

Legal Certainty in Electronic Contracts for E-Commerce Transactions in Indonesia

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ABSTRACT

The rapid expansion of e-commerce in Indonesia has led to the extensive use of electronic contracts as the primary legal instrument governing digital transactions. This development raises important legal issues related to legal certainty, particularly concerning the validity, enforceability, evidentiary value, and protection of parties involved in electronic contracts. This study aims to analyze legal certainty in electronic contracts within e-commerce transactions in Indonesia using a normative juridical approach. The research examines statutory regulations, legal principles, and doctrines related to contract law, electronic transactions, and consumer protection. The findings indicate that Indonesian law has formally recognized electronic contracts as legally binding and has acknowledged electronic documents as valid evidence. However, several challenges remain, including ambiguity in electronic consent, limitations in authentication mechanisms, evidentiary reliability, and the imbalance of bargaining power between business actors and consumers. The lack of full harmonization between traditional contract law and electronic transaction regulations also affects the predictability and consistency of legal enforcement. This study concludes that while the existing legal framework provides a basic level of legal certainty, further normative refinement and regulatory harmonization are necessary to strengthen legal protection and enhance trust in e-commerce transactions in Indonesia.

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1. INTRODUCTION

The rapid advancement of information and communication technology has fundamentally transformed patterns of economic activity in Indonesia, particularly in the field of trade, as reflected in the significant growth of electronic commerce (e-commerce) that enables business actors and consumers to

conduct transactions without physical presence and across territorial boundaries. This transformation has shifted conventional contract practices into digital forms known as electronic contracts (e-contracts), which are concluded through electronic systems such as websites, mobile applications, and digital platforms. Although e-contracts offer efficiency

and flexibility, their widespread adoption also poses challenges to existing legal frameworks that must adapt to digital interactions, including automated and smart contracts, thereby necessitating a re-evaluation of traditional contract law principles such as consent, legal certainty, and evidentiary standards [1]. Despite the formal legal recognition of electronic contracts in Indonesia, regulatory gaps persist, particularly in relation to autonomous contract execution and the reliability of digital evidence, indicating the need for a paradigm shift in legal thought to adequately address technological developments [1].

In response to the expansion of e-commerce, the Indonesian government has introduced regulatory instruments such as Government Regulation No. 80 of 2019, which aims to strengthen consumer trust and promote fair competition within digital markets; however, inconsistencies between e-commerce regulations and existing distribution laws continue to create compliance challenges and the potential for unfair competition among business actors [2]. From a consumer protection perspective, electronic contracts implemented on e-commerce platforms often lack sufficient transparency and legal safeguards, particularly for parties such as affiliates who encounter uncertainties regarding commission rights and access to effective dispute resolution mechanisms [3]. Nevertheless, from a doctrinal standpoint, the validity of electronic contracts is generally upheld under Indonesian law as long as they fulfill essential contractual requirements, including mutual agreement and legal capacity, thereby reaffirming their binding legal force within the national legal system [4];[5].

Electronic contracts play a central role in ensuring the continuity and legitimacy of e-commerce transactions, as most digital platforms rely on standard-form agreements such as click-wrap or browse-wrap mechanisms, where users are deemed to have consented by clicking an approval button or by

continuing to use the service. While these mechanisms offer efficiency and practicality, they also raise legal questions concerning the fulfillment of classical contract law requirements, including consent, legal capacity, certainty of terms, and lawful cause, particularly when contracts are formed automatically by electronic systems without direct human interaction. In Indonesia, the legal framework governing electronic contracts is rooted in the Civil Code, the Law on Electronic Information and Transactions (ITE Law), and Government Regulation Number 80 of 2019, which collectively aim to align electronic contracts with traditional contract principles. The validity of electronic contracts is anchored in Article 1320 of the Civil Code and is complemented by electronic-specific regulations under the ITE Law and Government Regulation Number 80 of 2019, which do not contradict but rather reinforce conventional contract norms [6]; [7]. Click-wrap agreements are generally recognized as binding once users click the "I agree" button; however, their implications for user rights and informed consent continue to require careful regulatory attention [8].

