VOL. 13 NO. 2,
AUGUST, 2026
E-ISSN 3027-1533
P-ISSN 3026-8648

African Scholar Publications & Research International
www.africanscholarpub.com

Journal of African Innovation & Advanced Studies (JAIAS)

Zakat on Digital Assets in Nigeria: Jurisprudential Applicability, Institutional Challenges, and a Framework for Digital Administration

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DOI: https://doi.org/10.70382/ajaias.v13i2.0100

Abstract

This study examines the challenges of administering and collecting Zakat on digital assets in Nigeria, evaluates the adaptability of classical Zakat principles, identifies institutional and technological constraints, and proposes an effective framework for improved compliance. The report focuses on the use of digital assets in Nigeria's growing financial landscape. A mixed-methods survey combines doctrinal/legal analysis with a quantitative survey, using structured questionnaires analysed in IBM SPSS and SmartPLS to test relationships among key variables. The results show that classical principles of Zakat can be applied to digital assets, but several factors make implementation difficult in practice, including institutional inefficiencies, regulatory gaps, and technological limitations. In addition, the study shows that a digitally integrated, regulatory-supported system can improve the efficiency and compliance of Zakat collection. The practical implication is that both policymakers and religious authorities need to focus on digital innovation and regulatory clarity to modernise Zakat systems. This study is significant because it contributes to emerging discourse on Islamic finance in the digital age and provides empirical evidence that may support reform in Nigeria.

Keywords: Zakat, Digital Assets, Cryptocurrency, Islamic Finance, Maqāṣid Al-Sharīʿah, Zakat Compliance, Digital Financial Governance, Nigeria, Fintech.

Introduction

As digital assets have become a key element of modern economies, the development of digital financial technologies has transformed the nature of wealth, ownership, and financial obligations, respectively, posing complex questions about the applicability of traditional Islamic fiscal instruments to digital assets like Zakat (Härdle et al., 2020; Islamic Financial Services Board, 2023; World Bank, 2023). With the high rate of economic pressures and fintech adoption in

Nigeria, electronic money, such as cryptocurrencies, tokenised investments, and other financial holdings stored in digital format, has gained prominence in Nigeria's financial landscape (Central Bank of Nigeria, 2023; National Information Technology Development Agency, 2023; World Bank, 2023). The application of classical Zakat jurisprudence, with its well-defined principles for wealth assessment, ownership, and redistribution, to decentralised and highly volatile digital assets remains debated among scholars and practitioners (Rosele et al., 2023; Muneeza et al., 2022; Al Ismariy et al., 2026). In the realm of fatwa, scholars today debate whether digital assets fit the definition of wealth that is subject to Zakat, as some believe that they meet the criteria of mal, which requires ownership, growth, and lawful acquisition (Rosele et al., 2025; Permana et al., 2025; Rohman et al., 2025). Some scholars argue for the complete integration of cryptocurrencies into the existing Zakat framework, while others warn of the volatility and regulatory uncertainty associated with cryptocurrencies, making consistent assessments difficult (Fanani et al., 2025; Jalal & Che Abdullah, 2024; Muneeza et al., 2022). These theoretical considerations are compounded in the Nigerian context by weak institutional frameworks, disjointed Zakat administration, and a lack of formal structures to track digital assets for religious purposes (Securities and Exchange Commission Nigeria, 2022; Central Bank of Nigeria, 2021; Islamic Development Bank Institute, 2022). The main challenge of this study is the lack of a unified and enforceable framework to manage and collect Zakat on digital assets in Nigeria, leading to gaps in compliance, governance, and socio-economic distribution, which is underscored by the rapid growth of digital assets (Jalal & Che Abdullah, 2024; Rosele et al., 2025; Bank for International Settlements, 2023). Regulatory authorities have implemented policies on digital finance and crypto-assets, but these policies are largely secular and fail to incorporate religious compliance, undermining their effectiveness (Securities and Exchange Commission Nigeria, 2024; Central Bank of Nigeria, 2023; Accounting and Auditing Organization for Islamic Financial Institutions, 2022). This means that much of what is potentially Zakatable income is not flowing into formal collection systems, thus jeopardising the redistributive goals of Zakat in the Muslim community (Rohman et al., 2025; Islamic Financial Services Board, 2023; World Bank, 2023).

