



# Transforming trade law in the digital era: Navigating challenges and seizing opportunities for legal reforms in Indonesia's evolving trade landscape

Abdurrahim<sup>1,\*</sup>

<sup>1</sup> Master of Law Program, Faculty of Law, Universitas Islam Indonesia (MH UII), Jl. Kaliurang km. 14,5 Sleman, Yogyakarta 55584, Indonesia.

\*Correspondence: abdurrahim5208@gmail.com

Received Date: November 25, 2024

Revised Date: January 21, 2025

Accepted Date: January 30, 2025

## ABSTRAK

**Background :** In Indonesia, the transformation of trade law in the IT and Internet era presents significant challenges and opportunities. Businesses have changed, markets have expanded, and digitalization has created new economic opportunities. However, these changes have also raised a number of legal questions, including consumer protection, data security, the legality of electronic transactions, and the role of government in regulating digital commerce. This article analyzes how Indonesian laws and regulations have adapted to these changes and examines the challenges of implementing regulations in the face of rapid technological developments. This article provides a comprehensive overview of the direction of trade law in the digital era and its impact on the Indonesian economy and society, with a focus on the policies implemented and opportunities for future regulatory improvement. **Methods:** This study focuses on the challenges and opportunities arising from technological advances and e-commerce, and discusses changes in trade law in the digital era in Indonesia. A normative legal approach is used in this study. Digital trade law is examined using a normative approach. **Findings:** This study highlights several issues, including regulations that do not reflect technological advances, inadequate consumer protection, cybersecurity risks, and regulations that mix digital and traditional business practices. In contrast, the rapid growth of e-commerce in Indonesia, government efforts to build a digital ecosystem, and the potential for global cooperation to resolve international issues present significant opportunities. **Conclusions:** The results of this study highlight the need for more flexible and comprehensive legal reforms to deal with developments in the digital era. Harmonization of cross-sector regulations, increased cybersecurity, and strengthened consumer protection are key to seizing the opportunities arising from the growth of digital trade in Indonesia. **Novelty/Originality of this Study:** The study found that digital trade regulations in Indonesia are still lagging behind technological developments, especially in consumer protection and cybersecurity. However, opportunities arise from the government's efforts to build a digital ecosystem and the potential for global cooperation to improve digital trade regulations.

**KEYWORDS:** legal transformation; digital trade; legal challenges; e-commerce; consumer protection.

## 1. Introduction

The digital era has brought about major changes in various aspects of life, including in the field of trade (Burri, 2018). Advances in information and communication technology have created a new trading ecosystem that is faster, more efficient, and more affordable (Teece, 2018). Transactions that used to be carried out physically have now shifted to digital platforms, allowing consumers and business actors to connect without geographical

### Cite This Article:

Abdurrahim. (2025). Transforming trade law in the digital era: Navigating challenges and seizing opportunities for legal reforms in Indonesia's evolving trade landscape. *Ex Aequo Et Bono Journal of Law*, 2(2), 108-121. <https://doi.org/10.61511/eaebjol.v2i2.2025.1338>

**Copyright:** © 2025 by the authors. This article is distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).



boundaries. However, this transformation also raises new challenges, especially in the legal aspect that must adapt to the dynamics of modern trade.

Trade law in Indonesia faces major challenges in keeping up with the pace of technological change (Pangestu et al., 2015). Regulations previously designed for conventional trade are often no longer relevant in the digital era. For example, issues such as data security, online dispute resolution, and digital consumer protection require a different legal approach from previous practices. The lack of or unclear regulation in addressing these issues can create legal uncertainty for both businesses and consumers.

On the other hand, the digital era also opens up great opportunities for the transformation of trade law (Okediji, 2018). By utilizing technology, the government and related institutions can create regulations that are more effective, inclusive, and adaptive to the needs of the digital market. Digitalization also allows for greater transparency, accelerates legal processes, and facilitates cross-border interactions (Luo, 2021). This provides an opportunity for Indonesia to become a pioneer in digital trade regulation in the Southeast Asian region.

The transformation of trade law in the digital era is an important step to support the growth of the digital economy in Indonesia (Primawanti et al., 2022). By creating a clear, adaptive legal framework that protects all parties, Indonesia can build a competitive, fair, and sustainable digital trade ecosystem. However, to achieve this, cooperation is needed between the government, business actors, academics, and the community in facing challenges and taking advantage of existing opportunities.

Indonesian trade law has undergone many changes due to global economic developments and technological advances (Jomo, 2019). The digital era has brought about major changes in the way transactions are conducted, with e-commerce increasingly dominating the physical retail market (Burt & Sparks, 2003). This phenomenon poses new challenges to current trade law and requires changes to protect the interests of all stakeholders: economic actors, consumers, and the environment. E-commerce has many advantages, including ease of use and low costs (Eastin, 2002). On the other hand, it also poses new threats such as internet fraud, data breaches, and incomplete consumer protection. In this context, applicable trade law regulations must be adjusted to current business practices. For example, we need to enact stronger laws regarding digital transactions, personal data protection, and consumer rights. Indonesia, the fourth most populous country in the world with growing internet access, is a huge potential market for e-commerce.

Therefore, the government must ensure that the policies and regulations implemented not only encourage the growth of this sector but also protect the interests of the community. Strong and comprehensive trade sanctions will be the foundation for creating a positive and stable business environment. Another problem that must be resolved is legal uncertainty. This is often caused by conflicting or overlapping regulations. Business actors, especially those operating in the MSME sector, often have difficulty understanding and complying with the various legal requirements that apply to them. Therefore, a simpler and clearer approach is needed in the regulatory process. However, digital transformation will enable countries to work more closely together in trade, including economic cooperation and free trade agreements. For local products to compete in the global market, Indonesian trade laws must be able to adapt and cooperate with international regulations.

