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Digital Business Contracts from the Perspective of Indonesian Civil Law

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Original Article

Abstract

The rapid expansion of the digital economy in Indonesia has led to increased use of digital business contracts, while simultaneously raising legal issues concerning legal certainty, the validity of electronic contracts, and personal data protection. This study analyzes drafting techniques for digital business contracts that are consistent with Indonesian civil law principles, examines the regulatory influence of the Electronic Information and Transactions Law (Law No. 11 of 2008 as amended by Law No. 1 of 2024) and Government Regulation No. 71 of 2019, and explores the implications of Law No. 27 of 2022 on Personal Data Protection for the formulation of contractual clauses in digital environments. This research employs a normative juridical method using statutory, conceptual, and comparative approaches based on a literature review. The findings indicate that effective digital contracts must integrate the principles of freedom of contract, good faith, consensualism, and legal certainty through explicit electronic consent, certified electronic signatures, and transparent data protection provisions. Accordingly, the harmonization of contract law, electronic transaction regulations, and personal data protection law constitutes a fundamental requirement for establishing a secure and reliable digital business ecosystem in Indonesia.

Keywords: *Digital Business Contracts, Electronic Information and Transactions Law, Personal Data Protection, Electronic Transactions*

Abstrak

Pesatnya perkembangan ekonomi digital di Indonesia telah meningkatkan penggunaan kontrak bisnis digital, namun sekaligus menimbulkan tantangan terkait kepastian hukum, validitas kontrak elektronik, dan perlindungan data pribadi. Penelitian ini bertujuan menganalisis teknik penyusunan kontrak bisnis digital yang sesuai dengan prinsip hukum perdata Indonesia, mengkaji pengaruh Undang-Undang Informasi dan Transaksi Elektronik (UU ITE) dan Peraturan Pemerintah Nomor 71 Tahun 2019, serta mengeksplorasi implikasi Undang-Undang Nomor 27 Tahun 2022 tentang Pelindungan Data Pribadi terhadap penyusunan klausul kontrak digital. Penelitian ini menggunakan metode yuridis normatif dengan pendekatan perundang-undangan, konseptual, dan komparatif melalui studi kepustakaan. Dapat dipahami bahwa kontrak digital yang efektif harus mengintegrasikan asas kebebasan berkontrak, itikad baik, konsensualisme, dan kepastian hukum melalui penggunaan persetujuan elektronik yang eksplisit, tanda tangan elektronik tersertifikasi, serta klausul perlindungan data yang transparan. Sehingga, harmonisasi hukum kontrak, transaksi elektronik, dan perlindungan data pribadi merupakan prasyarat utama bagi terciptanya ekosistem bisnis digital yang aman di Indonesia.

Kata kunci: *Kontrak Bisnis Digital, UU ITE, Pelindungan Data Pribadi, Transaksi Elektronik*

1. INTRODUCTION

The development of information and communication technology (ICT) over the past two decades has fundamentally transformed the ways in which societies, businesses, and governments conduct economic activities. Digitalization no longer functions merely as a supporting instrument; rather, it has become a foundational element in the formation of new business models, the restructuring of value chains, and the enhancement of efficiency and competitiveness. This phenomenon is closely associated with Industry 4.0, which is characterized by the integration of digital technologies, the internet, big data, artificial intelligence, and network-based computing systems across various economic sectors.

Indonesia represents one of the fastest-growing digital economies in Southeast Asia. By 2024, internet penetration had reached 79.5% of the total population, equivalent to more than 221 million active users.[1] This trend reflects the expanding accessibility of digital technologies and the growing dependence on internet-based services in daily economic activities. It also creates substantial opportunities for the development of e-commerce, digital financial services, and various platform-based business models.

The expansion of the digital economy is further evidenced by the increasing value of e-commerce transactions, which has reached hundreds of trillions of Indonesian rupiah annually and continues to show an upward trajectory.[2] This ecosystem is supported by urbanization, rising income levels, widespread smartphone adoption, and innovations in digital payment systems such as Buy Now Pay Later (BNPL), live commerce, and integrated logistics services. Collectively, these factors reinforce the position of the digital economy as a key driver of national economic growth.