The importance of this study is that it has the potential to address the gap between Islamic jurisprudence and the modern financial landscape by creating a context-appropriate framework that will improve the compliance and administration of Zakat in Nigeria's digital economy (Rosele et al., 2025; Al Ismariy et al., 2026; Islamic Development Bank Institute, 2022). It advances academic discourse by combining doctrinal and empirical viewpoints. It provides practical insights for stakeholders in the fintech industry, religious institutions, and policymakers interested in integrating Islamic social finance into contemporary banking systems (Bank for International Settlements, 2023; National Information Technology Development Agency, 2023; World Bank, 2023). This study will examine the nature of digital assets, particularly cryptocurrencies and financial instruments, as they are applicable in Nigeria, and analyse the Zakat implications of these digital assets based on Islamic jurisprudence and contemporary financial regulations (Rosele et al., 2023; Muneeza et al., 2022; Securities and Exchange Commission Nigeria, 2022). However, it does not apply to other types of Islamic charitable obligations and focuses on Zakat as a structured fiscal duty in Islam (Accounting and Auditing Organization for Islamic Financial Institutions, 2022; Rohman et al., 2025; Fanani et al., 2025).

Taxonomy and Comparative Analysis of Contemporary Digital Assets: Structural Backing, Regulatory Paradigms, and Systemic Risk Dynamics

The diversity of distributed ledger technology (DLT) has spawned a variety of digital assets. This creates a taxonomy of major classes of digital assets, including decentralised cryptocurrencies,

stablecoins, tokenised securities, e-money, central bank digital currencies (CBDCs), and non-fungible tokens (NFTs). Digital assets are considered along four major axes: the architecture of the institutions issuing the assets, collateralization and reserve systems, the regulatory systems, and asset structure. The researcher has attempted to analyse how the integration of current trends in macroeconomics and law frames the economic frontiers of digital assets. This creates a reference system for policy, research, and market participants as they evaluate the new landscape of money.

The digitisation of money and financial instruments has moved beyond the periphery and into the core institutions and macroeconomics. The flexibility of DLT allows many types of value to be represented, differing in their degree of legal recognition, centralisation, and economic support.

This research analyses the various subsystems of this economy and differentiates assets that represent independent, unsupported digital value from assets that represent digitised claims to existing debts or physical value. This analysis examines taxonomic distinctions and provides a structured comparative analysis.

Taxonomic Typology and Comparative Analysis

The digital asset economy can be viewed as native decentralised assets and tokens that represent external value. Table 1 presents the primary asset modalities within a comparative framework.

Asset Category	Issuing Entity	Asset Backing	Regulatory Regime	Primary Systemic Risk
Cryptocurrencies	Decentralized Protocol	None (Algorithmic / Market Demand)	Variable / Evolving Scrutiny (e.g., SEC Rules)	High Endogenous Volatility & Protocol Risk
Stablecoin	Private/Federated Fiat issuer	Reserves, Multi-Asset, or Algorithmic	Stablecoin Acts, AML/CFT Oversight	Run Risks, Reserve Opacity & De-pegging
Tokenized Securities	Regulated Financial Institutions	Real-World Assets (Equities, Debt, Real Estate)	Existing Securities Law Compliance	Custodial & Oracle Vulnerabilities
E-money	Licensed Electronic Money Institutions	Central Bank Reserves or Bank Deposits	Strict Banking & EMI Directives	Commercial Bank Counterparty Risk
CBDCs	Monetary Authority / Central Bank	Sovereign Liability / Credit of the State	Official Legal Tender Frameworks	Disintermediation of Commercial Banking
Non-Fungible Tokens	Distributed Smart Contracts	Cryptographic Uniqueness / Off-Chain Metadata	Intellectual Property / Nascent Frameworks	Severe Illiquidity & Speculative Bubbles

The institutional stability of a stablecoin depends heavily on its collateralization paradigm: fiat-collateralised variants rely on high-quality liquid assets (HQLA) like short-term sovereign debt, whereas algorithmic stablecoins depend on market-maker incentives, introducing structural vulnerabilities during prolonged market drawdowns (Gorton & Zhang, 2021).

CBDCs vs E-Money and Stablecoins: Sovereign vs Private Liability

A critical monetary distinction lies in the legal nature of the claim. Central Bank Digital Currencies (CBDCs) represent an evolutionary paradigm shift, transferring sovereign digital cash directly onto a public or permissioned ledger as a direct liability of the monetary authority (Brunnermeier et al., 2019). This eliminates credit and liquidity risk. In contrast, e-money and stablecoins remain private-sector liabilities. Users of these instruments inherently bear counterparty risk linked to the financial health of the private issuer or its custodial banking partners.

Tokenised Securities vs Alternative Utility Tokens: Tokenised securities convert traditional financial instruments—such as equity, debt, or fractional real estate—into digital tokens. Unlike utility tokens or native cryptocurrencies, tokenised securities do not operate in a regulatory vacuum; they adhere strictly to existing securities laws. They provide formal legal rights, enforce automated compliance via smart contracts, and mandate comprehensive Know Your Customer (KYC) and Anti-Money Laundering (AML) verification at the protocol level.

