

# Validity of Arbitration Clauses in Electronic Contracts

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## Abstract

The growth of electronic commerce and the expansion of contract formation through digital platforms have raised new questions regarding the validity and nature of “arbitration clauses.” Arbitration, as one of the most significant private methods of dispute resolution, is incorporated into electronic contracts when the parties intend to submit potential future disputes to a neutral and mutually agreed third party instead of referring them to state courts. Nevertheless, the inclusion of such clauses in virtual environments faces important challenges due to characteristics such as the non-physical manifestation of consent, the use of data messages, electronic signatures, clickwrap and adhesion contracts, as well as issues concerning attribution and verification of genuine intent. Therefore, examining the validity of arbitration clauses in electronic contracts requires a simultaneous analysis of the foundations of contract law, arbitration rules, and electronic commerce regulations. Using a descriptive-analytical approach, this article demonstrates that, in terms of legal nature, the arbitration clause is more appropriately analyzed as a “condition involving a legal act” rather than as an independent condition or a condition of result, because the parties undertake a reciprocal legal obligation whose breach is subject to enforcement mechanisms provided under arbitration laws and procedural regulations. Furthermore, the principles of separability of the arbitration clause, competence-competence, and the functional equivalence of data messages to written documents constitute the principal foundations for the validity of such clauses in electronic environments. Nevertheless, the validity of arbitration clauses in electronic contracts is not absolute, and in situations involving ambiguous adhesion clauses, non-transparent references, the absence of attributable signatures, and conflicts with consumer rights protections, such clauses may face limitations or invalidity.

**Keywords:** Arbitration clause, electronic contract, data message, electronic signature, separability of the arbitration clause, competence-competence.

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## 1. Introduction

The increasing expansion of electronic commerce and the formation of contractual relations on digital platforms have subjected many classical concepts of contract law to rereading and reconsideration. In this context, the “arbitration clause,” as one of the most important instruments for the private settlement of disputes, has acquired a special position; because, at the very moment of contract formation, the parties provide a mechanism for managing potential future disputes and thereby reduce direct recourse to courts and the lengthy and costly formalities of litigation. However, when this agreement is formed in the electronic environment, new questions arise concerning its legal nature, manner of formation, validity of attribution, scope of

independence, and enforceability; questions that cannot be answered without simultaneously analyzing traditional rules and the new requirements of technology. The importance of this issue is further intensified because electronic contracts, unlike traditional contracts, are often formed in non-face-to-face, intangible, and data-message-based formats. In such an environment, the parties' intention may be expressed through a click, online acceptance, digital signature, or reference to the general terms and conditions of a website. Although these new methods of expressing intention functionally perform the same role as traditional offer and acceptance, they create serious challenges in terms of proof, attribution, and verification of genuine intent. This is especially significant where arbitration clauses are included in adhesion and standard-form contracts, because the risk of surprise, insufficient awareness, and unilateral imposition of terms on the weaker party increases.

On the other hand, arbitration in the Iranian legal system and in international instruments is an institution founded on the parties' agreement and closely linked to the principle of party autonomy. Nevertheless, the legal nature of the arbitration clause has always been debated: should it be regarded as an ancillary clause within the main contract? Or should it be considered an agreement independent and separate from the underlying contract? Can this clause be regarded as an example of a condition involving a legal act, or should it be analyzed as a condition of result? The answers to these questions are not merely theoretical; rather, they have direct and important effects on the validity of the agreement, the limits of the independence of the arbitration clause, the possibility of its survival in the event of invalidity of the main contract, and the manner of court intervention at the stages of adjudication and enforcement.

In the electronic context, the importance of these debates becomes even greater, because the validity of the arbitration clause is no longer dependent solely on presumed consent or traditional written content; rather, it is also tied to the effectiveness of digital tools, transparency of the transactional environment, accessibility of the clause text, quality of the electronic signature, and admissibility in litigation. In this situation, electronic commerce law, the International Commercial Arbitration Law, the Civil Procedure Code, and the general rules of contracts must be interpreted harmoniously so that, on the one hand, contractual freedom and the efficiency of arbitration are preserved, and, on the other hand, the rights of persons, especially consumers and weaker parties, are not exposed to infringement. From a comparative perspective as well, legal developments at the international level show that the doctrine of separability of the arbitration clause, competence-competence, the functional equivalence of data messages to writing, and the acceptance of electronic signatures have gradually become core components of online dispute resolution systems. Nevertheless, the New York Convention and classical arbitration laws are products of an era in which electronic arbitration and fully virtual proceedings were not yet relevant. This has caused a certain distance, and sometimes conflict, between technological requirements and traditional arbitration requirements in many legal systems, including Iranian law.

The main issue of this study is how the arbitration clause in electronic contracts can be analyzed in terms of its nature, and to what extent it is formally and substantively valid and enforceable. In fact, this article seeks to show how, by relying on jurisprudential foundations, the general rules of contract law, arbitration regulations, and electronic commerce rules, the validity of the arbitration clause can be analyzed in the digital environment while its limitations and challenges are also properly identified. Such an analysis is essential for creating legal security in electronic commerce, ensuring predictability in disputes, and increasing the trust of economic actors.

Moreover, the issue of the validity of the arbitration clause in electronic contracts is not merely a theoretical debate; it is directly related to economic development, investment attraction, reducing the burden on the judiciary, and improving the efficiency of dispute resolution mechanisms. If the legal system cannot provide a clear, coherent, and reliable framework for electronic arbitration, parties to digital contracts will be forced to return to costly and uncertain judicial routes. Therefore, the present study is important because it can contribute to shaping a realistic legal policy for the future of arbitration in cyberspace. Accordingly, by focusing on the nature of the arbitration clause, its distinction from the institution of arbitration, its position in electronic contracts, and the formal and substantive challenges associated with it, the present article seeks to provide a comprehensive and in-depth picture of the subject. The result of such an examination is that the validity of the arbitration clause in electronic contracts is, in principle, acceptable; however, this acceptance is conditional upon compliance with the requirements of transparency, valid attribution, informed consent, and compatibility with public order and mandatory rules.

## 2. The Arbitration Clause and an Examination of Its Legal Nature

### 2.1. *The Concept of the Arbitration Clause*

Arbitration is a process in which disputes between parties are settled by a neutral third person selected by the parties themselves instead of being brought before state courts. In this regard, the question arises whether the concept of an “arbitration clause” is identical to the nature of “arbitration” itself. Conceptually, an arbitration clause in contracts is, in fact, a type of undertaking and obligation. The parties are bound that, should a future dispute arise concerning the main contract, they will refrain from referring to the court and will resolve it through arbitration. Therefore, the subject matter of an arbitration clause is merely the obligation to refer potential future disputes to an arbitral forum; consequently, the definition of the arbitration clause differs from the definition of the institution of arbitration.

