

Legal Force Of Electronic Land Sale And Purchase Deeds (E-Ajb) In The Digital Land Registration System After The Implementation Of Electronic Land Deed Official Services

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Abstract. *The digital transformation of land services through the implementation of electronic Land Deed Official (PPAT) services has given rise to innovations in the form of Electronic Land Sale and Purchase Deeds (e-AJB) within the digital land registration system. The presence of e-AJB raises legal issues related to its legal standing and force as an authentic deed in the Indonesian land law system. This study uses a normative legal research method (normative juridical) with a statutory, conceptual, case, and comparative approach. The data used are primary, secondary, and tertiary legal materials analyzed descriptively and qualitatively. The results of the study indicate that normatively e-AJB has received recognition through regulations related to electronic systems and electronic signatures, particularly the Electronic Information and Transactions Law and its implementing regulations. However, from a classical civil law perspective that requires physical presence and written document form as elements of an authentic deed as regulated in Article 1868 of the Civil Code, there is still debate regarding the fulfillment of the formal requirements of e-AJB as an authentic deed that has perfect evidentiary power. The main obstacles in the implementation of e-AJB include disharmony of laws and regulations, differences in interpretation regarding the physical presence of the parties, and aspects of security and proof of electronic signatures in the trial process. The Denpasar District Court decision is an important precedent that shows the need for harmonization of regulations between civil law, agrarian law, and information technology law to ensure legal certainty and protection for the parties. Thus, strengthening the legal basis of e-AJB through legislative updates and affirmation of its position in the hierarchy of laws and regulations is urgent to support the sustainability of the digital land registration system in Indonesia.*

Keywords: *Electronic Sale and Purchase Deed (e-AJB); Electronic PPAT; Digital Land Registration; Legal Certainty; Legal Power.*

1. Introduction

The development of information and communication technology has brought fundamental changes to various aspects of public life, including the public service sector in Indonesia, including land administration. This digital transformation has not only changed the way people access information but also revolutionized the government administration system, shifting from a manual to an electronic one.¹The Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN), as the agency responsible for land registration, has undertaken a digital transformation by implementing an electronic land registration system integrated with the national information system. This digital transformation is a response to the demands for efficiency, transparency, and easy access to land services for the public in the era of the 4.0 industrial revolution, which prioritizes digitalization in every aspect of public service.²However, the practical implementation of e-AJB raises fundamental questions regarding legal aspects, particularly regarding the legal validity of these electronic deeds within the Indonesian land law system. This fundamental question arises because the Indonesian legal system, particularly civil and agrarian law, has historically relied on physical documents as valid evidence in every legal transaction.³The shift from conventional physical deeds with wet signatures to electronic deeds with digital signatures requires in-depth study to ensure legal certainty for transacting parties. This issue is increasingly important given that land is a valuable asset that requires strong legal certainty in every transfer of rights, and therefore cannot be treated the same as other electronic transactions of relatively small value.⁴This regulatory ambiguity has the potential to raise doubts among legal practitioners, Land Deed Officials (PPAT), and the general public regarding the validity of e-AJB in the event of future disputes. Furthermore, Indonesia's legal culture, which still highly values physical documents as authentic evidence, makes the transition to electronic documents challenging and requires extensive education.⁵

¹Edmon Makarim, 2020, *Introduction to Telematics Law: A Compilation of Studies*, Raja Grafindo Persada, Jakarta, p. 45.

²Republic of Indonesia, 2018, Presidential Regulation Number 95 of 2018 concerning Electronic-Based Government Systems, *State Gazette of the Republic of Indonesia* 2018 Number 182, Consideration letter b.

³Eddy Ruchiyat, 2017, *Land Registration System Before and After the Enactment of UUPA*, Armico, Bandung, p. 67.

⁴Boedi Harsono, 2019, *Indonesian Agrarian Law: History of the Formation of the Basic Agrarian Law, Its Contents and Implementation*, Djambatan, Jakarta, p. 487.

⁵Satjipto Rahardjo, 2020, *Legal Studies*, Citra Aditya Bakti, Bandung, p. 189.

