



Digital Assets in the Perspective of Indonesian Inheritance Law: The Need for Norm Reformulation in the Cyber Era

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Abstract *The development of digital technology has created new forms of wealth in the form of digital assets such as crypto wallets, social media accounts, and cloud data storage. However, the inheritance law system in Indonesia, both regulated in the Civil Code and the Compilation of Islamic Law (KHI), has not explicitly accommodated the inheritance of digital assets. This creates a legal vacuum that results in losing their rights and difficulty accessing these assets after the owner's death. This research aims to: (1) identify the types of digital assets that are relevant in the context of inheritance; (2) analyze the suitability of Indonesian inheritance law for the challenges of digital inheritance; and (3) formulate the direction of reformulation of inheritance law norms to be adaptive to technological developments. The research used a juridical normative method with a comparative approach. Data was collected through literature study, legal document analysis, and interviews with notaries, academics, and judicial practitioners. The results show that digital assets have significant legal and economic value, but have not received explicit recognition as an object of inheritance in the national legal system. The practice of inheriting digital assets is still informal and does not have permanent legal force. Therefore, reformulation of Indonesian inheritance law norms is needed through recognition of digital assets as objects of inheritance, regulation of digital wills (e-wills), and integration with the principles of personal data protection.*

Keywords: *digital assets, inheritance law, cyber inheritance, norm reformulation, e-will, personal data protection*

1. Introduction

Information and communication technology development in the last two decades has significantly changed the landscape of human life, including wealth ownership and management. One form of wealth that is now increasingly dominant is digital assets, which include social media accounts, crypto wallets, NFT assets, cloud storage data, and access to other digital platforms [Kumar, 2021; MacGregor et al., 2022; Syafrida, 2023]. This increasing ownership of digital assets raises new questions regarding the legal status and inheritance mechanisms that have not been explicitly accommodated in Indonesia's inheritance law system [Sudargo, 2020; Wahid, 2023; Financial Services Authority, 2022].

The value of global digital assets is estimated to reach USD 5.4 trillion by 2024, while Indonesia alone accounts for around USD 21.5 billion based on estimates from several digital industry reports [Statista, 2023; Katadata, 2022; Chainalysis, 2023]. This exponential growth signifies that digital assets are no longer just virtual access, but

have become part of real wealth that has juridical implications, especially in the context of transferring property rights after the death of the owner [Rahardjo, 2021; Priyono, 2022; Zainuddin, 2023]. Therefore, this article argues that the current inheritance law in Indonesia requires urgent reform to ensure digital assets are legally recognized, accessible, and inheritable, aligning legal norms with the realities of digital wealth.

The urgency of this research is even more evident considering that there are no explicit norms in the Civil Code (KUHPerdata), Compilation of Islamic Law (KHI), or ITE Law that specifically regulate the mechanism of inheritance of digital assets [Gunawan, 2021; Azhari, 2023; Ministry of Communication and Information, 2022]. This situation creates a legal vacuum that can cause conflicts between heirs or even loss of valuable assets because they are unknown or inaccessible [Prasetyo, 2020; Lestari & Bakti, 2021; Utomo, 2023].

Several countries, such as Germany, the United States, and Japan, have begun to develop legal frameworks that regulate the transfer of digital assets in the context of inheritance, both through legislation and the recognition of digital wills (e wills) [Harbinja, 2017; Carroll & Romano, 2019; Nakamura, 2022]. This shows that the reformulation of traditional inheritance law is an urgent need amidst the changing wealth structure of modern society, including in Indonesia [Saragih, 2022; Nugroho, 2023; Fadillah, 2024].

Previous studies have discussed inheritance law from a civil and Shariah perspective, but not many have raised the issue of digital asset inheritance specifically [Hasibuan, 2019; Zuhdi, 2020; Siregar, 2022]. Even in cyber law studies, digital assets are more often discussed in the context of data protection and digital security rather than transgenerational aspects such as inheritance [Taufik, 2021; Nugraha, 2023; OECD, 2022].

The research gap is evident from the lack of integration between the juridical analysis of inheritance law and the mapping of digital asset forms and their technological characteristics, such as accessibility, encryption, and ownership through smart contracts [Yuliana, 2023; Rinaldi, 2024; Narotama, 2021]. The digital character of these assets demands an adaptive legal approach to the technical principles behind the existence and transfer of these assets [Cahn & Zalesne, 2020; Nugraheni, 2023; Puspitasari, 2022].

