

On the legal problems and countermeasures in the conclusion of electronic contracts — taking e-commerce platform transactions as an example

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How to cite this paper: Zhou, Y. H. (2025). On the legal problems and countermeasures in the conclusion of electronic contracts — taking e-commerce platform transactions as an example. *Law and Humanities*, 2(1), 39-49. ISSN Print: 3079-5117; ISSN Online: 3079-5125. <https://doi.org/10.63313/LH.9038>
Published: 2025-12-22

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Abstract

With the deep integration of the digital economy, e-commerce has become a core form of social commodity circulation, and electronic contracts, as the legal cornerstone of e-commerce transactions, are crucial to maintaining transaction order. Taking e-commerce platform transactions as the research object, this paper systematically explores the legal basis, practical models, and prominent problems in the formation of electronic contracts. It is found that the current legal predicaments mainly include difficulties in confirming contractual parties, doubts about the authenticity of intent expression, conflicts between standard terms and consumers' rights and interests, insufficient probative value of electronic evidence, and obstacles in the application of law in cross-border transactions. Combined with typical judicial cases, this paper further analyzes the judicial determination rules for related issues and proposes targeted countermeasures from four aspects: improving the legislative and regulatory framework, enhancing the standardization of electronic evidence, optimizing the mechanism for users' expression of intent, and strengthening the protection of consumers' rights and interests. The research aims to improve the legal regulation system of electronic contracts, resolve transaction risks, and provide theoretical support and practical reference for the healthy development of the e-commerce industry.

Keywords

electronic contracts; e-commerce platforms; contract formation; legal issues; dispute resolution; consumer rights protection

1. Introduction

In an era marked by the deep integration of the digital economy into the social and economic fabric, e-commerce has evolved from a supplementary transactional form to a core vehicle for the circulation of goods and services worldwide. According to the 54th Statistical Report on Internet Development in China released by the China Internet Network Information Center (CNNIC), as of June 2024, the number of online shopping users in China has surpassed 900 million. Against this backdrop of a

massive user base, electronic contracts, as the fundamental legal instruments defining the rights and obligations of transacting parties, their standardized formation and validity determination are pivotal to upholding the stability of e-commerce transaction order. Nevertheless, inconsistent with the rapid advancement of e-commerce, the formation of electronic contracts is plagued by numerous legal challenges in practice: the inherent difficulty of accurately verifying the identity of contractual parties in a virtual environment; doubts surrounding the authenticity of consumers' genuine intent underlying the "click-to-agree" mechanism; imbalances in rights and obligations arising from standard terms unilaterally formulated by platforms; inadequate probative value of electronic evidence due to its susceptibility to tampering; and conflicts in the application of law in cross-border transactions. These issues not only jeopardize the validity of individual transactions but also erode market entities' trust in e-commerce, thereby impeding the sound development of the digital economy. Drawing on e-commerce platform transactions as a specific research context, this paper systematically elaborates on the legal basis and practical models for the formation of electronic contracts, conducts an in-depth analysis of the existing legal predicaments, and proposes targeted countermeasures. It aims to provide theoretical and practical references for optimizing the legal regulation of electronic contracts.

2. Legal Concept and Theoretical Foundation of Electronic Contract

2.1. Definition of Electronic Contracts

Pursuant to Article 2 of the Electronic Signature Law of the People's Republic of China, an electronic signature is defined as "data contained in a data message that serves to identify the signatory and indicate the signatory's acknowledgment of the content therein." An electronic contract is essentially a contract concluded through digital means such as internet transmission, with electronic signatures and data messages as its core carriers. In contrast to traditional paper contracts, while electronic contracts substitute virtual data for physical texts in form, they are explicitly endowed with equal legal effect as paper contracts under the law. This legal attribute lays a solid foundation for the legitimacy of large-scale transactions conducted on e-commerce platforms.

2.2. Legal Sources of Electronic Contracts

The template is used to format your paper and style the text. All margins, column The application of electronic contracts is not isolated but anchored in a multi-tiered legal framework. Paragraph 2 of Article 469 of the Civil Code breaks the traditional constraints on contract forms by explicitly incorporating data messages into the scope of written forms, thereby fundamentally establishing the formal validity of electronic contracts. Article 13 of the Electronic Signature Law further refines the

validity criteria, stipulating that "a reliable electronic signature shall have the same legal effect as a handwritten signature or seal," providing dual technical and legal safeguards for the enforceability of electronic contracts. Article 10 of the E-commerce Law focuses specifically on e-commerce scenarios, emphasizing that e-commerce operators must fulfill their contractual obligations in accordance with the law and placing particular emphasis on the protection of consumers' legitimate rights and interests. Together, these three pieces of legislation form a cohesive legal system governing the formation and performance of electronic contracts.