Despite these opportunities, digital transformation also introduces increasingly complex legal challenges, particularly in relation to legal certainty in electronic transactions.[3] Digital business contracts have become a central instrument in establishing legal relationships between parties. Unlike traditional contracts, digital contracts are created and executed through electronic systems involving electronic signatures, digital documentation, and automated system-based mechanisms.[4]

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1 Komdigi, "Indonesia Siap Jadi Kekuatan Digital Asia, Menkomdigi: Nilai Ekonomi Digital Harus Berputar Di Dalam Negeri," *Komdigi*, 2026, https://www.komdigi.go.id/berita/siaran-pers/detail/indonesia-siap-jadi-kekuatan-digital-asia-menkomdigi-nilai-ekonomi-digital-harus-berputar-di-dalam-negeri.

2 Pusat Kebijakan Perdagangan Domestik et al., *Kinerja Perdagangan Melalui Sistem Elektronik (PMSE) Indonesia Tahun 2025* (Kementerian Perdagangan Republik Indonesia, 2025), https://bkperdag.kemendag.go.id/unduhan-file/a11ba920-123c-4a4f-856b-cdbb1f0f64c4.

3 Sisca Juliana, "Aspek Hukum Dalam Transaksi Ekonomi Digital Mengungkap Tantangan Kompleks Dan Solusi Masa Kini," *Retorika: Journal of Law, Social, and Humanities* 2, no. 1 (2023): 32–50.

4 Nataneila Astya Putri Asmana et al., "Kontrak Elektronik Dalam Bisnis Online: Kajian Terhadap Bentuk, Keabsahan, Dan Perlindungan Hukum Bagi Para Pihak," *Journal of Humanities and Education Studies* 1, no. 2 (2025): 201–10.

Under Indonesian civil law, the validity of digital contracts remains governed by Article 1320 of the Indonesian Civil Code, which sets out the essential requirements for a valid agreement, as well as by the principles of freedom of contract, consensualism, good faith, and legal certainty. However, the application of these principles in digital environments presents new challenges, including issues related to the validity of electronic consent, party identification, system security, and evidentiary standards in dispute resolution.

National regulatory frameworks, including the Electronic Information and Transactions Law (Law No. 11 of 2008 as amended by Law No. 1 of 2024) and Government Regulation No. 71 of 2019, provide the legal foundation for electronic transactions, including recognition of electronic signatures and electronic documents. Nevertheless, rapid technological advancement necessitates further regulatory strengthening, particularly following the enactment of Law No. 27 of 2022 on Personal Data Protection (PDP Law). This law underscores personal data protection as a fundamental right, with direct implications for the drafting of digital contracts.

Accordingly, digital business contracts are increasingly required to regulate matters such as personal data processing, data subject rights, obligations of data controllers, system security standards, and liability limitations. However, prevailing standard-form contracting practices often remain imbalanced and difficult to comprehend, thereby potentially resulting in contractual unfairness.[5]

In light of these conditions, research on digital business contract drafting techniques is essential to address existing academic gaps and to provide practical contributions. Such research is expected to develop a contract model that is adaptive, responsive, and aligned with evolving legal developments, thereby supporting the establishment of a legally sound digital economy ecosystem.

Prior studies on digital business contracts in Indonesia have developed in line with the increasing use of ICT in economic activities. Existing literature has primarily focused on the validity of electronic contracts, legal protection of contracting parties, and the implications of technological advancement for contract law. However, research specifically addressing digital business contract drafting techniques based on civil law principles and their integration with the personal data protection framework remains limited.

Research by Silalahi and Octavia examines the validity of electronic contracts within the Indonesian legal system as well as the forms of legal protection afforded to contracting parties. The findings indicate that electronic contracts possess the same legal force as conventional contracts, provided that they satisfy the requirements for a valid agreement under Article 1320 of the Indonesian Civil Code and comply with the

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[5] Hazilina Hazilina and Gembongseto Hendro Soedagoeng, "Analisis Kebebasan Berkontrak Dalam Smart Contract E-Commerce," *Tanjungpura Law Journal* 5, no. 1 (2021): 53–66, https://doi.org/10.26418/tlj.v5i1.46223.

provisions of the Electronic Information and Transactions Law. While this study strengthens the legal recognition of electronic contracts, it does not fully address drafting techniques for digital contract clauses that respond to technological developments and emerging regulatory frameworks, particularly the Personal Data Protection Law.[6]

