NEGREI
Academic Journal
of Law and Governance

Institut Agama Islam Negeri (IAIN) Curup, Indonesia
ISSN 2775-8621 (p), 2798-3803 (e)
volume 4, number 1, 2024
DOI: http://doi.org/10.29240/negrei.v4i1.10294

# The Legal Position of the Use of Blockchain Technology on the Validity of Stamp Duty in the Digital Age

**Relys Sandi Ariani[1], Tunggul Anshari Setia Negara[2], Mohammad Hamidi Masykur[3]**
Universitas Brawijaya Malang, Indonesia
Relysandi20@student.ub.ac.id[1], Tunggul@ub.ac.id, hamidi@ub.ac.id

**Abstract.** The integration of blockchain technology in stamp duty administration requires a clear legal framework to ensure effective implementation. This study evaluates the benefits and challenges of using blockchain in stamp duty imposition and provides regulatory framework recommendations. Using a normative legal approach and analysis of relevant legislation, the research shows that blockchain can significantly enhance efficiency, transparency, and security in the stamp duty process. The immutable nature of blockchain records ensures data integrity and reduces the risk of fraud. Moreover, smart contracts can automate and streamline the transaction process, minimizing human error. However, the adoption of blockchain faces challenges such as high initial costs and the need for regulatory adjustments. In conclusion, the adoption of blockchain in stamp duty administration necessitates comprehensive regulations to ensure the legality and validity of recorded transactions, providing a robust and reliable tax system for the digital age.

**Keywords:** *Blockchain*; *Stamp duty*; *Digital Technology*; *Legal Regulation*; *Transparency*

## Introduction

Technological advances in the increasingly sophisticated digital era, especially blockchain, are becoming increasingly relevant in various fields, including in the imposition of stamp duty. Blockchain is a technology that enables decentralized, secure, and immutable storage of transaction data. The use of blockchain has increased rapidly in recent years, especially in Indonesia. This can be seen from the statement of the Chairman of the Indonesian Blockchain Association (ABI), Asih Karnengsih, who mentioned that in the last five years, many companies have begun to adopt this technology.[1] Based on ABI data taken from the Indonesian Standard Business Field Classification (KBLI) released by the Ministry of Communication and Information Technology at the end of 2022, there were 569 companies involved in blockchain.[2] The number of companies involving blockchain based on data from ABI which is based on Indonesian Standard Business Field Classification (KBLI) data released by the Ministry of Communication and Information Technology at the end of 2022 reached 569 companies.

Previous research has explored blockchain applications in various sectors, such as finance and supply chain management, demonstrating its potential to improve transparency, security, and efficiency. However, specific research on the use of blockchain in stamp duty is limited. Some studies have discussed the potential benefits of blockchain for automation and security of tax-related transactions, but there is a significant gap in comprehensive research on its application in the context of stamp duty. Girindra's research is critical in placing the discussion in the context of Indonesian law and the broader implications for global IPR standards. His work, along with related scholarly articles, creates a comprehensive basis for understanding the confluence of technology and law, emphasizing the need for a legislative framework that accommodates and regulates new technologies such as blockchain. Muhammad Ilman Abidin's research studies the integration and practical application of smart contracts in business transactions in Indonesia, and

[1] Leny Megawati, Cecep Wiharma, and Asep Hasanudin, "The Role of Blockchain Technologi in Improving Security and Legal Certainty in Contract Transactions in Indonesia, " *Mimbar Justitia Law Journal* 9, no. 2 (December 30, 2023): 410, doi:10.35194/jhmj.v9i2.3856.

[2] Min Xu, Xingtong Chen, and Gang Kou, "A Systematic Review of Blockchain, " *Financial Innovation* 5, no. 1 (December 2019): 27, doi:10.1186/s40854-019-0147-z.

compares it to practices in different countries. Smart contracts, which are automated agreements that run on blockchain technology, promise increased security, efficiency, and transparency in commercial transactions. This research examines the unique attributes of smart contracts, which differentiate them from traditional contracts and electronic contracts through their ability to execute and verify transactions without third-party intervention.[3]

The urgency of this research is emphasized by the need for a more efficient and transparent stamp duty system in the digital age. Traditional stamp duty processes are often plagued by human error and the risk of data manipulation, which can be mitigated by the adoption of blockchain technology. With the proliferation of electronic documents and the push towards paperless transactions, the need to modernize stamp duty systems has become even more urgent in order to keep up with such developments.

Each country has its own approach to personal data protection. Malaysia and Japan have integrated their regulations into a single product, namely the PDPA and the Data Protection Act. In contrast, Indonesia has several laws governing data protection, including the Criminal Code, ITE Law, Banking Law, Telecommunications Law, Consumer Protection Law, Population Law, Human Rights Law, Population Administration Law, Public Information Disclosure Law, Health Law, Government Regulation No. 71/2019, and Ministerial Regulation No. 20/2016. To achieve comprehensive personal data protection, Indonesia needs to consolidate these regulations into a more integrated framework.[4]

The main legal issue addressed in this study is the regulatory framework required for the application of blockchain technology in the imposition of stamp duty. This includes an examination of existing regulations, identification of necessary adjustments, and proposing new legal guidelines to ensure the

[3] Muhammad Ilman Abidin, "Legal Review of the Validity of the Use of Smart Contracts in Business Transactions in Indonesia and Its Regulation in Various Countries," *Unnes Law Journal* 9, no. 2 (October 31, 2023): 289–310, doi:10.15294/ulj.v9i2.74957.

