



RECHTSIDEE

PUBLISHED BY
UNIVERSITAS
MUHAMMADIYAH
SIDOARJO

ISSN 2443-3497
(online)



SCAN ME

Table Of Contents

Journal Cover	1
Author[s] Statement	3
Editorial Team	4
Article information	5
Check this article update (crossmark)	5
Check this article impact	5
Cite this article.....	5
Title page	6
Article Title	6
Author information	6
Abstract	6
Article content	8

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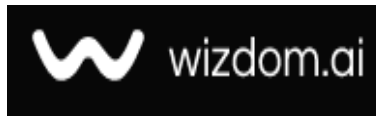
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Post-Civil Code Contract Law Update: The Urgency of a New Codification in a Digital Society

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Abstract

General Background Contract law codified in the nineteenth century was constructed on analog assumptions that presupposed physical objects, direct party interaction, and manual execution of agreements. **Specific Background** In Indonesia, the Civil Code as a colonial legacy increasingly fails to accommodate electronic transactions, digital objects of obligations, smart contracts, digital evidence, and multiparty relationships mediated by online platforms within a rapidly expanding digital economy. **Knowledge Gap** Existing provisions of the Civil Code do not systematically recognize electronic consent, automated contractual mechanisms, platform-based legal relations, or the probative value of digital evidence, resulting in normative gaps and legal uncertainty. **Aims** This study aims to examine the structural and substantive limitations of the Civil Code in the digital era and to formulate the urgency and direction of a new codification of contract law that aligns with contemporary technological realities. **Results** The analysis demonstrates that the Civil Code remains analog-oriented, lacks recognition of smart contracts and digital legal objects, provides no integrated framework for electronic evidence, and is unable to explain multiparty contractual relations governed by digital platforms and algorithms. **Novelty** This study articulates a comprehensive post-Civil Code codification model that integrates structural reform, recognition of smart contracts, digital consumer protection, and Online Dispute Resolution within a single coherent framework. **Implications** The proposed codification offers a systematic legal foundation to support Indonesia's digital transformation, harmonize national contract law with international standards, and strengthen legal certainty in digital transactions.

Highlights:

- ♦ The existing Civil Code framework remains bound to analog legal assumptions incompatible with digital transactions.
- ♦ Smart contracts, digital evidence, and platform-based relations lack systematic legal recognition.
- ♦ A unified post-Civil Code codification is required to align national contract law with digital economic development.

Keywords: Contract Law Reform, Digital Contracts, Smart Contracts, Legal Codification, Online Dispute Resolution

Introduction

The development of digital technology in the last two decades has brought fundamental changes to the structure of legal relationships in society, including in the realm of contract law. The transformation toward data-based interaction, automation, and global connectivity has produced new forms of obligations that were never imagined when the *Burgerlijk Wetboek* (BW) was drafted in the 19th century. The Civil Code as a codification of colonial heritage adopted since 1848 now faces serious limitations in responding to the dynamics of transactions in the digital era, especially related to the validity of electronic agreements, digital evidence, legal relationships through online platforms, as well as the emergence of non-physical objects of obligations such as digital assets, personal data, and algorithms [1].

These limitations are increasingly evident along with the rapid growth of Indonesia's digital economy, which has now become one of the largest in Southeast Asia. On one hand, digitalization presents wide economic opportunities; on the other hand, the digital space creates new legal complexities that have not been accommodated in the traditional framework of obligations. Uncertainty regarding the validity of electronic signatures, liability in smart contracts, and the role of platform providers in civil relations becomes evidence that the normative framework of the Civil Code is no longer adequate to ensure legal certainty in modern transactions [2].

Various countries have carried out modernization of civil law to adapt to technological developments. The Netherlands, for example, conducted major revisions to Book II and Book VI of the BW to integrate concepts of digital contracts and the principle of technological neutrality. Germany, through the *Bürgerliches Gesetzbuch* (BGB), has added provisions regarding digital consumer protection and software-based transactions. The reforms in those countries show that the codification of the law of obligations must be adaptive and responsive to technological innovation in order to remain relevant and effective [3]. Digitalization has shifted the paradigm of what constitutes a legal object. Classical civil law recognizes legal objects as objects (both tangible and intangible) and rights. However, in the digital era, new entities have emerged that challenge this definition [4]. Personal data, the most valuable commodity in the digital age, has not yet been fully recognized and protected as a legal object with economic value and clear ownership rights [5].

