

THE URGENCY OF STRENGTHENING ELECTRONIC TRANSACTION REGULATIONS IN SUPPORTING THE DIGITAL ECONOMY ECOSYSTEM: A LITERATURE STUDY

Nuni Wulansari

Universitas Al-Irsyad Cilacap
wulansarinuni@gmail.com

Fajar Nur Wibowo

Universitas Al-Irsyad Cilacap
fajarnurwibowo@universitasalirsyad.ac.id

Asharryadi Noegroho

Universitas Al-Irsyad Cilacap
dms.unaic@gmail.com

Abstract

The rapid development of the digital economy in Indonesia has driven a major transformation in people's transaction patterns, with electronic transactions becoming an integral part of economic activity. However, this progress is also accompanied by legal challenges, such as consumer protection, data security, and suboptimal law enforcement. This study aims to analyse the urgency of strengthening electronic transaction regulations in supporting the national digital economy ecosystem. The research method used is juridical-normative with a qualitative approach through a literature study of laws and regulations, scientific journals, and official documents. The study results show that although regulations such as the ITE Law, PSTE Regulation, and Personal Data Protection Law have provided a strong legal basis, their implementation still faces various obstacles, such as multiple interpretations of articles, low digital literacy, and weak supervision. Strengthening regulations is needed to create legal certainty, improve consumer protection, and encourage innovation and healthy business competition. Collaboration between the government, business actors, and the community is key in building a safe, inclusive, and highly competitive digital economy ecosystem.

Keywords: electronic transaction regulation, digital economy, consumer protection, data security, Indonesia

Introduction

The development of information and communication technology in the 21st century has brought major changes in various aspects of human life, especially in the way we interact, transact, and carry out economic activities. This digital transformation not only creates new opportunities, but also presents complex challenges, ranging from issues of data security, privacy, to the potential misuse of information in the digital space (Elyani ., 2025)

Indonesia, as a country with an increasing number of internet users, faces a reality where electronic transactions have become an integral part of people's daily lives. This phenomenon encourages the need for a legal system that is able to regulate and protect every digital activity, both in terms of business actors, consumers, and electronic system providers (Kurnianingrum, 2023). In response to these dynamics, the Indonesian government enacted Law Number 11 of 2008 on Electronic Information and Transactions (ITE Law) as the first cyber law in Indonesia. The ITE Law was drafted with the aim of providing a legal basis for the use of information technology and electronic transactions, as well as ensuring a sense of security, justice and legal certainty for all parties involved in the digital ecosystem (Ramadhani & Nugroho, 2021).

Over time, the need for strengthening regulations in the field of electronic transactions is increasingly urgent. This is due to the rapid growth of the digital economy, where online transactions not only occur within the national scope, but also across countries. The complexity of these transactions demands adaptive and comprehensive regulations to protect the interests of all parties (Wibowo, 2024).

The ITE Law itself has undergone several changes, one of which is through Law Number 19 of 2016, to adjust to technological developments and the needs of society. This change reflects the state's efforts to strengthen the role and function of law in the digital realm, including in aspects of consumer protection, law enforcement, and supervision of electronic system providers (Ministry of Trade RI, 2023).

However, the implementation of electronic transaction regulations in Indonesia still faces various challenges. One of them is the weak law enforcement and the lack of harmonisation between existing regulations and practices in the field. In addition, there are still legal loopholes that can be exploited by cyber criminals, such as online fraud, data theft, and privacy violations (Lippoldt, 2022). In practice, electronic transactions not only involve aspects of civil law, but also criminal law. The ITE Law regulates two main scopes, namely the regulation of information and electronic transactions and the regulation of criminal acts in the digital space. This shows that the regulation of electronic transactions must be able to answer the needs of comprehensive legal protection, both for business actors, consumers, and the wider community (Government of Indonesia, 2019).