Despite formal legal recognition, significant challenges remain in ensuring legal certainty and effective consumer protection in electronic contracts. The interpretation of consent and the assessment of legal capacity in digital environments often complicate the enforceability of electronic contracts, particularly in cases where users lack full awareness of contractual terms or where automated systems dominate contract formation [5]. Moreover, the absence of comprehensive legal guidelines governing smart contracts and advanced click-wrap mechanisms highlights the need for further legal reform to ensure justice and certainty in e-commerce transactions [9]. Although the ITE Law provides a foundational framework for consumer protection and dispute resolution, enhanced legal education, clearer regulatory standards, and stronger safeguards are

necessary to protect consumers from unfair practices and legal uncertainty [7]. In this context, privacy protection and references to international legal instruments, such as the UNCITRAL Model Law, are increasingly relevant in addressing regulatory gaps and strengthening the legal framework for electronic contracts, thereby reinforcing legal certainty as a core principle in maintaining trust within Indonesia's digital economy [9].

Indonesia has responded to the development of digital transactions by establishing a legal framework that recognizes electronic information and electronic documents as valid legal instruments. The enactment of legislation on electronic information and transactions marks a significant step toward accommodating technological developments within the national legal system. However, despite this formal recognition, practical and doctrinal challenges remain. These include inconsistencies between traditional civil law concepts and electronic contract practices, ambiguity in interpreting electronic consent, limitations in electronic evidence, and gaps in consumer protection within e-commerce transactions.

From a normative juridical perspective, the challenges arising from the implementation of electronic contracts in e-commerce transactions indicate the need for a systematic legal analysis of the extent to which existing regulations provide legal certainty. Normative legal research is essential to examine the coherence of statutory provisions, legal principles, and legal doctrines governing electronic contracts, as well as to assess whether current regulations adequately accommodate the unique characteristics of digital transactions, particularly in the context of Indonesia where e-commerce continues to grow rapidly alongside an increasing number of online transaction disputes. Based on these considerations, this paper analyzes legal certainty in electronic contracts used in e-commerce transactions in Indonesia through a normative juridical approach, focusing on the legal foundations of

electronic contracts, their conformity with general contract law principles, and the effectiveness of existing regulations in ensuring legal protection and certainty for the parties involved, while also contributing to the development of legal discourse and offering normative insights for strengthening the regulatory framework governing e-commerce in Indonesia.

2. LITERATURE REVIEW

2.1 *Concept of Legal Certainty in Contract Law*

Legal certainty in contract law is a cornerstone principle that ensures parties clearly understand their rights and obligations, thereby facilitating predictability and consistency in legal outcomes. In civil law systems, this principle is traditionally grounded in the fulfillment of essential contractual elements such as consent, legal capacity, a certain object, and a lawful cause; however, the emergence of electronic contracts has challenged these classical elements, particularly in relation to how consent is expressed and how agreements are evidenced in digital form, thus necessitating a re-examination of legal certainty in light of technological developments. In the Indonesian context, weaknesses in digital legal infrastructure, including limited regulatory harmonization and the absence of adaptive mechanisms for digital evidence, may undermine the effective enforcement of electronic contracts and weaken legal certainty [10]. Challenges related to the expression of consent and the reliability of electronic evidence further complicate the legal landscape, highlighting the need for clearer and more responsive legal frameworks to ensure clarity and predictability in electronic contracting [10]. From an economic perspective, legal certainty plays a vital role in supporting commercial activities by enabling parties to plan their actions with knowledge of legal consequences, reducing transaction costs, and promoting efficient business practices [11]. Moreover, legal

certainty also encompasses semantic and argumentative controllability, whereby legal norms and state actions are subject to processes of determination, legitimization, and justification to ensure fairness and accountability [12]. This principle is further strengthened by the availability and reliability of legal information, as legal certainty requires that individuals can easily access and reasonably rely on clear and obtainable legal rules when assessing their legal position and obligations [13].

