

## THE EFFECTIVENESS OF DIGITAL EVIDENCE IN E-COMMERCE DISPUTE LITIGATION IN THE DIGITAL ERA

Febrina Artia Putri<sup>1</sup>, Nabitatus Sa'adah<sup>2</sup>

Master of Laws, Faculty of Law, Diponegoro University, Semarang, Indonesia

E-mail: febrinaartiap@gmail.com

Received : 01 January 2026

Accepted : 03 February 2026

Revised : 17 January 2026

Published : 28 February 2026

### Abstract

The development of digital commerce, while offering convenience and positive impacts, also has the potential to trigger legal disputes between related parties. In the litigation process of digital commerce, digitally presented evidence such as emails, instant messages, and electronic payment records becomes crucial in proving the truth of a legal event. This article specifically examines the effectiveness of electronic evidence in resolving digital trade disputes in Indonesia. Using a normative juridical approach, this study finds that although digital evidence is recognized under the Electronic Information and Transactions (ITE) Law, its implementation still faces several challenges in terms of validity and integrity. Therefore, strengthening regulations, increasing public awareness, and enhancing the capacity of competent law enforcement officials are essential to ensure justice and effectiveness in resolving digital commerce disputes.

**Keywords:** *Digital Commerce, Evidence, Litigation, Transaction Disputes.*

### INTRODUCTION

Developments in information and communication technology have significantly transformed the way society interacts socially and economically, particularly in business transactions. E-commerce, as a manifestation of the digital economy, has now become an essential element of everyday life. Buying and selling activities that were previously conducted through traditional methods have shifted to digital platforms, offering greater speed, convenience, and broader access. However, this advancement also gives rise to new challenges, particularly in handling disputes arising from electronic transactions. Advancements in science and technology have triggered the emergence of increasingly digitalized aspects of life that continue to evolve dynamically. One area significantly affected is the legal sector. In the contemporary legal landscape, law has begun to integrate technological progress. Indirectly, the implementation of teleconference media and e-court systems serves as concrete evidence of the utilization of technological and information governance advancements in the current era of digitalization. The openness and freedom resulting from advances in digital science and technology have also fostered the creation of global markets and local cultures that encourage new innovations. These developments align with the continuously changing dynamics of society, requiring the law to adapt in order to ensure order and legal certainty amid the globalization of modern society. Globalization itself further accelerates progress in information and communication technology, effectively eliminating boundaries between global dimensions of society.

The emergence of new legal actions is a response to the rapid development of information technology alongside shifts in societal lifestyles. This condition prompted the Indonesian government to enact Law Number 19 of 2016, which amended Law Number 11 of 2008 concerning Information and Electronic Transactions (ITE Law). As an extension of the concept of admissible legal evidence, Article 5 paragraph (2) stipulates that electronic information and/or electronic documents, including their printed forms, are recognized as valid legal evidence under the law. In the context of civil law, particularly in the fields of trade and banking, the use of electronic evidence plays a crucial role in the evidentiary system related to civil procedural law. The existence of electronic evidence is a consequence of advancements in information and communication technology, especially in the handling of civil cases in court. When associated with reforms in civil procedural law, provisions concerning evidence are set out in Article 164 of the HIR, Article 284 of the RBg, and Article 1866 of the Civil Code, which regulate types of evidence in a limited and hierarchical manner in the resolution of civil disputes. By way of illustration, in the digital era, online buying and selling transactions generate transaction evidence in the form of digital data that can be printed as transcripts. These electronic transcripts, in the event of a future civil dispute, may serve as reference evidence for the

parties involved. Under civil law provisions, formal truth serves as the guiding principle, meaning that truth must be based on applicable legal rules. Therefore, evidentiary procedures are regulated in procedural law and must comply with existing legislation. From a formal perspective, although electronic evidence has not been comprehensively regulated in civil procedural law, its recognition remains limited. To date, electronic evidence is only explicitly acknowledged within the framework of substantive law under the ITE Law, including the use of electronic information and documents and the application of teleconferencing in witness examinations. This issue constitutes the author's primary concern and forms the basis of this study. Accordingly, this research aims to examine the effectiveness and legal standing of digital evidence in resolving digital buying and selling disputes, as well as the evidentiary strength of digital evidence in litigation processes in the current digital era.