Indonesia also faces an urgent need to carry out similar reforms. Although there are specific regulations such as the Electronic Information and Transactions Law (ITE Law) and its implementing regulations, the fragmentation of norms often creates inconsistencies because these rules are not directly integrated into the structure of the law of obligations in the Civil Code. As a result, there is overlap, legal gaps, and misalignment between the principles of classical obligations and the reality of digital transactions that require speed, clarity, and data protection. This condition confirms the urgency of drafting a new codification of the law of obligations that is capable of accommodating the development of digital society comprehensively and systematically [6].

Therefore, Indonesia must have a comprehensive legal framework to provide legal certainty for the digital market. Meanwhile, the Indonesian Civil Code (KUH Perdata) still adheres to colonial regulations, with many articles no longer relevant to the dynamics of modern society and the economy. Changes are urgently needed to ensure civil law can accommodate the needs of electronic transactions, consumer protection, and the rapidly growing innovation of digital businesses [7]. Without updates to the KUH Perdata, many provisions remain ambiguous, particularly regarding the basis for proof and the definition of losses in the digital realm [8].

The need for updates to the KUH Perdata is urgent to ensure Indonesian civil law can accommodate new challenges and needs. Without revision, many provisions in the KUH Perdata remain ambiguous and lack legal certainty, particularly in resolving disputes involving technology and online transactions. Furthermore, the use of the Dutch version, still the official reference, exacerbates the weakness of doctrine and jurisprudence, as few academics and judges are fluent in the language [9].

Thus, the reform of the law of obligations after the Civil Code is not only a technical necessity, but also a strategic need to ensure the sustainability of national digital transformation. The codification that is reformulated must take into account the principles of technological neutrality, legal certainty, digital consumer protection, as well as harmonization with international standards. This effort not only aims to strengthen the foundation of national law, but also to ensure that Indonesia is able to adapt and compete in a global order that is increasingly connected by technology [10].

Based on the issues above, the formulation of the problems in this research departs from the disparity between the very rapid development of digital technology and the framework of the law of obligations in the Civil Code, which is still oriented toward traditional patterns of relationships. The transformation toward electronic transactions, the emergence of digital objects of obligations, the use of smart contracts, and the dominant role of online platforms give rise to various legal problems that have not been adequately answered by the provisions in the BW 1848. Therefore, this research questions the extent of the structural and substantial limitations of the Civil Code in responding to the dynamics of digital society. In addition, this research also examines the urgency of drafting a new codification of the law of obligations that is more adaptive, and seeks a model of reform capable of integrating the principles of technological neutrality, legal certainty, digital consumer protection, and harmonization with international standards. Departing from these conditions, the focus of the study is directed at finding the ideal formulation of the codification of the law of obligations for Indonesia in facing the continuously developing digital era.

Method

This research uses a normative legal approach that places law as rules or norms that apply within the legislative regulatory system. This approach is chosen because the focus of the research lies in the analysis of the legal norms of obligations contained in the Civil Code and their relevance to the development of today's digital society. Normative research enables the researcher to examine the gap between the existing legal construction and the actual legal needs that arise as a result of digitalization, so that an appropriate model of reform of the law of obligations can be formulated [11].

To strengthen the analysis, this research also utilizes several additional approaches. First, the statute approach is used to examine the provisions in the Civil Code, the Electronic Information and Transactions Law (ITE Law), regulations regarding electronic signatures, and other sectoral rules related to digital transactions. This approach is important to identify disharmony or gaps in norms that require reform [12]. Second, the conceptual approach is applied to examine key concepts such as digital obligations, electronic evidence, smart contracts, and technological neutrality, so that a consistent theoretical framework can be constructed in the drafting of the new codification [13]. Third, the comparative approach is used to analyze the modernization of the law of obligations in several countries, such as the Netherlands and Germany, in order to obtain insights into how other countries adjust their civil laws to technological developments. All collected data was then analyzed qualitatively using descriptive-analytical methods. This analysis was conducted systematically to achieve three main objectives. First, identifying legal issues arising from the mismatch between civil regulations and technological developments. This included mapping legal gaps and normative conflicts [14].

The legal materials used in this research include primary, secondary, and tertiary legal materials. Primary legal materials consist of legislation and relevant court decisions, while secondary legal materials include academic literature in the form of journals, books, and research results related to the reform of civil law and digital contracts. Meanwhile, tertiary legal materials such as legal dictionaries and encyclopedias are used to support the clarification of legal terminology [15]. The analysis technique used is qualitative analysis in a descriptive and argumentative manner to interpret and connect various legal materials so as to produce logical and comprehensive conclusions. With this method, the research can systematically identify the weaknesses of the Civil Code, assess the urgency of reform, and offer a model of codification of the law of obligations that is relevant to the needs of the digital society. The analysis technique used is qualitative analysis in a descriptive and argumentative manner to interpret and connect various legal materials so as to produce logical and comprehensive conclusions. With this method, the research can systematically identify the weaknesses of the Civil Code, assess the urgency of reform, and offer a model of codification of the law of obligations that is relevant to the needs of the digital society.