Similarly, Hebimisa et al. focus on the characteristics of digital contracts and the enforceability of agreements under the Electronic Information and Transactions Law. This study identifies various forms of electronic contracts, including click-wrap agreements, electronic data interchange (EDI), and website-based contracts. It further emphasizes the continued relevance of the principles of freedom of contract, consensualism, and good faith in digital contracting. However, it does not elaborate on how these principles are operationalized into practical clause-drafting techniques in digital business transactions.[7]

Research by Asmana et al. expands the discussion to include browse-wrap agreements and smart contracts, as well as legal protection mechanisms under civil law, consumer protection law, and online dispute resolution (ODR). Although comprehensive, this study primarily focuses on issues of validity and dispute resolution rather than contract design that accounts for data security risks.[8]

Additional studies include Sugianingsih and Yoga, who analyze Article 18 of the Electronic Information and Transactions Law in relation to consumer protection;[9] Umar, who discusses regulatory limitations of blockchain-based smart contracts;[10] and Nurfadillah, who highlights the need for adaptation in digital contracting techniques but in a general manner.[11] Rahayu et al. identify unequal bargaining power in contracts between micro, small, and medium enterprises (MSMEs) and digital platforms[12], while Lisa Caroline Pakpahan et al. examine default in e-commerce transactions without addressing technical aspects of contract drafting.[13]

[6] Wilma Silalahi and Evellyn Octavia, "Keabsahan Dan Perlindungan Hukum Dalam Kontrak Elektronik," *Indonesian Journal of Law and Justice* 3, no. 3 (2026): 1–8, https://doi.org/10.47134/ijlj.v3i3.5674.

[7] Fitmar Stanly Hebimisa et al., "Penegakan Hukum Perjanjian Dalam Kontrak Digital Menurut Undang Undang Nomor 11 Tahun 2008 Yang Dibaharui Oleh Undang Undang Nomor 19 Tahun 2016," *Lex Administratum* 10, no. 4 (2022): 1–11.

[8] Asmana et al., "Kontrak Elektronik Dalam Bisnis Online: Kajian Terhadap Bentuk, Keabsahan, Dan Perlindungan Hukum Bagi Para Pihak."

[9] Ni Kadek Sugianingsih and I. Gede Perdana Yoga, "Sinkronisasi Pengaturan Kontrak Elektronik Pada Pasal 18 UU ITE Dan KUHPerdata Dalam Perlindungan Konsumen E-Commerce," *Jurnal Media Akademik* 3, no. 12 (2025): 1–17, https://doi.org/10.62281/9fhakm12.

[10] Munazar Umar, "Implementasi Smart Contract Dalam Bisnis Digital: Prespektif Hukum Perdata Dan Perlindungan Pihak Terlibat," *Hipotesa: Jurnal Ilmu-Ilmu Sosial* 19, no. 1 (2025): 23–28.

[11] Maulia Nurfadillah, "Hukum Kontrak Di Era Digital: Adaptasi Teknik Pembuatan Kontrak Dalam Transaksi Online," *Jurnal Ilmiah Nusantara* 2, no. 1 (2025): 185–93, https://doi.org/10.61722/jinu.v2i1.3185.

[12] Na'imah Putri Rahayu et al., "Analisis Etika Bisnis Dan Kepastian Hukum Dalam Penyusunan Kontrak Kemitraan Antara UMKM Kuliner Dengan Platform Digital Di Kota Semarang," *Jurnal Intelek Insan Cendikia* 2, no. 11 (2025): 18126–39.

[13] Lisa Caroline Pakpahan et al., "Analisis Hukum Perjanjian Jual Beli Melalui E-Commerce Berdasarkan Kitab Undang-Undang Hukum Perdata (KUHPerdata)," *Jurnal Hukum Lex Generalis* 5, no. 4 (2024): 305–15.

Prior studies have concentrated on contract validity, consumer protection, and dispute resolution. However, there remains a lack of comprehensive research integrating civil law principles, the Electronic Information and Transactions Law, Government Regulation No. 71 of 2019, and the Personal Data Protection Law into digital business contract drafting techniques. Accordingly, the novelty of this study lies in the formulation of a digital business contract drafting model that is adaptive, responsive, and oriented toward legal certainty and personal data protection within Indonesia's digital economy ecosystem.

This study aims to analyze effective digital business contract drafting techniques in line with the development of Indonesia's digital economy, based on civil law principles and electronic transaction regulations. Specifically, it examines the application of the principles of freedom of contract, good faith, consensualism, and legal certainty in digital contracts; analyzes the influence of the Electronic Information and Transactions Law and Government Regulation No. 71 of 2019 on contract formation and authentication; and explores the implications of the Personal Data Protection Law for drafting contractual clauses related to consent for data processing, data subject rights, and electronic system security.