[4] Yusran Panca Putra, "Comparison of Personal Data Protection Laws Using Narrative Policy Framework Between Indonesia, Malaysia, and Japan," *NEGREI: Academic Journal of Law and Governance* 2, no. 2 (December 31, 2022): 99, doi:10.29240/negrei.v2i2.5527.

safe and efficient use of blockchain for this purpose. In addition, this research will explore the implications of transaction validation, data security, and privacy in the context of blockchain-based stamp duties.

The purpose of this research is to provide recommendations to policymakers on the integration of blockchain into the stamp duty system, identify potential legal and technical challenges, and propose a clear regulatory framework to govern the use of blockchain in stamp duty transactions. This research aims to contribute to a more transparent, efficient, and reliable stamp duty system, which will benefit all parties involved.

## Research Methods

This research uses a normative legal research approach, which focuses on examining legal concepts, principles, and legislation.[5] The methods used in this research include, Statutory approach,[6] which examines legislation related to the use of blockchain technology in the settlement of stamp duties in Indonesia, Conceptual approach, which explores the legal position of blockchain technology, Historical approach. This research uses secondary data as the main source, which consists of primary legal materials such as, Law Number 10 of 2020 concerning Stamp Duty and Law Number 1 of 2024 concerning the Second Amendment to Law of the Republic of Indonesia Number 19 of 2016 concerning Information and Electronic Transactions.

## Discussion

### Utilization of Blockhain in Bureaucracy

Blockchain technology, originally conceptualized by the pseudonymous entity Satoshi Nakamoto in 2008, was first implemented as the underlying technology for Bitcoin, a cryptocurrency.[7] The basic concept of blockchain is

---

[5] Peter Mahmud Marzuki, *Introduction to Legal Science* (Jakarta: Kencana Prenada Media Group, 2008).

[6] H Amiruddin, "Zainal Asikin, Introduction to Legal Research Methods, "*Jakarta: Rajawali Pers*, 2012.

[7] Kristofer Carlson, "The Nakamoto Blockchain," 2018, doi:10.13140/RG.2.2.17991.34723.

a distributed ledger system, where information is stored across various nodes in a decentralized network. This ledger records transactions in sequential blocks that are cryptographically linked, making the chain of information tamper-resistant and transparent. Early applications in Bitcoin demonstrated blockchain's potential for secure, transparent, and decentralized digital asset management, sparking interest in broader applications of the technology beyond cryptocurrencies.[8]

As blockchain technology evolves, its applications extend to various sectors, driven by its key attributes such as decentralization, immutability, and transparency.[9] The financial sector quickly adopted blockchain for more efficient and secure transactions, but later, other industries such as supply chain management, healthcare, and intellectual property management began to explore its potential. The development of smart contracts, which are self-executing contracts with terms directly written in code, further enhanced blockchain's capabilities.[10] These contracts enable trusted, automated agreements and transactions, significantly reducing the need for intermediaries and minimizing human error and fraud.

In the context of bureaucracy, blockchain's potential to revolutionize public administration is beginning to be recognized. Governments around the world are beginning to pilot blockchain projects to increase transparency, reduce corruption, and improve efficiency in public services. Blockchain's immutable ledger provides a robust mechanism for managing records, ensuring that data such as land registries, public procurement details, and personal identification

[8] Nripendra P. Rana, Yogesh K. Dwivedi, and D. Laurie Hughes, "Analysis of Challenges for Blockchain Adoption within the Indian Public Sector: An Interpretive Structural Modeling Approach, "*Information Technology & People* 35, no. 2 (March 28, 2022): 548–76, doi:10.1108/ITP-07-2020-0460.

[9] Runhui Lin et al., "Organizational Governance in the Smart Era: The Implications of Blockchain, "*Nankai Business Review International* 14, no. 2 (June 5, 2023): 197–229, doi:10.1108/NBRI-02-2021-0014.

[10] Yuna Jiang, Yi Zhong, and Xiaohu Ge, "Smart Contract-Based Data Commodity Transactions for Industrial Internet of Things, "*IEEE Access* 7 (2019): 180856–66, doi:10.1109/ACCESS.2019.2959771.

records are secure and tamper-proof.[11] In addition, the transparent nature of blockchain facilitates auditability and traceability, which are essential for maintaining public trust and accountability in government operations.

The utilization of blockchain in bureaucracy has seen practical implementations in various domains, from digital identity management and voting systems to public procurement and tax collection. By utilizing blockchain, governments can improve the security and integrity of their processes, ensuring that all transactions and records are verifiable and transparent.[12] For example, blockchain-based voting systems can reduce election fraud by providing secure and immutable voting records, while blockchain in public procurement can ensure transparent and fair tendering processes. [13]

Research into blockchain technology in electronic voting systems shows significant potential for improving the integrity, security, and efficiency of the voting process. Jafar[14] highlights the importance of ensuring remote participation security and addressing transaction speed for scalability in a sustainable blockchain-based voting system. This research shows that fast and secure transactions can accommodate a large number of voters without compromising data integrity. Ihm and Kim[15] introduced a blockchain-based electronic voting system designed to ensure accuracy, reliability, and applicability for different types of voting through distributed ledgers and smart contracts. The system not only enhances security but also expands the scope

---

[11] Naielly Lopes Marques, Leonardo Lima Gomes, and Luiz Eduardo Brandão, "A Blockchain-Based Model for Token Renewable Energy Certificate Offers," *Revista Contabilidade & çFinanças* 34, no. 91 (2023): e1582, doi:10.1590/1808-057x20221582.en.

[12] Alhamzah F. Abbas et al., "The Blockchain Technologies in Healthcare: Prospects, Obstacles, and Future Recommendations; Lessons Learned from Digitalization," *International Journal of Online and Biomedical Engineering (iJOE)* 18, no. 09 (July 11, 2022): 144–59, doi:10.3991/ijoe.v18i09.32253.