Usually, the ancillary and accessory undertaking included within another contract and whose subject matter is the referral of future disputes to arbitration is called an “arbitration clause.” But does arbitration fundamentally have the capacity to be placed as a “condition” within another contract? In legal terminology, a condition within a contract is an agreement whose effect is the creation of an obligation and which, by virtue of its particular nature, falls among the accessories of another contract (Katouzian, 2012). As stated, the effect of an arbitration clause is also to create an obligation and commitment to refer disputes to arbitration; therefore, such an undertaking may be included in the form of a condition within a contract. Consequently, agreement to refer a dispute to arbitration in the form of a contractual condition is fully possible, and this condition will, in principle, be subordinate to the main contract.

### 2.2. *The Legal Nature of the Arbitration Clause*

The independent clause approach: The theory of the “independent arbitration clause” is essentially based on the doctrine of separability of the arbitration clause. Supporters of this theory believe that even if the arbitration agreement is included as a clause within another contract, it must be treated as a fully independent and separate contract. Accordingly, the invalidity or nullity of the main contract does not impair the validity of the arbitration clause. Advocates of this approach maintain that the arbitration clause falls outside the scope of the general rules governing conditions within contracts, as prescribed in Articles 234 onward of the Civil Code, and is not an accessory and ancillary undertaking; rather, this clause has independent intention and consent and, like a separate contract, is valid and enforceable based on the principle of party autonomy and Article 10 of the Civil Code (Nikbakht, 1994). Therefore, the legal regime governing the arbitration clause is entirely separate from the rules of contractual conditions in the Civil Code, and its rules must be sought in specialized laws such as the Civil Procedure Code and the International Commercial Arbitration Law of 1997. From this perspective, when a contract contains an arbitration clause, the parties have in fact concluded two distinct contracts (Rogers & Launders, 1994). The purpose of this distinction is to realize the parties’ intention to refer even disputes concerning the very validity of the contract to arbitration (Solhchi, 2010).

Although the free will of the parties is often introduced as the basis of this rule, it can also be justified and explained from the perspective of “commercial custom.” The role of custom as a supplementary source of contract is so significant that it is imposed on the parties even if they are unaware of it, according to Articles 220 and 356 of the Civil Code (Katouzian, 2012). As a result, in international commercial contracts, regardless of the law governing arbitration, the arbitration clause is independent from the main contract in terms of validity, effectiveness, and governing law by virtue of the custom governing such contracts, even if the parties are unaware of this custom. The doctrine of separability or independence of the arbitration clause has become so widespread that today it may be regarded as a transnational and fundamental rule in international commercial arbitration, even if it is not expressly mentioned in some international conventions (Barger, 1993).

Nevertheless, reflection on legal doctrine and international regulations shows that the independence of the arbitration clause is not absolute and unlimited, and this clause cannot be considered entirely detached from the main contract. The arbitration clause does not enjoy all the effects of an independent contract, and the scope of its independence is limited exclusively to two areas: first, validity and effectiveness; second, the governing law. In other respects, this clause remains dependent on the main contract. Furthermore, the application of the separability rule depends on there being no doubt as to the “apparent” existence

of the arbitration agreement (Eskini, 2004). In practice, the connection between this rule and the principle of “competence-competence” grants the arbitral tribunal the authority to decide independently on the validity or invalidity of the arbitration clause (Andrews, 2016).

On the other hand, despite its independence in terms of validity and effectiveness, from the perspective of “legal nature,” the arbitration clause cannot be regarded as a fully independent contract. The arguments for this claim are as follows:

First, if the arbitration clause were a fully independent contract, there would be no need to distinguish the methods of referral to arbitration into two separate forms: “independent contract” and “arbitration clause.”

Second, the concept of the term “condition” is inherently linked to the characteristics of subordination to the main contract and accessory status; an undertaking is called a condition when it is subordinate to another contract.

Third, today the arbitration clause cannot be regarded merely as an unnamed private contract subject to Article 10 of the Civil Code. In our law, the scope of nominate contracts is not limited only to contracts expressly mentioned in the Civil Code; rather, whenever a law, in the broad sense, explains the name, conditions, and effects of a contract, that contract joins the category of nominate contracts (Sadeghi & Goodarzi, 2008; Shoarian, 2009). Considering that arbitration has a specific name, conditions, and effects in laws such as the Civil Procedure Code and the International Commercial Arbitration Law of 1997, it constitutes a “nominate contract.” In fact, the criterion for identifying a nominate contract is the set of effects that the law assigns to the essence of that contract (Shahidi, 2015). The nature of the arbitration agreement is so specific that some jurists consider its analysis difficult even under the general Civil Code rules on binding and revocable contracts (Karimi & Parto, 2012).

In a comprehensive analysis, conditions within contracts are divided into two general categories: the first category consists of conditions that are themselves nominate and independent contracts, such as a condition of agency within a sale contract, but which the parties make subordinate to another contract for certain reasons; and the second category consists of conditions that do not constitute independent undertakings by themselves and become binding only when included within a contract, such as determining the time for performance of an obligation (Katouzian, 2012). The arbitration clause falls within the first category. In order to preserve the organic connection between the main contract and the settlement of disputes arising from it, the parties include the institution of arbitration as an accessory undertaking within the main contract. Therefore, from a legal perspective, there is no obstacle to the arbitration contract, which today is a nominate contract, becoming subordinate to another contract in the form of a condition; however, in terms of legal nature, it should not be treated as a fully independent condition and an unnamed contract subject to Article 10 of the Civil Code.

The “condition of result” approach: Some jurists, relying on Article 234 of the Civil Code and on the justification that the condition to refer disputes to arbitration is in fact a condition for the realization of an external matter, have classified the arbitration clause among examples of a “condition of result” (Jafarian, 1994; Raeisi & Saedi, 2013). However, a precise examination of the nature of the arbitration clause and a comparison of it with the rules governing conditions of result reveal the inconsistency of this view.