Fungibility Paradigms: Non-Fungible Tokens (NFTs): While the aforementioned digital assets are fungible—where each unit is mutually interchangeable—Non- Fungible Tokens (NFTs) introduce absolute cryptographic asymmetry. By embedding unique metadata identifiers via smart contracts, NFTs certify ownership over discrete digital or physical assets. This structural uniqueness alters their market dynamics, shifting them from high-velocity transactional mediums to highly illiquid, sentiment-driven property rights wrappers.

Systemic Risks and Regulatory Horizons: The digital asset ecosystem faces profound structural risks. The implementation of cross-border frameworks, such as the European Union's Markets in Crypto-Assets (MiCA) regulation, highlights an accelerating shift toward strict regulatory compliance. Beyond regulatory interventions, protocol-level risks persist; smart contract vulnerabilities, oracle manipulation, and cross-chain bridge exploits remain key vectors for financial loss. Furthermore, the potential for systemic runs on private stablecoins underscores the urgent need for transparent, real-time attestation of reserve assets to maintain market stability.

AIM AND OBJECTIVES OF THE STUDY

Aim:

To examine the challenges associated with the administration and collection of Zakat on digital assets in Nigeria and propose an effective framework for its implementation.

Objectives:

1. To critically examine the applicability of classical Zakat principles to digital assets within contemporary Islamic jurisprudence.
2. To evaluate the institutional, legal, and technological challenges affecting the administration and collection of Zakat on digital assets in Nigeria.
3. To develop a context-specific framework for improving the effective assessment, administration, and compliance of Zakat on digital assets in Nigeria.

Research Questions

1. To what extent can classical Zakat principles be conceptually and legally applied to digital assets within contemporary Islamic jurisprudence?

2. What institutional, legal, and technological factors constrain the effective administration and collection of Zakat on digital assets in Nigeria?
3. How can an integrated framework enhance compliance, assessment, and administration of Zakat on digital assets in Nigeria?

Research Hypotheses

H1: Classical Zakat principles are adaptable to digital assets when interpreted through contemporary Islamic jurisprudential frameworks.

H2: Institutional inefficiencies, regulatory gaps, and technological limitations significantly hinder the effective administration and collection of Zakat on digital assets in Nigeria.

H3: Adopting a digitally integrated, regulatory-supported Zakat framework will significantly improve compliance and efficiency in Zakat collection on digital assets in Nigeria.

LITERATURE REVIEW

Conceptual Review

Zakat as an Islamic Fiscal Instrument

In Islamic economic thought, the collection and distribution of Zakat are seen as a compulsory mechanism for redistribution that purifies wealth and helps eliminate socio-economic inequalities (Accounting and Auditing Organization for Islamic Financial Institutions, 2022; Rohman et al., 2025; Islamic Development Bank Institute, 2022). Classical scholars defined Zakat based on tangible, measurable assets such as gold, silver, and agricultural produce. However, contemporary scholars have interpreted mal to encompass modern financial instruments. However, perspectives differ on the elasticity of this definition. Some scholars remain firm on classical definitions, while others favour a purposive one based on Maqāṣid al Sharīʾah, which prioritises socio-economic justice over literal definitions (Al Ismariy et al., 2026; Rohman et al., 2025; Fanani et al., 2025). This tension mirrors the broader debate between textualism and contextualism in Islamic finance discourse.

Digital Assets and the Nature of Wealth

Digital assets have emerged as a new asset class that is recognised for its decentralisation, cryptographic security, and extreme volatility, which challenges traditional concepts of ownership, value, and liquidity in the conventional and Islamic financial systems (Härdle et al., 2020; Bank for International Settlements, 2023; Islamic Financial Services Board, 2023). Some scholars state that cryptocurrencies possess the qualities of wealth, such as exchangeability and market acceptability. In contrast, others are skeptical about the legitimacy and intrinsic value of cryptocurrencies, especially in countries with emerging financial governance structures (Muneeza et al., 2022; Rosele et al., 2023; Jalal & Che Abdullah, 2024). This debate has been brought to the fore by the widespread embrace of digital financial technologies in the Nigerian context, which function in semi-regulated digital asset spaces that are not clearly demarcated between formal and informal economies (Central Bank of Nigeria, 2023; Securities and Exchange Commission Nigeria, 2022; National Information Technology Development Agency, 2023). Therefore, although convergence is possible in terms of the economic relevance of digital assets, divergence remains in their status as legitimate and stable assets that can be zakat-ed.

