applies to every kind of contract that, in Arabic usage, falls within the meaning of contract or, according to custom, is regarded as an agreement, except in specific cases excluded by special evidence from the general evidence requiring fulfillment of contracts. An interesting point is that Islamic law, in its legislation concerning contracts, followed the method of endorsing customary and rational rules and gave authenticity to custom in this field. It also endorsed the sovereignty of human will in organizing social life within the framework of accepted customary and rational rules. Thus, the sovereignty of the will of the party or parties to a contract in a mutual agreement may be regarded as one of the best manifestations of human freedom in determining one's destiny. Ultimately, according to the well-known view, for which consensus has also been claimed, a contract requires words and is not formed without verbal expression, except where the person is unable to speak, such as a mute person, in which case gesture replaces speech, and where gesture is impossible, writing suffices. With regard to artificial intelligence, it may be said that it represents an advanced form of contracts in contemporary society. A smart contract is a computer program that automatically executes the terms and provisions of a contract (Szabo, 1994). This concept was first introduced in 1994 by Nick Szabo. Artificial intelligence refers to intelligence displayed by a machine or to a field of computer science that seeks to create such intelligence. A smart contract is a computer protocol for creating or improving a contract. A smart contract enables valid transactions without intermediaries. These transactions are traceable, and smart contracts contain all information relating to contractual terms and automatically execute all targeted actions. It should be noted that some forms of cryptocurrency have provided implementations for smart contracts. A smart contract, or "artificial intelligence contract," is an advanced type of contract that uses new technologies such as blockchain and artificial intelligence to improve the processes of conclusion, execution, and management of contracts (Wikipedia, 2025). The book Artificial Intelligence: A Modern Approach states that artificial intelligence refers to the ability of computer systems to perform tasks that ordinarily require human intelligence, such as learning, reasoning, and problem-solving, and that this field includes subfields such as machine learning and deep learning (Russell & Norvig, 2020). This type of contract benefits from digital capabilities and provides features such as automatic execution of obligations, secure storage of information on blockchain, and greater transparency. One important feature of smart contracts is their capacity to automatically execute contractual terms. This means that, upon the occurrence of an event or a change in conditions, the contract automatically applies the necessary changes without human intervention. Moreover, some smart contracts use digital identity capabilities for obligations, facilitating the identification and authentication of the parties. Through blockchain, contract-related information is securely and immutably accessible. This helps ensure transparency and trust in interactions among the parties. Smart contracts are considered a significant development in law and electronic commerce, bringing the potential to increase efficiency and reduce errors (Ghatge, 2024). Artificial-intelligence-based contract drafting technology is currently at an intermediate point in its application and operates as a progressive trend in industries that use routine, template-based contracts. It is used in a blockchain model. The application of this technology in this manner allows contracts to evolve and to be rewritten in accordance with the needs of the contracting parties (Yodaplus, 2025).

With regard to specific performance of contractual obligations, it should be said that the purpose of creating a contract is the specific performance of the obligation undertaken. In fact, at the time of concluding a contract, the principal intention of the parties is the performance of the very obligation that has been agreed upon, because persons enter contractual relations to meet their needs and obtain benefits, and their intention in entering an agreement is to meet a particular need or receive the very benefit for which they acted. On the basis of the principle of sovereignty of will, this intention must be respected. If the obligor does not perform the obligation, the law grants the obligee the right to demand compulsion of the obligor, rescission, or damages, and in some cases both rescission and damages.