The first objection to this theory is the incompatibility of the arbitration mechanism with the nature of “mere stipulation” in a condition of result. In jurisprudence and contract law, a condition of result concerns juridical matters whose realization does not depend on a specific cause or material formalities and which are realized solely by the mere stipulation and automatically (Katouzian, 2012). By contrast, the arbitration clause is, by nature, “an obligation to refer potential and future disputes to an arbitral forum.” At the time of contract formation and insertion of the clause, no dispute has yet arisen so that it could be referred to arbitration automatically by the mere stipulation. Moreover, the practical realization of arbitration and the establishment of the tribunal’s jurisdiction are not achieved merely by the existence of an arbitration clause in the contract; rather, they require a series of material and preliminary acts, such as requesting referral of the dispute, appointing the arbitrator, acceptance by the arbitrator, and submitting the request for adjudication (Raeisi & Saedi, 2013). Therefore, referral of a dispute to arbitration has no capacity for automatic realization, and inserting this clause in the contract does not mean the actual referral of a non-existent dispute (Shirovi, 2014).

The second axis of criticism concerns the clear contradiction in terms of “legal sanction.” In the legal regime of conditions of result, the intended result either comes into existence in the juridical world or it does not; its non-realization does not mean

the voluntary refusal of the obligor to perform an obligation, but rather indicates that the condition has not been realized by mere stipulation from the outset. On this basis, the condition of result lacks the conventional obligational and binding character, does not fall under the rule of “believers are bound by their conditions,” and the notion of a “sanction for the obligor’s refusal” is inapplicable because the subject itself is absent (Mohaqeq Damad et al., 2009). By contrast, arbitration regulations expressly provide sanctions for refusal to refer the claim to arbitration. For example, Article 8 of the International Commercial Arbitration Law of 1997 provides that if a claim is filed before a court, the judicial authority is required, “upon the request of one of the parties until the end of the first court session,” to refer the claim to arbitration. This statutory rule proves that the arbitration clause is an “obligation” whose breach, namely filing a claim in court, is met with a legal sanction, namely compulsory referral to arbitration.

In addition, if the arbitration clause were, by nature, a condition of result, the court would have to refrain from adjudication as soon as it became aware of the existence of the arbitration agreement, whether on its own initiative or at the request of the parties at any stage of the proceedings, because the result, namely the arbitrator’s jurisdiction, would already have been automatically realized. However, the legislature has limited this matter to the request of the interested party until a specific time, namely the end of the first session.

Finally, from the perspective of jurisprudential and legal foundations, the condition of result is fundamentally not an ancillary and accessory obligation; rather, it is equivalent to a “qualification” (Jafari Langroudi, 2012), from which no independent obligation or binding commitment is born (Mohaqeq Damad et al., 2009). By contrast, the theoretical core of the “condition within a contract” concerns an undertaking that is placed alongside the main obligations of the contract as an attachment (Katouzian, 2012). Therefore, considering the obligational nature embedded in arbitration agreements, the parties’ undertaking to refer future disputes to a private forum can by no means be analyzed or explained within the technical and legal framework of a “condition of result.”

The “condition involving an act” approach: Article 234 of the Civil Code, in explaining the nature of a “condition involving an act,” provides: “A condition involving an act is one whereby the performance or non-performance of an act is stipulated upon one of the contracting parties or upon a third person.” Based on this definition, a condition involving an act always entails a form of obligation and commitment (Katouzian, 2012), the subject matter of which may be the performance or non-performance of an act, whether material or legal. The applicability of this institution to the “arbitration clause” is very clear; because by inserting this clause, the contracting parties undertake that, in the event of any dispute arising from the underlying contract, they will refer its settlement to arbitration, which is an obligation to perform an act. Conversely, this agreement also means an undertaking not to initially refer to state courts, which is an obligation to refrain from an act. Furthermore, the legislature in Article 456 and the Note to Article 484 of the Civil Procedure Code of Public and Revolutionary Courts in Civil Matters of 2000 uses the phrase “commitment to refer the dispute to arbitration,” and this statutory language proves the full conformity of the arbitration clause with the obligational nature of a condition involving an act. In terms of legal sanction as well, a deep connection exists between these two concepts. Pursuant to Article 237 of the Civil Code, breach of a condition involving an act gives rise to the right to compel the defaulting obligor. In the field of arbitration, breach of the condition involving an act occurs when one of the parties files its claim in court instead of before the arbitral institution. However, the arbitration clause has a special characteristic: unlike ordinary conditions involving acts, which are usually drafted unilaterally, in favor of one party and against the other, the arbitration clause is a fully reciprocal obligation that is simultaneously in favor of and against both contracting parties.

Because of this bilateral nature, neither party has the right to unilaterally refuse to perform the arbitration clause and, by referring to court, impair the vested rights of the other party; therefore, waiver of this clause depends on the mutual agreement of the parties. The legislature has clearly explained this mechanism in Article 8 of the International Commercial Arbitration Law of 1997: “A court before which an action subject to an arbitration agreement is brought shall, upon the request of one of the parties until the end of the first court session, refer the parties’ dispute to arbitration...” Filing a claim in court is in fact the claimant’s implied offer to withdraw from the arbitration clause, and the respondent’s failure to object is regarded as acceptance of this withdrawal. However, if the respondent objects to the court’s jurisdiction, the claimant’s breach of the “condition involving an act” is established, and the court, by compulsorily referring the claim to arbitration, effectively applies the same sanction of a condition involving an act, namely compelling the defaulting party to fulfill the undertaking.

In response to the anticipated question of whether a condition involving an act can simultaneously be in favor of and against both parties, considering the phrase “upon one of the contracting parties” in Article 234 of the Civil Code, it must be stated that the legislature’s language in this article refers to the usual cases in contracts, and analytically there is no legal prohibition against stipulating a condition in favor of or against both parties (Shahidi, 2015). Having established that the arbitration clause is, by nature, a “condition involving an act,” the final step is to determine whether it is material or legal. A condition involving a material act concerns an undertaking to perform a physical act, such as transporting goods, whereas a condition involving a legal act entails an undertaking to create a legal act, such as a condition to lease the sold property. Since the arbitration process, the referral of a dispute to a private forum, and fundamentally the act of filing a claim itself are all constitutive, juridical matters and fall within the category of unilateral juridical acts (Katouzian, 2005), the “arbitration clause” must undoubtedly be regarded as a clear and developed example of a “condition involving a legal act.”