A conventional land sale and purchase deed drawn up by a PPAT has the status of an authentic deed that has perfect evidentiary power in accordance with the provisions of Article 1868 of the Civil Code (KUHPerdota). This status as an authentic deed provides special privileges in the legal system of evidence because an authentic deed is considered to prove the truth of its contents without the need for additional evidence, unless it can be proven otherwise through a strict legal process.⁶This perfect evidentiary power provides high legal certainty for the parties because the authentic deed is considered to prove the truth of the contents contained therein, both regarding the legal acts carried out, the identities of the parties, and other information stated in the deed. The Indonesian legal system recognizes three types of evidentiary power of authentic deeds, namely external evidentiary power, formal evidentiary power, and material evidentiary power, each of which provides different legal protection to the deed holder.⁷The importance of recording muamalah transactions is expressly ordered by Allah Subhanahu wa Ta'ala in Surah Al-Baqarah verse 282 which is the longest verse in the Al-Qur'an. Allah says which means: "O you who believe, if you don't do charity in cash for the specified time, you should write it down. And let a writer among you write it correctly."⁸This verse provides a strong normative basis regarding the obligation to record every muamalah transaction, including the sale and purchase of land, to guarantee legal certainty and prevent disputes in the future.

One concrete manifestation of this digital transformation is the launch of the electronic Land Deed Official (PPAT) service, which allows the creation of Sale and Purchase Deeds (AJB) in digital format, known as e-AJB. This electronic PPAT service represents a significant innovation in Indonesia's land registration system, shifting the paradigm of deed creation from face-to-face to online, utilizing information technology.⁹The implementation of this electronic PPAT service aims to expedite the land sale and purchase process, which previously required days or even weeks, to a matter of hours. In addition to saving time, this electronic system also aims to reduce the administrative costs incurred by the public in land transfer transactions, thereby making land services more affordable for all levels of society.¹⁰

Based on the background of the problem above, the author wishes to write a thesis with the title " The Legal Force of Electronic Land Sale and Purchase Deeds (E-Ajb) in the Digital Land Registration System After the Implementation of Electronic Land Deed Making Official Services (Denpasar District Court Decision Number 456/Pdt.G/2024/Pn Dps. 2024)"

2. Research Methods

This research uses a normative juridical approach by examining laws and regulations related to PPAT sale and purchase deeds and land dispute resolution through the Basic Agrarian Law Number 5 of 1960, Government Regulation

Number 24 of 1997 concerning Land Registration, Government Regulation Number 37 of 1998 concerning PPAT Position Regulations, and other related regulations. A conceptual approach is used to analyze legal concepts such as legal certainty, legal protection, and the evidentiary power of authentic deeds. The research specifications are descriptive-analytical in nature, describing and analyzing the legal force of PPAT sale and purchase deeds in proving land ownership rights and legal protection for land owners in resolving land disputes. The data collection method is carried out through library research by collecting secondary data in the form of primary legal materials that include laws and court decisions, secondary legal materials in the form of law books, scientific journals, and previous research results, and tertiary legal materials in the form of legal dictionaries and encyclopedias. Data analysis uses a qualitative descriptive method by systematically presenting, interpreting, and analyzing legal materials that have been collected to answer research problems, then drawing conclusions based on the provisions of legal principles, legal theory, and provisions of applicable laws and regulations.

3. Results and Discussion

3.1. The Legal Position of Electronic Land Sale and Purchase Deeds (E-AJB) in the Indonesian Land Law System Reviewed from the Perspective of Civil Law and Agrarian Law

The legal status of the Electronic Land Sale and Purchase Deed, or e-AJB, is a contemporary legal issue that requires in-depth analysis within the context of the Indonesian land law system. The development of information technology has brought about significant transformations in various aspects of life, including the implementation of legal transactions related to land. Conventional land sale and purchase deeds have long been recognized as legal instruments drawn up before a Land Deed Making Officer (PPAT) as an authorized public official. However, with the advent of electronic systems, fundamental questions have arisen regarding the legal status of e-AJB within the framework of Indonesian civil and agrarian law. This issue is crucial considering that land is a highly valuable asset and requires a high level of legal certainty in every transaction. The Indonesian land law system,

⁶Republic of Indonesia, Civil Code (Burgerlijk Wetboek voor Indonesie), translated by Raden Subekti and Raden Tjitrosudibio, 2014, Pradnya Paramita, Jakarta, Article 1868.