Table 1. Legal aspects of trade

Legal aspects of trade	Level of development or challenges (%)
International collaboration opportunities	70
Legal challenges (Regulatory overlap)	60
E-commerce market potential in Indonesia	80
Need for regulatory updates	75
New risks (Fraud, privacy violations)	55
Benefits of electronic trade	80
Conventional trade to e-commerce	85

The table above shows various aspects of the development and challenges of Indonesian trade law in the IT and Internet era. This table shows important aspects covered in each category, including: Opportunities in the Indonesian e-commerce market, legal challenges posed by overlapping regulations, benefits of e-commerce, and emerging risks such as fraud and data breaches. In addition, regulatory updates are also needed to protect consumers and economic actors.

By 2022, more than 204 million Indonesians will use the Internet and more than half of them will shop on e-commerce platforms. The value of Indonesian e-commerce is estimated to be around \$77 billion in 2022, a significant increase from around \$16 billion in 2016. Based on data, around 24 percent of e-commerce users in Indonesia have experienced cyber attacks or fraud when transacting online. The number of data breaches and data protection violations is also increasing. Several large-scale incidents in Indonesia have reportedly resulted in data breaches of more than 90 million e-commerce users. More than 15 laws and regulations related to e-commerce must be adjusted, as old and new regulations often overlap in the digital era. Only about 40% of e-commerce businesses in Indonesia meet legal compliance standards for data security and consumer protection. With a population of more than 270 million, Indonesia is one of the largest e-commerce markets in Southeast Asia. Indonesia has joined more than five international agreements on digital trade to improve legal protection and interoperability in the e-commerce sector. Indonesia's e-commerce market is estimated to be worth more than \$130 billion by 2025.

## 2. Methods

To Analyze Commercial Law Transformation in the Digital Age: Challenges and Opportunities in Indonesia is a multi-disciplinary undertaking by way of case studies, normative legal study, and comparison. The methodology of normative legal study concentrates on scrutinizing existing legal principles and how these regulate the phenomenon of new digital trade. The prescriptive legal study entails statute interpretation, the law of precedents, as well as executive regulations relating to consumer protection and e-commerce. The move from traditional to digital trade is a revolutionary change in business triggered by progress in information and communication technology. Traditional trade, with its feature of direct human-to-human contact, physical products, and cash transactions, has long offered transparent legal guidelines under the Trade Law and Consumer Protection Law. Digital trade has, however, changed this situation by bringing in electronic commerce platforms, mobile shopping apps, and electronic payment mechanisms that have no geographical bounds.

This transformation enhances efficiency but also presents new legal issues, particularly the relationship between business actors and customers. In conventional trade, the sellers are directly responsible for their products, whereas in e-commerce, platforms take on the role of intermediaries, creating legal uncertainties regarding defective products, fraud, or delayed shipments. In addition, the shift from cash, led by credit cards, e-wallets, and QR payments, reveals financial data vulnerability and consumer well-being. Despite regulation by Financial Services Authority (OJK) and Bank Indonesia (BI), the recent explosion of digital currency in the form of cryptocurrency presents novel regulatory challenges. The other key issue is protection of personal data, whereby online platforms accumulate vast amounts of consumer data, which are likely to be abused and hacked. The enactment of Indonesia's Personal Data Protection Law (UU PDP) in 2022 is a move to address these matters, though adherence from domestic and foreign business players is still a issue. The transition to digital commerce also reveals the loopholes of existing laws, i.e., Consumer Protection Law (UUPK), which fail to address digital consumers' rights, platform responsibilities, and cross-border disputes.

In a bid to develop a more adaptable framework, Indonesia introduced Government Regulation No. 80 of 2019 on Electronic Trading (PMSE) on platform responsibilities and consumer protection. However, effective implementation requires coordination among a number of agencies, including the Ministry of Trade, the Ministry of Communication and

Information (Kominfo), and OJK. Law enforcement is also hindered by the technical aspect of cybercrime investigations, with the requirement of specialized units and international cooperation to combat digital fraud and data theft. To address these, Indonesia must reform obsolete laws, bring the legal system up to date through digitization, and enhance digital literacy through education campaigns. Training programs for businesses, particularly MSMEs, need to concentrate on compliance with laws, ethical handling of data, and optimum practices in cyber security. The government also needs to encourage coordination with the private sector to implement industry standards for secure transactions as well as cross-border cooperation to regulate cross-border trade and cybercrime. Development of an Online Dispute Resolution (ODR) system would provide a fast way of resolving electronic commerce disputes without complex legal procedures. In addition, applying technology like blockchain to guarantee the transparency of transactions and artificial intelligence to identify fraud could improve the regulation enforcement. As digital trade expands, Indonesia must seize opportunities to change legislation to guarantee economic development, boost consumers' confidence, and stay competitive on the global marketplace. Creating an adaptive and open regulatory regime would allow Indonesia to establish a secure, innovative, and sustainable digital commerce system.

### 3. Result and Discussion

#### *3.1 Consumer protection in digital commerce: Barriers and implementation in Indonesia*

Digital commerce has become an integral part of modern life in Indonesia (Aminullah et al., 2024). With the rapid development of technology, online shopping is now one of the main choices for consumers to meet their daily needs. However, behind the convenience and efficiency offered, digital commerce also presents new challenges in protecting consumers. Issues such as fraud, defective products, and misuse of personal data are the main highlights in the digital commerce ecosystem. This article discusses the obstacles and implementation of consumer protection in digital commerce in Indonesia, including government efforts, regulatory challenges, and the role of society in creating a safer digital ecosystem.