2. RESEARCH METHODOLOGY

This study employs a normative legal research method focusing on the analysis of legal norms, principles, and regulatory frameworks governing digital business contracts in Indonesia. This approach is adopted because the study addresses legal construction rather than empirical data, with the objective of examining regulatory harmonization and developing a normative model for digital contract drafting in response to technological advancement and personal data protection requirements.

The research utilizes statutory, conceptual, and comparative approaches. The statutory approach examines relevant legal instruments, including the Indonesian Civil Code, the Electronic Information and Transactions Law, Government Regulation No. 71 of 2019, the Personal Data Protection Law, and the Consumer Protection Law. The conceptual approach analyzes foundational legal principles such as freedom of contract, good faith, consensualism, legal certainty, and informed consent. The comparative approach draws on selected international frameworks, specifically the European Union's General Data Protection Regulation (GDPR) and Singapore's Electronic Transactions Act (ETA), to identify best practices and regulatory convergence.

The data used in this study consist of secondary sources obtained through literature review, encompassing primary, secondary, and tertiary legal materials. The analysis is conducted using a qualitative and prescriptive method through legal norm identification, regulatory synchronization, and gap analysis. The findings are synthesized to formulate a digital business contract model that ensures legal certainty and protection for contracting parties, while also contributing to the development of a safe, equitable, and sustainable digital economy ecosystem in Indonesia grounded in strong national legal certainty.

3. RESEARCH RESULT AND DISCUSSION

3.1. Techniques for Drafting Effective Digital Business Contracts Based on Indonesian Civil Law Principles

Effective drafting of digital business contracts is not only determined by compliance with the validity requirements of agreements under Article 1320 of the Indonesian Civil Code, but also by the extent to which contracts accommodate the dynamic, cross-jurisdictional, and technology-driven nature of the digital environment. In this regard, digital contract drafting should be systematically conducted through three stages: pre-drafting, drafting, and post-drafting, as outlined by Salim H.S.[14]

In the pre-drafting stage, the identification of the parties, the object of the contract, and the legal purpose of the agreement constitutes a fundamental requirement. A significant proportion of disputes in electronic transactions arises from unclear party identification, incomplete information regarding the contractual object, and ambiguous allocation of rights and obligations. Accordingly, digital contracts should be supported by electronic identity verification systems, user authentication mechanisms, and legally accountable digital documentation to ensure enforceability and traceability.

At the drafting stage, clickwrap and sign-in wrap agreements represent the most legally effective models of electronic contracting. Both mechanisms more accurately reflect the principle of consensualism, as they require affirmative user actions that demonstrate explicit consent. In contrast, browse-wrap agreements are weaker from an evidentiary perspective due to the lack of clear proof that users have accessed and agreed to the contractual terms.

This view reinforces Hebimisa et al. (2022), who argue that clickwrap agreements are the form of digital contracting most consistent with Indonesian contract law principles.[15] However, the effectiveness of clickwrap mechanisms depends not only on the presence of an "I Agree" button, but also on clear information disclosure, the use of plain and understandable language, and multi-layered confirmation processes that ensure users comprehend the legal consequences of their consent.

The application of the principle of freedom of contract in digital environments has experienced a significant paradigm shift. In theory, this principle provides parties with autonomy to determine the content and form of agreements (Wahyono et al., 2026). However, in practice, digital contracts are predominantly standardized and unilaterally

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[14] Salim H.S., *Hukum Kontrak: Teori Dan Teknik Penyusunan Kontrak*, 19th ed. (Sinar Grafika, 2019).

[15] Hebimisa et al., "Penegakan Hukum Perjanjian Dalam Kontrak Digital Menurut Undang Undang Nomor 11 Tahun 2008 Yang Dibaharui Oleh Undang Undang Nomor 19 Tahun 2016."

drafted by service providers, resulting in an imbalance of bargaining power between businesses and users.

This finding is consistent with Rahayu et al., who identify the dominance of digital platforms in formulating contractual clauses in partnership agreements.[16] Nevertheless, this study emphasizes that limited contractual freedom in digital transactions does not necessarily invalidate an agreement, provided that contractual terms are transparent, proportionate, and free from unfair exoneration clauses that disadvantage one party.