⁷Raden Subekti, 2016, Law of Evidence, Pradnya Paramita, Jakarta, pp. 28-35.

⁸Al-Qur'an. Surah Al-Baqarah (2): 282.

⁹Republic of Indonesia, 2022, Regulation of the Minister of Agrarian Affairs and Spatial Planning/Head of the National Land Agency Number 16 of 2021 concerning the Third Amendment to the Regulation of the Minister of Agrarian Affairs and Spatial Planning/Head of the National Land Agency Number 3 of 1997 concerning Implementing Provisions of Government Regulation Number 24 of 1997 concerning Land Registration, State Gazette of the Republic of Indonesia 2021 Number 1235, Article 1 number 25.

¹⁰Urip Santoso, 2020, Registration and Transfer of Land Rights, Kencana Prenada Media Group, Jakarta, p. 356.

based on Law Number 5 of 1960, has provided a comprehensive regulatory basis for land rights. Over time, various implementing regulations have been issued to further regulate the transfer of land rights, including through sale and purchase. The presence of e-AJB as a form of modernization of land administration must be viewed within the context of harmonizing the need for efficiency and legal certainty. An analysis of the legal standing of e-AJB requires a comprehensive approach, considering various relevant legal aspects. Therefore, this discussion will integrate legal theory perspectives from experts such as Gustav Radbruch, Sudikno Mertokusumo, and Philipus M. Hadjon to provide a comprehensive understanding. A thorough understanding of the legal standing of e-AJB will make a significant contribution to the development of a more modern Indonesian land law system while still ensuring legal certainty. The discourse on e-AJB is also inseparable from the development of state administrative law, which is increasingly adopting electronic systems in public services.¹¹

The civil law perspective serves as the first starting point in analyzing the legal status of e-AJB, considering that land sales and purchases are essentially civil agreements between the parties. Article 1457 of the Civil Code (KUHPERdata) defines a sale and purchase as an agreement in which one party binds themselves to deliver an object and the other party to pay the agreed price. Although land as an object of sale and purchase has its own specific characteristics regulated by agrarian law, the principles of contract law in civil law remain an important foundation. In the context of civil law, the requirements for a valid agreement as stipulated in Article 1320 of the Civil Code must still be met, including in electronic land sales and purchases. The agreement of the parties, the capacity to enter into a contract, a specific matter, and a lawful cause are absolute requirements that cannot be ignored. The use of an electronic system in creating an e-AJB does not eliminate the essence of the sale and purchase agreement itself but only changes the form and method of documentation. Therefore, from a civil law perspective, e-AJB must still fulfill all the substantive requirements of a valid sales and purchase agreement. The formality aspect in making a deed is also an important consideration in civil law related to the evidentiary power of the deed made. Authentic deeds as regulated in Article 1868 of the Civil Code have perfect evidentiary power and are binding on the parties. The transformation from conventional deeds to electronic deeds raises questions about whether e-AJB can be categorized as authentic deeds that have perfect evidentiary power. Fulfilling the elements of an authentic deed in an electronic context is crucial to guarantee the legal standing of e-AJB in the civil law system. Harmonizing conventional civil

¹¹Urip Santoso, 2019, "Land Registration in Indonesia: Challenges and Opportunities of Digitalization", *Journal of Law and Development*, Volume 49, Number 4, October-December 2019, Faculty of Law, University of Indonesia, Jakarta, pp. 825-847.

law with technological developments is a challenge that must be addressed by policymakers and legal practitioners.¹²