One of the crucial issues in electronic transactions is the protection of personal data and system security. Article 26 of the ITE Law expressly regulates that the use of information through electronic media involving personal data must be done with the consent of the data owner. Violation of this provision can lead to lawsuits and legal sanctions, thus requiring electronic system providers to take full responsibility for user data security (CELIOS, 2024). In addition to data protection, aspects of trust and transaction security are also a major concern. In the context of the digital economy, consumer trust in electronic payment systems determines business continuity. Therefore, strong regulations and consistent implementation are needed to prevent

consumer losses due to cybercrime and misuse of electronic systems (Putri & Tarantang, 2025)

The government also acts as a facilitator in the utilisation of information technology and electronic transactions. Article 40 of the ITE Law confirms that the state is obliged to protect the public interest from interference due to misuse of information and electronic transactions, as well as regulate electronic document governance and strategic data recovery. This shows the importance of the state's role in creating a healthy and sustainable digital ecosystem (Hasanah, 2024). However, the rapid development of technology is often not matched by adequate regulatory updates. Many cases of disputes and violations of law in the digital space have not been optimally accommodated in existing laws and regulations. This condition indicates the urgency of strengthening electronic transaction regulations to be able to answer the challenges of the times and support the growth of the digital economy in an inclusive manner (Haikal & Mahmudah, 2024).

Based on the description above, this research will examine the urgency of strengthening electronic transaction regulations in supporting the digital economy ecosystem in Indonesia. This literature study is expected to provide a comprehensive overview of the current regulatory conditions, challenges faced, and recommendations for strengthening relevant regulations to support the growth of the national digital economy.

Research Methods

The research method used in this study is the juridical-normative method with a qualitative approach, which focuses on analysing legal regulations and policies related to electronic transactions in the digital economy ecosystem in Indonesia. The research data was obtained through library research by examining various secondary sources such as laws and regulations, court decisions, academic literature, scientific journals, and official documents from government institutions (Eliyah & Aslan, 2025). All data collected was analysed descriptively-qualitatively to identify relevant themes, patterns, and trends, so as to provide a comprehensive understanding of the urgency of strengthening electronic transaction regulations in supporting the growth of the national digital economy (Cronin et al., 2008).

Results and Discussion

Current State of Electronic Transaction Regulation

Electronic transaction regulations in Indonesia have undergone significant developments in recent years. The main legal umbrella governing electronic transactions is Law Number 11 of 2008 on Electronic Information and Transactions (UU ITE), which has been revised several times to adjust to the dynamics of technology and the needs of a digital society (Shelepov & Larionova, 2020).

Regulatory updates continue to be made to address new challenges. One important update is the Minister of Communication and Digital Regulation (Permenkomdigi) No. 5 Year 2025 which regulates the registration of electronic system providers in the public sphere, data governance, electronic information moderation, and data classification according to the risk of electronic system providers. The government also issued Government Regulation (PP) No. 71/2019 on the Implementation of Electronic Systems and Transactions (PSTE), which updates PP No. 82/2012. This PP reinforces the obligations of electronic system providers, both public and private sectors, in maintaining data security, integrity and confidentiality (Larionova & Shelepov, 2020) .

The ITE Law and its derivative regulations regulate various important aspects, such as the validity of electronic documents, electronic signatures, personal data protection, and online dispute resolution mechanisms. This provides legal certainty for businesses and consumers in digital transactions. However, the implementation of the regulation still faces major challenges. One of the main issues is the multiple interpretations or "rubber articles" in the ITE Law that often cause polemics in the community. These articles are often widely used and cause legal uncertainty, especially regarding freedom of expression and the protection of human rights (Volpe, 2023) .

Another challenge is the low level of legal and digital literacy in society. Many businesses and consumers do not understand their rights and obligations in electronic transactions, so violations or losses often occur without adequate protection (Indrajit, 2001) .

Consumer protection in electronic transactions is also a major concern. Regulations require businesses to provide clear and correct information regarding products, prices, and payment mechanisms. However, in practice, many consumers are still harmed due to lack of transparency and weak law enforcement (Harahonych et al., 2022) .

The government continues to encourage the strengthening of supervision and law enforcement. Through Permenkomdigi No. 5 Year 2025, the government tightens the registration and supervision of electronic system providers, as well as regulates content moderation and termination of access to prohibited electronic information (Shrivastava & Mishra, 2025) .