4. Examination of the Thematic Importance of Obligations in Human Contracts and Contracts Mediated by Artificial Intelligence

In discussing the importance of obligations in human contracts, the creation of trust and confidence plays an important role. Obligations constitute the basis of every successful contract. When the parties perform their obligations, trust and confidence arise between them, which is necessary for the preservation and expansion of relations. It should be said that preventing disputes is highly important in this discussion, and the precise and clear determination of the parties' obligations in the contract prevents disputes and misunderstandings. The clearer and more precise the obligations are, the lower the likelihood of dispute. Ensuring the execution of the contract is also very important and necessary; thus, within the framework of obligations, the guarantee of contractual performance is also provided. When the parties undertake to do something, they are required to perform it and, in the event of breach, bear legal responsibility. Economic and social development is also noteworthy, because contracts play an important role in economic and social development. Obligations in contracts create confidence among investors and economic actors and encourage them to engage in economic activities and investment. In this context, the importance of artificial intelligence in contracts should not be overlooked, because it provides increased efficiency and speed. Artificial intelligence can significantly increase efficiency and speed in the process of drafting and executing contracts. For example, artificial intelligence can automatically review, examine, and analyze contracts, identify possible errors, and offer improvement suggestions (Hakimi Sadr). It is also highly effective in reducing costs. For example, artificial intelligence can automatically prepare legal documents, reduce the need for expensive lawyers, and save time and cost. High precision and error reduction in artificial intelligence may also be mentioned, because compared with human beings, artificial intelligence can review and analyze contracts with greater accuracy and identify possible errors. Ultimately, this reduces risk and increases confidence in contracts. It also leads to easier access to information. It seems that artificial intelligence can help individuals and organizations easily access information related to contracts (Center, 2024). For example, artificial intelligence can automatically classify and organize contracts and make rapid information search and retrieval possible. It should be noted that, in relation to justice and discrimination, artificial intelligence may make decisions based on inappropriate data or discriminatory algorithms, leading to inequality and discrimination. Therefore, it must be ensured that artificial intelligence operates fairly and without discrimination. The changing role of human beings is also a noteworthy point that deserves mention. In fact, the use of artificial intelligence in contracts may lead to a change in the role of human beings. Some jobs may be completely eliminated, while others may require new skills.