### 3. The Concept, Nature, and Conditions for the Formation of Electronic Contracts

In legal terminology, a “contract” or “agreement” means the concurrence of two or more wills to create a binding legal effect (Mohaqq Damad et al., 2009). Although Article 183 of the Iranian Civil Code limits a contract merely to agreements that create obligations, this definition is not comprehensive; because in the juridical world, the effects of contracts extend beyond the creation of debts and include other matters such as the transfer of real rights, in proprietary contracts, the grant of representation, or the extinction and transfer of obligations (Katouzian, 2007). Nevertheless, in order to justify the Civil Code definition, the word “obligation” must be interpreted in its broad jurisprudential sense, meaning the establishment of an undertaking, commitment, and the parties’ adherence to maintaining the covenant and acting according to its content, regardless of whether its direct effect is an obligation to perform an act or the transfer of ownership of property.

A contract or agreement is the concurrence of two or more persons to create a legal effect, such as the creation, modification, or extinction of an obligation or real right (Doroudian; Safaei, 2010). Although some have distinguished between the word “agreement” for nominate contracts and “contract” for unnamed contracts (Katouzian, 2007), others have considered the two terms to have no conceptual difference (Jafari Langroudi, 1999), and in contemporary law these two terms are also regarded as completely synonymous, meaning a bilateral legal act and the mutual cooperation of wills in creating a legal entity (Safaei, 2010; Shahidi, 2006). On this basis, an “electronic contract” refers to any agreement and mutual cooperation of wills to create legal effects in any contract, whether nominate or unnamed, in which the expression of constitutive wills occurs in a virtual and intangible environment through data messages and electronic intermediaries (Akbari, 2005; Vesali Naseh, 2006).

The nature of electronic contracts: Developments in information technology have given commerce remarkable speed and convenience by removing the need for physical presence. From a legal perspective, the nature of electronic contracts is usually consistent with “contracts between absent parties,” or correspondence contracts, because offer and acceptance in them are often realized without oral negotiation and with temporal and spatial distance through electronic intermediaries (Jafari Langroudi, 1999; Vesali Naseh, 2006). Although the Iranian Civil Code is silent regarding contracts between absent parties, the validity and effectiveness of these contracts are established by reference to the acceptance of commercial custom, the absence of legal prohibition, and reliance on the “principle of validity” of transactions (Valaei, 1995). Accordingly, the undeniable advantages of these contracts in the development of commerce prove the necessity of accepting them despite the challenges arising from the parties’ lack of mutual knowledge.

Nevertheless, the manner of communication between the parties may change the legal nature of the electronic contract. If the contract is concluded using instruments such as a microphone and through simultaneous audio communication, then, because direct oral communication is realized, its nature leaves the category of contracts between absent parties and falls within the category of “contracts between present parties.” In this case, the electronic contract is completely similar to a telephone contract, which, despite the spatial distance between the contracting parties, is considered a contract between present parties because of the temporal concurrence of offer and acceptance (Amiri Ghaemmaghami, 1999; Vesali Naseh, 2006). Consequently, the electronic instrument is not decisive in itself; rather, the main criterion of distinction is the realization or non-realization of oral communication and simultaneity in the exchange of wills.

For the validity and formation of electronic contracts, as in traditional contracts, the existence of essential conditions such as intention and consent, legal capacity, subject matter of the transaction, and lawful cause is required; however, the main challenge in this field concerns the manner of expressing intention, namely offer and acceptance, and the form of contract formation. In contracts that legally require written or official formalities, such as transactions involving immovable property, the electronic environment faces structural and security obstacles because of the absence of the necessary infrastructure for official signatures by competent authorities or registration in official offices. Removing these obstacles and making the conclusion of such contracts possible require the creation of technical mechanisms, the enactment of specific legal regulations, and the active role of the state in establishing certification authorities for signature authentication and electronic transaction certification (Gholizadeh, 2007).

From a formal perspective, the formation of electronic contracts does not follow a uniform practice. On websites, which constitute the virtual display space for goods and services (Feyzi Chekab, 2004), the supplier is usually a merchant and the customer declares his or her intention merely by clicking options such as “I agree.” Determining whether the display of goods on a website constitutes a definitive “offer” or merely an “invitation to offer” depends on custom, the expectations of the parties, and the degree of detail provided, and must be examined on a case-by-case basis. On the other hand, contract formation through electronic mail, because of the non-simultaneity of the communication of wills, is equivalent to traditional mail and falls within the category of “correspondence contracts” between absent parties; legal doctrine does not distinguish these contracts from contracts concluded through fax or telex (Katouzian, 2007).

In addition to the above, contracts may be concluded in electronic chat rooms, where despite the absence of the parties’ physical presence, direct audio, visual, or intellectual communication is established, resembling presence in a “virtual session.” However, because the principal basis of contracts is binding force and mutual adherence to their terms, the “option of session” is an exception to this principle, and in case of doubt as to its existence, the presumption is the absence of the option of session (Katouzian, 2007). Accordingly, the option of session is not applicable to electronic contracts, even where simultaneous virtual presence exists, except in cases where the legislature has expressly provided a specific right of rescission for this type of exchange.

Electronic contracts and electronic commerce are divided into various categories and models based on the identity of the parties to the transaction and their communication platform. These models are examined below in greater detail:

1. Business-to-business commerce (B2B): In this model of commerce, both contracting parties are producers, suppliers, or merchants, and usually intermediary goods or raw materials are exchanged between them. Since this type of commerce is used for wholesale and large-scale buying and selling, the buyer, who is another merchant, needs comprehensive and accurate information about the technical details of the goods, upgrade programs, after-sales services, and other product characteristics in order to compare available options and make the most optimal commercial decision. In this environment, an integrated network of all actors in international trade, including suppliers, buyers, maritime transport companies, support and inspection services, marketing news providers, and software platforms, come together to facilitate the complex process of buying and selling (Faribarzi & Faribarzi, 2010).
2. Business-to-consumer commerce (B2C): This model is the same as online retailing, in which economic enterprises and sellers attempt to deliver their products and services directly to the final consumer through Internet platforms. With the increasing expansion of the World Wide Web, this model has grown significantly; so that today a wide range of goods, from food and clothing to automobiles and computer software, can be purchased through this method (Faribarzi & Faribarzi, 2010). In this model, the greatest challenge and most important issue is gaining buyers’ trust and ensuring security in electronic payments for goods (Madhoushi & Saffarinejad, 2004).
3. Consumer-to-consumer commerce (C2C): In this model, there is no commercial enterprise or formal intermediary, and consumers enter into transactions directly with one another. This model is similar to newspaper classifieds or second-hand markets. Usually, persons who no longer need a purchased item or intend to upgrade it use this platform. This method also provides an appropriate opportunity for low-income consumers to obtain the goods they need at

lower prices (Faribarzi & Faribarzi, 2010). Because advertising costs on the Internet are negligible, intermediary platforms that enable users to connect directly to sell their goods have attracted considerable attention and acceptance.