## METHOD

The type of research used is juridical-normative. This juridical-normative approach prioritizes research on existing secondary data, supported by a search of regulations and literature related to the problem being studied. In terms of data analysis, the author employed a qualitative analysis method, which is conducted by explaining the data based on applicable laws and regulations, expert opinions, and the author's own knowledge, elaborated using the interactive model of Matthew B. Milles and A. Michael Haberman (1999), which consists of data collection, data reduction, data presentation, and drawing conclusions. To maintain validity, the research data was tested using a triangulation model of sources and methods.

## RESULTS AND DISCUSSION

### Effectiveness and Legal Standing of Digital Evidence in E-Commerce Disputes

In the continuously developing digital era, digital trading activities or e-commerce have experienced rapid growth in line with the increasing use of information technology. This transformation has had a significant impact on the way individuals and companies conduct transactions involving the purchase and sale of goods and services. However, such advancements also give rise to new legal risks, particularly in relation to transaction disputes that are often difficult to prove using traditional methods. This is where the role and effectiveness of digital evidence become crucial in judicial proceedings. Digital evidence refers to all types of electronic information or documents that may be used to support the proof of a legal event. In the context of e-commerce disputes, digital evidence includes online transaction records, electronic transfer receipts, email correspondence, conversations through messaging applications, and activity logs on digital platform systems. All of these forms of evidence play a vital role in uncovering the facts of a dispute, especially since most interactions in e-commerce transactions occur without direct physical meetings and without tangible documents.

In Indonesia, two systems of evidence are recognized, namely formal and material systems. In civil procedural law, the formal evidentiary system is applied, whereby the evidentiary process is based on applicable legal provisions. However, both criminal and civil procedural laws have not explicitly regulated electronic documents or information as formal means of evidence. Formal truth refers to what is presented by the parties during trial proceedings, which serves as the basis for judicial consideration in rendering decisions. Normatively, legally valid evidence is regulated under Article 164 of the HIR, Article 284 of the RBg, and Article 1866 of the Indonesian Civil Code, which include written evidence, witness testimony, presumptions, confessions, and oaths. In addition, site inspections and expert testimony are regulated as supplementary forms of evidence. Nevertheless, electronic information and documents have not been formally recognized as admissible evidence in Indonesian civil procedural law. This is problematic given the rapid development of digital technology, such as transactions conducted through mobile banking, where electronic evidence often exists only in the form of transaction receipts or records that can be printed by financial institutions without any physical documentation.

Law Number 11 of 2008 concerning Information and Electronic Transactions (ITE Law), as amended by Law Number 19 of 2016, explicitly stipulates that electronic information and/or electronic documents constitute legally valid evidence (Article 5 paragraph (1)). Furthermore, Article 6 of the ITE Law provides that electronic documents may be equated with written documents as long as they can be accessed and their integrity is guaranteed. However, in civil law practice, the implementation of these provisions still faces challenges. Digital information is highly susceptible to alteration, interception, or rapid dissemination, making it vulnerable to misuse. On the other hand, modern business practices rely heavily on digital documentation and information systems. Although civil procedural law still requires evidence to conform strictly to statutory provisions, judicial practice shows that judges have increasingly begun to accept electronic evidence such as emails, SMS messages, and other digital recordings as considerations in resolving cases.

The effectiveness of digital evidence does not depend solely on its normative legal recognition but also on its ability to ensure authenticity, integrity, and validity. One of the main challenges in digital evidence lies in the potential for data manipulation, identity theft, or communication interception. Therefore, certain technical standards, such as digital signatures, time stamping, and digital forensics, are necessary to ensure that such evidence can be legally recognized. Pursuant to Article 16 of Law Number 4 of 2004 concerning Judicial Power, judges are prohibited from refusing to examine and adjudicate a case solely on the grounds that the applicable law is unclear. Accordingly, judges particularly in commercial courts—have begun to show openness toward accepting electronic evidence in judicial practice. This condition indicates the need for reform in the evidentiary system, shifting from a closed model to a more open one that accommodates technological developments and societal needs. On the other hand, judges are granted the authority to assess the probative value of evidence based on personal conviction and applicable law. With respect to digital evidence, although the regulatory framework has not yet been fully structured within the Civil Procedure Code (HIR/RBg), the principle of *in dubio pro justitia* and Article 16 of Law Number 48 of 2009 concerning Judicial Power provide judges with discretion to accept evidence even in the absence of explicit regulation.