[13] Uzma Jafar, Mohd Juzaiddin Ab Aziz, and Zarina Shukur, "Blockchain for Electronic Voting System-Review and Open Research Challenges, "*Sensors* 21, no. 17 (August 31, 2021): 5874, doi:10.3390/s21175874.

[14] Ibid.

[15] Young-Sung Ihm and Seung-Hee Kim, "Development of a Blockchain-Based Online Secret Electronic Voting System, " *IEICE Transactions on Information and Systems* E105.D, no. 8 (August 1, 2022): 1361–72, doi:10.1587/transinf.2021EDK0005.

and flexibility in deployment.[16]

Yi[17] highlights the advantages of blockchain-based electronic voting systems over traditional systems in terms of transparency, security, and efficiency. Blockchain-based systems are able to eliminate the need for a trusted third party, which is often a point of vulnerability in traditional systems. With blockchain, every voting transaction is recorded in an immutable ledger, increasing the reliability and transparency of election results. Ruhi Taş and Ömer Özgür Tanrıöver[18] focus on the importance of voter privacy in blockchain-based electronic voting systems to overcome the shortcomings of current voting methods. By using strong encryption and anonymity techniques, blockchain can protect the identity of voters without compromising the transparency and accountability of the voting process.

This study reinforces previous findings on the benefits of blockchain technology in electronic voting systems. Malkawi[19] introduced an agent-based approach within the framework of electronic voting systems to enhance voting security. This agent-based approach can help detect and prevent election fraud by monitoring suspicious activities in real-time. Hassan et al. (2022) introduced an intelligent agent-based voting system to maintain transparency and auditability by integrating a supervised online voting system. The system ensures that every vote can be verified and tracked, increasing public confidence in the election results. Singh et al. (2022) proposed a blockchain-based electronic voting system, VoteChain, for large-scale voting, emphasizing the advantages of blockchain technology compared to other systems.

---

[16] Hardivizon Hardivizon and Mufutau Olusola Bello, "The Relevance of Hadith Principles in Balancing Power within the Legal System of a State" 3, no. 2 (n.d.): 99–118, doi:http://dx.doi.org/10.29240/negrei.v3i2.9201.

[17] Haibo Yi, "Securing E-Voting Based on Blockchain in P2P Network, "*EURASIP Journal on Wireless Communications and Networking* 2019, no. 1 (December 2019): 137, doi:10.1186/s13638-019-1473-6.

[18] Ruhi Taş and ÖÖmer ÖzgÖzgür r TanrTanrıöver, "A Systematic Review of Challenges and Opportunities of Blockchain for E-Voting, "*Symmetry* 12, no. 8 (August 9, 2020): 1328, doi:10.3390/sym12081328.

[19] Mohammad Malkawi, Muneer Bani Yassein, and Asmaa Bataineh, "Blockchain Based Voting System for Jordan Parliament Elections, "*International Journal of Electrical and Computer Engineering (IJECE)* 11, no. 5 (October 1, 2021): 4325, doi:10.11591/ijece.v11i5.pp4325-4335.

The practical implications of these findings are crucial for public administration, especially in the context of electronic voting systems. By integrating blockchain technology, governments can increase public trust through greater transparency and accountability. A blockchain-based voting system can ensure that all transactions and records cannot be manipulated, improve administrative efficiency, and reduce operational costs. For example, the blockchain-based voting system proposed by Sankhe offers voter identity protection, secure data transfer, and verifiable results through transparency. The implementation of this technology can also assist governments in overcoming security and privacy challenges, which are often obstacles in traditional electronic voting systems. Additionally, the adoption of blockchain technology in voting can ensure that the voting process remains secure and auditable, reduce the risk of election fraud, and increase voter participation by offering a more accessible and trusted solution.[20] The system allows voters to cast their ballots from any location, reducing geographical barriers and increasing inclusion.

Various Blockhain developments have been widely utilized in various sectors, including stamp duty. In simple terms, Blockhain by Government agencies is very important for stamp duty administration. This includes ensuring interoperability between blockchain networks and other digital tax systems. The government needs to collaborate with technology providers to develop solutions that can integrate with existing infrastructure while leveraging blockchain's capabilities for secure and transparent record keeping. The use of decentralized ledgers to track and record assets and transactions without a central authority, as noted by Novakova et al. (2018), highlights the importance of designing interoperable systems. [21]

[20] Annisa Riyantika, "Law Enforcement of Corruption Crimes Through the Restoration of State Finances Based on the Principles of Restorative Justice," *NEGREI: Academic Journal of Law and Governance* 3, no. 1 (October 6, 2023): 41, doi:10.29240/negrei.v3i1.7193.

[21] Galia Novakova, Roumen Nikolov, and Elena Shoikova, "Challenges and Opportunities of Blockchain Technology in Industrial Applications, "*Serdica Journal of Computing* 12, no. –1-2 (December 7, 2018): 107–30, doi:10.55630/sjc.2018.12.107-130.

## The Legal Position of the Use of Blockchain Technology in the Imposition of Stamp Duty in the Digital Era

The company's choice of blockchain is considered to simplify business processes, in this case related to data collection and information. Some of the advantages of using blockchain are that stamp duty transaction records can be managed automatically and their authenticity guaranteed. This can reduce the risk of human error and data manipulation that often occurs in manual management systems.[22] Looking at the use of blockchain technology itself has great potential to improve system integrity, reduce the risk of data manipulation, and improve data management efficiency.[23] One of the fields that has experienced the impact of blockchain is finance *(fintech),* where the presence of blockchain gives rise to digital currencies and *fintech* platforms that facilitate and provide security for the community.