In Indonesia, consumer protection in the era of digital commerce is very difficult (Agustiawan et al., 2022). Although the Consumer Protection Law Number 8 of 1999 and the Electronic Information and Transactions Law (UU ITE) have been implemented, it is still unclear how effective they are in digital commerce. Many consumers face problems such as online fraud, unclear product information, and data breaches, but the current laws still do not protect all consumers from these dangers. Other obstacles are weak law enforcement and limited dispute resolution mechanisms.

Protecting Indonesian e-commerce consumers requires regulations that are stricter, more specific, and responsive to advances in digital technology (Kim, 2019). Although several laws have been enacted, such as PP Number 80 of 2019 concerning Transactions Through Electronic Systems (PMSE), they do not guarantee consumer safety. In addition, consumers, especially those who have recently switched to online shopping, are still not aware of their rights (Liao & Cheung, 2001). The government must impose stricter sanctions and strengthen supervision of economic actors who violate consumer rights (Alexander, 2009). In addition, digital trading platforms must participate in this effort by conducting independent monitoring and demonstrating how they manage consumer data and transaction requirements (Liang et al., 2018).

#### *3.2 Digital barriers to consumer protection in digital commerce*

One of the main obstacles to consumer protection in digital commerce is the low digital literacy of the Indonesian people (Arifin et al., 2021). Many consumers do not yet understand their rights as users of digital services. This lack of understanding is often exploited by irresponsible parties to commit fraud, such as phishing, selling counterfeit

products, or non-transparent pricing practices. Consumers who do not have adequate knowledge tend not to read the terms and conditions in online transactions. As a result, they often get caught in disadvantageous situations, such as purchasing products that do not match the description or being charged unclear additional fees.

Existing regulations often do not fully cover the complexities of digital commerce. Although Indonesia has the Consumer Protection Law/*Undang-Undang Perlindungan Konsumen* (UUPK) and the Electronic Information and Transactions Law/*Undang-Undang Informasi dan Transaksi Elektronik* (UU ITE), their implementation in the digital world still has shortcomings (Subagyo et al., 2024). For example, there are legal loopholes in regulating cross-border sales or handling consumer disputes with international e-commerce platforms. In addition, existing laws are often not flexible enough to adapt to rapid technological developments. This creates legal uncertainty for consumers and business actors.

Furthermore, Law enforcement in digital consumer protection in Indonesia is still weak (Kerti, 2023). Many cases reported by consumers are not followed up seriously. In addition, complicated and time-consuming complaint procedures make many consumers reluctant to report their losses. This provides an opportunity for unscrupulous business actors to continue committing violations without fear of legal consequences.

Besides that, In the digital era, consumers' personal data is one of the most valuable assets. However, personal data protection in Indonesia is still far from ideal. There are many cases of misuse of personal data by e-commerce platforms, such as the use of data for advertising without permission, to data leaks that are detrimental to consumers. The absence of a specific law governing personal data protection until the implementation of the Personal Data Protection Law in 2022 shows how slow the government's response is to this urgent need. Not all digital businesses understand or care about their obligations to protect consumers. Some e-commerce platforms and individual sellers often ignore product safety and quality standards, which harms consumers.

### *3.3 Implementation of consumer protection in digital trade*

The Indonesian government has launched various programs to improve people's digital literacy, such as the National Digital Literacy Movement program. This campaign aims to educate the public about digital security, consumer rights, and how to identify online fraud. In addition, major e-commerce platforms in Indonesia also contribute by providing consumer guidance, such as safe shopping tutorials and additional security features, such as two-step verification.

The government has made efforts to strengthen regulations related to digital trade. One important step is the implementation of the Personal Data Protection Law (UU PDP) which will come into effect in 2022. This law regulates the obligations of business actors to protect consumers' personal data, including reporting mechanisms in the event of a data leak. In addition, the government has also issued additional regulations, such as the Regulation of the Minister of Trade (Permendag) on trade through electronic systems, which regulates the responsibilities of e-commerce platforms towards consumers.

Improving law enforcement is a government priority in protecting digital consumers. The National Consumer Protection Agency (BPKN) together with the Ministry of Communication and Information (Kominfo) have improved coordination to handle consumer reports more quickly and effectively. The government is also encouraging the establishment of online dispute mediation institutions to resolve conflicts between consumers and business actors without having to go through a lengthy court process.

To handle the dispute, Large e-commerce platforms such as Tokopedia, Shopee, and Lazada have an important role in protecting consumers. They have implemented features such as seller ratings, product reviews, and responsive customer service. In addition, some platforms also provide consumer protection programs, such as refunds if the product is not suitable. Collaboration between the government and these platforms is essential to create a safer and more trusted digital trading ecosystem.

Moreover, The government and digital trade associations have also held training and seminars to raise awareness among businesses about the importance of protecting consumers. A certification program for online businesses has also been introduced as a measure to ensure compliance with consumer protection standards. In addition to the role of government and business actors, consumers also have a responsibility to create a safe digital environment. Understanding consumer rights is essential, as consumers need to know their rights, such as the right to correct information, the right to choose, and the right to security. In addition, they must be careful in transactions by checking the seller's reputation, reading product reviews, and avoiding transactions with suspicious parties. If their experience losses, consumers must report the case to the authorities, such as BPNP or the relevant e-commerce platform.

Beside that, The development of digital commerce has changed the way people interact, shop, and transact. However, behind this progress, new threats have emerged related to data security and privacy. Data leaks, cyber attacks, and misuse of personal information are increasingly pressing issues to be addressed. In this context, the role of law is very important to protect consumers and ensure a safe digital ecosystem. This article discusses various aspects of data security and privacy in digital commerce, including the cyber risks faced, the role of law in risk mitigation, and the challenges of implementing regulations in Indonesia.

