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Legal Study on the Validity of Electronic Notarial Deeds in Indonesia: Regulatory Analysis and Practical Implications

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Abstract. This study aims to evaluate the validity of electronic notary deeds in the context of Indonesian law, analyze their implementation challenges, and compare regulations with other countries that have adopted similar systems. The method used is a normative juridical approach with an analysis of various regulations, such as the Notary Position Law, the ITE Law, and the Government Regulation on Electronic Systems and Transactions. In addition, the study draws on the study of international literature and regulations, such as the eIDAS Regulation in the European Union, to offer a comparative perspective. Data analysis was carried out qualitatively through descriptive and comparative techniques. The findings show that regulations in Indonesia, while providing a basic foundation for electronic documents, still require more specific adjustments to accommodate the digitization of notary deeds. Key challenges include aspects of legal validity, digital security, and resistance to traditional legal culture. In contrast, the experiences of developed countries such as the European Union and Japan highlight the importance of reliable technological infrastructure and adaptive regulations to ensure successful implementation. The conclusion of the study emphasizes the need to harmonize national regulations with international standards as well as strengthen technological capacity and notary understanding of digital systems. The study recommends the development of a more integrated legal framework, improved digital security, and public and professional education to accelerate the transition to electronic notary deeds in Indonesia.

Keywords: Electronic Notarial Deed, Legal Validity, Digitalization, Regulation, Digital Security

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INTRODUCTION

The urgency to adopt electronic notarial deeds arises from practical needs and global pressures to enhance competitiveness in the digital era. The conventional system, which often requires the physical presence of parties, lengthy processes, and substantial costs, is considered less relevant to modern demands. In the context of Indonesian law, existing regulations, such as the Notary Office Law and the Electronic Information and Transactions Law (UU ITE), provide a fundamental framework for the implementation of electronic documents. However, gaps remain in accommodating the necessary changes (Fardela, 2024). This creates an urgent need to formulate more adaptive and implementable policies.

Digital transformation has had a significant impact on various aspects of life, including the legal field. (Cahya et al., 2024). In this modern era, digitalization has become a solution to enhance efficiency, accessibility, and accuracy in legal services, particularly in the creation and validation of legal documents. One of the main challenges faced is how to integrate digital technology into traditional legal processes, which have long relied on physical presence and paper-based documents (Romadhon & Sutaji, 2025). This issue is particularly relevant in the case of electronic

notarial deeds, where digital documents are expected to replace physical ones without compromising their legal validity. This challenge has become increasingly urgent as society and the business world demand faster and more flexible processes while still ensuring security and legal certainty (Farazmand, 2009).

Based on literature studies, countries such as Japan, South Korea, and the European Union have made significant progress in developing electronic notarial deeds. Regulations such as the eIDAS Regulation in the European Union serve as an example of how electronic documents can be integrated into the legal system with widespread recognition (Tsakalakis et al., 2016). This experience provides valuable insights into how Indonesia can overcome regulatory, technological, and traditional legal culture barriers. Previous studies also emphasize the importance of a robust technological infrastructure, the use of secure digital signatures, and regulatory alignment with practical needs as key factors for the successful implementation of electronic notarial deeds (Putra et al., 2025).

Furthermore, research conducted by Kim & Lee (2021) in South Korea indicates that the adoption of electronic notarial deeds relies not only on clear regulations but also on the readiness of the digital ecosystem, including data encryption and the integration of blockchain-based systems to enhance security and transparency. This study reveals that without strong encryption standards, electronic documents are vulnerable to forgery and manipulation, which could undermine public trust in the digital legal system.

Furthermore, research by Martínez & Rodríguez (2023) highlights Spain's experience in implementing notarial digitalization through the Notarnet platform, which enables centralized access to electronic legal documents. This study emphasizes that the success of implementation is highly influenced by the active participation of notaries in the digital transition process, as well as public education on the benefits and security of electronic deeds. Thus, socialization and training for stakeholders become crucial factors that should not be overlooked in Indonesia's efforts to digitalize the notarial system.

To address this issue, this study proposes an approach that includes an in-depth analysis of electronic deed regulations in various countries to gain relevant comparative insights. Additionally, it will identify the challenges faced in implementing electronic notarial deeds in Indonesia, including legal, technical, and social barriers that may hinder the optimization of this technology. Furthermore, this research aims to evaluate the effectiveness of electronic notarial deeds in providing legal certainty compared to conventional deeds. By employing a normative juridical approach and comparative study, this research is expected to establish a strong foundation for formulating strategic recommendations, including the development of a more comprehensive legal framework and practical guidelines for notaries in navigating the transition towards the digitalization of legal services.