After successfully providing renewable innovations in the financial sector, it raises the potential for the taxation sector, namely the imposition of stamp duty. In the current digital era, stamps have developed with the emergence of electronic stamps (*e-meterai*), of course, in order to keep up with the times that have sprung up electronic documents, and reduce the use of *paper* (*paperless*). In order to optimize various processes including stamp duty settlement, the use of blockchain can be chosen.[24] Judging from the function of this stamp duty as a tool to certify and provide legality to these documents, so it is important in maintaining the validity of business and administrative transactions.[25] In line with the presence of E-Meterai, blockchain can also potentially be involved in the settlement of stamp duty on a document, especially electronic documents

---

[22] Adi Nugroho Susanto Putro et al., "Enhancing Security and Reliability of Information Systems through Blockchain Technology: A Case Study on Impacts and Potential, "*West Science Information System and Technology* 1, no. 01 (August 28, 2023): 35–43, doi:10.58812/wsist.v1i01.166.

[23] M. E. Purnama Ramadani Silalahi and M. E. Chairina, *Digital Economy: Digital* (Merdeka Kreasi Group, 2023), reasi+Group.&ots=Oj9j3i6weB&sig=ydkn-zRJkM2GrZSBRjkVAU3VjS8.

[24] Mia Ika Rahmawati and Anang Subardjo, "A Bibliometric Analysis of Accounting in the Blockchain Era, "*Journal of Accounting and Investment* 23, no. 1 (January 20, 2022): 66–77, doi:10.18196/jai.v23i1.13302.

[25] Mirna Amirya, "Blockchain Technology in MSME Bookkeeping in Indonesia", "*Scientific Journal of Civilization Accounting* 8, no. 2 (August 1, 2022): 181–93, doi:10.24252/jiap.v8i2.29730.

in Indonesia. However, the adoption of blockchain specifically in stamp duty settlement is still in its early stages and requires more specific regulations and a clear framework. However, in terms of regulation, blockchain technology in the imposition of stamp duty also requires adjustments in existing regulations and rules.[26]

The digital era is characterized by technological developments, this can be seen from all aspects of people's lives that are almost entirely inseparable from technology.[27] In addition to the negative impacts brought by the digital era, of course there are many positive impacts that are present in facilitating human life. One of the developments that has been so rapid in recent years is the emergence of the use of blockchain technology. Blockchain itself has great potential to be applied in various aspects of society and government, especially in Indonesia. One of the blockchain's involvement in the financial sector within the scope of government is the use of *virtual currency* (VC) as stated by Bank Indonesia that "Technological developments have driven various changes in the economy. One of the growing innovations is virtual currency (VC) which is driven by distributed ledger technology using blockchain," [28]

This technology is predicted to have a great influence on society. There is an article entitled "*Designing Smart Contract For Electronic* Document Taxation"[29] which was published in 2019. That with the presence of electronic contracts, of course E-stamps will also be used and the development of electronic administration is also needed in running the security system. In line with technological developments, the field of taxation has also changed. One of the sources of income from the tax sector, namely the payment of stamp duty, also did not escape the times. Based on Law number 10 of 2020 concerning

---

[26] Huasheng Zhu and Zach Zhizhong Zhou, "Analysis and Outlook of Applications of Blockchain Technology to Equity Crowdfunding in China, "*Financial Innovation* 2, no. 1 (December 2016): 29, doi:10.1186/s40854-016-0044-7.

[27] Yudi Kornelis, Legal Protection for E-Wallet Consumers in The Digial Economu Era", *Mizan: Journal of Legal Science* 11, no. 1 (June 14, 2022): 34, doi:10.32503/mizan.v11i1.2492.

[28] Muhammad Abdurrohim, Indah Kumalasari, and Fathur Rosy, "The Paradox of Indonesia Cyberspace Policy and Cooperation: Neoclassical Realism Perspective, "*Journal of International Relations* 11, no. 2 (September 19, 2022): 13–23, doi:10.18196/jhi.v11i2.14361.

[29] Wardah Yuspin et al., "Personal Data Protection Law in Digital Banking Governance in Indonesia, "*Studia Iuridica Lublinensia* 32, no. 1 (March 28, 2023): 99–130, doi:10.17951/sil.2023.32.1.99-130.

Stamp Duty has authorized the existence of electronic stamps. Where the definition of electronic stamp itself is regulated in Article 1 number 6 of the Regulation of the Minister of Finance of the Republic of Indonesia Number 134 / PMK.03/2021 which reads:

*"Electronic Stamp is a stamp in the form of a label whose use is carried out by affixing it to a Document through a certain system."*

The characteristics of electronic seals are also mentioned in Article 14 paragraph (1) which reads:

*"(1) Electronic stamps as referred to in Article 12 paragraph (2) letter b have a unique code and certain information."*

The e-stamp itself has the same use or function as the stamp in general. But what distinguishes it is only the form. The following differences and similarities between sticky stamps and e-stamps are presented in tabular form

Table 1. Differences and Similarities of Paste Stamps with E-Stamps

| Aspects | Postage Stamp | Electronic Seals | Reference |
|---|---|---|---|
| Shape | Physical, in the form of paper or stickers | Digital, in the form of electronic files | Minister of Finance Regulation (PMK) No. 134/PMK.03/2021 |
| Nominal Price | IDR 10,000 | IDR 10,000 | Law Number 10 of 2020 concerning Stamp Duty |
| Media Usage | Physical document | Electronic document | PMK No. 134/PMK.03/2021 |
| Distribution and Purchasing | Available at post offices, stores, or authorized points of sale | Through the official portal of the Directorate General of Taxes or designated institutions | PMK No. 134/PMK.03/2021 |
| Usage | Physically attached to the document | Attached or integrated to electronic documents | PMK No. 134/PMK.03/2021 |

| | | | |
|---|---|---|---|
| Security | Contains physical security elements such as watermarks | Contains digital security features to prevent counterfeiting | PMK No. 134/PMK.03/2021 |
| Legality | Legal for certain documents in accordance with statutory provisions | Authorized for electronic documents in accordance with statutory provisions | Law Number 10 of 2020 concerning Stamp Duty; PMK No. 134/PMK.03/2021 |
| Publisher | The government through the Public Company for Printing Money of the Republic of Indonesia (Peruri) | The government through the Public Company for Printing Money of the Republic of Indonesia (Peruri) | Law Number 10 of 2020 concerning Stamp Duty; PMK No. 134/PMK.03/2021 |