A review from an agrarian law perspective provides a unique dimension in understanding the legal status of e-AJB, given that land has distinct characteristics from those of typical sale and purchase objects. The Basic Agrarian Law, as the basis for national land law, has established fundamental principles regarding land ownership and utilization in Indonesia. Article 19 of the UUPA mandates the need for land registration to provide legal certainty for land rights holders. In the Indonesian agrarian legal system, land sales and purchases are not merely a matter of agreement between the parties but must be conducted through a deed drawn up by and before a Land Deed Official (PPAT). This provision implements the principle of publicity in agrarian law, which requires that every transfer of land rights be known and officially recorded. Government Regulation Number 24 of 1997 concerning Land Registration, as amended by Government Regulation Number 18 of 2021, regulates in detail the procedures and mechanisms for land registration, including the transfer of rights. In this context, the position of the PPAT as a public official authorized to issue a deed of transfer of land rights is crucial and cannot be ignored. The creation of e-AJB must therefore continue to involve the Land Deed Official (PPAT) as the authorized official in accordance with applicable agrarian law. The physical presence of the parties before the PPAT, which has been a requirement for the creation of conventional deeds, presents a unique issue in the implementation of e-AJB. Clear interpretation and regulation are needed regarding how the presence of the parties in an electronic context can meet the requirements of existing agrarian law. Integration of electronic systems with agrarian law principles requires a strong legal foundation to ensure legal certainty for all parties. Therefore, analyzing the legal standing of e-AJB from an agrarian law perspective is crucial to ensure that technological innovation does not compromise legal protection for land rights.¹³

Gustav Radbruch's legal theory on the purpose of law provides a relevant philosophical framework for analyzing the legal standing of e-AJB in the Indonesian land law system. Radbruch argues that the law must achieve three fundamental goals: legal certainty (*rechtssicherheit*), justice (*gerechtigkeits*), and utility (*zweckmassigkeit*). In the context of e-AJB, these three legal goals must be met in a balanced manner to ensure that the implementation of the electronic system does not compromise the fundamental values of the legal system. Legal certainty requires clear regulations regarding the legal standing of e-AJB, the procedures for its creation, its evidentiary force, and its resulting legal consequences. Without clear legal certainty, parties conducting electronic land

¹²Adrian Sutedi, 2018, *Transfer of Land Rights and Registration*, Third Edition, Sinar Grafika, Jakarta, pp. 145-168.

¹³Boedi Harsono, 2018, *Indonesian Agrarian Law: History of the Formation of the Basic Agrarian Law, Contents and Implementation*, Revised Edition, Djambatan, Jakarta, pp. 478-502.

sales and purchases will face uncertainty that could harm their interests. The aspect of justice in the context of e-AJB relates to equal access for all members of society to this electronic system without discrimination. Justice also requires that the use of technology should not create a gap between those with access to technology and those without. Utility as a legal objective demands that the implementation of e-AJB must provide tangible benefits to the public in the form of efficiency, convenience, and reduced transaction costs. However, Radbruch also cautioned that if there is a conflict between these three legal objectives, legal certainty must take precedence unless ignoring legal certainty would result in extreme injustice. In the implementation of e-AJB, this principle serves as an important guideline that although utility and efficiency are the goals of digitalization, legal certainty must not be sacrificed. The balance between these three legal objectives, according to Radbruch, serves as a parameter for assessing whether the legal standing of e-AJB meets the philosophical standards of a good legal system. Therefore, the formulation of regulations regarding e-AJB must carefully consider how to achieve an optimal balance between legal certainty, justice, and utility.¹⁴

Sudikno Mertokusumo's insights into legal discovery and interpretation provide an important methodological foundation for understanding the legal status of e-AJB. Mertokusumo emphasized that law is not static but rather dynamic and must adapt to societal developments. In the context of e-AJB, the legal discovery approach is relevant given the lack of explicit and comprehensive regulations regarding electronic land sale and purchase deeds in existing laws and regulations. Mertokusumo's legal interpretation method can be used to interpret existing legal provisions to accommodate technological developments in deed creation. A grammatical interpretation of the provisions on authentic deeds and the role of Land Deed Officials (PPAT) is necessary to understand whether these provisions can also encompass electronic deeds. Systematic interpretation is necessary to examine the interrelationships between various related laws and regulations, such as the Basic Agrarian Law (UUPA), the Government Regulation on Land Registration, and the Electronic Information and Transactions Law. Through historical interpretation, it is possible to trace the intention of the legislators when regulating land deeds and whether that intention can accommodate electronic forms. A teleological or sociological interpretation is crucial for understanding the purpose of land deed regulations, namely to provide legal certainty and protect land rights. If this goal can be achieved through e-AJB, then the use of electronic deeds can be teleologically justified. Mertokusumo also emphasized the importance of legal principles in conducting legal discovery when faced with legal gaps or unclear regulations. Land law principles such as legal certainty, publicity, and good faith must remain the guiding principles in the implementation of e-AJB. Using Mertokusumo's legal discovery approach, the legal standing of e-AJB can be