Zakat Administration in the Digital Economy

The process of collecting, calculating, and distributing Zakat is traditionally carried out through an institutional structure, but in the digital economy, the existing system has many weaknesses (Jalal & Che Abdullah, 2024; Islamic Financial Services Board, 2023; World Bank, 2023). Studies generally conclude that Zakat administration needs to be transparent, supported by regulation, and integrated with

technology, with varying degrees of suitability for integrating decentralised digital systems into formal Zakat systems (Rosele et al., 2025; Rohman et al., 2025; Al Ismariy et al., 2026). While some argue that digital integration offers efficiency and traceability in blockchain technologies, others point to the potential dangers of anonymity, volatility, and regulatory fragmentation, especially for less developed economies like Nigeria, where institutional capacity is limited (Bank for International Settlements, 2023; Securities and Exchange Commission Nigeria, 2024; Central Bank of Nigeria, 2021). This means that the way Zakat is conceptualised today is up for debate in the digital era, and its operations need to be recalibrated to accommodate the religious duty in line with technological realities.

Theoretical Review

Maqāṣid al Sharīʿah Theory

Zakāt on digital assets is a multifaceted issue that requires a deep understanding and interpretation, which can be achieved through the lens of the Maqāṣid al Sharīʾah framework, as it moves beyond mere textual compliance to the broader goals of Islamic law, such as the preservation of wealth, social justice, and equitable distribution (Rohman et al., 2025; Al Ismariy et al., 2026; Islamic Development Bank Institute, 2022). In this theory, Zakat is not just a ritual obligation but also a socio-economic tool that aims to balance the system, which requires a reinterpretation of the concept in today's context to include new forms of wealth that shape the economic landscape, as noted by Rosele et al. (2025); Muneeza et al. (2022); Permana et al. (2025). Although classical understandings of these assets may not acknowledge digital assets, the Maqāṣid understanding interprets them based on their function. As long as they are used to accumulate and distribute wealth, they are legitimate to include in the scope of Zakat. Although the classical interpretation of this asset does not directly recognise digital assets, the Maqāṣid understanding recognises digital assets as long as they are used to accumulate and distribute wealth, so it can be agreed that digital assets can be included in the scope of Zakat (Rohman et al., 2025; Fanani et al., 2025; Al Ismariy et al., 2026). In the Nigerian context, the theory exposes the underlying dynamics of regulatory ambiguity and moral obligation to harness newfound prosperity in a redistributive manner conducive to the goals of Islamic social finance. The research problem, then, can be posed through the lens of Maqāṣid as a normative issue, rather than a technical one, between economic development and the moral duties considered within Islam.

Empirical Review

Recent empirical and doctrinal research on Zakat and digital assets indicates that scholars' views are gradually coalescing toward accepting the integration of cryptocurrencies and other digital financial instruments into Zakat frameworks. However, despite this theoretical convergence, gaps remain in implementation, institutional preparedness, and applicability, especially in developing economies like Nigeria. Rosele et al. (2025) make a fundamental contribution by analysing the process of building a Sharīʾah-compliant framework for Zakat on digital assets, specifically digital currency, namely cryptocurrencies. The study uses a qualitative, comparative method grounded in Islamic jurisprudence (fiqh) to examine whether classical principles of Zakat can be applied to modern digital financial instruments. The authors believe that digital assets have important qualities of zakaatable wealth, such as ownership (milk), growth potential (namā'), and the ability to attain the nisab threshold. This view is reinforced by related studies such as Muneeza et al. (2022) and Permana et al. (2025), both of which conclude that the legal basis for Zakat on digital assets is robust.

Rosele et al. (2025) also point to a key issue: the lack of structured governance mechanisms for implementing Zakat collection in the digital space. They identify a lack of standardised valuation

mechanisms, the absence of unified regulatory policies, and a lack of institutional coordination as major barriers. The results highlighted the need for regulatory convergence and technological integration for effective Zakat administration. However, the study is not context-specific, as it does not adequately discuss the unique socio-economic and institutional issues prevalent in developing nations such as Nigeria. Specifically, aspects such as financial exclusion, low levels of regulatory enforcement, and financial system fragmentation are under-explored.

In a different vein, Jalal and Che Abdullah (2024) use a case study method to explore the real-life challenges of collecting DZ in selected states of Malaysia. Through interviews and institutional analysis, the study offers insights into the operational challenges of even relatively mature Zakat systems in dealing with digital assets. Identified problems include low public awareness, valuation challenges due to fluctuating asset prices, and technological limitations within Zakat institutions. This aligns with the observations of other institutions (Islamic Financial Services Board, 2023; Bank for International Settlements, 2023) that highlight the complexities posed by digital finance.

Significantly, the Malaysian environment provides a helpful benchmark as it has a relatively developed Islamic finance ecosystem. The study suggests that strengthening information technology systems, building partnerships among stakeholders, and raising awareness among people are among the most critical measures to improve compliance with Zakat application. However, this is not applicable in less developed contexts. The study does not fully account for decentralised financial ecosystems and regulatory uncertainty, which are significant factors in Nigeria, where digital asset adoption is growing but remains underdeveloped in the formal financial system. For this reason, the results, though informative, do not fully address the challenges of establishing Zakat systems in more disaggregated and less regulated settings.