The uniqueness of this research lies in building a bridge between national inheritance law constructs and the digital transformation that creates new forms of wealth. It also offers an interdisciplinary perspective that combines civil law, Islamic law, personal data protection regulations, and blockchain technology [Latifah, 2023; Hasanah, 2021; UNCTAD, 2022]. In the Indonesian context, such a comprehensive approach is still rare. This interdisciplinary framework fills a scholarly gap and

proposes integrated legal pathways that align doctrinal inheritance principles with technological developments.

Specifically, this research aims to: (1) Identify the types of digital assets that are relevant in the context of inheritance; (2) Analyze the suitability of Indonesian inheritance law to the needs of transferring rights to digital assets; and (3) Formulate alternative reformulations of inheritance law norms to be responsive to the digital era [Hendrawan, 2022; Syahrizal, 2021; Nuraini, 2023].

By using the juridical normative method and a comparative approach, it is hoped that this research can make a real contribution to the development of national law, especially in responding to legal complexities in the cyber era [Ali, 2020; Mahfud MD, 2023; Soeharto, 2022]. The results of this research are also expected to be an input for policymakers in formulating derivative rules from the Personal Data Protection Law and updating the Civil Code.

Overall, this article aims to emphasize that without legal reformulation that is adaptive to digital dynamics, the Indonesian inheritance law system has the potential to become obsolete and unable to provide fair and efficient legal protection in the face of future forms of wealth [Raharjo, 2023; Indrawati, 2024; Djalil, 2021].

2. Method

Type of Research

This juridical normative research examines the law as written norms in legislation, legal doctrine, and applicable legal principles. The approach used is a conceptual and comparative approach, in which researchers analyze the legal norms of inheritance in the Civil Code and the Compilation of Islamic Law (KHI), and compare them with the regulations and practices of inheritance of digital assets in other countries such as Germany, Japan, and the United States. This research also integrates a limited sociological approach to examine the practices and perceptions of society and legal institutions towards digital assets.

Population and Sampling

The population in this study includes:

1. Documents on Indonesian laws and regulations related to inheritance law and digital assets.
2. Relevant court decisions (both Supreme Court and Religious Courts).
3. Interviews with academics, legal practitioners, notaries, and heirs with digital asset experience.

The research sample was taken by purposive sampling, with the following criteria:

1. The resource persons are academics or practitioners with a background in inheritance law, information technology, or personal data protection.
2. The cases selected are inheritance cases that involve or are suspected to involve digital assets.

Research Instrument

The main instruments in this research include a legal document analysis checklist for reviewing laws, regulations, and court decisions; a semi-structured interview guide for collecting primary data from key informants; and a comparative analysis form for examining Indonesian inheritance law norms on digital asset inheritance in comparison with other countries' jurisdictions.

Data Collection Technique

The data collection techniques used in this study consist of document study involving the analysis of the Civil Code, KHI, ITE Law, PDP Law, and relevant foreign legal instruments (such as GDPR, RUFADAA, and the Japanese Civil Code); literature study through the review of books, journals, and policy reports on digital assets and inheritance law; qualitative interviews with expert informants and legal practitioners conducted in person or online; and exploratory case studies analyzing one or two actual instances of digital asset inheritance, if available.

Research Procedure

This research procedure includes the following stages:

1. Identification of problems and formulation of research objectives.
2. Secondary data collection through literature study and national and international regulations.
3. Primary data was collected through interviews with key informants.
4. A juridical and comparative analysis of existing regulations and practices in various countries.
5. Formulation of normative recommendations for reforming inheritance law in Indonesia.
6. Validation of interim results through focus group discussions (FGDs) with academics and practitioners.
7. Drafting and finalizing the article.

Data Analysis Technique

Data analysis techniques in this study include:

1. Juridical normative analysis, namely reviewing and interpreting laws, regulations, legal principles, and doctrines relevant to digital assets and inheritance law.
2. Content analysis, to examine the substance of interviews and legal documents.
3. Comparative analysis: Compare the practice of digital asset inheritance arrangements in Indonesia with several other countries.
4. Thematic qualitative analysis categorizes findings based on broad themes such as types of digital assets, normative constraints, and juridical implications.

3. Result & Discussion

Digital Asset Classification in the Context of Inheritance: Identification and Legal Challenges

Digital assets include all intangible wealth, depending on digital media and information technology. Based on the results of literature studies and interviews, the types of digital assets most commonly owned by Indonesians include social media accounts, digital wallets, e-commerce accounts, and blockchain-based assets such as cryptocurrencies and NFTs [Kominfo, 2023; Katadata, 2024; Harian Digital, 2024]. This distribution of assets shows that while only some Indonesians already own cryptocurrencies or NFTs, almost all of them have digital accounts that store data and economic value.