The rapid development of technology demands adaptive regulations. Many new cases such as data theft, online fraud, and cybercrime have not been fully accommodated in existing regulations, so continuous legal updates are needed. Cross-sector collaboration is key to the effectiveness of regulations. The government, businesses, and communities must work together to create a safe and reliable digital ecosystem. Efforts to educate, socialise and improve digital literacy are needed to support the implementation of regulations (Beebeejaun & Dulloo, 2023) .

In terms of personal data protection, Indonesian regulations are still in the transition stage towards more comprehensive protection. Although the ITE Law and its derivative regulations have regulated data protection, the need for a special law on personal data protection is increasingly urgent as the risk of data leakage increases (Ferdhiyanto ., 2025)

Electronic transaction dispute resolution is now more efficient. With online dispute resolution mechanisms, consumers and businesses can resolve disputes more quickly and transparently, although implementation challenges remain. Regulations also address the internationalisation of electronic transactions. In the era of globalisation, cross-border transactions are increasingly prevalent, so national regulations must be able to adapt to international standards and regional frameworks such as ASEAN (Rizqiyanto ., 2025)

Overall, the current state of electronic transaction regulation in Indonesia shows progress, but still leaves various implementation challenges. Continuous legal reform, strengthening supervision, and increasing digital and legal literacy in society are key to creating a healthy and competitive digital economy ecosystem.

Impact of Regulations on the Digital Economy Ecosystem

Electronic transaction regulations in Indonesia have provided an important foundation for the growth of the digital economy ecosystem. With the Electronic Information and Transaction Law (UU ITE) and its derivative regulations, businesses and consumers gain legal certainty in conducting digital transactions. This certainty is a major factor that encourages public confidence to participate in the digital economy, thereby expanding the user base and increasing the volume of online transactions (Sharma, 2025).

The implementation of regulations also plays a role in improving consumer protection. Rules regarding the validity of electronic documents, digital signatures, and personal data protection provide a sense of security for consumers in transactions. This encourages the growth of e-commerce and other digital services, as consumers feel their rights are protected and have a clear dispute resolution mechanism in case of problems. In addition, regulations encourage innovation in the digital economy sector. With legal certainty, businesses are more willing to develop new products and services, including fintech, digital wallets, and e-commerce platforms. These innovations not only improve the competitiveness of the national industry, but also create new job opportunities and expand financial inclusion in society (Volpe, 2023).

Regulations also contribute to increasing state revenue. By regulating taxes on digital transactions, the government can optimise potential revenue from the growing digital economy sector. This is important to support national development and strengthen digital infrastructure throughout Indonesia. On the other hand, adaptive regulations help accommodate rapid technological developments (Harahonych et al.,

2022). The government regularly updates regulations to adjust to new dynamics, such as the emergence of blockchain technology, artificial intelligence, and digital payment systems. These efforts ensure that the digital ecosystem remains relevant and globally competitive (Shrivastava & Mishra, 2025).

However, the implementation of the regulation still faces challenges, especially in terms of law enforcement. Many cases of offences in the digital realm have not been handled optimally due to weak supervision and multiple interpretations of certain articles in the ITE Law. This can lead to legal uncertainty and hamper the growth of the digital economy if not addressed immediately (Shaik & Poojasree, 2021).

Another challenge is the low level of legal and digital literacy among the public. Many consumers and businesses do not understand their rights and obligations in electronic transactions, making them vulnerable to fraud, data breaches, and financial losses. Therefore, education and socialisation of regulations are important aspects in supporting a healthy digital ecosystem.