2.2 Electronic Contracts: Definition and Characteristics

Electronic contracts, as agreements formed through digital means, have become increasingly prevalent in the digital age by offering speed, efficiency, and cross-border reach, while remaining subject to the fundamental principles of contract law that ensure their conformity with traditional legal standards. Despite this continuity, the unique characteristics of electronic contracts such as standardization, automated processes, and limited opportunities for negotiation raise significant concerns regarding fairness, transparency, and imbalance of bargaining power, particularly for consumers, thereby requiring a legal framework that addresses not only formal validity but also substantive justice. Normatively, electronic contracts must comply with essential contractual requirements, including mutual consent, legal capacity, a specific object, and a lawful purpose, as reflected in various legal systems such as the Indonesian Civil Code and the European Union's Electronic Commerce Directive, with Indonesian regulations such as Government Regulation Number 80 of 2019 and the ITE Law further reinforcing their alignment with traditional contract principles [6]; [14]. Nevertheless, standardized electronic contracts may restrict consumer autonomy and facilitate the inclusion of unfair terms, underscoring ongoing concerns related to bargaining inequality [15]. In addition, ensuring the authenticity, integrity, and reliability of

electronic signatures and digital documents remains crucial for legal certainty and effective consumer protection [15]; [5]. These challenges are compounded by technological and structural features of the electronic environment, such as instant communication and automated contract formation, which transform conventional dimensions of contract law and elevate the importance of electronic signatures and trusted service providers in formalizing and enforcing electronic contracts [16];[14].

2.3 Validity of Electronic Contracts in Civil Law Perspective

The validity of electronic contracts in civil law fundamentally depends on the recognition of electronic expressions of intent as legally valid, with the principle of functional equivalence playing a central role by asserting that electronic communications should be treated as equivalent to traditional written or oral forms as long as they fulfill the same legal function [17]. This principle has been widely accepted in international legal instruments and is reflected in the Indonesian legal framework, where electronic contracts are regulated through the Civil Code and specific regulations such as Government Regulation Number 80 of 2019, which align electronic contracting with traditional contract law principles [6]. Nevertheless, the manifestation of consent in electronic contracts remains a contentious issue, particularly in the context of click-wrap and browse-wrap agreements. Click-wrap agreements, in which users explicitly click an "I agree" button, are generally regarded as valid expressions of consent when contractual terms are clear and reasonably accessible to users [18]. In contrast, browse-wrap agreements, where consent is implied merely through the use of a website, are more controversial due to the potential lack of explicit user awareness and understanding of the contractual terms [18]. These challenges are further intensified by the increasing use of automated systems in electronic contracting, which raises normative

questions about the nature of consent, as classical legal theory emphasizes human will and discernment as essential elements of agreement [19]. Consequently, the legal environment governing electronic contracts continues to evolve, accompanied by ongoing scholarly debates regarding whether existing legal frameworks are sufficiently responsive to the complexities of digital contracting and capable of maintaining legal certainty [20].

2.4 Legal Regulation of E-Commerce and Electronic Contracts

The regulation of e-commerce and electronic contracts in Indonesia remains a complex legal issue, as the regulatory framework must continuously adapt to rapid technological developments while ensuring legal certainty. Although electronic documents and electronic signatures have been formally recognized under the Electronic Information and Transactions Law (EIT Law) and Government Regulation No. 71 of 2019, significant challenges persist in harmonizing these regulations with traditional civil law principles, particularly in relation to evidentiary standards, authentication mechanisms, and dispute resolution processes. The enforcement of electronic contract regulations is further constrained by weaknesses in digital infrastructure and limited digital literacy among law enforcement officials, which undermines the effective application of existing laws [10];[21]. In addition, although certified electronic signatures are clearly recognized as valid legal instruments, uncertified electronic signatures are often applied inconsistently, creating uncertainty regarding their evidentiary value and weakening legal predictability [22]. These conditions highlight the urgent need for regulatory harmonization to better align electronic contract regulations with traditional civil law provisions, including the development of adaptive digital evidence mechanisms and the strengthening of institutional capacity to handle electronic disputes [10];[23]. Legal reforms should therefore prioritize improving

the security, flexibility, and reliability of electronic agreements to support the growth of Indonesia's digital economy, while also establishing clear guidelines on electronic evidence and dispute resolution to enhance enforcement effectiveness and build public trust in electronic signatures and transactions through capacity-building initiatives and public legal education [21];[24];[22].