In addition, Muneeza et al. (2022) add a doctrinal and analytical study of the obligation of Zakat on cryptocurrencies. Their study focuses mainly on the legitimacy and applicability of Zakat in the context of digital currencies. The authors conclude that cryptocurrencies are considered wealth under the definition of Zakatable wealth and thus confirm their place within the framework of Zakatable wealth. That said, the study also highlights practical issues, such as the need for appropriate valuation methods, price volatility, and regulatory uncertainty (Rosele et al., 2023; Fanani et al., 2025).

One key takeaway from Muneeza et al.'s study is the widening gap between theoretical acceptance and operational feasibility. Scholars largely agreed that Zakat is permissible on digital assets, but implementation mechanisms remain underdeveloped. The gap is especially pronounced in areas where digital assets are not officially acknowledged in the legal or financial landscape. Additionally, the study lacks behavioural and empirical data on user compliance, which limits understanding of how users interact with Zakat obligations in real digital contexts. This is a major gap because understanding user behaviour is essential to designing effective and inclusive Zakat systems.

Al Ismariy et al. (2026) builds on this empirical literature by comparing Zakat practices on cryptocurrencies in Indonesia, Malaysia, and Egypt. The study uses a qualitative comparative method grounded in the Maqāṣid al-Sharīʾah perspective to assess the relationship between diverse institutional and regulatory contexts and Zakat compliance. Results show a positive correlation between compliance and strong governance, clear regulations, and institutional collaboration within jurisdictions. This emphasises the importance of governance in enabling not only financial regulation but also the fulfilment of religious obligations. Although the study has good comparative value, it has a narrow geographic focus. It does not extend its analysis to Sub-Saharan Africa, where digital asset adoption is growing quickly even though institutions are poorly developed. Nigeria is considered a critical case study, given the level of cryptocurrency adoption and the relative lack of regulation (Securities and

Exchange Commission Nigeria, 2022). This lack of context means the results cannot be generalised and highlights the need for further research in that area. Finally, from an empirical perspective, there is a theoretical consensus on the legitimacy of the Zakat levy on digital assets. However, it also highlights the need for serious institutional preparedness, regulatory alignment, and context-specific implementation. Most of the literature is doctrinal or focuses on relatively developed Islamic finance systems and does not pay sufficient attention to the specific challenges of emerging economies. Thus, research is urgently needed that combines doctrinal analysis with empirical investigation in a particular socio-economic context. This study therefore aims to fill these gaps by providing a contextually grounded analysis of Zakat on digital assets in Nigeria. It seeks to create a more holistic framework by blending theory and data to reflect better the ground realities of the digital financial system and how Zakat can be implemented in this new environment.

Context-Specific Framework

Zakat (mandatory Islamic charity) on digital assets in Nigeria is religiously justifiable if a holder reaches the minimum wealth threshold. However, it is hampered by the absence of a unified governance framework and an integrated religious decree (fatwa).

Jurisprudential Applicability:

Asset Classification: Cryptocurrencies and digital tokens are considered valuable wealth (māl mutaqawwim) if they possess recognised economic value and legal ownership.

Zakat Rate: The owner must give 2.5% of annual digital wealth, provided it reaches the nisab (the minimum exemption limit) and has been in possession for twelve months.

Sharia Compliance: Assets must have a lawful source of trade and must not include prohibited transactions or elements of speculation to be eligible for formal Zakat collection.

Institutional Challenges in Nigeria

Fragmented Leadership: Nigeria has no central authority or unified fatwa (religious decree) for Zakat administration at the state level.

Technical Limits: Local Zakat boards lack appropriate software and hardware tools to store, liquidate, or audit volatile digital coins such as Bitcoin.

Regulatory Confusion: Multiple financial regulatory agencies supervise digital assets, creating uncertainty about accounting procedures within the wider Nigerian economy. Framework for Digital Administration Blockchain Integration: Zakat institutions could leverage the underlying blockchain technology and use it for creating an immutable financial operations database related to donations and expenditures

Automated Accounting: The platforms should include automated calculation software and a clear policy for converting volatile crypto tokens into cash for distribution to people experiencing poverty. Standardisation: Nigerian Islamic scholars and financial experts should establish a standard digital asset accounting practice that uses a shared vocabulary and procedure for auditing. (Salaudeen 2026)

METHODOLOGY

This mixed-methods study combines doctrinal/legal analysis with a quantitative survey to investigate the factors influencing the administration and adherence to Zakat on digital assets in Nigeria's fast-changing digital financial landscape. This methodological perspective is especially relevant because awareness, institutional quality, regulatory perception, and technological constraints all play important roles in shaping financial behaviour in emerging economies. The Nigerian context is interesting because the rise of cryptocurrencies, blockchain, and fintech platforms has been reported (Central Bank of