4. Consumer-to-business commerce (C2B): This innovative model, unlike traditional practices, begins the transaction process from the consumer's side and grants the consumer significant choice and bargaining power. Although this method is not as widespread as the previous models, its focus is on customer welfare. In this model, the customer records the needs and specifications of the desired product on a C2B website or platform and, through search engines, receives offers from sellers that match the request. In addition, this model makes it possible to create campaigns and alliances among consumers to form "buying groups" with economic motives, such as obtaining group discounts, or social motives (Ebrahimi & Mahdieh, 1979).
5. Other models of electronic commerce: In addition to the commonly used models above, new models have also emerged with the development of technology:

Business-to-employee commerce (B2E): In this model, an organization or employer establishes an integrated electronic communication network with its employees in order to facilitate intra-organizational processes, such as office automation systems, leave requests, or payment of salaries and benefits through electronic banking systems.

Mobile commerce (m-Commerce): This model, which in the original text also refers to peer-to-peer and wireless platforms, means the performance of any electronic commerce process in wireless network environments. In fact, this growing model denotes the use of portable digital tools, such as smartphones and tablets, for the rapid and accessible performance of commercial exchanges on the web.

#### **4. Legal Analysis of the Validity of the Arbitration Clause in Electronic Contracts**

The validity of the arbitration clause in electronic contracts requires an in-depth examination of the fundamental foundations of contract law in connection with cyberspace. The point of departure in this analysis is the principle of party autonomy set forth in Article 10 of the Civil Code, which is rooted in individual freedom (Safaei, 2016). This principle provides that the will of persons in creating legal entities is valid insofar as it does not conflict with mandatory laws and public order (Katouzian, 2012). In the electronic environment, the change from a physical to a virtual medium does not impair the essence of will and intention to create legal effect. The principle of validity, as a complement to this rule, also requires that in dealing with new commercial phenomena, the presumption should be the effectiveness and validity of electronic agreements (Shahidi, 2012). One of the most important traditional obstacles to accepting these clauses has been the requirement that arbitration agreements be in writing under domestic and international laws. Electronic commerce law has addressed this fundamental problem by resorting to the doctrine of functional equivalence, which has resolved many legal difficulties (Shirovi, 2014). Articles 6 and 7 of the Iranian Electronic Commerce Law also expressly adopt this progressive approach.

According to these statutory provisions, whenever the law requires the existence of a writing or document, a data message shall be regarded as equivalent to that writing. This principle emphasizes that the purpose of the writing requirement is merely to record intention, ensure future evidentiary use, and prevent denial by the parties (Akbari, 2019). These legal objectives are now achieved by digital data messages, such as text files and emails, in a manner far more efficient than paper. Therefore, all formal requirements of the arbitration clause can be fully satisfied and proven in the electronic and virtual environment.

From a legal perspective, the arbitration clause has a dual nature that simultaneously includes contractual and adjudicative dimensions (Mohaqeq Damad et al., 2009). On the one hand, as a condition involving a legal act, this clause creates a reciprocal undertaking to refer the dispute to a non-state forum. On the other hand, it has a jurisdictional effect because it excludes the initial jurisdiction of state courts. In the risky environment of the Internet, the rule of separability of the arbitration clause acquires doubled and vital importance in order to prevent agreements from collapsing for unfounded reasons (Katouzian, 2012). According to the principle of separability, the arbitration clause has a nature completely distinct from the underlying electronic contract and has an independent existence. As a result, even if the validity of the entire transaction is disputed for reasons such as platform malfunction, fraud, or lack of capacity, the arbitration clause remains valid (Shahidi, 2012). This means that the competent authority to examine the very claim of invalidity of the contract will also be the arbitrator

stipulated in the data message. This rule prevents the parties from abusing claims of invalidity of the main contract in order to evade their obligation to arbitrate. The formation of the parties' intention and consent in the web environment is one of the most challenging issues in the formation of electronic contracts. In this environment, intention is usually expressed through clickwrap agreements, where the user declares consent by pressing the "I agree" option (Vesali Naseh, 2011). This simple electronic act is, in legal science, a clear and definitive symbol of "acceptance" in response to the "offer" presented by the website. However, in browsewrap agreements, mere use of the website's services is treated as acceptance of hidden terms, which is controversial.

In adhesion contracts, which are mainly common in business-to-consumer relations, users often agree to lengthy terms without carefully reading them. This seriously and fundamentally calls into question the existence of genuine and informed intention and consent (Safaei, 2016). Courts, when dealing with these imposed arbitration clauses, adopt a protective approach and may invalidate the clause if it is unfair. The purpose of this judicial intervention is to prevent infringement of the fundamental rights of consumers against large platforms.

From the perspective of form and evidentiary rules, the most important problem in the electronic arbitration clause is proving the attribution of the data message to a specific person. The Electronic Commerce Law distinguishes between simple electronic signatures and secure electronic signatures in order to solve this problem (Shirovi, 2014). If the arbitration clause is accompanied by a digital signature based on encryption, its attribution will be certain and legally undeniable. However, in simple clickwrap agreements, proving the real identity of the person requires recourse to complex technical evidence such as IP addresses.

Ultimately, it must be said that the arbitration clause in electronic contracts is a valid legal reality founded on the fundamental principles of contracts (Akbari, 2019). Nevertheless, recognizing this validity should not lead to disregarding substantive and evidentiary challenges in cyberspace. Courts and arbitral institutions are required to examine the parties' genuine intent and the validity of data attribution carefully through a moderating approach. Only in this way can a logical balance be maintained between the rapid development of electronic commerce and the implementation of contractual justice.

## 5. Formal and Substantive Challenges of the Arbitration Clause in Electronic Contracts

Despite the acceptance of the theoretical foundations and general validity of the electronic arbitration clause, the implementation and enforcement of these clauses in practice face complex legal obstacles and challenges. These challenges may be examined and analyzed in two areas: "formal" challenges, relating to the form and manner of expressing intention, and "substantive" challenges, relating to the essence of the agreement, jurisdiction, and enforcement of awards.