From the perspective of good faith, effective digital contract drafting must ensure information transparency and a balanced distribution of rights and obligations.[17] This can be achieved through clear and accessible contractual clauses, the use of plain language, the provision of full access to terms and conditions prior to consent, and the availability of accessible complaint handling and dispute resolution mechanisms.

Sugianingsih and Yoga emphasize the role of Article 18 of the Electronic Information and Transactions Law in protecting consumers from unfair standard clauses.[18] Building on this, the present study argues that the principle of good faith is realized not only through the prohibition of certain contractual clauses, but also through the proactive design of digital contracts that prioritize transparency and safeguard party interests from the contract formation stage.

Furthermore, with regard to legal certainty, the use of certified electronic signatures represents the most effective mechanism for strengthening the validity and evidentiary value of digital contracts.[19] Electronic signatures issued by certified Electronic Certification Providers (PSrE) ensure identity authentication, document integrity, and non-repudiation, thereby preventing denial of consent once it has been given.

Furthermore, the implementation of audit trails, activity logs, encryption systems, and secure cloud-based storage for electronic documents constitutes a critical component in ensuring legal certainty. These findings are consistent with Asmana et al. and Nurfadillah, who emphasize that system verification and security represent essential determinants of the sustainability of digital contracts.[20] However, this study extends that argument by asserting that legal certainty in digital contracting depends not only on the

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16 Rahayu et al., "Analisis Etika Bisnis Dan Kepastian Hukum Dalam Penyusunan Kontrak Kemitraan Antara UMKM Kuliner Dengan Platform Digital Di Kota Semarang."

17 Bambang Abdul Latif et al., "Penerapan Asas Itikad Baik Melalui Perjanjian Elektronik Dalam Shopee Affiliate Berdasarkan Undang-Undang Nomor 1 Tahun 2024," *Unes Law Review* 8, no. 3 (2026): 708–19, https://doi.org/10.31933/hnxprk22.

18 Sugianingsih and Yoga, "Sinkronisasi Pengaturan Kontrak Elektronik Pada Pasal 18 UU ITE Dan KUHPerdata Dalam Perlindungan Konsumen E-Commerce."

19 Elga Dwiky Santoso and Sri Budi Purwaningsih, "Analysis of Electronic Signature Standardization Based on UU ITE: Standarisasi Tanda Tangan Elektronik Berdasarkan UU ITE," preprint, 2024, https://doi.org/10.21070/ups.6113.

20 Asmana et al., "Kontrak Elektronik Dalam Bisnis Online: Kajian Terhadap Bentuk, Keabsahan, Dan Perlindungan Hukum Bagi Para Pihak"; Nurfadillah, "Hukum Kontrak Di Era Digital: Adaptasi Teknik Pembuatan Kontrak Dalam Transaksi Online."

normative recognition of electronic documents, but also on the technical design of electronic systems capable of ensuring the integrity, authenticity, and traceability of the entire transaction lifecycle.

The most effective drafting model for digital business contracts in Indonesia is one that integrates Indonesian civil law principles with the technical requirements of electronic systems. Such a model encompasses explicit electronic consent through clickwrap or sign-in wrap mechanisms, the use of certified electronic signatures, the implementation of comprehensive audit trail systems, the use of clear and accessible contractual language, and the inclusion of proportionate clauses governing the rights and obligations of the parties.

The effectiveness of digital business contracts is determined not solely by their formal validity under civil law, but also by their capacity to foster trust, transparency, and legal certainty within the digital economy ecosystem. This finding further suggests that the development of Indonesia's digital economy necessitates a paradigm shift in contract drafting toward instruments that are not only legally valid, but also technologically adaptive, oriented toward legal protection, and capable of ensuring a balanced allocation of interests among all parties involved in electronic transactions.

3.2. The Impact of the Electronic Information and Transactions Law and Government Regulation No. 71 of 2019 on the Formation, Implementation, Evidence, and Enforcement of Digital Business Contracts

The enactment of the Electronic Information and Transactions Law (EIT Law) and Government Regulation No. 71 of 2019 on the Organization of Electronic Systems and Transactions has fundamentally shifted Indonesia's contractual legal paradigm from a framework centered on physical documents and handwritten signatures to one that recognizes and regulates electronically based transactions. Prior to these regulations, electronic contracting was characterized by legal uncertainty, particularly with respect to the legal status of electronic documents and their evidentiary value in judicial proceedings. With the formal recognition of electronic information and electronic documents as valid legal evidence under Articles 5 and 6 of the EIT Law, digital contracts now possess legal legitimacy equivalent to conventional contracts.