2.5 Consumer Protection and Legal Certainty in E-Commerce

Consumer protection in electronic contracts constitutes a crucial element in ensuring legal certainty in e-commerce transactions, particularly because consumers are often positioned more weakly than business actors in terms of bargaining power. Legal literature emphasizes that an effective regulatory framework must not only recognize the legal validity of electronic contracts but also provide substantive safeguards to protect consumer rights, including clear information disclosure, fair contractual terms, accessible dispute resolution mechanisms, and effective remedies in cases of breach. Although various legal systems have sought to protect consumers in electronic contracts, challenges persist, such as limited market choices and difficulties for consumers in understanding complex or standardized contract terms [25]. In Indonesia, consumer protection in online transactions is supported by laws such as Law Number 19 of 2016, which equates electronic contracts with conventional contracts and enables consumers to pursue legal action against business actors in the event of disputes [26]. Nevertheless, the widespread use of standard-form contracts in e-commerce continues to pose risks of unfair terms and lack of transparency, prompting courts and legal scholars to stress the responsibility of business actors to provide clear, accurate, and honest information regarding products and services [27]. To address these challenges, recommendations include improving consumer awareness of their rights, encouraging businesses to draft fair and

balanced standard agreements, and strengthening government regulation of electronic contracts [27]. Furthermore, both preventive legal protection aimed at avoiding harm before transactions occur and repressive legal protection focused on resolving disputes after transactions are essential in creating a secure and trustworthy e-commerce environment, thereby enhancing consumer confidence and supporting the sustainable growth of the digital economy [28].

2.6 Research Gap

Based on the existing literature, it is evident that electronic contracts have been widely recognized as legally valid instruments in e-commerce transactions. However, many studies focus either on technological aspects or on general regulatory frameworks without providing an in-depth normative analysis of legal certainty. There remains a need for a comprehensive normative juridical examination that integrates contract law principles, electronic transaction regulations, and consumer protection norms within a single analytical framework. This study seeks to fill that gap by critically analyzing the extent to which Indonesian law provides legal certainty for electronic contracts in e-commerce transactions.

3. RESEARCH METHODS

3.1 Type of Research

This study employs normative juridical research, which focuses on the analysis of legal norms, principles, and doctrines governing electronic contracts in e-commerce transactions in Indonesia. Normative juridical research is appropriate for this study because the main objective is not to examine empirical behavior or statistical data, but to assess the extent of legal certainty provided by existing laws and regulations. The research emphasizes law in books rather than law in action, by critically examining statutory provisions, legal concepts,

and scholarly opinions relevant to electronic contracts.

3.2 Research Approach

To achieve the research objectives, this study applies several legal research approaches commonly used in normative legal research, namely the statute approach, the conceptual approach, and a limited comparative approach. The statute approach is employed to analyze legislation related to electronic contracts and e-commerce transactions in Indonesia by examining statutory provisions governing contracts and electronic transactions, including civil law regulations, laws on electronic information and transactions, consumer protection laws, and relevant implementing regulations, in order to assess their consistency, harmonization, and potential normative gaps in ensuring legal certainty. The conceptual approach is used to examine legal doctrines, principles, and theoretical concepts related to legal certainty, contract law, and electronic contracts, which is essential for clarifying key concepts such as consent, contract validity, electronic evidence, and legal protection in the digital environment, and for constructing a normative framework based on legal theories and scholarly opinions to evaluate electronic contracts in e-commerce transactions. In addition, a limited comparative approach is applied to provide contextual understanding by briefly referring to general international principles or practices concerning electronic contracts, such as the principle of functional equivalence, not to conduct a full comparative law analysis but to enrich the normative discussion and support the evaluation of Indonesian regulations within the context of broader legal developments.

3.3 Sources of Legal Materials

This research utilizes three categories of legal materials, namely primary, secondary, and tertiary legal materials. Primary legal materials consist of binding legal sources, including the Indonesian Civil Code (Burgerlijk Wetboek),

Law Number 11 of 2008 on Electronic Information and Transactions as amended by Law Number 19 of 2016, Law Number 8 of 1999 on Consumer Protection, government regulations and other implementing regulations related to electronic systems and transactions, as well as relevant court decisions, where applicable, concerning electronic contracts or e-commerce disputes. Secondary legal materials comprise legal literature that provides explanations and interpretations of primary legal materials, including textbooks on contract law, cyber law, and e-commerce law, scientific journal articles, legal commentaries, research reports, and opinions or analyses from legal scholars related to electronic contracts and legal certainty. Meanwhile, tertiary legal materials are used to support the understanding of legal terminology and concepts and include legal dictionaries, encyclopedias, and indexing sources relevant to contract law and electronic transactions.