### 5.1. Formal Challenges

Formal challenges mainly arise from the confrontation between traditional international instruments, such as the 1958 New York Convention, and the intangible nature of data messages in electronic contracts. These challenges are mainly focused on the manner of formation, recording of intention, and evidentiary admissibility of electronic agreements before courts. Some of these challenges are examined below.

#### 5.1.1. Electronic Signature and Authentication in Arbitration Agreements

The development of electronic commerce has fundamentally transformed the traditional concept of the "written" arbitration clause contained in Article II of the New York Convention. According to the doctrine of functional equivalence, data messages have replaced paper documents, and electronic signatures have assumed the task of attributing the document to its issuer. The Iranian Electronic Commerce Law of 2003, in Articles 7 and 14, recognizes the legal validity and evidentiary force of electronic signatures as equivalent to handwritten signatures (Shirovi, 2023). Nevertheless, authentication in the digital environment faces numerous technical and legal challenges, such as the risk of denial of data, due to the absence of the parties' physical presence. A secure electronic signature, based on public key infrastructure (PKI) and issued digital certificates, can largely prevent challenges to the authenticity of the arbitration agreement. At the international level, the UNCITRAL Model Law

emphasizes the need to accurately verify the signer's intention and consent through reliable technological methods (Born, 2021).

The substantive difference between "clickwrap" and "browsewrap" agreements in the process of verifying intention is one of the most complex issues in electronic contract law. In the clickwrap model, the user's affirmative act of clicking the acceptance button is regarded as a valid signature and an express manifestation of intention to refer the dispute to arbitration. Courts generally accept this method as a valid contractual commitment because the user has expressly declared the intention to accept the terms (Mafi, 2022).

By contrast, browsewrap contracts, which treat mere browsing of web pages as acceptance of arbitration terms, face serious doubts from the perspective of evidentiary standards. In this situation, proving the user's awareness of the existence of the arbitration clause and the user's genuine intention to exclude the jurisdiction of state courts is very difficult. International judicial practice, especially in United States courts, has made the validity of these clauses conditional upon proof of reasonable visibility and the user's actual awareness (Fouchard et al., 2024). Ultimately, reliance on electronic signatures to prove the arbitration clause before domestic courts requires precise expert assessments. In the event of a dispute, courts must examine the validity of encryption infrastructure and the integrity of the data message. This requires a high degree of technical knowledge, the absence of which may cause the validity of the electronic arbitration clause to become unstable due to insufficient evidentiary proof.

### 5.1.2. *Adhesion Contracts and the Challenges of Arbitration Clauses*

Adhesion contracts have become the main instrument for regulating legal relations in cyberspace, and arbitration clauses are often hidden among the lengthy texts of these contracts. The defining characteristic of these contracts is the absence of bargaining power and the unilateral imposition of terms by the service provider, which undermines the principle of freedom of will. In business-to-consumer (B2C) models, the insertion of an arbitration clause in standard contracts substantially increases the risk of depriving the weaker party of the right to fair judicial recourse (Sadeghi, 2024).

However, in commercial relations (B2B), the adhesion nature of a contract alone does not invalidate the arbitration clause, provided that the economic and legal balance of the contract is maintained. Jurists believe that an arbitration clause in standard electronic contracts must satisfy the criteria of "reasonableness" and "fairness." Imposing excessive institutional arbitration costs or designating distant arbitral seats in such contracts is a clear example of abuse of superior bargaining position (Bantekas, 2023). To prevent users from being surprised, international practices require that arbitration clauses in adhesion contracts be highlighted and "visible." The arbitration clause should not be hidden among unrelated provisions; rather, it should be designed with a distinct font, textual warning, or a separate confirmation requirement, such as ticking a separate box. These formal measures help ensure that the other party's informed intention to accept arbitration is established more definitively (Darabpour, 2021).

In advanced legal systems, as well as in instruments such as the Convention on the International Sale of Goods, protection of the weaker party against surprising terms has become a fundamental principle. Courts facing hidden arbitration clauses in clickwrap or browsewrap contracts do not waive their jurisdiction in favor of arbitration by relying on the doctrine of unfair terms unless the user's full awareness is proven (Kaufmann-Kohler & Rigozzi, 2022). In Iranian law, although there is no express law concerning the invalidity of arbitration clauses in electronic adhesion contracts, the enforcement of imposed terms may be prevented by relying on the general rules of contracts and consumer protection law. A restrictive interpretation of clauses excluding court jurisdiction is an approach that can partly restore the lost balance in electronic adhesion contracts.

### 5.1.3. *Electronic Reference and the Validity of the Arbitration Clause*

Including an arbitration clause through electronic reference to an external document is one of the most common methods of contract formation in the web environment. According to Article 18 of the Iranian Electronic Commerce Law, reference to data messages located in other information systems is fully valid and has binding legal effects. This rule, derived from Article 5 bis of the UNCITRAL Model Law, enables the arbitration clause to be attached to the contract through a valid link without needing

to be included in the main text (Shirovi, 2023). The validity of this method of reference is conditional upon two essential requirements: first, the existence of an express and clear reference in the text of the main contract that draws the user's attention to the external document; second, easy and direct access to the full text of the arbitration terms at the time of contract formation. If the reference link is broken or directs the user to a page requiring a complex search, the arbitration clause contained therein will lack formal and substantive validity (Lew et al., 2023).

International judicial and arbitral practice applies particular strictness in examining the validity of electronic references in order to prevent the infringement of the parties' rights. The doctrine of "express reference" requires that the referring phrase in the underlying contract specifically indicate the existence of an arbitration agreement or general dispute resolution terms. Merely using the phrase "subject to the website rules," without direct reference to dispute settlement through arbitration, is not considered sufficient to establish common intention (Mafi, 2022). One of the major evidentiary challenges in electronic reference is the frequent change of website content and general terms. When a dispute arises, proving exactly which version of the arbitration terms the user was referred to and agreed to is very difficult. The use of secure archival systems, data storage with time-stamping, and digital signatures to stabilize the agreed version are technical requirements for guaranteeing the validity of such references (Born, 2021).

Consequently, in electronic commerce law, reference to an arbitration clause is recognized, but courts assess it cautiously. Emphasis on continuous accessibility, transparency in the method of reference, and stability of the referenced content are criteria that can remove formal challenges concerning the incorporation of electronic documents and prevent the invalidation of the arbitration clause before judicial authorities.

## 5.2. Substantive Challenges

Substantive challenges concern the adjudicative process, the independence of the clause, determination of jurisdiction, and finally the enforcement of awards issued in the electronic environment.