Results and Discussion

A. Limitations of the Law of Obligations in the Civil Code in the Digital Era

The development of digital technology has drastically changed the character of legal relationships in society, including in the realm of the law of obligations. However, the Civil Code, as a codification inherited from the 19th century, was not designed to address modern forms of transactions based on networks, data, and system automation. Obligations in the Civil Code are built on the assumption that the parties interact directly, use objects of obligation that are physical in nature, and carry out agreements manually. This pattern is very different from the digital reality, which involves intangible objects such as personal data, software, digital tokens, algorithms, and crypto assets. The absence of explicit regulation regarding these new objects creates a very wide scope of interpretation and often results in legal uncertainty [16].

In addition, the provisions regarding the validity requirements of agreements in Article 1320 of the Civil Code do not provide an explanation concerning electronic consent, digital signatures, or mechanisms for expressing will through automated systems such as clickwrap agreements and browsewrap agreements. In fact, modern electronic transactions are often conducted without physical meetings, and consent is given through interaction with digital interfaces. The absence of specific regulation in the Civil Code makes the assessment of the validity of electronic agreements highly dependent on judicial interpretation, thus failing to provide legal certainty for digital business actors and consumers [17].

The problem becomes increasingly complex when digital evidence is involved in civil disputes. The Civil Code does not have a systematic regulation regarding the value of electronic evidence such as server logs, digital signatures, metadata, authentication evidence, or algorithm traces. The ITE Law does recognize electronic evidence, but this recognition is not integrated into the framework of the law of obligations that governs contractual relationships. As a result, courts often face difficulties in determining the probative value of electronic documents, because the Civil Code only regulates conventional written evidence and witnesses [18]. The disparity between traditional evidentiary mechanisms and the need for digital evidence is one of the most crucial weaknesses in Indonesia's law of obligations system.

At the same time, the digital era also presents new challenges in the form of multiparty legal relationships through digital platforms. In application-based or marketplace transactions, consumers do not always interact directly with sellers, but rather through platform providers who manage algorithms, data, and binding terms and conditions. However, the Civil Code does not recognize the concept of tripartite legal relationships or the role of platforms as "gatekeepers" that influence the content of contracts. When a breach of performance occurs, determining the responsible party is often unclear because the Civil Code only regulates bilateral relationships between the promisor and the promisee [19]. Do agreements made through online platforms meet the "agreement of those who bind themselves" requirement? What about "a lawful cause" in the context of blockchain-based smart contracts? Furthermore, the evidentiary system in the Civil Code, which prioritizes authentic and private deeds, struggles to accommodate electronic evidence, such as conversation logs, screenshots, or digital transaction data, as valid and strong evidence in the eyes of the law [20].

The development of smart contracts that run automatically through blockchain protocols demonstrates that binding mechanisms can now operate without human intervention once the contract is programmed. The Civil Code lacks provisions that allow for the assessment of system errors, the liability of code developers, or the legal status of automated transactions that occur even without the knowledge of one of the parties. This lack of regulation could potentially pose significant legal risks, particularly in high-stakes transactions such as decentralized finance.

Therefore, the limitations of the Civil Code in addressing digital dynamics lie not only in the absence of technical articles regarding electronic transactions, but also in a legal paradigm that is still based on the analog world. Indonesia's law of obligations framework requires systemic reform in order to respond to modern technological challenges comprehensively.

B. The Urgency of a New Codification of the Law of Obligations Post-Civil Code

The acceleration of digitalization across various sectors demands a framework of the law of obligations that can provide legal certainty while also offering flexibility to accommodate technological transformation. The Civil Code, as an old codification, is no longer able to support the needs of the digital society, which requires clear rules regarding electronic transactions, data protection, recognition of digital documents, and the role of platform providers. This gap underscores the urgency of establishing a new codification that can address these challenges systematically and comprehensively. This reform is important not only to respond to technological changes but also to protect the rights of the parties involved in an increasingly complex digital ecosystem.