The primary impact of the EIT Law and Government Regulation No. 71 of 2019 is most evident in the formation of digital contracts. These regulations expand the traditional concept of agreement under Article 1320 of the Indonesian Civil Code. In digital environments, agreements are no longer formed through physical meetings between parties but through electronic mechanisms such as click-based consent, online form submissions, email exchanges, and the use of electronic signatures. While the principle of consensualism remains intact, the mode of expressing consent has evolved in line with technological developments.

The EIT Law functions as a complementary legal framework to civil law principles rather than a substitute. The validity of digital contracts continues to depend on the fulfillment of the essential requirements of a valid agreement under the Civil Code, while the EIT Law and Government Regulation No. 71 of 2019 provide the legal infrastructure governing the formation, authentication, and verification of electronic agreements. This regulatory structure creates harmonization between classical civil law doctrines and advancements in information technology.

This view is consistent with Silalahi and Octavia, who argue that electronic contracts are legally valid and binding as long as they satisfy both the requirements of a valid agreement under civil law and the provisions of the EIT Law.[21] However, the present study extends this argument by demonstrating that the EIT Law not only legitimizes electronic contracts but also establishes new standards for contract drafting, particularly in relation to the use of reliable electronic systems, authentication mechanisms, and secure electronic document storage.

The second impact is reflected in the implementation phase of digital business contracts. Government Regulation No. 71 of 2019 requires electronic system operators to ensure the security, reliability, and integrity of electronic systems used in transactions. This provision indicates that digital contracts are not merely legal instruments but also components of electronic systems that must comply with defined technical standards.

The implementation of digital contracts requires technological safeguards such as encryption systems, multi-factor authentication, activity logging mechanisms, and secure data storage infrastructure.[22] The effectiveness of digital contract implementation is therefore highly dependent on the capacity of electronic systems to maintain document integrity and prevent data manipulation, highlighting the inseparable relationship between legal and technical dimensions in digital contracting.

The third impact concerns the admissibility of digital contracts as evidence in judicial proceedings. Article 5 of the EIT Law, which recognizes electronic information and electronic documents as lawful evidence, has transformed the evidentiary framework within Indonesian civil law. Electronic records such as chat screenshots, emails, transaction logs, metadata, and system activity records may be admitted as evidence, provided that their authenticity and integrity can be verified.

This position reinforces Asmana et al., who identify evidentiary issues as one of the primary challenges in the implementation of electronic contracts.[23] However, the core issue of proof does not lie in the absence of legal recognition of electronic evidence,

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21 Silalahi and Octavia, "Keabsahan Dan Perlindungan Hukum Dalam Kontrak Elektronik."

22 Deden Saputra and Wardan Wardan, "Kekuatan Pembuktian Kontrak Elektronik Dalam Perspektif Hukum Perdata," *Jurnal Kajian Hukum* 1, no. 1 (2025): 32–40.

23 Asmana et al., "Kontrak Elektronik Dalam Bisnis Online: Kajian Terhadap Bentuk, Keabsahan, Dan Perlindungan Hukum Bagi Para Pihak."

but rather in the ability of the parties to ensure that such evidence meets the requirements of authenticity, integrity, and non-repudiation.

The use of electronic signatures plays a critical role. The regulation of electronic signatures under Articles 11 and 12 of the EIT Law and Government Regulation No. 71 of 2019 provides legal certainty regarding user identity and the validity of electronically expressed consent. Certified electronic signatures issued by Electronic Certification Providers (PSrE) carry stronger evidentiary value compared to simple electronic signatures, particularly in establishing authenticity and legal accountability.

This view is consistent with Nurfadillah, who argues that the adaptation of digital contracts requires authentication mechanisms capable of ensuring legal certainty.[24] However, certified electronic signatures function not only as authentication tools but also as instruments of legal risk mitigation by safeguarding document integrity and preventing repudiation of previously given consent.

The fourth impact relates to the enforceability and binding force of digital business contracts. Empirical findings indicate that the Electronic Information and Transactions Law (EIT Law) and Government Regulation No. 71 of 2019 have effectively eliminated the dichotomy between conventional and electronic contracts. Both forms are accorded equal legal standing, provided that they satisfy the requirements for a valid agreement under civil law and are executed through electronic systems that comply with applicable regulatory standards.