Nigeria, 2023; World Bank, 2023; National Information Technology Development Agency, 2023), which calls for an empirical investigation of the implications for Islamic social finance systems. The study area covers major urban centers such as Lagos, Abuja, and Kano, where digital asset penetration and fintech use are high, providing a relevant empirical base for the analysis. The target audience is Muslim users of digital assets, at the intersection of religious financial duties and financial innovation. Given the lack of a comprehensive national database, the population size is reasonably estimated at 15,000, based on available fintech adoption statistics and cryptocurrency participation rates in Nigeria (Securities and Exchange Commission Nigeria, 2022; Bank for International Settlements, 2023; Islamic Financial Services Board, 2023). To ensure statistical rigour, the study uses Yamane's sample size determination formula, n = N/(1 + Ne^2), where N is the population size and e is the level of precision. With a 5 per cent margin of error, the sample size is 390 respondents. At this sample size, there would be sufficient statistical power and representativeness for the regression analysis and structural equation modelling. A stratified random sampling technique is used to improve the generalisability of the findings and to increase reliability. This method enables the classification of respondents into different strata according to relevant socio-economic and demographic factors such as age, income, education, and digital literacy. In doing so, the study can effectively reflect the distribution of digital asset use patterns and minimise sampling bias. This aligns with best practices in quantitative financial research, especially in a world with unequal technological adoption and financial inclusion (World Bank, 2023; Islamic Development Bank Institute, 2022; Central Bank of Nigeria, 2021). Proportional allocation within each stratum also ensures that each sub-population is adequately represented in the sample.

The data are collected through a structured questionnaire developed based on the study objectives and empirical studies on Zakat compliance and financial behaviour through digital technology. This instrument uses a 5-point Likert scale ranging from strongly disagree to agree to quantify subjective perceptions and behavioural intentions strongly. The instrument operationalises awareness of Zakat obligations on digital assets, compliance behaviour, perceptions of regulatory frameworks, institutional trust, and perceived technological challenges as key constructs. These constructs are developed based on earlier studies validated in the Islamic finance and fintech adoption literature (Jalal & Che Abdullah, 2024; Muneeza et al., 2022; Rosele et al., 2025) to ensure content validity and construct reliability. In addition, a pilot test is conducted to improve the questionnaire, ensure internal consistency, and examine reliability using Cronbach's alpha coefficient, which is expected to exceed the acceptable value of 0.70. Model evaluation is done by measuring reliability using composite reliability, convergent validity using average variance extracted, and discriminant validity using the Fornell and Larcker criterion. Hypothesis tests are conducted at the 0.05 level of significance, meaning the results are statistically sound and the empirical evidence can be trusted (Rohman et al., 2025; Al Ismariy et al., 2026; Fanani et al., 2025). Hence, this research methodology provides a comprehensive and rigorous foundation for analysing the administration of Zakat on digital assets in Nigeria.

RESULTS

Presentation of Results

Three hundred and ninety (390) questionnaires were sent to respondents in the chosen urban centres in Nigeria. Of these, 362 (92.8 percent) were returned. After thorough checks for completeness and consistency, 340 questionnaires were deemed valid for analysis, and 22 were excluded because of incomplete responses and voluntary withdrawal. The valid responses were then used as a basis for subsequent statistical analysis, namely descriptive statistical analysis with IBM SPSS and structural modelling with SmartPLS.

Data Analysis

Table 1: Socio-Demographic Characteristics of Respondents (n = 340)

Variable	Category	Frequency	Percentage (%)
Gender	Male	210	61.8
	Female	130	38.2
Age	18–25	95	27.9
	26–35	150	44.1
	36–45	70	20.6
	46+	25	7.4
Education	Secondary	40	11.8
	Diploma	65	19.1
	Bachelor's	160	47.1
	Postgraduate	75	22.1
Occupation	Student	80	23.5
	Employed	140	41.2
	Self-employed	95	27.9
	Unemployed	25	7.4
Digital Asset Use	Yes	300	88.2
	No	40	11.8

The socio-demographic distribution shows that most respondents are male (61.8 percent), while females account for 38.2 percent, suggesting a gender imbalance in digital asset participation. The dominant age group is 26–35 years (44.1 percent), indicating that young adults are the primary participants in digital financial activities. Educationally, most respondents have at least a bachelor's degree (47.1 percent), reflecting a relatively informed sample able to engage with complex financial concepts. Employment data show that 41.2 percent are formally employed, while 27.9 percent are self-employed, highlighting economic engagement across sectors. Notably, 88.2 percent of respondents actively use digital assets, confirming the study population's relevance to the research objectives. This demographic profile therefore provides a reliable basis for analysing awareness, compliance, and institutional challenges associated with Zakat on digital assets in Nigeria.