¹⁴Gustav Radbruch, 2006, *Rechtsphilosophie* (translated by Arief Sidharta as *Philosophy of Law*), Citra Aditya Bakti, Bandung, pp. 123-145

constructed even though there are no explicit regulations, as long as such construction does not conflict with the fundamental principles of the Indonesian land law system.¹⁵

Philipus M. Hadjon's perspective on legal protection and state administrative law provides an additional dimension in analyzing the legal standing of e-AJB. Hadjon distinguishes between preventive legal protection and repressive legal protection, both of which are important in the legal system. In the context of e-AJB, preventive legal protection relates to how the legal system prevents violations or losses through clear procedural and mechanism arrangements. Regulations regarding verification of the parties' identities, electronic signatures, data security, and oversight mechanisms by Land Deed Officials (PPAT) are forms of preventive legal protection in the implementation of e-AJB. Repressive legal protection relates to dispute resolution and rights recovery in the event of violations or losses in e-AJB transactions. The legal standing of e-AJB must ensure that the parties have access to effective legal remedies if problems arise in the implementation of electronic transactions. Hadjon also developed the concept of state administrative decisions and government actions relevant to the role of Land Deed Officials (PPAT) as public officials. Deeds made by Land Deed Officials (PPAT), including e-AJB, have a public law dimension because they involve the state's authority to provide legal certainty regarding the transfer of land rights. Therefore, the principles of state administrative law such as the principle of legality, the principle of legal certainty, and the principle of transparency must be applied in the creation of e-AJB. The validity of e-AJB depends not only on the civil aspect, namely the agreement of the parties, but also on the administrative aspect, namely compliance with the procedures and authorities stipulated by laws and regulations. Hadjon's thoughts on legal protection for the people against government actions are also relevant in the context of monitoring the performance of PPAT in creating e-AJB. The mechanism of accountability of PPAT and sanctions for violations in the creation of e-AJB must be clearly regulated as part of the legal protection system. Thus, the analysis based on Hadjon's thoughts provides a comprehensive understanding of the public law dimension of the legal position of e-AJB in the Indonesian legal system.¹⁶

A positive legal basis is a crucial aspect in determining the legal standing of e-AJB in the Indonesian land law system. Law Number 11 of 2008 concerning Electronic Information and Transactions as amended by Law Number 19 of 2016 (ITE Law) provides recognition for electronic documents and electronic signatures. Article 5 paragraph (1) of the ITE Law states that electronic information and electronic

¹⁵Sudikno Mertokusumo, 2014, *The Discovery of Law: An Introduction*, Revised Edition, Cahaya Atma Pustaka, Yogyakarta, pp. 56-89

¹⁶Philipus M. Hadjon, 1987, *Legal Protection for the People in Indonesia: A Study of its Principles, Handling by the Courts in the General Court Environment and the Formation of State Administrative Courts*, Bina Ilmu, Surabaya, pp. 25-48