### 5.2.1. Competence-Competence

The fundamental principle of "competence-competence," which is reflected in Article 16 of the UNCITRAL Model Law, grants the arbitral tribunal the authority to decide, as the first forum, on the existence, validity, and scope of the arbitration agreement. This principle, which constitutes the cornerstone of the independence and efficiency of the arbitral process, is designed to prevent parties from resorting to national courts as a tactic to delay proceedings. According to this doctrine, judicial intervention is minimized, and the role of courts is mainly limited to post-award supervision and the enforcement stage (Born, 2021).

In developed legal systems and international arbitral practice, the "negative effect" of this principle has been accepted, meaning that courts must refrain from adjudicating objections related to the arbitrator's jurisdiction and must leave their examination to the arbitral tribunal itself. This approach allows specialized arbitrators to first express an opinion on the scope of their powers by taking into account subject-matter and technical complexities, and only afterward will the national court have the right to re-examine that decision (Fouchard et al., 2024).

By contrast, although the Iranian legal system has recognized this principle in its International Commercial Arbitration Law, in practice state courts adopt an expansive approach in interpreting their supervisory role. Domestic courts often tend to conduct a preliminary, or even substantive, review of the authenticity and validity of the arbitration clause before fully referring the case to arbitration. This tendency toward intervention undermines the independence of the arbitral tribunal and causes significant delays in the process (Mafi, 2022).

This challenge is far more severe in contracts concluded in the digital environment. Given the intangible nature of electronic agreements, domestic courts may consider themselves required to examine the technical validity of the contract formation process before any action is taken by the arbitrator. Issues such as digital authentication of the parties, platform security against cyberattacks such as hacking, or the validity of a click-based signature are matters that courts may consider within their inherent jurisdiction before the arbitrator's jurisdiction (Shirovi, 2023). Ultimately, this interventionist approach seriously weakens the

raison d'être of electronic arbitration, namely speed, specialization, and reduction of formalities. When a national court involves itself in examining digital evidence and assessing the technical validity of an online agreement, the efficiency of arbitration as an alternative dispute resolution method is effectively lost, and the parties are faced with a two-stage and exhausting adjudicative process that contradicts their original purpose in choosing arbitration.

### 5.2.2. *Enforceability of Online Arbitration Awards (ODR)*

The 1958 New York Convention, as the central international instrument in the field of recognition and enforcement of foreign arbitral awards, established a broad and enforcement-friendly legal regime. However, this convention was the product of an era in which electronic communications and online dispute resolution (ODR) were not contemplated. Consequently, its text contains no express reference to awards issued in fully virtual processes or electronic arbitration agreements, and this legislative silence has given rise to different interpretations in national legal systems (Lew et al., 2023). In leading international arbitral practice, such as institutions like the ICC and ICDR, electronic processes are considered fully compatible with the standards of the New York Convention. By relying on evolutionary interpretations, these organizations regard awards issued through ODR as equivalent to paper-based and in-person awards. From the perspective of these forums, as long as fair trial standards and the parties' right of defense are observed, the medium of data transmission and the manner of holding hearings, whether in person or online, do not impair the validity and enforceability of the award (Kaufmann-Kohler & Rigozzi, 2022).

In Iran, judicial courts adopt a highly cautious and sometimes strict approach when dealing with ODR awards. Reliance on Article V of the New York Convention, especially with respect to the "lack of proper notice" to the parties regarding the adjudicative process, has become one of the main tools for refusing enforcement of these awards. Domestic courts may, due to unfamiliarity with electronic notification mechanisms or dedicated arbitration messaging systems, regard the entire process as contrary to public order and the principles of fair proceedings (Darabpour, 2021).

The issue of "public order" is another substantive challenge in the enforcement of these awards in Iran. An Iranian judge may, upon observing ambiguity in electronic authentication or doubt concerning voluntary confirmation of the arbitration clause, regard enforcement of the award as contrary to mandatory rules and economic public order. This judicial sensitivity in examining the technical processes of ODR causes many valid international awards issued in the digital environment to be stopped behind the barrier of enforcement by domestic courts (Sadeghi, 2024). Uncertainty in the enforcement of online arbitral awards is the greatest obstacle to the development of cross-border electronic commerce involving Iranian parties. When an economic actor is not confident that an award issued by an international arbitration center on the web will be recognized and enforced by Iranian courts, that actor will refuse to accept arbitration clauses in digital contracts. This situation severely reduces the legal security needed for investment and creates problems for Iran's commercial interactions in the international environment.

### 5.2.3. *Legal Gaps and Conflict with the Electronic Commerce Law*

The Iranian Electronic Commerce Law of 2003, despite accepting progressive concepts such as data messages and digital signatures, is silent on electronic arbitration proceedings. This law mainly focuses on the formal and evidentiary aspects of documents and does not provide the substantive rules needed to administer a fully virtual arbitration process. This legal gap has caused a kind of legal discontinuity and conflict at the enforcement stage between the traditional rules governing arbitration and the new needs of digital commerce (Shirovi, 2023).

The Iranian International Commercial Arbitration Law of 1997 still emphasizes physical and tangible concepts, whereas the Electronic Commerce Law focuses on digital equivalence. The absence of an integrated legal framework connecting these two fields has caused judicial authorities to hesitate in determining how to reconcile "electronic consent" with the writing requirements contained in arbitration laws. This legislative fragmentation has severely weakened the legal security of contracting parties in the digital environment (Katouzian, 2020).

The conflict between these two laws becomes more apparent in matters such as the "place of arbitration" and "method of notifications." Whereas traditional arbitration law emphasizes the need to designate a physical place or situs, in electronic arbitration the concept of place itself is challenged. The absence of an express provision in the Electronic Commerce Law

recognizing the “virtual place of arbitration” forces judges to resort to traditional interpretations, which are often incompatible with the nature of online processes and the requirements of speed in modern commerce (Mafi, 2022).

This legal gap has also prevented the formation of a uniform practice regarding the evidentiary value of digital documents in arbitration hearings. Although the Electronic Commerce Law recognizes these documents as valid, traditional arbitration law does not provide clear rules for accepting them as exclusive or preferential evidence in the absence of paper documents. This ambiguity in the hierarchy of evidentiary proof increases the risk of annulment of the arbitral award due to defects in the adjudicative process or failure to observe evidentiary formalities (Sadeghi, 2024). Overall, the need to draft a comprehensive law on “electronic arbitration,” or at least to amend existing laws to integrate digital concepts with the institution of arbitration, is felt more than ever. Continued legislative silence and exclusive reliance on judicial interpretations of existing laws will cause capital flight and reduce merchants’ willingness to use efficient dispute resolution systems. Creating an integrated legal structure is the only way to guarantee legal stability and predictability in contracts concluded in the digital environment.