The primary objective of this study is to evaluate the legal validity of electronic notarial deeds, identify challenges in their implementation, and formulate recommendations to enhance the effectiveness and efficiency of Indonesia's legal system in the digital era. Specifically, this research aims to provide practical solutions that can be applied by notaries and policymakers. Thus, this study not only holds academic value but also has high practical relevance in supporting legal reforms in Indonesia.

This study assumes that the legal validity of electronic notarial deeds in Indonesia can be achieved through the reinforcement of clear regulations, harmonization with international standards, and the development of a reliable digital infrastructure. Currently, although the legal framework, such as the Electronic Information and Transactions Law (UU ITE), recognizes electronic documents, regulatory gaps in the Notary Office Law create legal uncertainty, thereby hindering the adoption of electronic deeds. This study also assumes that implementation challenges, such as the limited understanding of digital technology among notaries and cybersecurity risks, can be addressed through comprehensive education and training, as well as the adoption of technologies like digital signatures that comply with international standards.

METHODS

The research method used in this study is a normative juridical approach, which focuses on the analysis of legal documents as the primary source for understanding regulations related to electronic notarial deeds in Indonesia. This approach involves an in-depth review of various laws and regulations, including Law Number 30 of 2004 on the Notary Office, as amended by Law Number 2 of 2014, Law Number 11 of 2008 on Electronic Information and Transactions (UU ITE). and Government Regulation Number 82 of 2012 on the Implementation of Electronic Systems and Transactions. Additionally, this study compares international regulations, such as the eIDAS Regulation in the European Union, to gain a broader and more relevant perspective. The data collection technique is conducted through a literature study, which includes primary legal regulations, scientific journals, reference books, and previous research findings. The examination of legal documents and literature aims to explore the existing legal framework, identify regulatory gaps, and assess the relevance of current regulations in relation to digital technology advancements. The data analysis technique used is qualitative descriptive analysis, which involves data reduction, data presentation, and conclusion drawing based on identified patterns or themes. The analysis is carried out by considering the national legal context and international practices to ensure that the regulations align with the needs of the digital era.

This study also employs a comparative law approach to evaluate the implementation of electronic notarial deeds in other countries, such as Japan, South Korea, and the United States, which have successfully integrated digital technology into their notarial systems. This approach provides insights into best practices and enables the identification of strategies that can be adapted to the Indonesian context. Through this method, the research offers a comprehensive understanding of the legal validity of electronic deeds, the challenges faced, and recommendations for developing more adaptive and effective regulations. The research methodology in this study not only involves an analysis of relevant regulations, such as the Electronic Information and Transactions Law (UU ITE) and the Notary Office Law, but also includes an in-depth review of academic literature, legal journals, and international best practices related to the digitalization of notarial deeds. This approach is undertaken to explore regulatory gaps, identify technical and legal challenges, and assess potential solutions that can be applied in Indonesia. Additionally, this study utilizes secondary data from reliable sources, such as government reports, policy documents, and previous research findings, to enrich the analytical perspective.

RESULTS AND DISCUSSION

The Legal Validity of Electronic Notarial Deeds in Indonesia

The legal validity of electronic notarial deeds in Indonesia is currently a crucial topic in the evolving landscape of technology and law. The primary legal framework governing notarial deeds in Indonesia includes Law Number 2 of 2014, which amends Law Number 30 of 2004 on the Notary Office (UUJN), Law Number 11 of 2008 on Electronic Information and Transactions (UU ITE) along with its amendments in Law Number 19 of 2016, and several government regulations, such as Government Regulation Number 71 of 2019 on the Implementation of Electronic Systems and Transactions.

However, this legal framework still faces several challenges. For instance, the UUJN primarily regulates notarial deeds in a physical format with wet-ink signatures, limiting the legal recognition of electronic deeds. Meanwhile, although the UU ITE acknowledges electronic signatures, their validity as a key element of electronic notarial deeds has not been fully integrated with the UUJN, creating regulatory gaps that could lead to legal uncertainty (Wulandari, 2022). This ambiguity creates challenges for notaries and parties involved in legal transactions, as they must still consider the legality of using electronic notarial deeds (Arwanto & Bahirah, 2021). Thus, there is an urgent need to develop clearer and more comprehensive regulations regarding electronic notarial deeds to ensure legal certainty and protect the rights of the parties involved in transactions.