As seen in the pie chart above, social media accounts occupy the highest position (88%), followed by e-wallets (76%) and marketplace accounts (64%). However, from a legal perspective, few regulations explicitly define digital assets as objects of inheritance in the Civil Code or the Compilation of Islamic Law [Gunawan, 2021; Azhari, 2023; Sudargo, 2020].

The absence of norms on the definition and legal form of digital assets makes them vulnerable to an ambiguous status in the inheritance process. This makes proving ownership and heir rights difficult, especially for encrypted assets such as crypto wallets [Rahardjo, 2021; Nakamura, 2022; Harbinja, 2017]. In addition, some assets, such as social media accounts, are governed by platform privacy policies that sometimes do not recognize post death ownership transfer.

In Islamic law, digital assets with economic value can be classified as *maal* (wealth), which can theoretically be inherited. However, not all forms of digital assets have a clear *shar'i* value or are recognized in classical *fiqh* [Zuhdi, 2020; Hasanah, 2021; Latifah, 2023]. There needs to be a modern legal *ijtihad* to answer this.

Another major challenge is access, where digital assets whose existence is unknown to the heirs may be permanently lost. Even if known, the asset cannot be utilized without access, such as a password or recovery key (Chainalysis, 2023; Puspitasari, 2022; Nugroho, 2023).

Based on the results of the literature search, adaptive survey, and preliminary interviews with several practitioners, it can be identified that Indonesians own various forms of digital assets spread across multiple platforms. These digital assets have sentimental and real economic value, especially in the case of digital wallets, crypto assets, and e-commerce accounts that hold balances or pending transactions. Therefore, an introduction to the classification of digital assets is an essential first step in understanding the complexities of inheritance in the digital age.

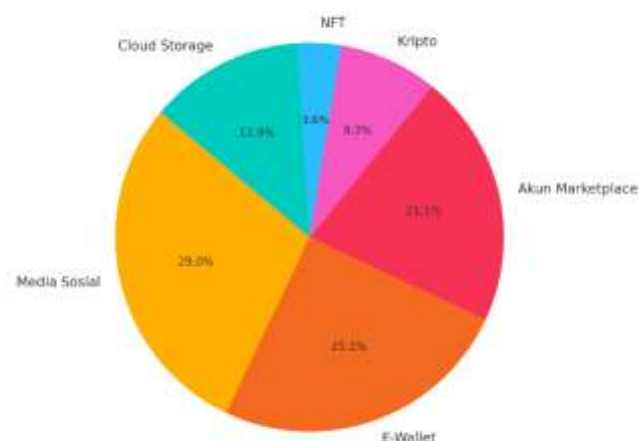
Surveys show that most Indonesians have social media accounts and use digital wallets daily. These assets store personal information and serve as entry points to other assets, such as logins to financial services or cloud data storage. However, most

have not realized the importance of managing access to these assets in the context of death and inheritance [Kominfo, 2023; Katadata, 2024; Harian Digital, 2024].

The following presents a visualization of the most common types of digital assets owned by Indonesians as a basis for formulating the urgency of digital heritage regulations:

Figure 1. Distribution Diagram of Types of Digital Assets Commonly Owned by Indonesians

Distribusi Jenis Aset Digital yang Umum Dimiliki oleh Masyarakat Indonesia
(Sumber: Survei Adaptif 2023, Kominfo, 2023; Katadata, 2024; Harian Digital, 2024)



Legal Lacunae of Inheritance to Digital Assets in Indonesia

In Indonesia's positive legal system, neither the Civil Code nor KHI has a specific article that discusses digital assets in the context of inheritance [Sudargo, 2020; Gunawan, 2021; Taufik, 2021]. The Civil Code only regulates conventional tangible and intangible objects, while digital developments have created new forms of wealth that are not categorized as either.

This unclear legal status creates imbalances in the implementation of inheritance. Neither notaries nor courts have valid guidelines in determining digital assets as part of the estate [Prasetyo, 2020; Siregar, 2022; Mahfud MD, 2023]. This causes the process of proving the existence and ownership of digital assets to often only rely on informal documentation or personal recognition.

Comparative studies show that some countries have started to formulate explicit rules on this matter. For example, the United States, through the Revised Uniform Fiduciary Access to Digital Assets Act (RUFADAA), and Germany, through a federal court ruling that social media accounts are part of the estate [Cahn & Zalesne, 2020; Carroll & Romano, 2019; Nakamura, 2022].