In the current context, the limitation of admissible evidence to a closed list is no longer relevant. The ITE Law has provided legal legitimacy to electronic evidence in dispute resolution. Articles 5 paragraph (2) and Article 6 affirm that electronic information that meets the requirements of written form and can be accessed, read, and verified for authenticity may be recognized as legally valid evidence. Consequently, electronic evidence now plays a critical role in ensuring legal protection and certainty for parties involved in civil disputes. Thus, it can be concluded that the effectiveness and legal position of digital evidence in e-commerce disputes are closely linked to two main factors: regulatory strength and institutional readiness. Improvements in procedural law regulations, education and training for law enforcement officials, and the adoption of technology within the judicial system are essential prerequisites for ensuring justice in the digital era. Without such measures, digital evidence—despite its significant potential to reveal the truth—may be overlooked due to weak normative foundations and limited technical capacity among legal practitioners. Therefore, Indonesia's legal system must continue to adapt in order to address the inevitable challenges posed by digitalization.

## The Evidentiary Strength of Electronic Evidence in E-Commerce Disputes

In today's highly digitalized era, online buying and selling transactions or e-commerce have become an integral part of everyday life. Nevertheless, alongside the increasing volume of digital transactions, legal disputes have also become more frequent, particularly when one party suffers a loss or when contractual obligations are breached. In resolving e-commerce disputes through litigation, evidence plays a crucial role, with electronic evidence being especially significant in such cases. Electronic evidence encompasses all information or documents that are recorded, stored, or transmitted digitally through electronic media and can be used to establish the truth of a legal event. Such evidence may take the form of emails, transaction records, screenshots, audio recordings, system activity logs, and electronic fund transfer records or bank statements. In e-commerce disputes, electronic evidence often serves as the primary or even the sole indicator of the existence of a transaction, agreement, or negligence between the parties involved.

Law Number 11 of 2008 concerning Information and Electronic Transactions (ITE Law), as amended by Law Number 19 of 2016, provides a legal foundation for the use of electronic evidence. Article 5 paragraph (1) of the ITE Law states that electronic information and electronic documents are legally admissible evidence. This provision is further reinforced by Article 6, which emphasizes that electronic documents may be recognized as valid written evidence as long as they can be accessed, displayed, their integrity is ensured, and they are accountable. Based on Law Number 19 of 2016 amending Law Number 11 of 2008, the issue of the probative force of electronic evidence is addressed in the general explanation, which states that e-commerce activities recognize the existence of electronic documents whose legal standing is equated with documents made on paper. This means that electronic documents are considered equivalent to paper-based documents, and therefore possess equal evidentiary value. The legal position of copies of electronic documents as evidence is regulated under Article 6 of Law Number 11 of 2008 concerning Information and Electronic Transactions. Furthermore, Article 11 of Law Number 11 of 2008 regulates the evidentiary function of electronic signatures. An electronic signature is deemed to have legal force and produce valid legal consequences if it meets at least the following requirements:

- a. The data used to create the electronic signature is uniquely linked to the signatory.
- b. The data used to create the electronic signature is under the exclusive control of the signatory at the time of signing.

- c. Any alteration to the electronic signature after the time of signing can be detected.
- d. Any alteration to the associated electronic information after the time of signing can be detected.
- e. There is a specific method used to identify the signatory.
- f. There is a method to demonstrate that the signatory has given consent to the related electronic information.