For comparison, international regulations such as the eIDAS Regulation (EU Regulation No. 910/2014) in the European Union provide a comprehensive framework for the recognition of electronic signatures, including digital signatures that hold the same legal force as handwritten signatures. Similarly, in Japan, the Electronic Signatures and Certification Business Act establishes a clear legal basis for the use of electronic signatures in legal documents. This comparison highlights the need for Indonesia to harmonize its regulations with international standards to support the legal validity of electronic notarial deeds. A related case study demonstrates the real impact of regulatory gaps. For example, in research (Wulandari, 2022), a case was found where an electronic deed using a digital signature was not accepted as valid evidence in court because it did not meet the formal requirements stipulated in the Notary Act (UUJN). This highlights the need for revising and harmonizing the national legal framework to ensure that electronic deeds have strong legal validity. The formal validity of an electronic deed includes the recognition of legally valid electronic signatures, authentication of the identities of the parties involved, and document integrity to ensure it cannot be altered undetectably.

The Electronic Information and Transactions Law (UU ITE) has addressed this through the concept of certified electronic signatures, which require electronic certification providers registered in Indonesia. However, this regulation has not been fully integrated with the Notary Act (UUJN), creating challenges in recognizing electronic deeds made by notaries. Meanwhile, material validity refers to the document's content, which must comply with applicable substantive legal provisions. This involves assessing whether the substance of the electronic deed meets the legal requirements set by Indonesian law. For example, an electronic agreement deed must adhere to the Civil Code (KUH Perdata) and other relevant regulations. According to Fakhriah (2023), Gustav Radbruch's theory of legal validity can be used to assess this material validity by evaluating the alignment between justice, legal certainty, and the principle of expediency. Previous research by (Sihombing, 2020) Previous research has shown that although the concept of cyber notary has been discussed for a long time, its implementation in Indonesia is still hindered by the lack of specific regulations. In practice, the transition from conventional deeds to electronic deeds requires comprehensive regulatory reforms to ensure equal legal validity.

Challenges in Implementing Electronic Notarial Deeds

In the implementation of electronic deeds, the authentication of digital signatures faces a major challenge in maintaining a high level of security without compromising ease of use. Unreliable authentication poses risks of document manipulation and identity fraud, while overly complex authentication methods can hinder technology adoption, particularly among notaries and service users. One effective solution is the use of Qualified Electronic Signatures (QES), which has been implemented in the European Union. QES utilizes asymmetric cryptography and requires certification from a trusted service provider. Research Kutyłowski & Błaśkiewicz (2023) Research shows that Qualified Electronic Signatures (QES) can provide a level of security equivalent to handwritten signatures while also enhancing user trust. Additionally, biometric authentication approaches, such as fingerprint or facial recognition, can serve as an effective additional security layer.

This technology leverages commonly used mobile devices, making integration easier without requiring expensive new infrastructure. Another promising approach is the use of blockchain for authentication, as blockchain can provide a permanent, transparent, and tamper-proof audit trail. Studies Jaradat et al (2021) Research shows that blockchain can minimize the risk of manipulation to nearly zero, making it an ideal solution for ensuring the authenticity of electronic documents. The implementation of electronic notarial deeds in Indonesia faces significant challenges due to technological and regulatory gaps. One of the main issues is the limited digital infrastructure, including a lack of interoperability between systems. Indonesia's digital infrastructure is not yet fully prepared to support the adoption of modern technologies required for executing electronic deeds.

According to Schneier (2009), The inability of systems to interact efficiently can hinder the provision of integrated services, especially in the legal field, where data reliability and security are crucial. Moreover, the technological approach available in Indonesia differs significantly from that of developed countries. In developed nations such as the United States or Western Europe, the adoption of blockchain technology and secure digital document management systems has become standard. In Indonesia, the adoption of these technologies is still in its early stages due to budget constraints, outdated regulations, and a lack of trained human resources. Agranoff (2005), emphasizes the importance of collaboration between the government, technology providers, and the education sector to bridge this gap, as technology cannot function effectively without adequate regulatory support. This situation increases the risk of legal processes being interpreted differently among practitioners (Irawati, 2024).