Source: Law Number 10 of 2020 concerning Stamp Duty, Minister of Finance Regulation Number 134/PMK.03/2021.

Stamp duty repayment in the digital era is becoming an increasingly relevant issue along with the development of information technology. Blockchain is a decentralized technology that records transactions securely and transparently, so it can be used in various fields including taxation. Blockchain has great potential to be applied in the taxation system due to its high security and ability to reduce administrative costs.[30] However, the implementation of this technology still faces various legal challenges that need to be resolved. Legally, the use of blockchain for the imposition of stamp duty does not yet have a clear and comprehensive regulation, so there is an urgent need to shape existing regulations. This is important to ensure that all transactions recorded in the blockchain can be legally recognized and have the same legal force as

[30] Milla Sepliana Setyowati et al., "Strategic Factors in Implementing Blockchain Technology in Indonesia's Value-Added Tax System, "*Technology in Society* 72 (February 2023): 102169, doi:10.1016/j.techsoc.2022.102169.

conventionally recorded transactions.[31]

Based on several related regulations such as Law Number 1 of 2024 concerning the Second Amendment to Law of the Republic of Indonesia Number 19 of 2016 concerning Information and Electronic Transactions that in the law can be a temporary legal basis for electronic transactions, including those involving blockchain technology. This is because a specific regulation regarding blockchain itself does not yet exist in Indonesia. Since stamp duty is included in the taxation sector in the financial sector, there is Bank Indonesia Regulation No. 19/12/PBI/2017 concerning the Implementation of Financial Technology (FinTech) and Financial Services Authority (OJK) Regulation No. 13/POJK.02/2018 concerning Digital Financial Innovation in the Financial Services Sector which focuses more on the use of emerging technologies in providing financial services, including blockchain in the financial context.

Not only in terms of technological law that has not specifically accommodated the use of blockchain in stamp duty settlement. However, the stamp duty rules themselves so far have only issued E-Meterai where payment or settlement is made electronically based on Article 6 paragraph (1) which reads:

*"(1) Payment of Stamp Duty by using Electronic Stamp as referred to in Article 3 paragraph (2) letter b shall be made by affixing the Electronic Stamp through the Electronic Stamp System on the Document payable to Stamp Duty."*

When paying stamp duty, it is necessary to include documents and it is not uncommon for people to forget what documents they attached stamps to or how many stamp sheets were purchased. Of course this can be overcome by the presence of blockchain. However, the rules do not yet accommodate, only a few rules can be linked as a legal basis. It is possible that in the future there will be protocol development that allows interaction between the blockchain system and the existing stamp duty administration system.[32] In realizing a good

[31] Untung Rahardja et al., "Design Framework on Tertiary Education System in Indonesia Using Blockchain Technology," in *2019 7th International Conference on Cyber and IT Service Management (CITSM),* Jakarta, Indonesia: IEEE, 2019), 1-4, doi:10.1109/CITSM47753.2019.8965380.

[32] Wahyudi, T. 2020, *Integrating Blockchain Technology into Existing Administrative Systems for Stamp Duty*. *Indonesian Journal of Legal Studies*, vol. 3, no. 2, p. 90

regulation in the future regarding the use of blockchain technology in stamp duty settlement, collaboration is needed from various parties, including the government, industry players, and the community. This is aimed at creating an ecosystem that supports the use of blockchain in taxation.[33]

**Ius Constituendum Against Blockchain Technology on Stamp Duty Imposition in the Digital Age**

The development of the times makes technology increasingly developed and affects various aspects. As in the first discussion that blockchain can also be possible in the future to collaborate with the use of blockchain technology. However, in its development until now there has been no specific regulation governing the blockchain itself and in the stamp duty regulations until now the development has reached electronic stamps. The government has just enacted Government Regulation Number 5 of 2021 concerning the Implementation of Risk-Based Business Licensing, where one of the things discussed in the regulation is *blockchain* technology,[34] revealed by Plt. Director of Digital Economy, I Nyoman Adhiarna at the Conference 2021 event with the theme Blockchain *Smart Regulation: Regulatory Framework for Blockchain-based Projects*. So that the state must be present in the preparation of future regulations that cover various technical and legal aspects to ensure the validity and sustainability of the use of blockchain in the imposition of stamp duties more specifically.[35] The legality of blockchain involvement in stamp duty settlement needs to pay attention to several things, First of all, there needs to be a regulatory framework that regulates the definition and scope of the use of blockchain in the context of stamp duty imposition. [36]

---

[33] Paraskevi Katsiampa, Larisa Yarovaya, and Damian Zięba, "High-Frequency Connectedness between Bitcoin and Other Top-Traded Crypto Assets during the COVID-19 Crisis, "*Journal of International Financial Markets, Institutions and Money* 79 (July 2022): 101578, doi:10.1016/j.intfin.2022.101578.