In examining the thematic importance of obligations at the time of concluding contracts among human beings, various points must be considered. Every contract has its own specific conditions, referred to in Article 183 of the Civil Code, and Article 190 of the Civil Code also sets out four conditions as the conditions of validity of a contract (Katouzian, 2010). However, it should be noted that the principled and precise interpretation of the parties' intention, the parties' consent, and ultimately the condition of effectiveness in concluding a contract are among the most important points in drafting any contract. There are also other important points at the time of concluding a contract, some of which are as follows. The relationship between obligation and contract is one of absolute generality and specificity. This means that contract is more specific than obligation. Every contract is an obligation, but not every obligation is a contract. Obligation is a legal relationship, one of the sources of which is contract. Sometimes obligation arises from other events, such as custom, practice, and court judgment. On the other hand, the only effect of contract is not the creation of obligation. Sometimes a contract transfers an obligation or extinguishes an obligation, and the effect of a contract may be the transfer of property, union and partnership, marriage, or creation of a legal personality. In law, obligations arise from other sources such as destruction of property, causation, unilateral legal acts, judicial decisions, and even acknowledgment (Katouzian). In some contracts, there is no trace of obligation, and the direct effect of the contract is the transfer of property; transfer of property is not an obligation, and this is the basis for distinguishing contracts into transferring and obligational contracts. In a contract concluded by human beings, as a rule, all possible risks and both detailed and general points must be stated. The contract must also be written in a completely simple and concise manner. Excessively lengthy explanations in a contract create a negative psychological burden for the parties. If contractual information is confidential, or if the type of contract is such that its information should not be disclosed, this matter must definitely be included as an article or clause in the contract, and non-disclosure of information must be stipulated; in the event of disclosure, the possibility of rescission of the contract or the liability of the offending person must be included. If a contract is concluded without the consent of both parties, the contract will be void and without legal validity. The importance of obligations when concluding contracts between human beings can be examined from various aspects, and obligations play a fundamental role in forming contractual relations and ensuring their performance. In fact, contractual obligations are the cornerstone of trust between the parties. When individuals enter an agreement with awareness of their own obligations and those of the other party, this creates a sense of confidence that both parties will adhere to the terms of the agreement. This trust provides the basis for long-term and successful cooperation. Obligations also provide a mechanism for ensuring contractual performance. If one party fails to perform its obligations, the other party may demand performance through legal authorities or dispute-resolution methods provided in the contract, or may receive damages arising from non-performance. This enforceability creates the necessary incentive to comply with obligations. It should also be noted that contractual obligations determine the limits of responsibility and risk for each party. By specifying the matters for which each party is responsible, the likelihood of disputes decreases, and each party can make decisions with awareness of possible risks. Moreover, contracts are instruments for achieving the objectives and interests intended by the parties, and contractual obligations specify the path toward achieving those objectives. Through performance of obligations, each party can obtain the expected benefits and enjoy the advantages of the agreement. Obligations also create a specific and transparent framework for contractual relations. This framework determines the rights and duties of each party and prevents misunderstandings and disputes. Such transparency increases efficiency and reduces costs associated with disputes. Contracts and contractual obligations play an important role in economic and social development. By creating trust, ensuring performance of obligations, and reducing risks, contracts contribute to business growth, increased investment, and improved economic conditions. This leads to job creation, increased production, and social welfare. Contractual obligations can also prevent abuse and unfair treatment. By specifying each party's obligations and rights, the possibility of imposing unfair terms or abusing the other party's position is reduced. This helps make contracts fair and equitable. Obligations create a legal relationship between the parties. This legal relationship is binding and requires the parties to comply with the terms of the contract. In the event of breach of obligations, the injured party may seek enforcement of rights through legal authorities. In summary, obligations in contracts are vitally important. They create trust, ensure contractual performance, specify the limits of responsibility and risk, help realize the parties' objectives, create order and transparency, facilitate economic and social development, and prevent abuse. For this reason, obligations must be carefully determined and defined in contracts in order to prevent disputes and secure the interests of both parties. In examining the thematic importance of contracts between human beings and artificial intelligence, artificial intelligence has emerged as a transformative force across various industries, especially in legal services. Contract drafting is an important part of legal work and is increasingly affected by artificial intelligence technology (Martin et al., 2024). With the ability to analyze vast volumes of data quickly and efficiently, artificial intelligence can simplify the process of contract creation, minimize human error, and increase overall accuracy. By integrating artificial intelligence into contract drafting, law firms can significantly reduce the time spent on routine agreements, allowing legal professionals to focus on more complex legal matters that require their expertise. Obligations in contracts drafted with artificial intelligence proceed on a digital basis. Artificial intelligence, as one of the advanced and growing technologies of today's world, is widely used in various fields and has created major transformations in societies and industries. However, with the development and widespread use of artificial intelligence, new legal and ethical issues have emerged, creating a need to define legal obligations related to this technology.

Artificial-intelligence-based contract drafting tools use natural language processing and machine-learning algorithms to analyze large volumes of contractual data and extract key terms and clauses. This allows lawyers and even contracting parties to quickly create customized contracts based on templates, saving time and reducing the risk of errors. Artificial intelligence can also help identify possible legal issues and inconsistencies in contracts. In general, the use of artificial intelligence in drafting legal contracts has many advantages. By automating repetitive tasks and reducing the contract-creation process, artificial intelligence can help contracting parties focus on strategic and value-added activities. In addition, artificial intelligence can help reduce errors and improve the overall quality of contracts, leading to greater efficiency and better outcomes for all parties involved. Moreover, as artificial intelligence technology continues to evolve and improve, further developments in contract drafting and management may be expected. By adopting artificial intelligence tools and incorporating them into their legal practices, lawyers can position themselves as leaders in this field and remain competitive in a digital and data-driven world (Simpson & Handler, 2024). In addition, the integration of artificial intelligence into the contract process can further enhance the potential for negotiation and cooperation between humans and artificial intelligence. In this way, individuals can create a more constructive negotiation environment, because better outcomes are achieved by combining the strengths of both humans and artificial intelligence. Whereas human negotiators may rely only on emotional intelligence in contracts, the use of this type of strategy in contracts can create more satisfactory agreements for all parties involved.