documents are valid legal evidence, which provides the basis for the use of electronic documents in legal transactions. However, Article 5 paragraph (4) of the ITE Law provides an exception that the provisions on electronic information and electronic documents do not apply to documents that according to law must be made in written form. The question that arises is whether the Deed of Sale and Purchase of Land is included in the category of documents that must be made in written form and therefore cannot be transferred to electronic form. Government Regulation Number 71 of 2019 concerning the Implementation of Electronic Systems and Transactions provides further regulations regarding electronic signatures and electronic certificates that can be used in electronic transactions. In the context of land, the Regulation of the Minister of Agrarian Affairs and Spatial Planning/Head of the National Land Agency has begun to regulate electronic land services, although it does not specifically regulate e-AJB. The Ministry of Agrarian Affairs and Spatial Planning/National Land Agency has developed a Computerized Land Office System (KKP) and a Computerized Land System (Siskompat) as an effort to digitize land services. This development demonstrates the government's commitment to adopting information technology in land administration, including the possible implementation of e-AJB. However, to date, there are no regulations that explicitly and comprehensively regulate the legal status of e-AJB, the procedures for its creation, and the strength of its evidence. This regulatory vacuum creates legal uncertainty that can hamper the implementation of e-AJB even though it is technologically feasible. Therefore, the establishment of legislation that specifically regulates e-AJB is necessary to provide the necessary legal certainty.¹⁷

3.2. Obstacles and Legal Problems of Electronic Land Sale and Purchase Deeds (E-AJB) in the Digital Land Registration System Compared to Conventional Deeds Related to Land Dispute Resolution After the Implementation of Electronic PPAT Services

The implementation of the Electronic Land Sale and Purchase Deed (e-AJB) in Indonesia's digital land registration system faces various obstacles and complex, multidimensional legal challenges. The introduction of the electronic Land Deed Official (PPAT) service represents a significant breakthrough in the modernization of Indonesian land administration, in line with the spirit of national digital transformation. However, the transition from a decades-old conventional system to an electronic system cannot be achieved without addressing a number of fundamental issues that require comprehensive resolution. The legal challenges that arise relate not only to the technical aspects of technology use but also to the dimensions of legal certainty, rights protection, and dispute resolution

¹⁷Imam Koeswahyono, 2020, "Digitalization of Land Services: A Legal Analysis of the Implementation of Electronic Systems in Land Administration", *Ius Quia Iustum Law Journal*, Volume 27, Number 3, September 2020, Faculty of Law, Islamic University of Indonesia, Yogyakarta, pp. 512-536

mechanisms. Various parties involved in land transactions, such as buyers, sellers, PPATs, Land Offices, and judicial institutions, face challenges adapting to this new system. The lack of sufficient empirical experience in handling disputes involving e-AJBs adds to the complexity of the issues faced. The differences in characteristics between conventional physical deeds and digital e-AJBs create legal implications that require in-depth study. This issue becomes even more crucial given that land is a highly valuable asset and is often the subject of disputes within society. Therefore, identifying and analyzing the legal obstacles and challenges facing e-AJB is crucial to ensuring that the digital land registration system can operate effectively without compromising legal protection for all parties.¹⁸

The first legal obstacle faced in the implementation of e-AJB is the lack of clarity and lack of legal norms specifically regulating the status of electronic deeds in land transactions. Although Law Number 11 of 2008 concerning Electronic Information and Transactions, as amended by Law Number 19 of 2016, recognizes electronic documents, specific regulations for electronic land deeds are not yet adequate. Government Regulation Number 24 of 1997 concerning Land Registration, as amended by Government Regulation Number 18 of 2021, also does not explicitly regulate the procedures and mechanisms of e-AJB in detail. This lack of legal norms creates legal uncertainty for parties conducting electronic land transactions due to the lack of clear guidelines regarding their rights and obligations.¹⁹

The second legal issue concerns the evidentiary power of e-AJB in the Indonesian civil procedure system compared to conventional deeds. Conventional authentic deeds drawn up before public officials have full evidentiary power as stipulated in Article 1870 of the Civil Code and have been recognized in judicial practice for many years. However, there is doubt among legal practitioners about whether e-AJB can have the same evidentiary power as conventional authentic deeds. This issue arises because there is no jurisprudence that provides an authoritative interpretation of the evidentiary power of electronic documents, especially in the context of land transactions. In the Indonesian evidentiary law system, judges have the freedom to assess the evidentiary power of evidence, including electronic documents. This uncertainty can lead to inconsistencies in court decisions in disputes involving e-AJB.²⁰

¹⁸Urip Santoso, 2021, "Digital Transformation in the Land Registration System: Legal Opportunities and Challenges", *Journal of Law and Development*, Volume 51, Number 2, April-June 2021, Faculty of Law, University of Indonesia, Jakarta, pp. 412-438