Privacy and security are key issues in Indonesia's digital commerce. With more and more transactions using digital technology, privacy and security are major concerns. The law is not enough to prevent data breaches, misuse of personal data, and cyber attacks, which are increasing in this context. Certain sections are subject to the ITE Law and regulated by PP No. 12/2019 concerning the Implementation of Electronic Systems and Electronic Transactions, personal data protection has not been fully organized and implemented.

Personal data protection in digital commerce requires a more comprehensive legal approach. To ensure better protection of personal data, Indonesia is currently working on developing the Personal Data Protection Bill/*Rancangan Undang-Undang Perlindungan Data Pribadi* (RUU PDP). The current legal system is full of loopholes that allow for data misuse and leakage. E-commerce companies are often unclear about how they protect consumer data, and there is still no clear system for managing losses from data breaches. In addition to strengthening regulations, it is important to raise public awareness of the importance of protecting personal data and support better cybersecurity infrastructure. The government and the private sector must work together to create a safe and trusted digital business environment.

### 3.4 Cyber risks in digital commerce

One of the main risks in digital commerce is the leakage of personal data. Personal data, such as names, addresses, telephone numbers, and credit card information, are often the main targets of hackers. This data leak can be used for various criminal acts, such as fraud, identity theft, and extortion. The data leak case involving a major e-commerce platform in Indonesia shows that even though companies have security systems, this threat still exists. In some cases, the leaked data is even sold on the digital black market (dark web), which makes the losses even wider. Phishing attacks also are a common cyber fraud method used to steal users' personal information. In the context of digital commerce, these attacks are usually carried out through fake emails, SMS, or links that direct victims to fake websites that resemble genuine e-commerce platforms. Unsuspecting consumers often fall victim, voluntarily handing over their personal data without realizing the dangers that lurk.

Many digital platforms use consumer data to target more relevant ads. While this practice is legal if consumers give permission, in many cases, the data is used without the consumer's knowledge or consent. This abuse not only violates consumer privacy but also creates distrust in digital platforms. Moreover, there is Ransomware which is a type of cyberattack in which hackers encrypt user data and demand a ransom to regain access to it.

In digital commerce, ransomware can attack e-commerce systems, causing major losses for both consumers and businesses.

In Indonesia, the Personal Data Protection Law (UU PDP), which was passed in 2022, is an important milestone in protecting consumers from cyber risks. This law regulates how personal data is collected, used, stored, and protected. It includes obligations for business actors to ensure the security of consumers' personal data, including implementing an adequate cybersecurity system. Additionally, consumers have the right to know how their data is used, withdraw consent, and request the deletion of data. The PDP Law also stipulates administrative and criminal sanctions for parties who violate the provisions of personal data protection.

The ITE Law also plays an important role in addressing cyber risks in digital trade. This law regulates cybercrime such as hacking, phishing, and malware distribution. E-commerce platforms are required to ensure the security of their systems so that they do not become targets or tools of cybercrime.

The Indonesian government through the Regulation of the Minister of Trade (Permendag) also provides specific rules on trade through electronic systems. This rule includes the obligation of business actors to provide a consumer complaint mechanism regarding data security and privacy issues. As digital trade is cross-border, international cooperation is essential in addressing cyber risks. Indonesia participates in various global initiatives, such as the ASEAN framework on cybersecurity, to ensure that data protection and cybersecurity practices are adopted regionally.

Even when regulations are in place, enforcement is often a major challenge. Many violations are not taken seriously, leaving cybercriminals free to repeat their actions. Weak enforcement also creates the perception that consumer protection in digital commerce is still not a priority. Moreover, Not all business actors, especially small and medium enterprises (SMEs), have the ability to meet data security standards set by law. This creates a gap between regulations and technical capabilities in the field. Many consumers are unaware of their rights under existing regulations. This lack of legal literacy makes them less likely to report violations or take proactive steps to protect their personal data.

### *3.5 Evolution of cyber threats*

Cyber threats are constantly evolving, while regulations take time to develop and implement. This misalignment creates legal loopholes that cybercriminals often exploit. Strategies to overcome challenges include increasing digital literacy, strengthening law enforcement, collaborating with digital platforms, and regularly updating regulations. The government, together with industry players, needs to conduct intensive digital literacy campaigns to increase public awareness of data security and privacy, ensuring that consumers are taught how to recognize cyber threats and protect their personal data. Strict law enforcement against cybercriminals will create a deterrent effect and increase consumer confidence in the legal system, while the formation of a special unit to handle cybercrime can speed up the investigation and resolution process. E-commerce platforms must play an active role in ensuring the security of user data by adopting technologies such as data encryption, dual authentication, and real-time monitoring of suspicious activity, and the government can provide incentives for platforms that comply with high security standards. Additionally, regulations need to be updated regularly to keep up with technological developments and ever-changing cyber threats, with the government involving technology and legal experts to ensure that regulations remain relevant.

Trade has been one of the most important aspects of economic activity since ancient times. However, the development of information technology has brought significant changes in the way humans conduct transactions, moving from conventional trade to digital-based trade. This evolution not only changes the way businesses and consumers interact, but also creates new challenges that must be responded to by the existing legal framework. In this context, Indonesia faces unique dynamics that reflect the need to update regulations to remain relevant and able to protect all parties in the digital trade ecosystem.

Conventional trade refers to the traditional transaction system where sellers and buyers meet directly in a physical market. This model involves physical elements such as shops, tangible merchandise, and cash payments. The relationship between businesses and consumers in this era is direct, allowing for transparent interactions. Applicable legal regulations, such as the Trade Law and the Consumer Protection Law, are designed to regulate these transactions.