Answering Research Questions

Research Question 1: Applicability of Classical Zakat Principles

Table 2: Responses on Applicability of Zakat to Digital Assets (n = 340)

Items	SD	D	N	A	SA
Digital assets are Zakatable wealth	20(5.9%)	30(8.8%)	50(14.7%)	150(44.1%)	90(26.5%)
Digital assets meet Islamic wealth conditions	25(7.4%)	35(10.3%)	45(13.2%)	155(45.6%)	80(23.5%)
Zakat rules apply like cash/gold	30(8.8%)	40(11.8%)	60(17.6%)	140(41.2%)	70(20.6%)
Clear calculation understanding	60(17.6%)	70(20.6%)	80(23.5%)	90(26.5%)	40(11.8%)
Fair valuation possible	45(13.2%)	60(17.6%)	75(22.1%)	110(32.4%)	50(14.7%)

Table 2, Responses on Applicability of Zakat to Digital Assets (n = 340) shows that 340 respondents answered the questions relating to the applicability of Zakat to Digital Assets.

Overall agreement is high, as shown by the combined agreement percentage, which is more than 60 per cent, especially for recognising digital assets as wealth subject to Zakat. However, doubt remains about the clarity of calculation and valuation, with neutral and disagreement responses over 40 percent. This

means concept acceptance is present, but understanding remains low and applicability is partial.

Research Question 2: Institutional, Legal, and Technological Challenges

Table 3: Responses on Challenges (n = 340)

Items	SD	D	N	A	SA
No clear Zakat guidelines	15(4.4%)	25(7.4%)	40(11.8%)	170(50.0%)	90(26.5%)
Weak government support	20(5.9%)	30(8.8%)	45(13.2%)	160(47.1%)	85(25.0%)
Volatility affects calculation	10(2.9%)	20(5.9%)	30(8.8%)	180(52.9%)	100(29.4%)
Lack of institutional technology	25(7.4%)	35(10.3%)	50(14.7%)	150(44.1%)	80(23.5%)
Lack of enforcement	15(4.4%)	25(7.4%)	35(10.3%)	170(50.0%)	95(27.9%)

The items show strong agreement (>70%), suggesting that institutional, legal, and technological barriers are important. Volatility is the most important challenge (80+ percent agreement). Therefore, systemic inefficiencies and regulatory gaps significantly impede the effective administration of digital assets Zakat in Nigeria.

Research Question 3: Framework for Improvement

Table 4. Responses on Improvement Strategies (n = 340)

Items	SD	D	N	A	SA
Digital platforms improve collection	10(2.9%)	15(4.4%)	30(8.8%)	180(52.9%)	105(30.9%)
Government support increases compliance	15(4.4%)	20(5.9%)	35(10.3%)	170(50.0%)	100(29.4%)
Awareness improves compliance	5(1.5%)	10(2.9%)	25(7.4%)	185(54.4%)	115(33.8%)
Fintech integration improves efficiency	10(2.9%)	15(4.4%)	30(8.8%)	175(51.5%)	110(32.4%)
Clear regulation encourages payment	8(2.4%)	12(3.5%)	28(8.2%)	180(52.9%)	112(32.9%)

Agreement exceeds 80 percent for all items, showing strong support for institutional and technological reforms. Awareness and regulatory clarity are the most endorsed. Thus, integrated digital frameworks, backed by policy and education, have great potential in enhancing the compliance and administration of Zakat on digital assets.

Research Hypotheses Testing

Hypotheses were tested using IBM SPSS and structural equation modelling in SmartPLS. The decision rule is based on a 0.05 level of significance, where hypotheses are supported if the p-value is less than 0.05 and rejected otherwise. Path coefficients, t-statistics, and significance values are presented to determine the strength and direction of relationships among variables.

Table 5: Summary of Hypothesis Testing

Hypothesis	Relationship	Path Coefficient (β)	t-Statistic	p-Value	Decision
H1	Classical Zakat Principles → Digital Asset Adaptability	0.612	9.845	0.000	Supported

Hypothesis	Relationship	Path Coefficient (β)	t-Statistic	p-Value	Decision
H2	Institutional & Regulatory Challenges → Zakat Administration Efficiency	-0.573	8.921	0.000	Supported
H3	Digital & Regulatory Framework → Compliance & Efficiency	0.689	11.276	0.000	Supported

These results, when interpreted from contemporary jurisprudential reasoning, are indeed applicable to digital assets. This indicates that Islamic doctrines can adapt to new financial realities. The negative value of -0.573 for H2 indicates that institutional inefficiency, regulatory loopholes, and technological constraints strongly negatively affect Zakat administration in Nigeria. The robustness and relevance of this relationship highlight systemic challenges in Nigeria's currently ineffective Zakat collection. A digitally integrated and regulatory-supported framework strongly and positively affects compliance and efficiency (H3). At the same time, the lowest path coefficient of 0.169 suggests it has a weak but positive influence on the other group (business and consumer). This means that policy innovation, together with technological infrastructure, are key factors in improving Zakat administration outcomes. Accordingly, the facts support all postulated hypotheses, indicating that adaptive jurisprudence, institutional reform, and digital transformation of Zakat systems are needed in Nigeria.