5. Types of Obligations in the Field of Artificial Intelligence

Legal obligations in the field of artificial intelligence may broadly be divided into two major categories: ethical obligations and legal obligations.

With regard to legal obligations, the protection of human rights and the preservation of individual privacy by artificial intelligence systems are among the issues that require legal regulation. In support of this point, it may be said that the OECD principles emphasize responsible development, respect for human rights, and the preservation of privacy in the development of artificial intelligence (Organisation for Economic & Development, 2019). From this perspective, the enactment of new and updated laws capable of responding to legal needs in contemporary society is highly important and worthy of attention, because new laws must resolve many unknown questions. In this way, legal challenges concerning artificial intelligence, as an emerging phenomenon in the legal community, can be addressed. Many questions can be raised and answered for the enactment of new legislation specifically concerning contracts in the field of artificial intelligence (Surden, 2019). Legal obligations in artificial intelligence require new approaches and greater transparency in the development and use of this technology. Appropriate legal regulations and clear obligations can help prevent misuse of artificial intelligence, protect individual rights, and contribute to the sustainable and ethical development of this technology. It seems possible to incorporate into artificial-intelligence contracts the same obligations that are included in human contracts, but in an optimized form. Just as the need for new legislation to respond to new challenges is inseparable from this issue, a law has been designed in this regard under the name of the European Union Artificial Intelligence Act, which seeks to specify legal requirements for artificial intelligence applications by categorizing risks (European, 2021).

The conditions for the breach or extinction of contractual obligations include the following. The first is mutual rescission, which in jurisprudential terminology means agreement to dissolve a transaction. If a person regrets purchasing or selling a product and asks the other party to rescind the transaction, and the other party accepts the request, this act is called mutual rescission. The next case is release, meaning that when an obligation exists between two persons and one party is required to perform it, if the other party waives their right, the obligated party may refrain from performing the obligation. This act is called release or waiver. The next case is set-off. In jurisprudential and legal terminology, set-off means extinction of an obligation because both parties to a transaction are indebted to one another (Katouzian, 2015). In fact, whenever two persons are mutually indebted, under certain conditions the debt is extinguished without either party paying it. Finally, fulfillment of the covenant is the simplest method of extinguishing an obligation, because in fulfillment, the purpose of the other party, namely achievement of the subject matter of the obligation, is realized, and the duty imposed on the obligor by the contract is performed. With regard to legal obligations, it should be said that such obligations in the field of artificial intelligence are highly diverse and evolving, because this technology is advancing rapidly and affects different aspects of our lives. Some of the most important types of legal obligations in this field include obligations related to privacy and data protection, as well as the obligation to collect, use, and maintain data lawfully. Artificial intelligence systems often require large volumes of data for learning and operation. The collection, use, and maintenance of such data must comply with privacy laws, ethical frameworks, and the observance of obligations, such as the GDPR, CCPA, and similar frameworks (Ieee, 2020). The principles of transparency, user control over data, and data security are emphasized. Under the obligation of transparency regarding how data are used, users must be informed about how their data are collected, used, and shared by artificial intelligence systems.