From a policy perspective, the implementation of electronic deeds involves a tug-of-war between stakeholders. Regulations on digital signatures and electronic authentication involve multiple institutions, including the Ministry of Communication and Informatics, the Ministry of Law and Human Rights, and the National Cyber and Crypto Agency (BSSN). Each institution has different perspectives and interests in establishing security standards and supporting infrastructure. For instance, BSSN tends to emphasize strict cybersecurity measures, while the Ministry of Law and Human Rights focuses more on the legal validity and protection of users. This lack of consensus can slow down the legislative process and hinder practical implementation. Moreover, regulatory development in Indonesia is often delayed by bureaucratic complexity and political interests. In some cases, groups with economic stakes, such as digital signature service providers or traditional notary institutions, may resist regulatory changes out of concern for their business models. This creates a dilemma between technological innovation and the protection of economic interests within the legal system.

Table 1. Regulatory Gaps in Indonesia Compared to Other Countries

Country	Main Regulation	Openness to Electronic Deeds	Challenges	
Indonesia	UU No. 30/2004 &	Not explicitly supporting	Lack of regulatory	
	UU ITE	electronic deeds	harmonization	
European Union	eIDAS Regulation	Recognition of electronic signatures as authentic documents	Cross-border security standards	
Japan	Electronic Signatures Act	Electronic signatures are equivalent to handwritten signatures	Limited public acceptance	
South Korea	Framework Act on E-Documents	Full recognition of digital documents with high security standards	High infrastructure investment costs	

Source: (Rahadian, 2023)

The traditional legal culture in Indonesia is also a major obstacle to the implementation of electronic notarial deeds. Notaries in Indonesia have long been accustomed to the manual system, which is considered safer due to its reliance on physical documents. Digital innovation is often perceived as a threat to the stability of established legal practices. According to Irawati (2024), many notaries remain skeptical about the security of electronic systems, viewing technology as complex and incompatible with their work culture. This resistance is further reinforced by the lack of adequate education and training on digital technology among notaries. Furthermore, a survey conducted by Wiguna et al. (2024) indicates that 65% of notaries in Indonesia have a low level of trust in electronic systems, particularly regarding data security and document authenticity. The study also notes that the lack of knowledge and practical experience with technology makes notaries more likely to resist innovations that could disrupt their traditional legal practices.

Thus, an inclusive approach is needed to integrate digital technology while addressing notaries' concerns and needs. The Notary Office Law (UU No. 30 of 2004 jo. UU No. 2 of 2014) has not explicitly regulated the use of digital media in notarial deed creation. This creates legal uncertainty for notaries looking to adopt digital technology. Cybersecurity risks are a major concern in the use of electronic deeds. Digital Security Theory, as proposed by (Schneier, 2009), emphasizes the importance of encryption and authentication as data protection mechanisms. However, these challenges become increasingly complex as hacking technologies evolve. Many notaries and service users do not yet understand or trust electronic deed systems. A study by (Fakhriah, 2023) mentions that this lack of understanding slows down the adoption of technology in Indonesia's legal system. The study also highlights the importance of clear regulations regarding the use of this technology, including standardizing authentication processes and conducting regular security oversight. Existing regulations must be harmonized to create legal clarity. For instance, in a study by (Rodliyah, 2023) clearly reveals that the implementation of digital signatures recognized under the ITE Law must be integrated with authentication procedures regulated in the Notary Position Law. Additionally, a supervisory system and specialized training for notaries are necessary to enhance their readiness in facing the digital era.

The Academic Review Process in Draft Bills and Laws

The formulation of policies related to electronic deeds requires a comprehensive academic review before being drafted as a Bill (Rancangan Undang-Undang or RUU) and ultimately enacted as a Law (Undang-Undang or UU). This process typically begins with academic research that identifies key issues and provides evidence-based policy recommendations. Academics and legal experts play a crucial role in reviewing international standards, evaluating the effectiveness of proposed technologies, and assessing their impact on the existing legal system. The findings from these academic studies serve as the foundation for the preparation of an academic manuscript (naskah akademik), which is drafted by the legislative team in the Parliament (DPR) or relevant ministries. This document is then discussed in various forums, including dialogues with stakeholders such as notary associations, technology service providers, and law enforcement agencies. However, in practice, many Bills in Indonesia are not entirely based on in-depth academic studies but are instead influenced by political interests and lobbying efforts.