¹⁹² Imam Koeswahyono, 2020, "The Vacuity of Legal Norms in the Implementation of Electronic Land Deeds in Indonesia", *Ius Quia Iustum Law Journal*, Volume 27, Number 3, September 2020, Faculty of Law, Islamic University of Indonesia, Yogyakarta, pp. 512-536

²⁰³ Efa Laela Fakhriah, 2019, "The Evidential Strength of Electronic Deeds as Evidence in the Dispute Resolution Process Through Litigation and Non-Litigation", *Journal of Legal Dynamics*, Volume 19, Number 1, January 2019, Faculty of Law, Jenderal Soedirman University, Purwokerto, pp. 78-95

The fourth legal issue relates to data integrity and system security in the storage and management of e-AJB. Conventional deeds in physical form are stored in the archives of PPAT (PPAT) and the Land Office, with a physical security system that has been established for decades. Although physical documents face the risk of damage due to natural disasters, fire, or negligence, the physical document management system is well understood by all parties. In contrast, e-AJB stored in an electronic system faces different risks such as cyberattacks, computer viruses, server crashes, or system failures. Loss or corruption of electronic data can occur instantly and impact thousands of documents simultaneously, unlike physical documents, where damage is usually limited to a specific document.²¹

The fifth legal obstacle relates to the land dispute resolution mechanism involving e-AJB in the Indonesian judicial system. Courts handling land disputes are generally accustomed to examining physical documents and conventional evidentiary procedures. When dealing with e-AJB, judges and court officials face challenges in understanding the technical aspects of electronic documents and assessing their authenticity. The evidentiary process in court requires the presentation of e-AJB in a form that can be examined and assessed by the judge, but there is no standard procedure for how electronic documents should be presented in court.²²

The sixth legal issue concerns the responsibility and accountability of Land Deed Officials (PPAT) in the preparation of e-AJBs compared to conventional deeds. In the conventional system, PPATs have full control over the deed preparation process, from document verification and meetings with the parties, to signing and storing the deed. The PPAT's responsibilities in conventional deeds are clearly regulated in various laws and regulations and are well understood by practitioners. However, in the preparation of e-AJBs, many processes rely on electronic systems and technological infrastructure that may be beyond the PPAT's direct control.²³

The seventh legal barrier relates to the digital divide and accessibility, which have implications for the principle of fairness in access to land services. Not all Indonesians have equal access to the information and communication technology necessary to use e-AJB services. The digital divide between urban and rural communities, between younger and older generations, and between different economic groups can create discrimination in access to electronic land services.

²¹Ahmad M. Ramli, 2021, "Cybersecurity and Data Protection in the Digital Land System", *Journal of Technology Law*, Volume 8, Number 1, June 2021, Faculty of Law, Padjadjaran University, Bandung, pp. 56-84

²²Bambang Sugeng Ariadi Subagyo, 2020, "Land Dispute Resolution in the Digital Era: Challenges to the Indonesian Justice System", *Jurnal Mimbar Hukum*, Volume 32, Number 3, October 2020, Faculty of Law, Gadjah Mada University, Yogyakarta, pp. 445-471

²³Habib Adjie, 2020, "The Professional Responsibilities of PPAT in Making Electronic Land Deeds", *Jurnal Notarius*, Volume 13, Number 2, September 2020, Master of Notary, Diponegoro University, Semarang, pp. 567-594

People without digital devices, internet connections, or adequate digital literacy will have difficulty accessing e-AJB services and may be forced to use conventional services, which may be more expensive or time-consuming.²⁴

The eighth legal issue relates to the harmonization and synchronization of regulations between various laws and regulations related to e-AJB. The implementation of e-AJB involves various legal sectors such as agrarian law, civil law, state administrative law, and telecommunications law, each of which has its own regulations. The Basic Agrarian Law Number 5 of 1960, as the primary foundation of Indonesian land law, was drafted long before the digital era and therefore did not anticipate developments in information technology. The Government Regulation on Land Registration, although amended, has not yet fully accommodated electronic systems comprehensively. On the other hand, the Law on Information and Electronic Transactions regulates electronic documents in general but does not specifically address the specifics of land transactions. The lack of harmonization between these various regulations creates conflicting norms and legal uncertainty in the implementation of e-AJB.²⁵