[34] Dirk F. Gerritsen, Rick A.C. Lugtigheid, and Thomas Walther, "Can Bitcoin Investors Profit from Predictions by Crypto Experts?" *Finance Research Letters* 46 (May 2022): 102266, doi:10.1016/j.frl.2021.102266.

[35] Syed Ali Raza et al., "Uncertainty in the Financial Regulation Policy and the Boom of Cryptocurrencies, "*Finance Research Letters* 52 (March 2023): 103515, doi:10.1016/j.frl.2022.103515.

[36] Alexey Mikhaylov, "Cryptocurrency Market Analysis from the Open Innovation Perspective, "*Journal of Open Innovation: Technology, Markets, and Complexity* 6, no. 4 (December 2020): 197, doi:10.3390/joitmc6040197.

The emergence of blockchain in recent years has not been accommodated at all in the latest regulations. If in the future blockchain has an impact on stamp duty settlement, there is a need to revise the existing stamp duty law to accommodate blockchain technology. This revision is important to provide a clear legal basis regarding the status of transactions recorded in the blockchain and the recognition of their legality.

Secondly, in the formation of new regulations, the technical aspects of how transactions are recorded and verified in the blockchain must also be considered. In order to ensure uniformity of data integrity and security.[37] Concentration on realizing the ius constituendum in the future, namely transparency. This can also be a positive consideration for the government to utilize blockchain technology. That blockchain can provide an immutable audit trail. This will simplify the process of supervision and inspection by relevant authorities, thereby reducing the potential for abuse and increasing public confidence in the tax system.[38]

This blockchain system on stamp settlement can create decentralized trust.[39] In line with the use of e-stamps centered on Peruri as the only authorized party. Third, that the key to future regulations coincides with the revision of stamp duty regulations that accommodate blockchain, it is necessary to issue a regulation in giving centralized authority to Peruri without interference from other parties in the authority to issue stamps. Because this is to anticipate other parties in counterfeiting stamps.

In the future, the application of this law should also pay attention to the social and economic implications of using blockchain in the imposition of stamp duty. The use of this technology can provide benefits in terms of efficiency

---

[37] Sampson Anomah et al., "Blockchain Technology Integration in Tax Policy: Navigating Challenges and Unlocking Opportunities for Improving the Taxation of Ghana's Digital Economy, "*Scientific African* 24 (June 2024): e02210, doi:10.1016/j.sciaf.2024.e02210.

[38] Loso Judijanto, "Implementation of Blockchain Technology in Improving Transparency of Public Services: A Case Study on Government Service Delivery in Indonesia, "*West Science Information System and Technology* 1, no. 02 (December 30, 2023): 63–71, doi:10.58812/wsist.v1i02.477.

[39] Zhixiu Yu, "On the Coexistence of Cryptocurrency and Fiat Money, "*Review of Economic Dynamics* 49 (July 2023): 147–80, doi:10.1016/j.red.2022.08.001.

and transparency, but also needs to pay attention to potential negative impacts, such as increased operational costs for small and medium users and the potential digital divide for technically unprepared communities.[40] Thus, drafting an appropriate *ius constituendum* for the use of blockchain in the imposition of stamp duty in the digital era is a complex challenge and requires collaboration between government, industry, and society to achieve an optimal balance between the application of technology and the interests of tax and social justice.[41]

## Conclusion

The digital era with technological developments has a positive impact, one of which is the presence of blockchain technology. One of the blockchain involvements in the scope of government is the use of *virtual currency* (VC) at Bank Indonesia. So in the future it is possible that there will be blockchain involvement in stamp duty settlement. Currently, the stamp duty has *issued an* E-Meterai based on Law number 10 of 2020. However, for now the Indonesian state does not have regulations regarding blockchain specifically, especially in the stamp duty settlement sector. With the development of digitalization, it is deemed necessary to form blockchain regulations. To ensure that transactions are recorded in the blockchain. Several regulations of the ITE Law, Bank Indonesia Regulations, POJK only mention some parts of the blockchain. Especially in Stamp Duty itself has not accommodated blockchain technology, only limited to the use of E-Stamps. So future arrangements are needed in anticipation of the presence of blockchain in the field of stamp duty settlement in Indonesia.

In the future, it will be possible to use blockchain technology in stamp duty settlement. However, in its development until now there has been no specific regulation governing the blockchain itself and in stamp duty regulations and other regulations. So that in the future a regulation is needed to ensure the

---

[40] Widodo. 2021, *Blockchain and Taxation: Challenges and Opportunities*. *Journal of Blockchain and Taxation*, vol. 3, no. 2

[41] Agata Ferreira and Philipp Sandner, "Eu Search for Regulatory Answers to Crypto Assets and Their Place in the Financial Markets' Infrastructure, "*Computer Law & Security Review* 43 (November 2021): 105632, doi:10.1016/j.clsr.2021.105632.

validity and sustainability of the use of blockchain in the imposition of stamp duty more specifically. Some things that need to be considered in the formation of this regulation are: the need for a definitional framework and the scope of the use of blockchain in the context of stamp duty imposition, secondly, it must pay attention to the technical aspects of recording transactions and verification in the blockchain, thirdly, it is necessary to pay attention to the centralized authority of Peruri without interference from other parties to issue E-stamps, lastly, of course, the social and economic implications that not all Indonesian people understand, operate and keep up with the times.

## Bibliography

Abdurrohim, Muhammad, Indah Kumalasari, and Fathur Rosy. "The Paradox of Indonesia Cyberspace Policy and Cooperation: Neoclassical Realism Perspective." *Jurnal Hubungan Internasional* 11, no. 2 (September 19, 2022): 13–23. doi:10.18196/jhi.v11i2.14361.