With the development of information and communication technology, trade has begun to shift to digital platforms. E-commerce, marketplaces, and online shopping applications have become the main platforms that connect business actors and consumers without geographical limitations. Transactions now involve virtual elements, such as digital product catalogs, electronic payments, and delivery of goods through third parties. This change allows for high efficiency, but also brings new challenges that are different from conventional trade.

In the digital era, the relationship between business actors and consumers also has become more complex. In conventional trade, consumers deal directly with sellers, so legal responsibility is clear. However, in digital trade, marketplace platforms often act as intermediaries between sellers and buyers. This creates legal confusion regarding responsibility for problems such as defective products, late delivery, or fraud.

Digital platforms often claim that they only provide a means of transaction, so they are not responsible for the quality of products or services. On the other hand, consumers often find it difficult to obtain legal clarity when facing disputes. The lack of regulation regarding the role of platforms in digital trade is one of the main challenges, such as payment.

Payments in digital commerce are dominated by electronic methods, such as credit cards, bank transfers, digital wallets (e-wallets), and QR code-based payments. This raises new challenges related to financial data security and consumer protection. In Indonesia, the Financial Services Authority (OJK) and Bank Indonesia (BI) have regulated digital payment transactions, but these regulations still need to be adjusted to be more relevant to the ever-growing technological innovations.

In addition, the emergence of digital currencies such as cryptocurrencies also presents legal challenges that have not been fully regulated in Indonesia. While BI prohibits its use as a means of payment, cryptocurrencies are still used as an investment tool, which requires special regulations to protect investors and prevent money laundering. All of these things are done to protect consumers' personal data.

In digital commerce, consumers' personal data is a key component in transactions. Digital platforms often collect data such as names, addresses, telephone numbers, and payment information to facilitate the transaction process. However, the management of this data is often accompanied by the risk of misuse or data leakage. Indonesia has taken an important step by passing the Personal Data Protection Law/*Undang-Undang Perlindungan Data Pribadi* (UU PDP) in 2022. This law aims to regulate how consumers' personal data is collected, used, and protected. However, its implementation still faces challenges, especially in ensuring digital platform compliance, considering the large number of cross-border business actors operating in Indonesia.

Regulations designed for conventional trade are often unable to handle the complexities of digital trade. For example, the current Consumer Protection Law (UUPK) does not specifically regulate consumer rights in digital transactions. This ambiguity creates legal uncertainty, which can be detrimental to consumers and business actors. In addition, international trade law has not been fully adapted to deal with the dynamics of cross-border trade. When Indonesian consumers buy products from abroad through digital platforms, it is often unclear which law applies in the event of a dispute.

The transformation to digital trade requires more responsive and flexible regulations. The Indonesian government has begun to address this challenge by issuing Government Regulation No. 80 of 2019 concerning Trading Through Electronic Systems (PMSE). This regulation covers various aspects, such as the responsibilities of digital business actors, consumer protection, and supervision of electronic transactions. However, the success of this regulation is highly dependent on its implementation. Good coordination is needed



between various government institutions, such as the Ministry of Trade, the Ministry of Communication and Information, and the OJK, to ensure that these regulations are truly effective in protecting consumers and encouraging the growth of the digital economy.

Law enforcement in the digital era faces its own challenges. One of them is the lack of understanding of law enforcement officers about technology and digital transactions. Cybercrime cases, such as online fraud and data theft, are often difficult to investigate because of their cross-border nature. The government needs to improve the capacity of law enforcement officers through training and the formation of special units to handle cases related to digital trade. In addition, international cooperation is also key to overcoming global cybercrime.

### *3.6 Solutions and recommendations*

To face the challenges arising from the evolution of digital trade, Indonesia needs to take strategic steps, including revising old regulations, digitizing the legal system, increasing legal and digital literacy, and strengthening international cooperation. Regulations such as the Consumer Protection Law and the ITE Law need to be revised to be more relevant to the needs of digital trade, incorporating provisions on digital consumer rights, platform responsibilities, and online dispute resolution. The government can utilize technology to create a more efficient and transparent legal system, for example, by using online platforms for dispute mediation and digital business registration to accelerate legal processes. Additionally, consumers and business actors must be educated about their rights and obligations in digital transactions, with digital literacy campaigns helping the public understand the risks and responsibilities in the digital trade ecosystem. Given the cross-border nature of digital trade, Indonesia must actively participate in international forums to establish a global legal framework that supports and regulates digital trade effectively.

Digital transformation has brought about major changes in the world of trade, opening up new opportunities and challenges that require adaptation of the legal framework. In Indonesia, the growth of the digital economy is growing rapidly, supported by high internet penetration and the increasing popularity of e-commerce platforms. However, regulations that are not yet fully adaptive pose risks to consumers and business actors. Therefore, a mature strategy is needed to build a relevant, responsive, and equitable digital trade legal framework. This article will discuss important strategies that can be implemented to create an adaptive digital trade legal framework in Indonesia, including regulatory revisions, cross-sector collaboration, increasing digital legal literacy, and strengthening law enforcement.

Many laws in Indonesia, such as the Consumer Protection Law (UUPK) and the Electronic Information and Transactions Law (UU ITE), are designed for the context of conventional commerce. Revisions to these regulations are urgently needed to address the challenges that arise in digital commerce, such as:

- a. Protection of consumer rights in online transactions.
- b. Law enforcement for violations such as online fraud and data leaks.
- c. Regulation of digital platform responsibilities, including marketplaces and electronic transaction service providers.

One concrete step is to include clauses that regulate digital consumer rights, such as price transparency, quality of goods/services, and mechanisms for returning goods or refunds. The Indonesian government has issued Government Regulation No. 80 of 2019 concerning Electronic Trading (E-Commerce). Although this is a significant step, there are still regulatory gaps that need to be filled, such as personal data protection, cyber risk management, and regulation of cross-border trading activities. More in-depth specific regulations must be created to address specific issues such as cryptocurrency, dropshipping, and online dispute resolution. These regulations must also cover micro,

small, and medium enterprises (MSMEs), which are the backbone of the Indonesian economy.