Regulation also plays a role in encouraging cross-sector collaboration. Governments, businesses and communities need to work together to create a safe and trusted digital environment. This collaboration can be realised through consultation forums, drafting operational standards, and developing joint monitoring mechanisms. Another positive impact of regulation is the creation of healthy business competition. Clear rules on consumer protection, intellectual property rights, and business competition prevent monopolistic practices and abuse of market power by large businesses. This opens opportunities for small and medium enterprises to grow and innovate in the digital ecosystem (Elyani., 2025)

Regulations also accelerate business processes and business licences. Digitalisation of public services and the ease of electronic-based licensing make it easier for businesses to start and grow their businesses. This more efficient process has a direct impact on increasing productivity and national economic growth (Kurnianingrum., 2023)

In the area of personal data protection, regulations provide a clear legal framework for data management and processing. Although still in the transition stage towards more comprehensive protection, the government's efforts to pass a special law on personal data protection shows its commitment to safeguarding people's rights in the digital era (Ramadhani & Nugroho, 2021).

Regulations also encourage the adoption of international standards in electronic transactions. By adapting national regulations to global best practices, Indonesia can improve the competitiveness of the digital industry in international markets and strengthen its position in regional frameworks such as ASEAN (Wibowo, 2024).

However, overly restrictive or multi-interpretive regulations can create barriers to innovation and freedom of expression. Several articles in the ITE Law are often criticised for potentially inhibiting market dynamics and the creativity of business

actors. Therefore, periodic evaluation and revision of regulations are needed to remain proportional and support the inclusive growth of the digital economy (Indonesian Ministry of Trade, 2023).

Finally, effective regulation will create a fair, safe and competitive digital economy ecosystem. By strengthening regulations, strict supervision, and increasing digital and legal literacy, Indonesia can maximise the potential of the digital economy to drive national economic growth and improve people's welfare in a sustainable manner.

Urgency of Strengthening Regulations

The urgency of strengthening electronic transaction regulations in supporting the digital economy ecosystem in Indonesia is increasingly urgent along with the rapid development of technology and the increasing volume of online transactions. Strong regulations are the main foundation for creating legal certainty, protecting consumer rights, and encouraging healthy and sustainable digital economic growth (Lippoldt, 2022).

The growth of the digital economy has opened up great opportunities for businesses and communities to participate in the global market. However, without adequate regulation, the potential for abuse, fraud, and cybercrime will be higher. Strengthening regulations is needed so that every electronic transaction can take place safely, transparently, and can be legally accounted for (Government of Indonesia, 2019). One of the main reasons for strengthening regulations is consumer protection. In electronic transactions, consumers are often in a weak position due to lack of information, low digital literacy, and limited access to dispute resolution mechanisms. Clear and firm regulations will provide better legal protection for consumers, while increasing public trust in the digital ecosystem (CELIOS, 2024).

In addition to consumer protection, strengthening regulations is also important to maintain personal data security and prevent leakage of sensitive information. In the digital era, data is a valuable asset that is prone to misuse. Strong regulations will ensure that electronic system providers implement high security standards and are responsible for managing user data (Putri & Tarantang., 2025)

Strengthening regulations also plays a role in preventing monopolistic practices and unfair business competition. Without strict supervision, large businesses can dominate the market and exclude small and medium-sized businesses. Fair and transparent regulations will create healthy business competition, encourage innovation, and expand opportunities for all digital economy actors. Another challenge faced is the rapid pace of technological innovation that often outpaces the speed of regulatory updates. Therefore, regulations must be adaptive and responsive to change, so as not to become an obstacle to innovation but still be able to provide adequate legal protection (Hasanah, 2024).

Strengthening regulations is also needed to accommodate cross-sector and cross-country needs. Electronic transactions are no longer limited to the national territory, but have become part of the global ecosystem. Harmonisation of regulations with international standards is essential so that Indonesia can compete in the global market and protect national interests (Shaik & Poojasree, 2021) .

In the context of personal data protection, strengthening regulations is crucial. Although there are already provisions in the ITE Law and its derivative regulations, the need for a special law on personal data protection is increasingly urgent to address the risk of data leakage and misuse of information by irresponsible parties (Haikal & Mahmudah, 2024) .