Under the obligation to provide users with control over their data, users must be able to access their data, correct them, delete them, or prevent their transfer. Another point is the obligation of data security, according to which organizations must adopt appropriate security measures to protect data against unauthorized access, misuse, or loss (Ieee, 2020). In the discussion of obligations related to civil liability, various matters are considered. With respect to liability arising from erroneous artificial intelligence decisions, the question is: if an artificial intelligence system makes a wrong decision that results in damage, who is responsible: the developer, the user, or the artificial intelligence system itself? This issue has not yet been fully resolved, and different rules exist in this field. Regarding liability arising from discriminatory artificial intelligence, if an artificial intelligence system unintentionally acts in a discriminatory manner and harms a particular group of persons, who is responsible? Regarding liability arising from defects in the design or development of artificial intelligence, if an artificial intelligence system malfunctions because of a defect in design or development and causes damage, who is responsible? Under the obligation to compensate damages, if damage is caused by the operation of an artificial intelligence system, the responsible party must compensate the damage. Protection of trade secrets and even intellectual property is also highly important, because artificial intelligence algorithms and models often contain trade secrets that must be protected. Unauthorized use of artificial intelligence algorithms and models may lead to infringement of intellectual property rights. Precise analyses concerning intellectual property, algorithms, models, and protection of trade secrets in obligations involving artificial intelligence are considered highly important (World Intellectual Property, 2020). Artificial intelligence systems must also be protected against cyberattacks, because such attacks may disrupt performance, steal data, or misuse systems.

Furthermore, with regard to the obligation to identify and remedy security vulnerabilities, it should be said that security vulnerabilities in artificial intelligence systems are highly destructive and must certainly be identified and remedied to prevent misuse. Under the obligation to report security incidents, incidents related to artificial intelligence systems must be reported to competent authorities. With regard to the obligation to develop and use artificial intelligence ethically, artificial intelligence must be developed and used in a manner that benefits society and respects human rights and values. Artificial intelligence systems must also be designed in a way that prevents biases and discrimination, must include obligations, and must be transparent and accountable. In other words, there must be transparency regarding how artificial intelligence systems operate, and responsible persons must be accountable for their performance. Another valuable point is that, under the obligation to preserve privacy, it is very important that individuals' privacy be respected in the use of artificial intelligence. In the discussion of obligations arising from contracts for the development and use of artificial intelligence, contracts concerning the development, sale, lease, and use of artificial intelligence systems must be carefully drafted and must specify the rights and obligations of each party. In fact, obligations arising from service-level agreements must guarantee the performance and reliability of artificial intelligence systems (Kesan & Hayes, 2020). It seems that contractual requirements in the development and exploitation of artificial intelligence proceed in line with the proposed European Union legislation (Veale & Borgesius, 2021). Obligations arising from warranties must guarantee the proper functioning of artificial intelligence systems and provide remedial solutions in the event of defects. With the advancement of this technology, new obligations may also emerge. Legal specialists, developers, and users of artificial intelligence must be aware of these obligations and must strive to use artificial intelligence responsibly and ethically.