The transformation of digital trade law requires good coordination between various government agencies, such as the Ministry of Communication and Informatics to regulate technology infrastructure, the Ministry of Trade to regulate digital trade policies, and the Financial Services Authority/*Otoritas Jasa Keuangan* (OJK) and Bank Indonesia (BI) to regulate electronic payment transactions. This collaboration can accelerate the regulatory harmonization process, so that the resulting policies are more comprehensive and synchronous. The private sector, including technology companies and e-commerce platforms, should be involved in policy making. As parties who understand the dynamics of the digital market, their contributions can help the government design realistic and relevant regulations. In addition, the government can encourage the private sector to adopt best practices, such as data security certification, digital business codes of ethics, and transparency in transactions.

Due to the cross-border nature of digital trade, Indonesia needs to build cooperation with other countries and international organizations. Some important focuses in this cooperation include the settlement of cross-border disputes through international legal mechanisms, handling cybercrime by sharing information and technology between countries, and the standardization of globally recognized digital trade regulations.

One of the main obstacles to digital trade in Indonesia is the low level of digital literacy among the public. Many consumers do not understand their rights in online transactions, making them vulnerable to fraud or exploitation. The government, in collaboration with digital platforms, can conduct a digital legal literacy campaign. This campaign should include Understanding of digital consumer rights, Awareness of the importance of personal data protection, Practical steps to avoid the risks of online transactions. Beside that, Business actors, especially MSMEs, also need education about digital trade regulations. This is important to ensure they comply with applicable laws, while increasing their competitiveness in the digital market. This training can include Ethical and legal management of customer data, Fulfillment of customer service standards, Use of technology to improve operational efficiency.

Law enforcement in digital commerce requires a different approach (Neely, 2014). Crimes such as data theft, online fraud, and copyright infringement are often difficult to prosecute because of their technology-based nature (Chawki & Abdel Wahab, 2006). Establishing a special unit to handle these cases, with personnel trained in digital technology, can strengthen law enforcement. This unit should also be equipped with adequate tools and technology to track and prove violations.

Disputes in digital commerce often involve consumers, business actors, and digital platforms (Cortés, 2010). To resolve these disputes quickly and efficiently, the government can build Online Dispute Resolution (ODR). ODR is a digital platform that allows consumers and business actors to resolve disputes without having to attend a physical court (Unnaty & Goyal, 2023). This system can save time and costs, while providing a more adaptive solution to the characteristics of digital commerce (Schmitz, 2018).

In addition, businesses and governments can also use technology to support regulations such as blockchain and others. Blockchain technology can be used to increase transparency in digital commerce (Bulsara & Vaghela, 2020). For example, blockchain can help record transactions permanently and irreversibly, making audits easier and preventing fraud (Wang & Kogan, 2018). Artificial Intelligence (AI) also can be used to monitor activities on digital platforms in real-time (Tien, 2017). With AI, the government can detect suspicious transaction patterns, such as fraud or other illegal activities, so that law enforcement can be carried out more quickly (Harris, 2022).

In the digital era, legal transformation is one of the keys to creating a conducive and sustainable economic ecosystem (Muzykant et al., 2020). Digital trade in Indonesia is experiencing rapid growth, especially through e-commerce platforms, fintech, and other digital innovations (Dewi & Lusikooy, 2023). However, the acceleration of the digital economy also raises new legal challenges that must be anticipated (Brynjolfsson & McAfee,

2011). Legal transformation is not only important to overcome challenges, but also opens up great opportunities for the growth of the digital economy (Haslehner et al., 2019). Responsive, inclusive, and proactive regulations can encourage innovation, increase consumer confidence, and strengthen Indonesia's competitiveness in the global market (Fridayani et al., 2024). This article discusses the various opportunities that arise from legal transformation to support the digital economy in Indonesia.

#### 4. Conclusion

The changes to the Digital Trade Law in Indonesia reflect the challenges and opportunities in regulating the ever-evolving digital ecosystem. The main challenge lies in consumer protection which is still not optimal, so stricter regulations are needed to guarantee user rights in digital transactions. In addition, data security and protection are also crucial issues that require clearer and more structured regulations to prevent violations and increase public trust in the digital system. To face this challenge, a flexible approach, strict supervision, and close collaboration between the government, the private sector, and civil society are needed to create a safe and fair digital business environment.

On the other hand, increasing trust and legal certainty in the digital ecosystem is key to the growth of this sector. Strengthened consumer protection through transparent regulations, easily accessible complaint mechanisms, and strict data security standards will encourage more digital transactions. This has a direct impact on market expansion and accelerates the development of Indonesia's digital economy. In addition, business actors, especially MSMEs, need legal certainty so that they can develop their businesses with a sense of security from regulatory uncertainty. Adaptive regulations can also encourage innovation and open up opportunities to participate in the global market while still complying with international standards.

Legal transformation in digital trade also plays an important role in encouraging technological innovation. By creating regulations that support experimentation and development of new technologies, such as through regulatory sandboxes, business actors have the space to test and develop products without worrying about legal sanctions. Innovations in the fintech, e-commerce, and logistics sectors have shown great benefits from this approach. In addition, collaboration between the government and the technology industry sector is needed to ensure that the resulting regulations are relevant to market needs and do not hinder innovation.