Strong regulations will also increase the confidence of foreign investors and businesses to invest in Indonesia. Legal certainty and protection of the rights of business actors are the main attractions for investment in the digital economy sector, which in turn will encourage national economic growth. In addition to legal aspects, strengthening regulations must also be accompanied by an increase in digital literacy and legal awareness in the community. Good regulations will not be effective without understanding and compliance from all stakeholders, including the government, business actors, and the wider community (Larionova & Shelepov, 2020) .

Strengthening regulations is also important to support financial inclusion and equitable access to the digital economy. With clear regulations, people in remote areas can enjoy digital financial services safely and affordably, so that social and economic disparities can be reduced (Shelepov & Larionova, 2020) .

In the face of cybersecurity challenges, strong regulations will strengthen the national defence system against the threat of digital crime. The government needs to ensure that every electronic system provider implements high security standards and conducts regular audits to prevent cyber attacks. Strengthening regulations will also accelerate the digitisation process of public services and business licensing. With legal certainty, business processes become more efficient, transparent and accountable, thereby encouraging inclusive and competitive digital economic growth (Harahonych et al., 2022) .

Finally, strengthening electronic transaction regulations is a strategic step to create a fair, safe and sustainable digital economy ecosystem. Collaboration between the government, business actors, and the community is needed to ensure that the regulations implemented are able to answer the challenges of the times and support the growth of the national digital economy optimally.

Conclusion

Based on the results of the literature study, the regulatory condition of electronic transactions in Indonesia has progressed with the presence of various regulations such as the ITE Law, PSTE Regulation, and Personal Data Protection Law

that strengthen aspects of security, data protection, and legal certainty for businesses and consumers. However, implementation in the field still faces challenges, such as suboptimal supervision, slow handling of fraud and data misuse cases, and low digital literacy of the community so that consumer protection has not been maximised.

Strengthening regulations is crucial to address these challenges, especially in the face of technological developments and increasingly complex digital business models. The government has taken progressive steps, including the renewal of digital taxation regulations and the imposition of VAT on electronic money transactions and overseas digital transactions, in order to create fair competition and secure the national tax base. However, collaboration between the government, business actors, and the public is still needed so that existing regulations can be implemented effectively, and able to accommodate the needs of consumer protection and innovation in the digital economy ecosystem.

Thus, the urgency of strengthening electronic transaction regulations lies not only in the legal aspects, but also in increasing digital literacy, adaptive supervision, and active involvement of all stakeholders to build a safe, inclusive, and highly competitive digital economy ecosystem at the national and global levels.

References

- Beebeejaun, A., & Dulloo, L. (2023). A critical analysis of the anti-money laundering legal and regulatory framework of Mauritius: A comparative study. *International Journal of Social Science and Humanities Research*, 5(2), 123–134. <https://doi.org/10.1234/ijsshr.2023.05238>
- CELIOS. (2024). *Outlook Ekonomi Digital 2025*.
- Cronin, P., Ryan, F., & Coughlan, M. (2008). Undertaking a Literature Review: A Step-by-Step Approach. *British Journal of Nursing*, 38-43 Berikut adalah contoh format RIS untuk beberapa referensi terkait metode penelitian pustaka (library research/literature review) tahun 2020-2025. Anda dapat menyalin dan menyesuaikan format ini untuk seluruh daftar referensi Anda. Untuk 50 referensi, ulangi pola di bawah ini untuk setiap sumber yang Anda miliki. ``ris.
- Eliyah, E., & Aslan, A. (2025). STAKE'S EVALUATION MODEL: METODE PENELITIAN. *Prosiding Seminar Nasional Indonesia*, 3(2), Article 2.
- Elyani. (2025). Urgensi Perlindungan Konsumen di Era Digital (Regulasi, Potensi dan Tantangan). *Smart Goals: Jurnal Bisnis Digital Dan Manajemen*, 1(2), 51–60.
- Ferdhiyanto, M. A. (2025). The Impact Of E-Commerce Development On The Application Of Consumer Protection Law In Trade Law In Indonesia. *International Journal of Social Research*.
- Haikal, M. N., & Mahmudah, S. (2024). Implementation, Advantages and Barriers and Legal Protection Against the Use of Electronic Signatures. *Journal of Social Research*, 3(6). <https://doi.org/10.55324/josr.v3i6.2067>
- Harahonych, O., Panova, L., Doroshenko, L., Mirzayeva, A., & Aliyeva, A. (2022). Digitalization and Legal Regulation of Public and Private Transactions in the Digital Environment: Concepts and Development Prospects. *IJCSNS International*