6. Comparison of Traditional Contracts and Blockchain Technology

A traditional contract may use various instruments to record and verify changes, but the use of blockchain is not common. A smart contract uses blockchain technology as its principal infrastructure for recording and executing obligations. The history of changes is transparently recorded on the blockchain. Smart contracts are also used more frequently in civil and commercial fields, digital interactions, finance, and blockchain. With regard to settings and changes in smart contracts, it should be said that they are possible quickly and with considerable flexibility. Automatic execution of obligations in smart contracts is another superior feature compared with traditional contracts. In a smart contract, artificial intelligence and automated programming are used to execute obligations automatically. This means that a smart contract can execute and modify obligations without human intervention. A traditional contract requires more human intervention, and performance of obligations is carried out manually and under human supervision. Artificial intelligence technologies function, to a large extent, like a concierge service in the legal field, capable of analyzing the meaning and intention behind numerous legal concepts. Artificial intelligence operates beyond mere keyword searches, because it can absorb data based on patterns and contextual understanding. For example, it can identify an indemnity clause or a sunset clause in contractual agreements without requiring manual intervention. This capability not only frees time for legal professionals but also reduces the likelihood of human error inherent in manual contract review and ultimately increases the quality and reliability of legal drafting. Artificial intelligence contract-analysis software functions as a digital assistant, enabling legal professionals to increase their efficiency in handling complex legal documents. Traditionally, lawyers devote considerable time to drafting and reviewing contracts, often spending between 40% and 60% of their working hours on these tasks (Remus & Levy, 2016). Artificial intelligence simplifies these time-consuming activities by enabling rapid searches across thousands of documents to locate specific clauses or provisions, a task that would take a human lawyer far more time. Overall, smart contracts, through the use of blockchain technology and artificial intelligence, provide more capabilities than traditional contracts, although they must be adapted to the needs and specific conditions of each type of contract (Mik, 2017). By automating routine tasks, law firms can allocate their highly skilled personnel to work requiring critical legal expertise. This increase in efficiency translates into more effective use of time and allows firms to serve more clients or handle more complex cases without increasing staff numbers. The automation of legal affairs, the increase of efficiency in law firms, the role of artificial intelligence in improving efficiency, and the better use of human legal resources are also important matters that may be explicitly mentioned (Susskind, 2019). In addition, with artificial intelligence's ability to manage compliance with deadlines and obligations more effectively, firms can reduce the risk of missing important dates that may have financial consequences. This not only improves client satisfaction but also strengthens the law firm's reputation for reliability and accuracy. The legal challenges of personal data in the analysis of contracting parties' behavior through artificial intelligence are also important. Comparative examination of privacy laws in different countries, including the requirement of user consent for the use of data by new technologies, is also highly important. It should also be noted that, in this context, the importance of protecting personal data security may be emphasized (Bygrave, 2014). The use of artificial intelligence in analyzing contracting parties' behavior requires access to their personal data. In the laws of some countries, the use of such data is conditional on the explicit consent of users; however, in many countries, privacy laws have not been updated and new regulations need to be drafted.

7. Conclusion

In Imami jurisprudence and Iranian law, compelling performance of an obligation takes place through two methods that stand in a hierarchical relation: direct executive action and indirect executive action, which is divided into financial compulsion and bodily compulsion. It should be noted that the use of smart contracts and artificial intelligence in digital marketing has created unique opportunities for businesses, but these technologies also face serious legal challenges. Although it is possible to impose the rules and obligations of current human contracts on smart contracts and merely improve and complete them from a legal perspective, it is more comprehensively necessary, in order to fully exploit the advantages of these technologies, for various legal systems, including Iran's legal system, to prepare for these changes by drafting new regulations and amending existing laws. Aligning domestic laws with global developments, in addition to creating legal security, will help increase public trust in new technologies. It seems that, with the expansion of smart contracts across different industries, more standards in the field of artificial intelligence and intelligent programming will become possible. Smart contracts are used in various fields, including finance, insurance, supply chains, real estate, and even electronic voting. In addition to emphasizing advantages, this article recognizes the potential disadvantages of automated artificial intelligence decision-making, such as the possibility of bias and the decline of human oversight. To fully understand the potential of smart and automated contracts, challenges related to enforceability, accountability, and security preservation must be addressed. In general, smart contracts, considering both their advantages and disadvantages, are an innovative technology that can improve commercial and legal communications in the future, but they require attention to various challenges, strengths, and weaknesses. To confront the legal challenges associated with artificial intelligence and smart contracts in Iran, it is recommended that smart locks defined in new legislation be necessarily used to protect entrusted property and ensure proper contractual performance. Of course, it should be said that this type of smart contract also requires intelligent human oversight. It is recommended that relevant laws, especially electronic commerce law, be updated and that new regulations be drafted to explicitly address the following issues: determining legal liability in the event of errors in smart contracts, drafting personal data protection regulations to prevent misuse of customer data, and creating legal frameworks for the use of artificial intelligence in digital marketing and electronic commerce. These are considered important matters.

Ethical Considerations

All procedures performed in this study were under the ethical standards.

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Conflict of Interest

The authors report no conflict of interest.

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