In facing the challenges of the digital era, improving legal competence is a key factor that cannot be ignored. Education and training in the fields of digital law, cybersecurity, and blockchain technology must be strengthened to ensure that law enforcement officers, lawyers, and academics have adequate understanding. Thus, they can enforce the law more effectively and responsively to technological changes. In addition, judicial institutions and trade regulators must strengthen their capacity to handle digital trade cases and utilize technology to increase transparency and efficiency in the legal process.

Great opportunities also arise in cross-border trade, where Indonesia can strengthen its position in the global digital economy by harmonizing regulations with international standards. This regulatory adjustment will facilitate the export of digital products and services, as well as increase Indonesia's competitiveness on the international stage. Thus, Indonesian business actors can more easily access the global market and protect Indonesian consumers in international transactions.

Investment in the digital sector is also expected to increase along with clear and transparent legal certainty. Regulations that encourage investment, such as tax incentives and easy licensing for technology startups, can create a sustainable investment ecosystem. By providing adequate legal protection for investors, Indonesia can attract more capital to support the growth of the digital sector.

Furthermore, digital legal transformation opens up great opportunities to increase transparency and accountability, for example through the application of blockchain technology in recording transactions and logistics. This system allows for tighter

supervision and reduces the risk of data manipulation, thereby increasing trust in the digital ecosystem. On the other hand, the implementation of a digital dispute resolution system will provide faster and more efficient access for consumers and business actors, while reducing the burden on conventional justice.

In conclusion, e-court and digital legal transformation in Indonesia are important steps forward in building a safe, innovative, and competitive digital business ecosystem. By strengthening consumer protection, increasing legal certainty for business actors, and encouraging innovation and investment, Indonesia can strengthen its position as a leader in the digital economy in the Southeast Asia region. However, more attention must be given to the outermost and most disadvantaged areas, ensuring that all Indonesian people, including those in remote areas, can feel the benefits of this transformation.

### **Acknowledgements**

The author sincerely thank my colleagues, mentors, and institutions that have supported this research. Special appreciation goes to those who provided valuable insights and constructive feedback throughout the study.

### **Author Contributions**

The author solely conducted the research, including conceptualization, data collection, analysis, and writing. All interpretations, findings, and conclusions presented in this study are the author's own work.

### **Funding**

This research received no external funding.

### **Ethical Review Board Statement**

Not available.

### **Informed Consent Statement**

Not available

### **Data Availability Statement**

Not available.

### **Conflicts of Interest**

The author declares no conflict of interest.

### **Open Access**

©2025. The author(s). This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. The images or other third-party material in this article are included in the article's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this license, visit: <http://creativecommons.org/licenses/by/4.0/>

### **References**

Agustiawan, M. H., Umam, K., & Maleka, M. (2022). The importance of consumer protection law revision in the development of e-commerce in the digital transformation era in Indonesia. *Proceedings of Islamic Economics, Business, and Philanthropy*, 1(2), 305-317. <https://jurnalfebi.iainkediri.ac.id/index.php/proceedings/article/view/249>

- Alexander, K. (2009). *Economic Sanctions: Law and Public Policy*. Palgrave Macmillan.
- Aminullah, E., Fizzanty, T., Nawawi, N., Suryanto, J., Pranata, N., Maulana, I., ... & Budiatri, A. P. (2024). Interactive components of digital MSMEs ecosystem for inclusive digital economy in Indonesia. *Journal of the Knowledge Economy*, 15(1), 487-517. <https://doi.org/10.1007/s13132-022-01086-8>
- Arifin, R., Kambuno, J. A., Waspih, W., & Latifiani, D. (2021). Protecting the Consumer Rights in the Digital Economic Era: Future Challenges in Indonesia. *Jambura Law Review*, 3, 135-160. <https://doi.org/10.33756/jlr.v3i0.9635>
- Brynjolfsson, E., & McAfee, A. (2011). *Race against the machine: How the digital revolution is accelerating innovation, driving productivity, and irreversibly transforming employment and the economy*. Brynjolfsson and McAfee.
- Bulsara, H. P., & Vaghela, P. S. (2020). Blockchain technology for e-commerce industry. *International Journal of Advanced Science and Technology*, 29(5), 3793-3798. <http://serisc.org/journals/index.php/IJAST/issue/view/274>
- Burri, M. (2018). Understanding and shaping trade rules for the digital era. *The Shifting Landscape of Global Trade Governance*, edited by Manfred Elsig, Michael Hahn and Gabriele Spilker (Cambridge University Press, 2019), 73-106. <https://ssrn.com/abstract=3288624>
- Burt, S., & Sparks, L. (2003). E-commerce and the retail process: a review. *Journal of Retailing and Consumer services*, 10(5), 275-286. [https://doi.org/10.1016/S0969-6989\(02\)00062-0](https://doi.org/10.1016/S0969-6989(02)00062-0)
- Chawki, M., & Abdel Wahab, M. S. (2006). Identity theft in cyberspace: Issues and solutions. *Lex Electronica*, 11, 1. <https://www.lex-electronica.org/en/articles/vol11/num1/>
- Cortés, P. (2010). *Online dispute resolution for consumers in the European Union* (p. 266). Taylor & Francis.
- Dewi, G. D. P., & Lusikooy, A. E. (2023). E-commerce Transformation in Indonesia: Innovation and Creative Destruction. *Nation State: Journal of International Studies*, 6(2), 117-138. <https://doi.org/10.24076/nsjis.v6i2.1304>
- Eastin, M. S. (2002). Diffusion of e-commerce: an analysis of the adoption of four e-commerce activities. *Telematics and informatics*, 19(3), 251-267. [https://doi.org/10.1016/S0736-5853\(01\)00005-3](https://doi.org/10.1016/S0736-5853(01)00005-3)
- Fridayani, H. D., Hakim, M. L., & Chiang, L. C. (2024). Inclusive Development through Smart Environmental Strategies and Digital Innovation: Empowering Informal Businesses in Semarang, Indonesia. In *E3S Web of Conferences* (Vol. 594, p. 02002). EDP Sciences. <https://doi.org/10.1051/e3sconf/202459402002>
- Harris, H. (2022). Artificial intelligence and policing of financial crime: a legal analysis of the state of the field. *Financial Technology and the Law: Combating Financial Crime*, 281-299. [https://doi.org/10.1007/978-3-030-88036-1\\_12](https://doi.org/10.1007/978-3-030-88036-1_12)
- Haslehner, W., Kofler, G., Pantazatou, K., & Rust, A. (Eds.). (2019). *Tax and the digital economy: challenges and proposals for reform*. Kluwer Law International BV.
- Jomo, K. S. (2019). *Southeast Asia's misunderstood miracle: industrial policy and economic development in Thailand, Malaysia and Indonesia*. Routledge.
- Kerti, N. R. M. (2023). Consumer protection institutions strengthening in the digitalization era. *Indonesian Journal of Multidisciplinary Science*, 3(1), 55-63. <https://doi.org/10.55324/ijoms.v3i1.675>
- Kim, H. (2019). Globalization and regulatory change: The interplay of laws and technologies in E-commerce in Southeast Asia. *Computer Law & Security Review*, 35(5), 105315. <https://doi.org/10.1016/j.clsr.2019.03.009>
- Liang, F., Yu, W., An, D., Yang, Q., Fu, X., & Zhao, W. (2018). A survey on big data market: Pricing, trading and protection. *Ieee Access*, 6, 15132-15154. <https://doi.org/10.1109/ACCESS.2018.2806881>
- Liao, Z., & Cheung, M. T. (2001). Internet-based e-shopping and consumer attitudes: an empirical study. *Information & management*, 38(5), 299-306. [https://doi.org/10.1016/S0378-7206\(00\)00072-0](https://doi.org/10.1016/S0378-7206(00)00072-0)