Nevertheless, several implementation challenges persist, including low levels of digital legal literacy, inconsistent use of certified electronic signatures, cybersecurity vulnerabilities, and limited understanding among business actors regarding technical standards for electronic system operations.[25] This condition demonstrates that the effectiveness of digital contract implementation depends not only on regulatory availability but also on the readiness of technological infrastructure and human resource capacity.

The EIT Law and Government Regulation No. 71 of 2019 have had a significant impact on the development of digital business contracts in Indonesia. These regulations not only provide legal recognition of electronic contracts but also establish comprehensive standards governing their formation, implementation, verification, and enforceability through provisions on electronic documents, electronic signatures, and reliable electronic systems.

Accordingly, digital business contracts in Indonesia are no longer regarded as merely alternative forms of agreement but have evolved into primary legal instruments in digital economic transactions. As a result, digital contract drafting techniques must

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[24] Nurfadillah, "Hukum Kontrak Di Era Digital: Adaptasi Teknik Pembuatan Kontrak Dalam Transaksi Online."

[25] Siti Almunawaroh et al., "Perlindungan Hukum Bagi Konsumen Terhadap Klausula Baku Dalam Transaksi E-Commerce Berdasarkan Undang-Undang Perlindungan Konsumen," *Doktrin: Jurnal Dunia Ilmu Hukum Dan Politik* 4, no. 1 (2026): 39–46, https://doi.org/10.59581/doktrin.v4i1.5955.

be designed in an adaptive manner by integrating the provisions of the EIT Law and Government Regulation No. 71 of 2019 into contractual clauses, including those governing authentication, data storage, system security, and electronic evidence mechanisms, in order to ensure legal certainty and enhance trust among parties in electronic transactions.

3.3. Practical Implications of Law No. 27 of 2022 on Personal Data Protection for Digital Business Contract Clause Drafting Techniques

The enactment of Law No. 27 of 2022 on Personal Data Protection (PDP Law) has reshaped the paradigm of digital contract drafting in Indonesia. Prior to its enactment, clauses governing the collection and use of personal data were generally incorporated into standard terms and conditions that were broad in scope and often insufficiently understood by users. Following the adoption of the PDP Law, digital contracts are required to include more specific, transparent, and accountable data protection provisions. Personal data protection is no longer treated as an ancillary clause but has become an essential component that determines the lawfulness of personal data processing within contractual relationships.

Articles 20 and 23 of the PDP Law require data controllers to obtain explicit, valid, and voluntary consent from data subjects prior to processing personal data. In practice, this requirement precludes reliance on implied consent or consent embedded within lengthy and complex standard-form provisions. Consent clauses must clearly specify the purposes of data processing, the types of data collected, data retention periods, and the parties authorized to access the data.

Digital contracts that fail to incorporate explicit consent mechanisms may give rise to legal consequences, including the invalidation of data processing clauses.[26] The principle of informed consent has thus become a foundational element in digital business contracting in Indonesia.[27] Accordingly, contract drafting must prioritize transparency and ensure that users are able to freely grant or refuse consent without coercion or ambiguity.

The second implication concerns the regulation of data subject rights. The PDP Law strengthens the legal position of data subjects by recognizing their rights to access, rectify, update, delete, and withdraw consent regarding personal data processing. Consequently, digital business contracts must incorporate provisions that clearly regulate the mechanisms for exercising these rights.

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[26] Elfia Tri Afrilia et al., "Validitas Clickwrap Agreement Dalam Transaksi E-Commerce Menurut KUHPerdata Dan Undang-Undang Pelindungan Data Pribadi," *Al-Zayn: Jurnal Ilmu Sosial & Hukum* 4, no. 3 (2026): 5639–45, https://doi.org/10.61104/alz.v4i3.6186.

[27] Afrilia et al., "Validitas Clickwrap Agreement Dalam Transaksi E-Commerce Menurut KUHPerdata Dan Undang-Undang Pelindungan Data Pribadi."

This finding extends the view of Nurfadillah, who emphasizes the need for comprehensive privacy protection clauses in digital contracts.[28] The recognition of data subject rights functions not only as a consumer protection instrument but also as a control mechanism against potentially abusive data processing practices. Therefore, digital contract drafting must adopt a rights-based approach rather than one solely driven by business interests.