2.3. Theoretical Foundation of Electronic Contracts

Although electronic contracts are predicated on digital technology, their core essence adheres to the fundamental principles of civil law. The principle of autonomy of will constitutes the cornerstone of contract formation. Even in an electronic environment, the consensus of the parties' intent remains a prerequisite for the establishment of a contract. Whether it is "click to purchase" or "confirm order," such actions essentially represent the expression of the parties' free will. The principle of formal equality abrogates the reliance of traditional contracts on physical documents, as the law recognizes the equal status of electronic data and paper texts, ensuring that electronic contracts are not subjected to formal discrimination. The principle of good faith is particularly crucial in e-commerce transactions. Given that transacting parties are often in a non-face-to-face relationship, platform operators are obligated to truthfully disclose product information and fulfill after-sales commitments, while users must abide by order agreements and refrain from malicious breaches of contract. This principle serves as the core link in safeguarding trust in e-commerce transactions.

3. Practical Models for the Formation of Electronic Contracts on E-commerce

The models for forming electronic contracts on e-commerce platforms are not uniform but exhibit diverse characteristics tailored to specific transaction scenarios and platform rules. The most prevalent model is the click-wrap agreement, wherein users are required to click buttons such as "I agree" or "Purchase Now" to complete a transaction after selecting products. The act of clicking is deemed an acceptance of the platform's pre-drafted contract terms. Owing to its operational simplicity and high efficiency, this model is widely adopted across nearly all retail transaction scenarios on e-commerce platforms. In contrast, the browse-wrap agreement model does not require users to explicitly click to agree; instead, it stipulates through platform rules that "continuing to browse or use the website shall be construed as acceptance of the terms." While this model lowers the operational threshold for users, the absence of active confirmation by users often gives rise to disputes in judicial practice regarding "whether a valid expression of intent has been formed." Courts

typically assess the validity of the contract by considering factors such as the clarity of the term notifications and whether the user had actual knowledge of the terms. In addition to these two core models, e-commerce platforms generally adopt a two-tier contract structure wherein registration agreements coexist with transaction contracts. When users register an account on a platform for the first time, they are required to agree to a registration agreement that includes service rules, privacy policies, and other provisions, thereby establishing a service contract relationship between the user and the platform. Subsequent to registration, when a user selects specific products and submits an order, an independent sales contract relationship is formed with the merchant. These two types of contracts are interrelated yet distinct, collectively defining the rights and obligations of the platform, the merchant, and the user. Furthermore, the completion of e-commerce transactions often relies on the support of third-party payment and logistics services. When users opt for third-party payment tools such as Alipay or WeChat Pay, they enter into a payment service contract with the payment institution. When merchants engage logistics companies to deliver products, they form a transportation contract with the logistics provider. These contracts are interconnected with the core sales contract, forming a comprehensive contractual chain for e-commerce transactions.

4. Main Legal Issues in the Formation of Electronic Contracts

4.1. Difficulties in Confirming Contractual Parties

The virtual nature of e-commerce platforms poses inherent obstacles to the accurate verification of the identity of contractual parties. During the account registration process, users typically only need to provide basic information such as mobile phone numbers and email addresses, and some users even conduct transactions using virtual identities such as screen names or nicknames. Although platforms mandate real-name authentication, in practice, instances of authentication by third parties or identity theft are not uncommon, resulting in inconsistencies between the registered account holder and the actual transacting party. This anonymity of parties not only elevates transaction risks but also creates judicial challenges in dispute resolution. When a dispute arises and is brought before a court, the plaintiff often struggles to provide the defendant's true identity information and must rely on background registration data provided by the platform. However, such platform data may be incomplete or outdated, and certain data may involve user privacy. When disclosing such data, the platform must balance privacy protection with judicial needs, making it difficult for courts to promptly construct a complete evidentiary chain regarding the parties' identities, which in turn affects the efficiency and fairness of case proceedings.

4.2. Doubts about the Authenticity of Intent

The authenticity of intent is a core element for the validity of a contract, yet the transaction models employed by e-commerce platforms are prone to undermining this element. In the click-wrap agreement model, platform-drafted contract terms are often presented in lengthy texts or small fonts. To expedite the transaction process, consumers typically click "agree" without reading the terms in full. This act of "formal consent without substantive acknowledgment" significantly compromises the authenticity of the expression of intent. When consumers subsequently discover unfavorable provisions in the terms, they often assert the invalidity of the contract on the ground that they "were unaware of the term content," triggering legal disputes. Additionally, with the integration of intelligent technology in the e-commerce sector, some platforms have introduced features such as intelligent recommendations and automatic ordering. For instance, after users set up "automatic renewal" or "regular purchases," the platform automatically generates orders and deducts fees at predetermined times. While such automated transactions enhance convenience, they may also raise questions about "whether they reflect genuine autonomy of will," particularly when product prices fluctuate or specifications are adjusted, leading to challenges regarding the reasonableness of automated orders.