The urgency of reform is also reinforced by the fact that Indonesia has promoted national-scale digital economic development through various policies such as MSME digitalization, cashless payment systems, fintech regulations, and digital identity infrastructure. Without a modern foundation in the law of obligations, these policies risk facing legal obstacles that reduce their implementation effectiveness. For example, uncertainty regarding the status of digital evidence can weaken consumer protection and prolong dispute resolution processes. Therefore, a new codification of the law of obligations must be able to provide normative standards in line with contemporary digital practices, while also ensuring legal security for business actors and consumers. Fresh changes to the Civil Code (KUH Perdata) are becoming increasingly important amidst the rapid development of digital businesses and the creative economy. Digital transformation has altered business interaction patterns, introducing new models such as economic platforms, data transactions, and electronic contracts that have not been fully accommodated by the conventional and rigid Civil Code [21].

At the international level, several countries have modernized civil law to address the development of digital technology. The Netherlands has updated Book VI of the Burgerlijk Wetboek to incorporate the principle of technological neutrality, while Germany, through reforms to the Bürgerliches Gesetzbuch, has added provisions governing digital contracts, software-based services, and online consumer protection. The consistency of reforms at the international level shows that modernization of the law of obligations is no longer optional, but a necessity for countries that wish to remain competitive in global trade. If Indonesia does not follow this development, the potential integration with international digital trade standards will be hindered.

The need for new codification is also evident from the increasing role of digital platforms that act as both facilitators and controllers in many modern economic transactions. Legal relationships between users and platforms cannot be explained by the classical law of obligations in the Civil Code, which only recognizes bilateral relationships. The new codification needs to accommodate the structure of multiparty legal relationships, including the concept of platform liability for service failures, algorithmic control, and data misuse. Without clear rules, consumers are in a vulnerable and weak position because platforms can unilaterally draft terms and conditions through standard digital clauses that are difficult to negotiate. Speaking of data misuse in digital-based obligations, it is certainly inseparable from the ITE Law; the amendment through Law No. 1 of 2024 introduces several new norms to maintain a fair and innovative digital ecosystem. One new article relevant to addressing fake reviews is Article 28B. This article regulates the prohibition of manipulating or collecting data/information that misleads consumers in electronic transactions with the aim of unlawfully benefiting oneself or another party. Thus, the practice of fake reviews carried out deliberately for business gain or consumer deception has a clearer illegal status. In addition, the existence of Article 28B demonstrates the state's commitment to follow and respond to the increasingly sophisticated dynamics of digital crime [22].

On the other hand, technological developments such as smart contracts, artificial intelligence, and blockchain present new forms of obligations with automatic operational mechanisms. The Civil Code does not provide guidance regarding the legal status of contracts executed by computer code, liability in the event of algorithm errors, or mechanisms for canceling automatic transactions. New codification is highly needed to ensure that the use of these technologies remains within a clear legal framework and protects the parties from undesired risks.

Therefore, the urgency of a new codification of the law of obligations is a consequence of the need to adapt the law to the dynamics of digital society, maintain national economic stability, meet international standards, and protect consumer rights in the digital environment. The new codification must be designed not merely as a technical revision, but as a renewal of the legal paradigm that integrates the principles of technological neutrality, legal certainty, regulatory flexibility, and harmonization with global developments.

C. The Ideal Codification Model for Indonesia's Law of Obligations

The ideal codification model for Indonesia's law of obligations must begin with a comprehensive structural reform, not

merely by adding new articles to the Civil Code provisions that are over a century old. This structural reform is important because the paradigm of obligations in the BW 1848 is still based on simple bilateral legal relationships and does not anticipate the reality of today's digital legal relationships. The new codification needs to restructure the basic definitions of obligations, digital legal subjects, and objects of obligations, which now include immaterial items such as data, software, crypto tokens, and virtual assets. In addition, the codification must include more systematic regulations regarding digital consent mechanisms, validation of electronic contracts, and multiparty legal relationships involving digital platforms. Such comprehensive reform will create a legal structure that is more cohesive, harmonious, and compatible with the modern digital ecosystem [23].

One of the most important components in a modern codification model is the regulation of smart contracts, which are increasingly used in blockchain-based digital transactions. Unlike traditional contracts that rely on the explicit will of the parties, smart contracts operate through computer code that executes obligations automatically without human intervention. The new codification of obligations needs to regulate crucial aspects such as the validity of automatic contracts, code transparency, mechanisms for canceling or correcting algorithm errors, and the liability of software developers in the event of system failure. Without specific regulation, disputes arising from smart contracts have the potential to create uncertainty because the Civil Code does not have a concept of contracts executed by autonomous systems. Clear legal recognition of smart contracts will provide certainty for both digital business actors and consumers utilizing this technology [24].