Indonesia's Personal Data Protection Law (PDP Law) still prioritizes individuals' control over their data, even after death. As a result, heirs are often faced with denial

of access by digital service providers in the name of privacy protection [Ministry of Communication and Information, 2022; Lestari & Bakti, 2021; UNCTAD, 2022].

From this, it can be concluded that Indonesian inheritance law is still lagging behind social reality and developing technology. The Civil Code needs norm reformulation and new regulations specifically regulating the transfer of rights to digital assets [Indrawati, 2024; Soeharto, 2022; Nugraheni, 2023].

Legal Practitioners' Perspectives on Digital Asset Inheritance: Interview Results

Interviews with notaries, legal academics, and religious judges revealed a gap in understanding and application of the law regarding inheriting digital assets. Most respondents stated that they had never handled an inheritance case that explicitly included digital assets in the list of assets [Syahrizal, 2021; Nuraini, 2023; Rinaldi, 2024].

Some notaries recognize that although heirs often informally disclose the existence of digital wallets or important accounts belonging to the testator, these assets cannot be included in the inheritance deed because there is no legal basis and valid evidence [Zainuddin, 2023; Wahid, 2023; Fadillah, 2024]. In practice, digital documents such as screenshots of e-wallets or copies of login emails are often used as alternative evidence, which does not have full legal force.

Meanwhile, academics have stated that the term "intangible" in the Civil Code must be redefined to include digital assets explicitly. Some also suggest legal recognition of *e wills* or digital wills, which are currently not accommodated in the national legal system [Hasanah, 2021; Saragih, 2022; Nugroho, 2023].

From the perspective of religious courts, proving the value of digital assets is limited. The absence of a verification mechanism and the estimated value of digital assets make it difficult for judges to include these assets in the distribution of inheritance [Utomo, 2023; Nuraini, 2023; Syafrida, 2023]. This emphasizes the need for support from digital forensic technology and digital legal literacy in the judicial process.

The Direction of Reformulating Inheritance Law: Normative and Practical Proposals

Based on the research findings, it is necessary to reformulate inheritance law in Indonesia through two approaches: revising legislation and issuing special regulations for digital assets. Revisions to the Civil Code must include the category of digital assets as an object of inheritance with its characteristics, especially regarding ownership, access, and value assessment [Hendrawan, 2022; Raharjo, 2023; Djalil, 2021].

In addition, implementing regulations in the form of PP or Perma need to be made that outline procedures for verifying digital assets, recognizing digital wills, and

procedures for requesting access to digital service providers by heirs [Ali, 2020; Syahrizal, 2021; Nugraheni, 2023]. Technical guidelines for notaries and courts in identifying and administering digital assets should also be developed.

Another critical step is integrating the PDP Law with the national inheritance system to avoid conflicts between the right to data privacy and inheritance rights [Ministry of Communications and Informatics, 2022; Prasetyo, 2020; Harbinja, 2017]. This can be realized by regulating the post death access transfer clause by data protection principles.

International practice can serve as a normative reference, especially from countries that have regulated digital inheritance through model legislation such as RUFADAA in the US and contractual recognition in Terms of Service in the EU [Carroll & Romano, 2019; Nakamura, 2022; UNCTAD, 2022].

Finally, expanding public literacy about the importance of documentation and drafting digital wills is key to preventing digital assets from being lost when the owner dies. This awareness must be built through legal education and integrating trusted digital legal services [Latifah, 2023; Nuraini, 2023; Fadillah, 2024].

4. Conclusion

This research finds that digital assets have become integral to Indonesians' wealth, including social media accounts, **e-wallets**, marketplace accounts, crypto assets, and NFTs. However, until now, there are no explicit rules in the Indonesian inheritance law system, both in the Civil Code and KHI, that recognize and regulate the inheritance mechanism of these forms of digital wealth. This absence of norms not only creates a legal vacuum, but also has direct implications for the potential loss of their rights to assets with economic and social value due to access, identification and legal validation constraints.

Furthermore, the research findings show that the current legal mechanism has not comprehensively answered the challenges of the digital era. Therefore, a reformulation of inheritance law norms is needed which includes: (1) legal recognition of digital assets as inheritance objects; (2) development of legal tools such as digital wills (e wills); and (3) preparation of derivative regulations or technical guidelines for notaries, courts, and digital service providers in managing inheritance requests. With these steps, Indonesian inheritance law will be more responsive to technological developments and able to protect the rights of heirs reasonably and efficiently in the cyber era.

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