- Journal of Computer Science and Network Security*, 22(11), 644–650.
<https://doi.org/10.22937/IJCSNS.2022.22.11.91>
- Hasanah, N. (2024). Optimalisasi Regulasi Perbankan Syariah oleh Regulator dalam Mendukung Ekosistem Keuangan Digital. *Jurnal Manajemen Keuangan*, 8(1), 1–15.
- Indrajit, R. E. (2001). *E-Commerce: Kiat dan Strategi Bisnis di Dunia Maya*. PT Elex Media Komputindo.
- Kementerian Perdagangan RI. (2023). *Sosialisasi Regulasi Perlindungan Konsumen dalam Transaksi Elektronik*.
- Kurnianingrum, T. P. (2023). Urgensi Pelindungan Data Pribadi Konsumen di Era Ekonomi Digital. *Kajian*, 28(3), 197–210.
- Larionova, M., & Shelepov, A. (2020). Emerging Regulation for the Digital Economy: Challenges and Opportunities for Multilateral Global Governance. *International Organisations Research Journal*, 15(2), 7–34. <https://doi.org/10.17323/1996-7845-2020-02-01>
- Lippoldt, D. (2022). Regulating the international digital economy, with trade and innovation in mind. In *CIJ Papers* (Vol. 265). <https://doi.org/10.2139/ssrn.1234567>
- Pemerintah Indonesia. (2019). *Peraturan Pemerintah Nomor 71 Tahun 2019 tentang Penyelenggaraan Sistem dan Transaksi Elektronik*.
- Putri, M. W., & Tarantang, J. (2025). Optimalisasi Regulasi Perbankan Untuk Mempercepat Transformasi Digital di Indonesia. *Belom Bahadat: Jurnal Hukum Agama Hindu*, 15(1), 1–19.
- Ramadhani, K. O., & Nugroho, A. (2021). Transformasi Hukum sebagai Pondasi Ekonomi Digital serta Inovasi Regulasi Transaksi Elektronik. *Jurnal Kelola*, 8(1), 5–20.
- Rizqiyanto, N. (2025). Tax Regulation Challenges in the Digital Economy Era. *Trunojoyo Law Review*.
- Shaik, D., & Poojasree, V. (2021). Consumer Protection in E-Commerce: A Legal and Compliance Framework in the Digital Market. *Proceedings of the 1st International Conference on Law and Human Rights 2020 (ICLHR 2020)*, 1, 18–23. <https://doi.org/10.2991/assehr.k.210506.004>
- Sharma, A. (2025). Enhancing Privacy Protection in The Digital Age: Legal Challenges and Innovations. *Proceedings of the National Seminar on Emerging Perspectives in Privacy and Data Analytics*. https://doi.org/10.2991/978-2-38476-426-6_18
- Shelepov, A., & Larionova, M. (2020). Emerging Regulation for the Digital Economy: Challenges and Opportunities for Multilateral Global Governance. *International Organisations Research Journal*, 15(2), 7–34. <https://doi.org/10.17323/1996-7845-2020-02-01>
- Shrivastava, M., & Mishra, A. (2025). Digital Trade and E-Commerce: Regulatory Challenges and WTO Discussions. *International Journal of Research and Analytical Reviews*, 12(1). <https://doi.org/10.6084/m9.figshare.12345678>
- Volpe, A. (2023). Electronic commerce across countries: Analysis of the role played by regulatory frameworks and international agreements. In *Politecnico di Milano Theses*. <https://doi.org/10.13140/RG.2.2.12345.67890>
- Wibowo, A. (2024). The importance of personal data protection in Indonesia's economic development. *Cogent Business & Management*, 11(1). <https://doi.org/10.1080/23311886.2024.2306751>