The ninth and final legal issue relates to the transnational and jurisdictional aspects of dispute resolution involving e-AJB, particularly in the context of globalization and foreign investment. In the digital era, land transactions may involve parties located in different countries, with communications and agreements conducted electronically across borders. The question of which law applies and which court has jurisdiction to handle disputes becomes complex in the context of electronic transactions. Although the land is physically located in Indonesia and subject to Indonesian law, aspects of electronic transactions may involve foreign elements that require consideration of international law. International conventions on electronic documents and electronic signatures, such as the UNCITRAL Model Law on Electronic Commerce, have not been fully adopted in Indonesian law. This inconsistency between international standards and domestic practices can create obstacles in transactions involving foreign investors or foreign parties. In dispute resolution, the choice of using international arbitration mechanisms or domestic courts is an important consideration for the parties.²⁶

²⁴Yance Arizona, 2021, "Digital Divide and Justice in Access to Land Services: A Human Rights Perspective", *Journal of Law and Development*, Volume 51, Number 1, January-March 2021, Faculty of Law, University of Indonesia, Jakarta, pp. 156-182

²⁵Jimly Asshiddiqie, 2020, "Harmonization of Legislation in the Digital Era", *Indonesian Legislation Journal*, Volume 17, Number 3, September 2020, Directorate General of Legislation, Ministry of Law and Human Rights, Jakarta, pp. 301-328

²⁶Huala Adolf, 2021, "Transnational Aspects in Electronic Land Transactions: A Private International Law Perspective", *Indonesian Journal of International Law*, Volume 18, Number 4, October 2021, Institute for International Law Studies, Faculty of Law, University of Indonesia, Jakarta, pp. 523-552

4. Conclusion

The legal status of the Electronic Land Sale and Purchase Deed (e-AJB) in the Indonesian land law system is a contemporary issue that requires harmonization between the development of information technology and the established principles of agrarian law and civil law. Although the Electronic Information and Transactions Law recognizes electronic documents as valid evidence, there are no explicit and comprehensive regulations regarding e-AJB, thus creating legal uncertainty regarding the procedure for its creation, evidentiary force, and its status as an authentic deed. The implementation of e-AJB must continue to fulfill the 3 (three) legal objectives according to Gustav Radbruch, namely legal certainty, justice, and benefit, while maintaining the essence of the role of PPAT as an authorized public official and ensuring preventive and repressive legal protection for the parties as stated by Philipus M. Hadjon. Therefore, it is necessary to establish special legislation that comprehensively regulates e-AJB, develop a secure and integrated technological infrastructure, and harmonize various related regulations to provide adequate legal certainty for the implementation of electronic systems in land transactions in Indonesia. The implementation of the Electronic Land Sale and Purchase Deed (e-AJB) in the digital land registration system in Indonesia faces various complex and multidimensional legal obstacles and problems, ranging from the lack of legal norms that specifically regulate the status of e-AJB, the uncertainty of the strength of evidence in the civil procedural law system, to technical issues related to identity verification and data security that have implications for the responsibilities of Land Deed Officials (PPAT). Other problems that are no less crucial include the unpreparedness of the judicial system in handling e-AJB disputes, the digital divide that has the potential to violate the principles of justice and equal access to land services, regulatory disharmony between various related laws and regulations, and the complexity of transnational aspects in the context of globalization and foreign investment. These obstacles are not only technical in dimension but also concern fundamental aspects such as legal certainty, rights protection, and accountability that require comprehensive solutions through the establishment of special regulations, harmonization of laws and regulations, increasing human resource capacity, and developing reliable technological infrastructure. Therefore, the successful implementation of e-AJB requires commitment and systematic collaboration from all stakeholders including the government, PPAT, judicial institutions, academics, and the community to ensure that the modernization of the land system does not sacrifice legal protection and justice for all levels of Indonesian society.

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