The next stage involves parliamentary discussions on the Bill, often characterized by complex political dynamics. Political parties and parliamentary factions may have differing interests regarding the substance of the proposed regulation. For example, in discussions on digital signature regulations, debates arise over the extent of government intervention in regulating digital service providers and how such regulations can ensure fairness for all parties, including conventional notaries affected by digitalization. After undergoing various revisions and debates, the Bill is finally enacted into law. However, its implementation remains a challenge, as enacted regulations still require technical rules in the form of Government Regulations (Peraturan Pemerintah or PP) or Ministerial Regulations (Peraturan Menteri or Permen) that provide further details. In the context of electronic deeds, additional regulations are needed to govern technical aspects such as encryption standards, the authority of certification bodies, and dispute resolution mechanisms in cases of system misuse.

The Effectiveness of Electronic Deeds in Providing Legal Certainty

Electronic deeds have brought significant changes to modern legal services by enhancing efficiency and accessibility. The process of drafting and validating legal documents, which previously took a considerable amount of time, can now be completed within hours or even minutes. This is due to electronic systems that enable automatic data processing, reduce reliance on physical documents, and allow remote access through digital platforms. According to Hutapea et al (2023), The implementation of technology in electronic deeds not only reduces administrative costs but also eliminates the need for physical travel, which is often expensive and time-consuming.

South Korea is an example of a country that has successfully integrated electronic technology into legal services. With systems such as e-notarization, the document authentication process has become faster and more accurate. Fardela (2024) notes that digital transformation in the country has increased public trust in legal services, given greater transparency and a reduction in potential corruption. In Indonesia, adopting a similar model has the potential to expand the reach of legal services to remote areas, providing a practical solution to geographical challenges that have long been a major obstacle. The courts play a crucial role in determining the validity of electronic documents as legal evidence. In Indonesia, the recognition of electronic documents has been regulated through the Electronic Information and Transactions Law (UU ITE). However, challenges arise in the validation and authentication of these documents Fakhriah (2023) explains that the courts require a clear evidentiary mechanism to ensure that documents have not been manipulated during the digitization process.

The experience of other jurisdictions can serve as a valuable lesson. For example, some countries have implemented digital verification systems that rely on a combination of electronic signatures and blockchain technology to ensure the authenticity of documents. Mallolongan & Noor (2023) emphasizes that this mechanism not only enhances the efficiency of judicial processes but also fosters greater trust in digital documents. In the Indonesian context, adopting such an approach could be a progressive step in ensuring that electronic documents are recognized and valued on par with physical documents. In the Theory of Legal Function, (Moechthar, 2020) states that law functions to create order and justice in society. Therefore, the implementation of electronic deeds must be able to fulfill this function. Research by (Adolph, 2016) reveals that electronic deeds equipped with digital signatures and blockchain technology have the potential to enhance transparency and accountability in legal transactions. However, challenges remain, particularly in terms of evidentiary procedures in court. The courts must have mechanisms capable of verifying the authenticity and validity of electronic documents without diminishing their evidentiary value.

The Theory of Electronic Evidence, as stated by Fakhriah (2023), emphasizes that electronic documents must meet authentication and data integrity standards to be accepted as valid evidence. Electronic deeds offer several advantages that enhance efficiency across various aspects. In terms of time and cost efficiency, business actors can complete transactions without the need for physical presence at a notary's office, making the process faster and more cost-effective. Additionally, blockchain technology enhances transparency and accountability, as transaction records can be clearly tracked, thereby minimizing the risk of manipulation. However, electronic deeds also have drawbacks that need to be considered. One of them is the complexity of the validation process, where advanced validation systems, such as Qualified Electronic Signatures (QES), require expensive and complex infrastructure. Moreover, electronic deeds face challenges in evidentiary procedures in court, as courts often struggle to verify the authenticity of digital documents, as highlighted in the research by (Leroux, 2004).

Study on the Implementation of Electronic Deeds in Other Countries

The implementation of electronic deeds in various countries demonstrates a range of regulatory approaches that can serve as a reference for Indonesia in developing an adaptive digital legal system. The European Union, through the eIDAS Regulation (Electronic Identification, Authentication, and Trust Services), has established a clear legal framework for the use of electronic signatures in notarial deeds. This regulation not only ensures the legal validity of electronic documents but also enhances trust in the digital legal system by setting high security standards (Izdihar et al., 2023). On the other hand, Japan and South Korea have successfully integrated electronic deeds into their legal systems by establishing strict security standards, ensuring data protection, and adopting robust digital infrastructure (Hutapea et al., 2023; Wiguna et al., 2024).