## 6. Conclusion and Recommendations

The arbitration clause in electronic contracts is, in principle, acceptable and valid. The legal foundations of this validity must be sought in the principle of party autonomy, the principle of validity, the general rules of contracts, and the acceptance of data messages as the functional equivalent of writing. From this perspective, the transformation of the medium from paper to the digital environment does not eliminate the nature of contractual consent; rather, it only changes the manner of expressing, recording, and proving intention. Therefore, if the parties’ intention clearly and attributably indicates the referral of the dispute to arbitration, the mere electronic nature of the contract cannot be regarded as a ground for invalidating the arbitration clause. Analysis of the legal nature of the arbitration clause shows that this institution should be understood more as a “condition involving a legal act” than as a “condition of result” or a fully independent agreement. In fact, the parties undertake to resolve future disputes through arbitration and to refrain from initially referring to court. This undertaking has specific legal effects and, in the event of breach, may be met with statutory sanctions. At the same time, the independence of the arbitration clause from the main contract is acceptable in the areas of validity, effectiveness, and governing law; however, this independence does not mean its complete and unconditional separation from the underlying contract.

In electronic contracts, formal challenges play a decisive role in the fate of the arbitration clause. Matters such as simple click acceptance, lack of transparency in displaying the clause, incomplete reference to general terms, absence of a secure electronic signature, and difficulty in proving attribution of the data message can weaken the validity of the clause in litigation. Especially in adhesion contracts, if the arbitration clause is inserted in a hidden, ambiguous, or surprising manner, the possibility of challenging informed consent and relying on rules protecting the weaker party increases. Therefore, the formal validity of the arbitration clause requires transparent, prominent, and evidentially reliable drafting. Substantive challenges are equally important. Although the principle of competence-competence is recognized in international commercial arbitration, in practice it faces judicial interventions and doubts concerning the arbitrator’s jurisdiction when dealing with electronic contracts. Furthermore, the enforcement of online arbitral awards under the New York Convention, due to the silence of traditional texts regarding fully virtual processes, may encounter cautious or strict interpretations by courts. Although this situation is understandable from the perspective of protecting public order and fair proceedings, if taken to excess, it weakens the main function of electronic arbitration, namely speed, specialization, and efficiency.

Although the Iranian Electronic Commerce Law has taken an important step in accepting data messages, electronic signatures, and functional equivalence, it has not yet provided a comprehensive and coherent framework for electronic arbitration. This gap has caused remaining discrepancies in practice between traditional arbitration rules and the requirements of online transactions. The result of this gap is legal uncertainty, fragmentation of practice, and reduced confidence among economic actors in arbitration clauses in the digital environment. From this perspective, the need for supplementary legislation or amendment of existing laws is clearly felt. Moreover, the future of arbitration in electronic contracts depends on the extent to which the legal system can create a balance among contractual freedom, protection of the weaker party, legal security, and acceptance of technology. The stronger the technical mechanisms for authentication, digital signature, storage of the agreed version, and recording of time and content, the greater the likelihood of validity and enforcement of the arbitration clause.

Therefore, the ultimate solution lies neither in denying electronic arbitration nor in accepting it without restriction; rather, it lies in smart regulation, formal transparency, and the development of specific rules for this type of agreement.

In light of the findings obtained, the following recommendations are offered to address the existing challenges and improve the position of the arbitration clause in electronic contracts.

To strengthen the position of electronic arbitration in the Iranian legal system, legislative reforms must first be pursued in a targeted and coherent manner. It is appropriate for the legislature to dedicate an independent chapter to electronic arbitration either in the Civil Procedure Code or in the International Commercial Arbitration Law so that the rules governing formation, validity, notification, proceedings, and enforcement of awards in the digital environment are clearly regulated. Within this framework, it should be expressly provided that an arbitration clause included in a data message is formally valid whenever it is attributable to the obligor, accessible to the other party, and capable of storage and retrieval. Also, in electronic adhesion contracts, the legislature should guarantee the informed consent of the weaker party by requiring the highlighting of the arbitration clause, obtaining separate confirmation, and prohibiting its hidden or surprising insertion. Furthermore, establishing express criteria for electronic notification, recognizing the virtual place of arbitration, and accepting online hearings can resolve many existing ambiguities and remove electronic arbitration from the state of fragmentation and uncertainty.

At the judicial and practical level, it is also necessary for courts to view electronic arbitration clauses with a protective but realistic approach. First, formal objections should not become tools for escaping arbitration; therefore, a restrictive interpretation of objections raised merely to delay proceedings or render the arbitration agreement ineffective is justified. Second, the principle of competence-competence should be respected in practice so that the arbitrator can initially express an opinion on the existence and prima facie validity of the arbitration clause, unless the invalidity of the clause is manifest and requires no substantive examination. Third, in disputes concerning attribution of data messages, authenticity of digital signatures, and integrity of the electronic version of the contract, the use of technical expert evidence should be strengthened as the main tool for discovering the truth, rather than resolving technological disputes solely through traditional evidentiary standards. At the same time, in consumer and B2C contracts, courts must be sensitive to surprising, ambiguous, or imposed clauses and, relying on the principles of protecting the weaker party, preserve the balance between contractual freedom and contractual justice.

From contractual and research perspectives as well, the use of precise legal design and in-depth comparative studies is a necessary condition for the success of electronic arbitration. In practice, the arbitration clause must be inserted in an independent, clear, and visually prominent provision, and general acceptance of terms of use alone should not be considered sufficient to prove consent to arbitration; rather, a separate checkbox, registration of the final version of the contract, time-stamping, a unique identifier, and a secure electronic signature should be considered minimum standards. Also, precise determination of the arbitral institution, language of proceedings, governing law, place of arbitration, and method of notifications can prevent subsequent disputes. At the research level, comparative examination of leading legal systems, analysis of the experience of electronic commerce platforms, study of the effects of arbitration clauses on consumer rights, and feasibility assessment of drafting a national standard for online arbitration can lay the groundwork for the formation of an indigenous, efficient, and reliable model for the future.

### **Ethical Considerations**

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

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The authors report no conflict of interest.

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