Theoretically, electronic contracts should be subject to the legal requirements of an agreement as stipulated in Article 1320 of the Civil Code (KUHPerdata). However, the application of these principles in a digital context raises significant ambiguities. One such element is the "agreement of those who bind themselves," which is a subject of debate. In traditional contracts, agreement is reached through face-to-face interaction or physical correspondence, which facilitates verification of the parties' intentions. In the digital realm, agreement is often represented by the act of clicking "I Agree" or "Buy Now." The question is, does this action truly reflect free will and without coercion? This complexity is further compounded when one of the parties is a bot or automated system designed to take orders, challenging the concept of legal capacity in civil law. Furthermore, this issue is further complicated by the advent of blockchain-based smart contracts, where agreements are automatically executed by computer code without human intervention, thus challenging the civil law concept of free will and the legal requirements of an agreement [25].

Therefore, in the digital ecosystem, consumers are in a relatively weaker position compared to businesses and platform providers. Digital transactions are often accompanied by standard, non-negotiable clauses, the use of personal data without the consumer's full understanding, and algorithmic mechanisms that determine pricing, recommendations, and service access. The new codification should explicitly incorporate digital consumer protection principles, including information transparency, data usage limits, prohibitions on unfair clauses, and accessible dispute resolution mechanisms. Strengthening consumer protection is a characteristic of modern contract law in various jurisdictions, such as the European Union, which has integrated digital consumer rights into the Digital Content Directive framework. By adopting more progressive standards, Indonesian contract law can ensure a balance between technological innovation and legal security for consumers [26]. This will allow disputes in the digital contract system to be anticipated as early as possible.

Dispute resolution in the digital era cannot fully rely on conventional litigation mechanisms, which require lengthy processes, high costs, and limited technical capacity to handle electronic evidence. Therefore, the ideal codification needs to incorporate the concept of Online Dispute Resolution (ODR) as an alternative dispute resolution mechanism that is faster, more flexible, and suited to the cross-border nature of digital transactions. ODR allows parties to resolve disputes online through mediation, automated negotiation, or digital arbitration. Several countries, such as Singapore, the United Kingdom, and Canada, have implemented ODR in consumer disputes and small transactions because it has proven effective in increasing access to justice. By integrating ODR into the codification of the law of obligations, Indonesia can improve the efficiency of dispute resolution and strengthen public trust in digital transactions [27].

Overall, the ideal codification model for Indonesia's law of obligations must reflect the character of a modern legal system that is responsive, adaptive, and based on the principle of technological neutrality. The new codification functions not only as a technical update, but also as a reconstruction of the legal paradigm that allows Indonesia to continue developing amid global changes driven by digitalization.

Conclusion

The development of digital technology has created a legal landscape that is vastly different from the conditions when the Civil Code was first enacted. The transformation toward electronic transactions, the use of smart contracts, the existence of digital objects of obligations, and the increasing role of platforms as new legal actors indicate that the normative structure in the Civil Code is no longer adequate to address the challenges of digital society. These limitations are evident in aspects such as the regulation of electronic consent, digital evidence, and multiparty legal relationships, which are not recognized in the construction of classical obligations. Therefore, the need to introduce a new codification of the law of obligations represents a strategic urgency to ensure legal certainty, justice, and protection for all participants in digital transactions.

In addition to internal needs, the demand for harmonization with international legal instruments such as the UNCITRAL Model Law, as well as the global trend of civil law modernization, further strengthens the argument that reform cannot be postponed. The new codification must be designed with an adaptive paradigm through systematic structural reform, recognition of smart contracts, strengthening of digital consumer protection, and integration of digital dispute resolution mechanisms such as ODR. By adopting this approach, Indonesia's law of obligations will not only align with global

developments, but also serve as a solid foundation for national digital economic growth.

Overall, the reform of the codification of obligations is not merely a matter of legal technicality, but a strategic agenda that determines Indonesia's readiness to enter an increasingly advanced and complex digital era. A modern, responsive, and forward-looking codification will ensure that the law of obligations remains relevant in protecting public interests, providing legal certainty, and supporting technological innovation sustainably..

Acknowledgement

The author expresses his sincere appreciation to all parties who have contributed to the research process and writing of this article. I express my deepest gratitude to my supervisors for their continuous guidance, motivation, and assistance from the beginning to the end of this work. Without their support, this research would not have been completed successfully. I also express my gratitude to my beloved family and friends who have provided constant encouragement, attention, and understanding throughout this process.

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