4.3. Conflicts between Standard Terms and Consumers' Right and Interests

Electronic contracts on e-commerce platforms are predominantly standard terms, i.e., terms unilaterally formulated by the platform that users can only accept passively. While this form of terms aligns with the efficiency requirements of e-commerce transactions, the lack of a negotiation process between the parties often results in the infringement of consumers' rights and interests. In practice, the issues associated with platform standard terms primarily manifest in three aspects: first, overly restrictive exemption clauses. Some platforms include provisions such as "not liable for the accuracy of product information" or "no compensation for order cancellation due to system failures" in their terms, which unduly exempt themselves from obligations and increase risks for consumers. Second, restrictions on consumers' dispute resolution rights. Certain terms stipulate that "disputes shall only be resolved through internal platform mediation, excluding arbitration or litigation rights" or "the competent court shall be limited to the court where the platform is located," which increase the time and economic costs for consumers to enforce their rights. Third, implicit authorization of personal information. Some platforms utilize a "default check" mechanism to use users' personal information for advertising or third-party sharing without obtaining explicit consent, in violation of relevant legal provisions on personal information protection and infringing upon consumers' information rights.

4.4. Insufficient Preservation and Probative Value of Electronic Evidence

The formation and performance of electronic contracts are documented in the form of data messages, such as order screenshots, chat records, and payment vouchers. While these electronic evidences offer convenience, they are also susceptible to tampering and difficult to preserve, which impairs their probative value in judicial practice. On one hand, screenshots, chat records, and other evidences independently preserved by ordinary users may lose their authenticity due to actions such as time modification or content deletion. Courts generally require the submission of the original carrier or notarization when admitting such evidences. However, the notarization process entails significant time and costs, increasing the burden of proof for consumers. On the other hand, electronic data storage standards vary across different e-commerce platforms. Some platforms only retain transaction data for a short period, while others fail to encrypt and back up data, leading to a high risk of data loss or corruption. The absence of unified electronic data storage standards makes it challenging for courts to adopt a consistent approach when verifying evidence, thereby affecting the efficiency of fact-finding in cases.

4.5. Issues Concerning the Application of Law in Cross-border E-commerce

With the rapid expansion of cross-border e-commerce, the formation of electronic contracts has transcended national boundaries. However, differences in legal systems among various countries and regions present challenges to the application of law in cross-border electronic contracts. In terms of the choice of governing law, some cross-border e-commerce platforms stipulate in their terms that the law of the platform's location shall apply. Nevertheless, if such an agreement violates the mandatory legal provisions of the consumer's place of residence, it may be deemed invalid. In the absence of an explicit agreement on the governing law by the parties, courts are required to determine the law with the closest connection to the contract in accordance with provisions such as Article 41 of the Law of the Application of Law for Foreign-related Civil Relations, taking into account factors such as the place of contract conclusion, the place of performance, and the parties' places of residence. This process often entails significant complexity due to cross-border factors, increasing the difficulty of determination. Additionally, data circulation in cross-border transactions faces obstacles. Some countries impose stringent security review requirements on the cross-border transfer of personal information, and e-commerce platform transaction data typically includes sensitive content such as consumers' identities and payment information. The compliance of cross-border data transmission not only affects the acquisition and verification of electronic evidence but also may give rise to legal risks related to data security.

5. Typical Cases in Judicial Practice

In the judicial practice of electronic contract disputes arising from e-commerce

platform transactions, the determination of legal issues in various cases provides valuable precedents for subsequent litigation. In the case of "Taobao Buyer v. Seller for Non-conforming Goods," the buyer alleged that the seller had breached the contract and demanded a refund and return of goods on the ground that the received products did not match the information displayed by the seller on the platform. The seller contended that the buyer had failed to carefully examine the product information and refused to assume liability. After hearing the case, the court held that the e-commerce platform's order records detailed key transactional elements such as product names, specifications, and prices, and the Alipay payment voucher confirmed that the buyer had fulfilled their payment obligation. Together, these documents constituted a complete evidentiary chain proving the existence and validity of the contractual relationship between the parties. Furthermore, as the provider of product information, the seller was under an obligation to ensure the accuracy and authenticity of such information. The seller's delivery of non-conforming goods constituted a breach of contract, and the court ultimately ordered the seller to process the refund and return. This case clarified the central role of e-commerce platform order records and third-party payment vouchers in establishing an electronic contract evidentiary chain, providing guidance for the admissibility of evidence in similar cases.