These conditions establish a binding legal relationship between the disputing parties with respect to the signing process, provided that the agreement does not violate the legal requirements of contracts under Article 1320 of the Indonesian Civil Code, unless otherwise stipulated or terminated before the agreed contractual period. In the implementation of digital payment systems, disputes between parties are highly possible; therefore, dispute resolution mechanisms serve as an important instrument of legal protection, particularly for users who engage in digital payment transactions. Although official recognition of electronic evidence exists, practical challenges remain. One of the primary issues concerns the authenticity and integrity of evidence. Digital evidence is highly vulnerable to alteration, forgery, or theft, necessitating validation mechanisms such as digital signatures, hash functions, and audit trails. Moreover, not all law enforcement officials—including judges and lawyers—possess sufficient technical knowledge and expertise to critically assess the probative value of digital evidence accurately.

Furthermore, in the context of e-commerce involving multiple platforms and cross-border parties, electronic evidence is often stored on servers located abroad or managed by third parties, such as marketplace providers. This situation creates difficulties in evidence collection, data requests, and digital forensic validation. Within Indonesia's civil procedural law system, which still adheres to a closed and limited evidentiary system pursuant to Article 164 of the HIR and Article 1866 of the Civil Code, the position of electronic evidence has not yet been explicitly recognized. Nevertheless, based on the principle of *ius curia novit* and the principle that judges may not refuse to adjudicate a case due to the absence of written law (Article 16 of the Judicial Power Law), judges may still substantively assess and consider electronic evidence. Therefore, to strengthen the role of electronic evidence in e-commerce disputes, it is necessary to enhance technical regulations and reform procedural law to be more responsive to digital conditions. Courts should also provide greater flexibility in digital evidentiary processes and apply technology-based evidentiary standards, such as electronic evidence testing and digital forensic audits. Ultimately, the recognition and reinforcement of digital evidence in evidentiary processes will significantly influence the effectiveness and fairness of e-commerce dispute resolution in the digital era. Legal regulatory reforms and the development of judicial institutional capacity are key factors in ensuring that the law can meet contemporary challenges in a relevant and progressive manner.

## CONCLUSION

### Conclusion

Based on the above discussion, it can be concluded that in the context of e-commerce disputes, digital evidence plays a highly crucial role as the primary means of proving the validity of legal events, given that most transactions are conducted without direct interaction and without physical documents. Although civil procedural law in Indonesia still adheres to a formal system of evidence and has not explicitly recognized digital evidence, the Civil Procedure Code (HIR/RBg) acknowledges electronic documents as regulated under Law Number 11 of 2008 on Information and Electronic Transactions (ITE Law). The evidentiary value of digital evidence depends not only on normative legal provisions but also on its technical reliability in ensuring data authenticity, integrity, and validity. Therefore, enhancing the capacity of law enforcement officers, applying digital forensic technology, and updating legal regulations to be responsive to technological developments are essential to ensuring justice and legal certainty. Judges are also granted discretion to assess digital evidence comprehensively, as stipulated in the Law on Judicial Power, even though specific regulations have not yet been fully established.

Furthermore, digital evidence such as electronic mail, transaction screenshots, and records of digital interactions has become increasingly important in proving e-commerce cases. The ITE Law and its explanatory provisions clearly equate digital documents with traditional physical documents, including regulations on digital signatures that possess legal force when certain criteria are met. This provides a normative basis for the evidentiary strength of digital evidence within the Indonesian legal system. However, significant challenges remain, ranging from technical issues such as the potential for data falsification to limited technical understanding among law enforcement officials. In addition, disputes involving cross-jurisdictional issues and data management by third parties further complicate the collection and verification of digital evidence. Therefore, strengthening the legal framework and establishing standardized digital forensic audit procedures are necessary to ensure that digital evidence can be assessed lawfully and fairly before the law.

### **Recommendations**

To create an evidentiary system that is adaptive to technological developments, reforms—particularly in civil procedural law—are required to explicitly recognize electronic evidence in court litigation. Revisions to the Civil Procedure Code (HIR/RBg) are expected to provide greater legal certainty for judges and legal practitioners in evaluating digital evidence. In addition, continuous training for law enforcement officers in digital forensics and cybersecurity is necessary to enhance their ability to assess the validity of electronic evidence. Judicial institutions should also establish rules governing the verification procedures of digital evidence, such as digital signatures and forensic audits, to minimize data manipulation. Cooperation with digital platform providers and e-commerce actors is equally important to ensure easy access to transaction records and archives while safeguarding personal data. Moreover, legal education for business actors and consumers is essential to raise awareness of the importance of preserving digital evidence to prevent disputes. The establishment of a specialized institution to handle electronic transaction disputes should also be considered to make the Indonesian judicial system more responsive and effective in addressing e-commerce cases.