Based on the experiences of these countries, Indonesia has a significant opportunity to develop more advanced regulations in the field of electronic deeds. One aspect that can be

adapted is the implementation of Qualified Electronic Signatures (QES), as applied in the European Union. QES is a form of electronic signature that holds the same legal validity as a handwritten signature and is internationally recognized, thereby enhancing the interoperability of Indonesia's digital legal system with global standards. A study by (Mallolongan & Noor, 2023) emphasizes that the adoption of these international standards will not only enhance the efficiency of legal administration but also strengthen public trust in the use of technology within the notarial sector. Therefore, by adjusting existing regulations and adopting best practices from other countries, Indonesia can establish a secure, credible, and globally aligned electronic deed system.

Table 2. Comparison of Implementation Success

Indicator	European Union	Japan	South Korea	Indonesia
Technology Infrastructure	Highly Advanced	Moderately Advanced	Advanced	Limited
Regulatory Support	Very Strong	Adequate	Strong	Weak
Public Acceptance	High	Moderate	High	Low
International Recognition	Yes	Yes	Yes	No

Source: (Rahadian, 2023)

CONCLUSION

Based on comparative studies, regulations in developed countries such as the European Union, Japan, and South Korea provide a clear legal foundation for the use of electronic notarial deeds. The European Union, through the eIDAS Regulation, has established standards for Qualified Electronic Signatures (QES), which have the same legal validity as handwritten signatures. Japan and South Korea have also implemented legal frameworks that support the use of electronic documents, including the recognition of authentication methods based on advanced technologies such as blockchain and digital signatures. The experiences of these countries demonstrate that the successful implementation of electronic deeds is highly influenced by regulatory clarity, legal harmonization with international standards, and a robust technological infrastructure. The legal validity of electronic notarial deeds in Indonesia remains a subject of debate due to the lack of clear harmonization between various regulations governing electronic documents. The Electronic Information and Transactions Law (UU ITE) recognizes the validity of electronic documents. However, in practice, notarial deeds in Indonesia still adhere to the Notary Position Law (UUIN), which is more oriented toward physical documents with handwritten signatures. This creates regulatory gaps that may lead to legal uncertainty regarding the use of electronic deeds. Therefore, revisions and regulatory adjustments are necessary to establish a strong legal foundation for electronic notarial deeds and ensure their official recognition within Indonesia's legal system.

The main challenges in implementing electronic notarial deeds in Indonesia involve technological, regulatory, and traditional legal culture aspects. From a technological perspective, limited digital infrastructure and data security remain major concerns, particularly regarding electronic signature authentication and protection against cyber threats. In terms of regulations, the misalignment between the Electronic Information and Transactions Law (UU ITE) and the Notary Position Law (UUJN) creates confusion among notaries regarding the legal validity of electronic deeds. Furthermore, resistance from the traditional legal culture, which still relies on physical documents, hinders the adoption of digital technology in the notarial system. To address these challenges, regulatory strengthening, the development of a secure digital infrastructure, and training programs for notaries are necessary to prepare them for the digital transformation of the legal profession. Electronic deeds have great potential to enhance legal certainty by offering greater efficiency, transparency, and security compared to conventional deeds. Technologies such as digital signatures and blockchain enable electronic documents to achieve a high level of validity and verifiability. However, the effectiveness of electronic deeds still depends on regulatory readiness and the proper implementation of technology. In some countries, courts

have recognized electronic documents as legally valid evidence, whereas in Indonesia, there is still no uniform mechanism for electronic deed verification in court proceedings.

SUGGESTION

Therefore, concrete steps are needed to clarify legal and technical standards so that electronic deeds can provide legal certainty in line with justice principles and legal protection. The experiences of developed countries such as the European Union, Japan, and South Korea in implementing electronic deeds can serve as a reference for Indonesia. The European Union, through the eIDAS Regulation, has established the use of qualified electronic signatures, which hold the same legal force as handwritten signatures. Japan and South Korea have also implemented regulations that ensure the security and validity of digital documents with high standards. This comparative study shows that the successful implementation of electronic deeds depends on a combination of clear regulations, robust technological infrastructure, and the readiness of society and legal practitioners to adapt to digital systems. By adopting best practices from other countries, Indonesia can develop a secure, efficient, and reliable electronic deed system in the future. This conclusion highlights the importance of regulatory harmonization, technological readiness, and legal culture transformation in achieving effective electronic deed implementation in Indonesia.

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