In the case of "Dispute over JD Platform Service Terms," the consumer claimed compensation from the platform due to product quality issues, while the platform relied on standard terms in the service agreement to assert that it "merely provided transaction matching services and was not liable for product quality." Upon review, the court held that pursuant to the provisions on standard terms in Article 496 of the Civil Code, as the drafter of the standard terms, the platform was obligated to adhere to the principle of fairness in determining the rights and obligations of the parties. However, the impugned terms unduly exempted the platform from its obligation to verify and guarantee product quality, excluded the consumer's primary right to claim compensation from the platform, and the platform had failed to adequately prompt or explain the terms to the consumer. Consequently, the court declared the standard terms invalid and ordered the platform to bear supplementary liability for the consumer's losses. This case underscores the judiciary's negative stance toward unreasonable standard terms imposed by e-commerce platforms and emphasizes the importance of standard terms complying with the principle of fairness and the platform's obligation to provide adequate notice and explanation.

In the case of "Cross-border E-commerce International Goods Sale," a Chinese buyer purchased goods from an overseas seller through a cross-border e-commerce platform. Subsequent to the transaction, the contract's purpose was frustrated due to delays in product delivery, and the parties disagreed on the dispute resolution method and the applicable law. In adjudicating the case, the court applied Article 41 of the Law of the Application of Law for Foreign-related Civil Relations and first

examined whether the parties had agreed on a governing law. Finding no such agreement in the contract terms, the court considered the practical circumstances of the case and determined that the place of delivery and the buyer's place of residence were both in China, establishing China as the jurisdiction with the closest connection to the contract. The court thus ruled that Chinese law should govern the dispute. Regarding the dispute resolution method, in the absence of an arbitration clause, the court exercised jurisdiction in accordance with the law and conducted a substantive trial. This case provides practical guidance for the application of law and jurisdiction determination in cross-border e-commerce electronic contracts, clarifying the rule that "the law of the jurisdiction with the closest connection shall apply in the absence of an explicit agreement by the parties."

6. Countermeasures and Improvement Suggestions

6.1. Improve the Legislative and Regulatory Framework

To address the legal gaps and ambiguities in the formation of electronic contracts, it is imperative to promote the refinement and coordination of relevant legislation. This includes clarifying the scope of application between the E-commerce Law and the Electronic Signature Law, for example, by establishing specific criteria for determining the validity of different formation models such as click-wrap and browse-wrap agreements, thereby avoiding inconsistent judgments in similar cases. Additionally, with respect to standard terms, legislative or judicial interpretations should explicitly delineate the circumstances under which e-commerce platform standard terms are invalid, such as terms that unduly exempt the platform from liability or restrict consumers' right to seek legal remedies, thereby curbing the use of unreasonable standard terms through legal means. At the regulatory level, market supervision authorities should strengthen the daily supervision of e-commerce platforms and establish a filing and review system for standard terms. Platforms should be required to file new user agreements or transaction terms with regulatory authorities prior to their implementation, and regulatory authorities should conduct reviews to assess the fairness and legality of such terms, ordering revisions to problematic provisions within a specified timeframe to prevent the infringement of consumers' rights and interests at the source. Furthermore, to address the challenges associated with the application of law in cross-border e-commerce, China can draw on the advanced experience of the UNCITRAL Model Law on Electronic Commerce and formulate specialized guidelines for the application of law in cross-border electronic contracts tailored to the country's specific cross-border e-commerce development context, clarifying the rules for selecting the governing law in different scenarios and providing stable legal expectations for cross-border transactions.