The third implication relates to the obligations of data controllers. The PDP Law requires data controllers to implement appropriate technical and organizational measures to safeguard personal data. These obligations include the establishment of security systems, breach notification procedures, access restrictions, and the deletion of data that is no longer necessary for its intended purpose. This requirement necessitates the inclusion of clauses affirming the data controller's commitment to information security.[29] Effective data security clauses should at minimum address encryption measures, multi-factor authentication, data recovery mechanisms, and procedures for responding to cybersecurity incidents.[30]

This view is consistent with Asmana et al., who identify system security as one of the principal challenges in the implementation of electronic contracts.[31] However, following the enactment of the PDP Law, data security can no longer be regarded solely as a technical concern; it has become a legal obligation that may result in civil and administrative liability if violated.

Finally, the PDP Law imposes strict limitations on exoneration clauses intended to release data controllers from liability for personal data breaches. While limitation of liability clauses are permitted, they must not exclude liability arising from intentional misconduct or negligence on the part of the data controller.

The practical implication of these provisions is that drafters of digital business contracts must design limitation of liability clauses in a proportional and balanced manner. Clauses that unilaterally exempt business actors from all risks associated with data breaches may conflict with the principles of fairness, good faith, and consumer protection. Accordingly, digital contract drafting techniques should prioritize the principle of balancing interests between business actors and service users.

The fifth finding relates to electronic system security and data protection governance. The implementation of Law No. 27 of 2022 on Personal Data Protection encourages business actors to adopt a more comprehensive data governance framework, including the development of privacy policies, staff training programs, the establishment of data breach response procedures, and the appointment of a Data Protection Officer

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28 Nurfadillah, "Hukum Kontrak Di Era Digital: Adaptasi Teknik Pembuatan Kontrak Dalam Transaksi Online."

29 Hafit Afiyatun, "Perlindungan Hukum Terhadap Data Pribadi Konsumen Dalam Perjanjian Pinjaman Online," *Lex Crimen* 14, no. 4 (2026): 1–16.

30 Muhammad Fairuzabadi et al., *Keamanan Sistem Informasi* (Yayasan Kita Menulis, 2023).

31 Asmana et al., "Kontrak Elektronik Dalam Bisnis Online: Kajian Terhadap Bentuk, Keabsahan, Dan Perlindungan Hukum Bagi Para Pihak."

(DPO). Compliance with the PDP Law cannot be achieved solely through contractual provisions; it must be supported by adequate organizational and technological infrastructure.

Law No. 27 of 2022 on Personal Data Protection has significant implications for digital business contract drafting techniques in Indonesia. The enactment of the PDP Law has driven a paradigm shift in digital contracting from a model primarily oriented toward business interests to one that places personal data protection and data subject rights at its core. Digital business contracts concluded after the enactment of the PDP Law must therefore include explicit consent clauses, comprehensive provisions on data subject rights, clearly defined data controller obligations, robust security requirements, and proportionate limitations of liability. This approach not only enhances legal certainty and protects the contracting parties but also serves as a critical foundation for building public trust and establishing a secure and sustainable digital economy ecosystem.

4. CONCLUSION

Effective digital contracts should be grounded in the principles of freedom of contract, consensualism, good faith, and legal certainty, and operationalized through explicit electronic consent mechanisms, certified electronic signatures, reliable electronic document storage systems, and transparent and balanced contractual clauses. This study confirms that the Electronic Information and Transactions Law (EIT Law) and Government Regulation No. 71 of 2019 provide legal legitimacy and certainty for electronic documents, electronic evidence, and electronic signatures, thereby strengthening the enforceability of digital contracts in Indonesia. In addition, the Personal Data Protection Law (Law No. 27 of 2022) reshapes the paradigm of digital contract drafting by positioning personal data protection as a fundamental component through provisions governing data processing consent, data subject rights, data controller obligations, and proportionate limitations of liability.

This study offers theoretical contributions to the development of digital contract law and practical implications for business actors, regulators, and contract drafters in designing adaptive and regulatory-compliant digital business contracts. However, its scope is limited to a normative juridical approach and does not assess the empirical implementation of digital contracts across different industrial sectors. Accordingly, the government is encouraged to develop technical guidelines for digital contract drafting and to accelerate regulatory harmonization between data protection and electronic transaction frameworks. Future research is recommended to adopt empirical and comparative approaches to examine the effectiveness of digital contract implementation and to explore the implications of emerging technologies such as blockchain and smart contracts within the Indonesian legal system.

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