### **REFERENCES**

#### **Undang Undang**

Undang-undang Nomor 19 tahun 2016 tentang perubahan atas Undang-undang Nomor 11 Tahun 2008 tentang Informasi dan Transaksi Elektronik  
Undang-undang Nomor 4 Tahun 2004 tentang Kekuasaan Kehakiman

#### **Jurnal**

- Anjani, M. R., & Santoso, B. (2018). Urgensi Rekonstruksi Hukum E-Commerce Di Indonesia. *Law Reform*, 14(1), 89-103.
- Asaad, A. F. (2023). Efektivitas hukum alat bukti elektronik dalam pemeriksaan bukti di Pengadilan Tata Usaha Negara. *Jurnal USM Law Review*, 6(1), 279-290.
- Dianta, D. (2023). Urgensi penegakan hukum e-commerce di Indonesia: Sebuah tinjauan yuridis. *Arus Jurnal Sosial Dan Humaniora*, 3(1), 1-14.
- Dotulong, T. (2014). Keberadaan Alat Bukti Elektronik Dalam Penyelesaian Sengketa Perdata. *Lex Privatum*, 2(3).
- Iskandar, T., Mauluddin, M., Rudi, R., & Utoyo, M. (2023). Kekuatan pembuktian alat bukti elektronik berdasarkan Undang-Undang Nomor 19 Tahun 2016 tentang Informasi Transaksi Elektronik (ITE). *Lex Stricta: Jurnal Ilmu Hukum*, 2(1), 23-34.
- Manope, I. J. (2017). Kekuatan Alat Bukti Surat Elektronik Dalam Pemeriksaan Perkara Pidana. *Lex Crimen*, 6(2).
- Nashir, F., & Mustafida, L. (2021). KEDUDUKAN ALAT BUKTI ELEKTRONIK DALAM PUTUSAN PERCERAIAN DI PENGADILAN AGAMA YOGYAKARTA. *Fortiori Law Journal*, 1(02), 23-56.
- Perkasa, R. E., Nyoman Serikat, P., & Turisno, B. E. (2016). Perlindungan Hukum Pidana Terhadap Konsumen Dalam Transaksi Jual/Beli Online (E-Commerce) Di Indonesia. *Diponegoro Law Journal*, 5(4), 1-13.
- Romadiyah, S. N. (2021). Analisis Jenis-Jenis Alat Bukti dan Kekuatan Bukti Digital Dalam Pembuktian Acara Perdata. *Jurnal Hukum Keluarga Islam El-Qisth*, 4(02).
- Soroinda, D. L., & Nasution, A. A. R. S. (2022). Kekuatan Pembuktian Alat Bukti Elektronik Dalam Hukum Acara Perdata. *Jurnal Hukum & Pembangunan*, 52(2), 384-405.
- Swandani, D., & Ramadhani, D. (2020). Hukum Pembuktian E-Mail Sebagai Alat Bukti Penyelesaian Sengketa Wanprestasi Secara Litigasi Di Indonesia Dan Cina. *Jurnal Hukum*, 6(3).
- Tumbel, T. G. M. (2020). Perlindungan konsumen jual beli online dalam era digital 4.0. *Lex Et Societatis*, 8(3).
- Wulandari, Y. S. (2018). Perlindungan Hukum bagi Konsumen terhadap Transaksi Jual Beli E- Commerce. *AJUDIKASI: Jurnal Ilmu Hukum*, 2(2), 199-210.
- Yusandy, T. (2019). Kedudukan dan Kekuatan Pembuktian Alat Bukti Elektronik dalam Hukum Acara Perdata Indonesia. *Jurnal Serambi Akademica*, 7(5), 645-656.

#### **Artikel/Website**

<https://badilag.mahkamahagung.go.id/artikel/publikasi/artikel/kedudukan-alat-bukti-elektronik-dalam-hukum-acara-perdata>, di Akses 12 Juni 2025.