6.2. Enhance the Probative Value and Standardization of Electronic Evidence

The insufficient probative value of electronic evidence constitutes a key bottleneck in the resolution of electronic contract disputes. To address this issue, efforts should be made to improve the standardization of electronic evidence from both technical and institutional perspectives. From a technical standpoint, the government can take the lead or encourage industry associations to establish a unified electronic evidence preservation platform, leveraging blockchain technology to achieve real-time on-chain storage of electronic data. The tamper-proof and traceable nature of blockchain can ensure the authenticity and integrity of electronic evidence such as order records, payment vouchers, and chat records. Additionally, third-party notary institutions should be encouraged to collaborate with e-commerce platforms and evidence preservation platforms to offer "one-click evidence collection and notarization" services, enabling users to promptly obtain notarized electronic evidence in the event of a dispute, thereby reducing the cost of evidence collection and enhancing the judicial admissibility of such evidence. From an institutional perspective, unified electronic data storage standards should be formulated, specifying requirements such as the retention period, encryption standards, and backup mechanisms for transaction data by e-commerce platforms. For example, platforms should be mandated to retain transaction data for a minimum of three years, with data stored in encrypted form and regularly backed up to ensure data security and accessibility. Simultaneously, the judicial process for the admissibility of electronic evidence should be streamlined. Electronic evidence preserved through official evidence preservation platforms or third-party notary institutions should be admissible as *prima facie* evidence by courts, reducing unnecessary cross-examination procedures and improving the efficiency of case trials.

6.3. Optimize the Mechanism for Users' Expression of Intent

To ensure the authenticity of users' expression of intent, e-commerce platforms should optimize and adjust their contract formation processes. For terms that significantly impact users' rights and interests, such as exemption clauses, dispute resolution clauses, and personal information authorization clauses, platforms should not merely present them in standard text format but instead adopt a dual-confirmation mechanism. Prior to users clicking "agree," platforms should prominently highlight such terms through pop-up windows, bolded fonts, or separate checkboxes, requiring users to explicitly confirm that they "have read and agreed to the terms," thereby preventing users from passively accepting terms due to oversight or lack of awareness. Additionally, platforms should simplify the language of terms, avoiding overly technical legal jargon to ensure that users with varying levels of cognitive ability can comprehend the content of the terms. For special user groups such as minors and the elderly, specialized notification mechanisms should be implemented. For example, when minors submit orders, platforms should verify the identity of their guardians and obtain their consent. When elderly users log in to

the platform, an "elderly mode" should be automatically activated, providing voice announcements or enlarged font displays of contract terms to reduce the risk of special user groups being disadvantaged by unfair terms. Furthermore, for automated transaction functions, platforms must clearly inform users of transaction rules, payment methods, and modification/cancellation procedures when users enable such functions. Additionally, users should receive reminder notifications prior to each automated transaction to ensure that they maintain full control over the transaction process and that their expression of intent is genuine.

6.4. Strengthen the Protection of Consumers' Rights and Interests and Improve the Dispute Resolution Mechanism

Consumers occupy a vulnerable position in electronic contract relationships, and it is therefore essential to safeguard their legitimate rights and interests by strengthening platform responsibilities and improving dispute resolution mechanisms. In terms of platform responsibilities, the boundaries of e-commerce platforms' obligations should be further clarified. Platforms are not only intermediaries facilitating transactions but also bear the responsibility of rigorously verifying merchants' business qualifications and the authenticity of product information. They should promptly take measures such as removing products or suspending merchant accounts for those engaged in false advertising or selling counterfeit and shoddy goods. Additionally, platforms should establish and improve a consumer complaint handling mechanism, setting up dedicated complaint channels and specifying clear processing timeframes. For example, platforms should be required to provide a response to consumer complaints within seven working days to ensure that complaints are not ignored. In terms of dispute resolution, a "preliminary compensation + diversified dispute resolution" model should be promoted. Platforms can establish a preliminary compensation fund, enabling them to provide immediate compensation to consumers in cases involving product quality issues or merchant breaches of contract, with subsequent recovery from the responsible merchant. This approach reduces the financial burden on consumers seeking redress. Furthermore, diversified dispute resolution methods such as arbitration and mediation should be introduced, with platforms collaborating with arbitration institutions and industry mediation organizations to provide consumers with convenient non-litigious dispute resolution channels. For small-value disputes, a "small-claims expedited arbitration" mechanism can be implemented to expedite the resolution process, preventing consumers from abandoning their claims due to excessive litigation costs.

7. Conclusion

Electronic contracts have emerged as the predominant transactional tool in the digital economy era. Their widespread adoption in e-commerce platform transactions has not only enhanced commercial efficiency but also introduced a range of legal

risks. The key challenges currently facing electronic contract formation include difficulties in confirming contractual parties, doubts regarding the authenticity of intent, inconsistencies between standard terms and consumers' rights and interests, insufficient probative value of electronic evidence, and issues related to the application of law in cross-border transactions. Addressing these challenges requires the collaborative efforts of legislative bodies, judicial authorities, and platform operators. By refining legal norms, advancing technological solutions, and strengthening platform accountability, it is possible to balance transaction efficiency with the protection of the legitimate rights and interests of consumers and merchants, thereby laying a robust legal foundation for the sustainable development of China's e-commerce sector.

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