3.4 Technique of Legal Material Collection

Legal materials are collected through library research, which involves systematic identification, classification, and documentation of relevant legal sources. Statutory provisions are gathered from official legal databases, while secondary and tertiary materials are obtained from academic journals, books, and reputable legal publications. The collected materials are then organized according to their relevance to the research issues.

3.5 Technique of Legal Analysis

The analysis of legal materials is conducted using qualitative normative analysis. This technique involves interpreting legal norms, principles, and doctrines in a systematic and logical manner. The study applies deductive reasoning, starting from general legal principles of contract law and legal certainty, and then examining their application to electronic contracts in e-commerce transactions. Through this method, the research identifies

normative consistency, legal gaps, and ambiguities that may affect legal certainty.

4. RESULTS AND DISCUSSION

4.1 Legal Recognition of Electronic Contracts in Indonesian Law

The results of this normative juridical analysis indicate that Indonesian law has formally recognized electronic contracts as legally valid and binding instruments, reflecting the state's response to the rapid development of digital transactions and the need to establish a legal foundation for e-commerce activities. This recognition is based on the principle of technological neutrality, whereby the law does not distinguish between conventional and electronic forms of contracts as long as their substantive requirements are fulfilled. Accordingly, electronic information and electronic documents are accorded legal force equivalent to written documents, reinforcing the applicability of general contract law principles to electronic contracts and affirming that rights and obligations arising from such contracts may be enforced through established legal mechanisms, thereby contributing positively to legal certainty.

Nevertheless, formal legal recognition alone does not automatically ensure full legal certainty in practice. The lack of detailed normative guidance governing specific forms of electronic contracts—particularly standard-form agreements widely used by e-commerce platforms—creates space for differing interpretations and inconsistent application. As a consequence, although electronic contracts are recognized in principle as legally binding, their practical implementation continues to raise concerns regarding consistency, predictability, and uniformity in legal enforcement within Indonesia's e-commerce environment.

4.2 Validity of Electronic Contracts and Contractual Requirements

The analysis shows that electronic contracts in e-commerce transactions generally

fulfill the essential requirements of contract validity under civil law, namely consent, legal capacity, a certain object, and a lawful cause. In practice, consent in electronic contracts is commonly expressed through digital actions such as clicking an "agree" button, accepting terms and conditions, or completing an online transaction process. From a normative perspective, these digital actions may be interpreted as valid manifestations of intent, thereby satisfying the requirement of agreement between the contracting parties and supporting the formal validity of electronic contracts.

However, the concept of consent in electronic contracts continues to present significant challenges to legal certainty. In standard-form electronic contracts, consent is often provided without meaningful negotiation or a comprehensive understanding of the contractual terms, raising doubts as to whether such consent is truly informed and voluntary. Although the law generally presumes the existence of consent once a user agrees electronically, this presumption may weaken legal protection, particularly for consumers. In addition, issues related to legal capacity and the identification of contracting parties remain problematic, as electronic systems may obscure the true identity or capacity of parties, especially in anonymous or cross-border transactions. While electronic authentication mechanisms are designed to address these concerns, their effectiveness largely depends on adequate regulation and proper implementation. As a result, although electronic contracts may satisfy contractual requirements in theory, practical limitations continue to influence the degree of legal certainty they provide in e-commerce transactions.

4.3 Evidentiary Value and Authentication of Electronic Contracts

One of the most critical aspects of legal certainty in electronic contracts relates to their evidentiary value. Indonesian law formally recognizes electronic documents and electronic information as valid legal evidence, provided

that they are produced, transmitted, and stored through reliable electronic systems. This legal recognition strengthens legal certainty by allowing parties to rely on electronic records in the resolution of disputes and by equating electronic evidence with conventional written evidence within judicial and non-judicial processes.