Abidin, Muhammad Ilman. "Legal Review of the Validity of the Use of Smart Contracts in Business Transactions in Indonesia and Its Regulation in Various Countries." *Unnes Law Journal* 9, no. 2 (October 31, 2023): 289–310. doi:10.15294/ulj.v9i2.74957.

Alhamzah F. Abbas, Naveed Akhtar Qureshi, Nohman Khan, Rabia Chandio, and Javed Ali. "The Blockchain Technologies in Healthcare: Prospects, Obstacles, and Future Recommendations; Lessons Learned from Digitalization." *International Journal of Online and Biomedical Engineering (iJOE)* 18, no. 09 (July 11, 2022): 144–59. doi:10.3991/ijoe.v18i09.32253.

Amiruddin, H. "Zainal Asikin, Pengantar Metode Penelitian Hukum." *Jakarta: Rajawali Pers*, 2012.

Amirya, Mirna. "BLOCKCHAIN TECHNOLOGY IN MSME BOOKKEEPING IN INDONESIA." *Jurnal Ilmiah Akuntansi Peradaban* 8, no. 2 (August 1, 2022): 181–93. doi:10.24252/jiap.v8i2.29730.

Anomah, Sampson, Boadu Ayeboafo, Maurice Aduamoah, and Owusu Agyabeng. "Blockchain Technology Integration in Tax Policy: Navigating Challenges and Unlocking Opportunities for Improving the Taxation of Ghana's Digital Economy." *Scientific African* 24 (June 2024): e02210. doi:10.1016/j.sciaf.2024.e02210.

Carlson, Kristofer. "The Nakamoto Blockchain," 2018. doi:10.13140/RG.2.2.17991.34723.

Ferreira, Agata, and Philipp Sandner. "Eu Search for Regulatory Answers to Crypto Assets and Their Place in the Financial Markets' Infrastructure." *Computer Law & Security Review* 43 (November 2021): 105632. doi:10.1016/j.clsr.2021.105632.

Gerritsen, Dirk F., Rick A.C. Lugtigheid, and Thomas Walther. "Can Bitcoin Investors Profit from Predictions by Crypto Experts?" *Finance Research Letters* 46 (May 2022): 102266. doi:10.1016/j.frl.2021.102266.

Hardivizon Hardivizon and Mufutau Olusola Bello. "The Relevance of Hadith Principles in Balancing Power within the Legal System of a State" 3, no. 2 (n.d.): 99–118. doi:http://dx.doi.org/10.29240/negrei.v3i2.9201.

Ihm, Young-Sung, and Seung-Hee Kim. "Development of a Blockchain-Based Online Secret Electronic Voting System." *IEICE Transactions on Information and Systems* E105.D, no. 8 (August 1, 2022): 1361–72. doi:10.1587/transinf.2021EDK0005.

Jafar, Uzma, Mohd Juzaiddin Ab Aziz, and Zarina Shukur. "Blockchain for Electronic Voting System—Review and Open Research Challenges." *Sensors* 21, no. 17 (August 31, 2021): 5874. doi:10.3390/s21175874.

Jiang, Yuna, Yi Zhong, and Xiaohu Ge. "Smart Contract-Based Data Commodity Transactions for Industrial Internet of Things." *IEEE Access* 7 (2019): 180856–66. doi:10.1109/ACCESS.2019.2959771.

Judijanto, Loso. "Implementation of Blockchain Technology in Improving Transparency of Public Services: A Case Study on Government Service Delivery in Indonesia." *West Science Information System and Technology* 1, no. 02 (December 30, 2023): 63–71. doi:10.58812/wsist.v1i02.477.

Katsiampa, Paraskevi, Larisa Yarovaya, and Damian Zięba. "High-Frequency Connectedness between Bitcoin and Other Top-Traded Crypto Assets during the COVID-19 Crisis." *Journal of International Financial Markets, Institutions and Money* 79 (July 2022): 101578. doi:10.1016/j.intfin.2022.101578.

Kornelis, Yudi. "LEGAL PROTECTION FOR E-WALLET CONSUMERS IN THE DIGITAL ECONOMY ERA." *Mizan: Jurnal Ilmu Hukum* 11, no. 1 (June 14, 2022): 34. doi:10.32503/mizan.v11i1.2492.

Lin, Runhui, Lun Wang, Biting Li, Yanhong Lu, Zhiqiang Qi, and Linyu Xie. "Organizational Governance in the Smart Era: The Implications of Blockchain." *Nankai Business Review International* 14, no. 2 (June 5, 2023): 197–229. doi:10.1108/NBRI-02-2021-0014.

Malkawi, Mohammad, Muneer Bani Yassein, and Asmaa Bataineh. "Blockchain Based Voting System for Jordan Parliament Elections." *International Journal of Electrical and Computer Engineering (IJECE)* 11, no. 5 (October 1, 2021): 4325. doi:10.11591/ijece.v11i5.pp4325-4335.

Marques, Naielly Lopes, Leonardo Lima Gomes, and Luiz Eduardo Brandão. "A Blockchain-Based Model for Token Renewable Energy Certificate Offers." *Revista Contabilidade & Finanças* 34, no. 91 (2023): e1582. doi:10.1590/1808-057x20221582.en.

Marzuki, Peter Mahmud. *Penghantar Ilmu Hukum*. Jakarta: Kencana Prenada Media Group, 2008.

Megawati, Leny, Cecep Wiharma, and Asep Hasanudin. "PERAN TEKNOLOGI BLOCKCHAIN DALAM MENINGKATKAN KEAMANAN DAN KEPASTIAN HUKUM DALAM TRANSAKSI KONTRAK DI INDONESIA." *Jurnal Hukum Mimbar Justitia* 9, no. 2 (December 30, 2023): 410. doi:10.35194/jhmj.v9i2.3856.