- Luo, Y. (2021). A general framework of digitization risks in international business. *Journal of international business studies*, 53(2), 344. <https://doi.org/10.1057/s41267-021-00448-9>
- Muzykant, V., Komarov, V., Shalnova, O., Grinberg, T., & Muqsith, M. A. (2020). Corporate social responsibility in the digital transformation of business ecosystems. *Int J Innov Creativity Change*, 14(5), 1295-1313. <https://www.ijicc.net/index.php/volume-14-2020/202-vol-14-iss-5>
- Neely, P. R. (2014). The Impact and Implementation of E-Commerce in Government & Law Enforcement. *Journal of Management Policy & Practice*, 15(1). <https://articlegateway.com/index.php/JMPP/index>
- Okediji, R. L. (2018). Creative markets and copyright in the fourth industrial era: reconfiguring the public benefit for a digital trade economy. *Geneva: International Centre for Trade and Sustainable Development*. <https://www.wita.org/nextgentrade/creative-markets-and-copyright-in-the-fourth-industrial-era-reconfiguring-the-public-benefit-for-a-digital-trade-economy/>
- Pangestu, M., Rahardja, S., & Ing, L. Y. (2015). Fifty years of trade policy in Indonesia: New world trade, old treatments. *Bulletin of Indonesian Economic Studies*, 51(2), 239-261. <https://doi.org/10.1080/00074918.2015.1061915>
- Primawanti, H., Subagyo, A., & Dermawan, W. (2022). ASEAN 4.0. Era: Development in Digital Economy and Trade Sector. *Dinamika Global: Jurnal Ilmu Hubungan Internasional*, 7(02), 333-349. <https://doi.org/10.36859/jdg.v7i02.1279>
- Schmitz, A. J. (2018). There's an App for That: Developing Online Dispute Resolution to Empower Economic Development. *Notre Dame JL Ethics & Pub. Pol'y*, 32, 1. <https://scholarship.law.nd.edu/ndjlepp/vol32/iss1/1/>
- Subagyono, B. S. A., Romadhona, M. K., Chumaida, Z. V., Suheryadi, B., & Elkhatab, N. S. (2024). Can Indonesia's Laws Keep Up? Protecting Consumer Rights in Digital Transactions. *Journal of Law and Legal Reform*, 5(3). <https://doi.org/10.15294/jllr.v5i3.4202>
- Teece, D. J. (2018). Profiting from innovation in the digital economy: Enabling technologies, standards, and licensing models in the wireless world. *Research policy*, 47(8), 1367-1387. <https://doi.org/10.1016/j.respol.2017.01.015>
- Tien, J. M. (2017). Internet of things, real-time decision making, and artificial intelligence. *Annals of Data Science*, 4, 149-178. <https://doi.org/10.1007/s40745-017-0112-5>
- Unnaty, & Goyal, A. (2023). The Evolution and Effectiveness of Online Dispute Resolution (ODR) Platforms: A Comprehensive Analysis of ADR in the Digital Age. *Part 2 Indian J. Integrated Rsch. L.*, 3, 1. <https://ijirl.com/volume-iii-issue-v/>
- Wang, Y., & Kogan, A. (2018). Designing confidentiality-preserving Blockchain-based transaction processing systems. *International Journal of Accounting Information Systems*, 30, 1-18. <https://doi.org/10.1016/j.accinf.2018.06.001>

### Biographies of Author

**Abdurrahim**, Master of Law Program, Faculty of Law, Universitas Islam Indonesia (MH UII), Jl. Kaliurang km. 14,5 Sleman, Yogyakarta 55584, Indonesia.

- Email: [abdurrahim5208@gmail.com](mailto:abdurrahim5208@gmail.com)
- ORCID: N/A
- Web of Science ResearcherID: N/A
- Scopus Author ID: N/A
- Homepage: N/A