Nevertheless, practical challenges remain in proving the authenticity, integrity, and reliability of electronic contracts. Disputes may arise regarding whether an electronic document has been altered, whether it genuinely originates from the alleged contracting party, and whether the electronic system used complies with applicable legal standards. Although electronic signatures and authentication mechanisms are designed to mitigate these risks, their application is not uniform across e-commerce platforms. Many transactions continue to rely on basic authentication methods, such as usernames and passwords, which offer limited evidentiary strength. Consequently, despite the normative recognition of electronic evidence, the absence of standardized and mandatory authentication mechanisms may weaken evidentiary reliability and, in turn, undermine legal certainty in the practical enforcement of electronic contracts.

4.4 Legal Certainty and Consumer Protection in E-Commerce Transactions

The results of this study demonstrate that legal certainty in electronic contracts is closely intertwined with the issue of consumer protection. E-commerce transactions frequently involve unequal bargaining positions, as business actors typically dominate the formulation of contractual terms. This imbalance is reflected in the widespread use of standard-form electronic contracts, which often contain clauses that limit the liability of business actors, restrict consumer rights, or impose unilateral obligations on consumers, thereby increasing the risk of unfair contractual practices.

From a normative perspective, consumer protection laws are intended to address and correct such imbalances by prohibiting unfair contract terms and promoting transparency in contractual relationships. However, the integration between consumer protection norms and regulations governing electronic contracts is not always explicit or systematic, which may create uncertainty regarding the applicable legal provisions when conflicts arise between standard electronic contract clauses and consumer protection principles. Legal certainty for consumers therefore requires not only formal recognition of electronic contracts but also the existence of clear safeguards against abusive practices, effective enforcement mechanisms, and accessible dispute resolution procedures. In this regard, while the current legal framework provides a basic level of legal certainty, further normative refinement and regulatory alignment are necessary to ensure balanced legal protection for all parties involved in electronic commerce transactions.

4.5 Harmonization of Legal Norms and Regulatory Challenges

Another important finding of this study is the need for greater harmonization between traditional contract law and regulations governing electronic transactions. Although civil law principles continue to apply to electronic contracts, their interpretation in digital contexts is not always straightforward. Differences in terminology, regulatory scope, and underlying objectives between conventional contract law and electronic transaction regulations may create overlaps or normative gaps that negatively affect legal certainty in e-commerce transactions.

For instance, traditional contract law places strong emphasis on written agreements and physical evidence, while regulations on electronic transactions focus on electronic systems and digital records. In the absence of clear harmonization, legal practitioners and judges may apply inconsistent interpretations

when resolving disputes involving electronic contracts, thereby reducing predictability and weakening trust in the legal system. From a normative standpoint, legal certainty requires coherence and alignment among legal norms. Although Indonesian law has made notable progress in recognizing and accommodating electronic contracts, further regulatory clarification remains necessary, particularly with regard to standards for electronic consent, authentication, evidentiary requirements, and the relationship between general contract law and sector-specific regulations. Strengthening such harmonization would enhance legal certainty and support the sustainable development of e-commerce in Indonesia.

5. CONCLUSION

This study concludes that electronic contracts in e-commerce transactions have been legally recognized under Indonesian law and are generally considered valid and binding when they fulfill the essential requirements of contract law. The recognition of electronic information and electronic documents as lawful evidence contributes positively to legal certainty and supports the development of digital commerce. Nevertheless, legal certainty in electronic contracts has not been fully realized in practice. Ambiguities regarding electronic consent, weaknesses in authentication and evidentiary mechanisms, and the dominance of standard-form contracts continue to pose challenges, particularly for consumer protection. In addition, the lack of comprehensive harmonization between traditional civil law principles and regulations governing electronic transactions creates interpretative inconsistencies that may undermine predictability in dispute resolution. Therefore, strengthening legal certainty requires clearer regulatory standards, improved integration between contract law and consumer protection norms, and enhanced legal mechanisms to ensure fairness and transparency in electronic contracts. Such

efforts are essential to foster trust and sustainability in Indonesia's e-commerce ecosystem.

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