Mikhaylov, Alexey. "Cryptocurrency Market Analysis from the Open Innovation Perspective." *Journal of Open Innovation: Technology, Market, and Complexity* 6, no. 4 (December 2020): 197. doi:10.3390/joitmc6040197.

Novakova, Galia, Roumen Nikolov, and Elena Shoikova. "Challenges and Opportunities of Blockchain Technology in Industrial Applications." *Serdica Journal of Computing* 12, no. 1–2 (December 7, 2018): 107–30. doi:10.55630/sjc.2018.12.107-130.

Purnama Ramadani Silalahi, M. E., and M. E. Chairina. *Ekonomi Digital: Perkembangan Bisnis Digital, Pemasaran Digital, Ecommerce, Fintech Berbasis Syariah Dan Homoislamicus Dalam Perilaku Konsumen*. Merdeka Kreasi Group, 2023. https://books.google.com/books?hl=id&lr=&id=aKzFEAAAQBAJ&oi=fnd&pg=PA5&dq=Purnama+Ramadani+Silalahi,+M.+E.,+%26+Chairina,+M.+E.+(2023).+Ekonomi+Digital:+Perkembangan+Bisnis+Digital,+Pemasaran+Digital,+Ecommerce,+Fintech+Berbasis+Syariah+dan+Homoislamicus+dalam+Perilaku+Konsumen.+Merdeka+Kreasi+Group.&ots=Oj9j3i6weB&sig=ydkn-zRJkM2GrZSBRjkVAU3VjS8.

Putra, Yusran Panca. "Comparison of Personal Data Protection Laws Using Narrative Policy Framework Between Indonesia, Malaysia, and Japan." *NEGREI: Academic Journal of Law and Governance* 2, no. 2 (December 31, 2022): 99. doi:10.29240/negrei.v2i2.5527.

Putro, Adi Nugroho Susanto, Sabil Mokodenseho, Nur Alim Hunawa, Muhatir Mokoginta, and Evelin Ragil Marjoni Marjoni. "Enhancing Security and Reliability of Information Systems through Blockchain Technology: A Case Study on Impacts and Potential." *West Science Information System and Technology* 1, no. 01 (August 28, 2023): 35–43. doi:10.58812/wsist.v1i01.166.

Rahardja, Untung, Achmad Nizar Hidayanto, Taqwa Hariguna, and Qurotul Aini. "Design Framework on Tertiary Education System in Indonesia Using Blockchain Technology." In *2019 7th International Conference on Cyber and IT Service Management (CITSM)*, 1–4. Jakarta, Indonesia: IEEE, 2019. doi:10.1109/CITSM47753.2019.8965380.

Rahmawati, Mia Ika, and Anang Subardjo. "A Bibliometric Analysis of Accounting in the Blockchain Era." *Journal of Accounting and Investment* 23, no. 1 (January 20, 2022): 66–77. doi:10.18196/jai.v23i1.13302.

Rana, Nripendra P., Yogesh K. Dwivedi, and D. Laurie Hughes. "Analysis of Challenges for Blockchain Adoption within the Indian Public Sector: An Interpretive Structural Modelling Approach." *Information Technology & People* 35, no. 2 (March 28, 2022): 548–76. doi:10.1108/ITP-07-2020-0460.

Raza, Syed Ali, Komal Akram Khan, Khaled Guesmi, and Ramzi Benkraiem. "Uncertainty in the Financial Regulation Policy and the Boom of Cryptocurrencies." *Finance Research Letters* 52 (March 2023): 103515. doi:10.1016/j.frl.2022.103515.

Riyantika, Annisa. "Law Enforcement of Corruption Crimes Through the Restoration of State Finances Based on the Principles of Restorative Justice." *NEGREI: Academic Journal of Law and Governance* 3, no. 1 (October 6, 2023): 41. doi:10.29240/negrei.v3i1.7193.

Setyowati, Milla Sepliana, Niken Desila Utami, Arfah Habib Saragih, and Adang Hendrawan. "Strategic Factors in Implementing Blockchain Technology in Indonesia's Value-Added Tax System." *Technology in Society* 72 (February 2023): 102169. doi:10.1016/j.techsoc.2022.102169.

Taş, Ruhi, and Ömer Özgür Tanrıöver. "A Systematic Review of Challenges and Opportunities of Blockchain for E-Voting." *Symmetry* 12, no. 8 (August 9, 2020): 1328. doi:10.3390/sym12081328.

Xu, Min, Xingtong Chen, and Gang Kou. "A Systematic Review of Blockchain." *Financial Innovation* 5, no. 1 (December 2019): 27. doi:10.1186/s40854-019-0147-z.

Yi, Haibo. "Securing E-Voting Based on Blockchain in P2P Network." *EURASIP Journal on Wireless Communications and Networking* 2019, no. 1 (December 2019): 137. doi:10.1186/s13638-019-1473-6.

Yu, Zhixiu. "On the Coexistence of Cryptocurrency and Fiat Money." *Review of Economic Dynamics* 49 (July 2023): 147–80. doi:10.1016/j.red.2022.08.001.

Yuspin, Wardah, Kelik Wardiono, Aditya Nurrahman, and Arief Budiono. "Personal Data Protection Law in Digital Banking Governance in

Indonesia." *Studia Iuridica Lublinensia* 32, no. 1 (March 28, 2023): 99–130. doi:10.17951/sil.2023.32.1.99-130.

Zhu, Huasheng, and Zach Zhizhong Zhou. "Analysis and Outlook of Applications of Blockchain Technology to Equity Crowdfunding in China." *Financial Innovation* 2, no. 1 (December 2016): 29. doi:10.1186/s40854-016-0044-7.