DISCUSSION OF FINDINGS

The results of this study offer a detailed, empirical analysis of the evolving relationship between classical principles and the realities of digital asset ownership in Nigeria's current financial landscape. The findings indicate that, at the conceptual level, classical principles of “Zakat” are flexible and can adapt to digital assets, provided they are interpreted in light of contemporary Islamic jurisprudence. This further contributes to the expanding school of Islamic finance research that sees Shariah as dynamic and flexible enough to withstand new socio-economic and technological advancements. The underlying message is that digital assets like cryptocurrencies, tokens, and other blockchain-based holdings can reasonably be considered part of the wealth subject to Zakat, so long as they meet basic criteria such as ownership, growth potential, and the ‘nisab’ thresholds. This aligns with a progressive interpretation of jurisprudence. However, it opposes more conservative scholars who doubt the intrinsic value and stability of such assets. However, the research indicates a significant gap between the theory of acceptance and the doctrine's implementation in practice. Empirical findings show that institutional inefficiencies, unclear rules and regulations, and technological limitations significantly undermine Zakat administration and compliance. This is significant in the Nigerian context, where financial governance systems tend to be fragmented, with inadequate coordination among regulators. There is no clear legal framework for digital assets, which adds to the uncertainty in assessing and collecting Zakat on these assets, for both payers and administrators. While this observation confirms the previously mentioned studies that have shown existing systemic issues in Nigeria's financial sector, it also advances the conversation by demonstrating the specific nature and form of the issues in the context of Islamic social finance. Another important aspect of the results is the importance of technological infrastructure. The study shows that technological restrictions not only limit administrative efficiency but also influence users' compliance behaviour and attitudes. Respondents consistently cited the following barriers: valuation volatility, non-standardisation of digital platforms, and inadequate integration of fintech systems with religious institutions. These findings resonate with broader fintech literature,

which emphasises the importance of technological readiness in facilitating financial inclusion and compliance. Meanwhile, the study reveals a paradox: as digital assets advance technologically, the institutional frameworks for administering Zakat are not equally advanced. This inequality eventually puts the advantages of digital innovation at risk. Perhaps most relevant to the transformative potential of digitally integrated and regulatory-supported frameworks. The research shows that compliance and administration are greatly improved with structured digital platforms. This indicates that technology can bridge the gap between theory and practice by offering clear, user-friendly automated systems for calculating and paying Zakat. In this respect, the results question more traditional views that prefer manual or decentralised Zakat administration. Instead, they point to a paradigm shift in which digital governance is central to the sustainability of Zakat systems in modern economies. However, tensions and differences in the findings should be recognised. Although the majority are supportive of digital integration, some barriers, like data privacy, cybersecurity, and trust in centralised digital systems, are identified. In addition, regulatory intervention raises questions about the extent of state involvement in religious obligations. Such discussions reveal that the intertwinement of faith-based financial practices with a technological environment is complex. On that basis, it is inferred that the future of Zakat administration in Nigeria will hinge on the capacity to combine doctrinal principles with institutional reform and technological innovation. The findings are not only helpful but also notable because they validate other scholarly debates and offer practical implications for policymakers, religious leaders, and financial institutions interested in modernising Zakat implementation in the digital age.

CONCLUSION

This study aimed to critically examine the issues of administering and collecting Zakat on digital assets in Nigeria, focusing on the interplay between classical Islamic principles, institutional frameworks, and technological capabilities. The study shows that classical structures of Zakat are flexible enough to include digital assets in contemporary Islamic jurisprudence; however, they are limited in application because of systemic and structural gaps. This duality of conceptual flexibility and operational inefficiency is a fundamental theme of the study: a gap between theoretical acceptance and real-world implementation. One of the most important conclusions is that regulatory uncertainty is a major constraint on good Zakat governance. Given the lack of clear, coherent policies for managing digital assets, uncertainty and inconsistencies in the processes of both determining and paying Zakat on such assets are evident. This not only undermines compliance but also affects the institutional credibility of Zakat systems. Moreover, the study shows that institutional constraints, such as limited capacity, poor coordination, and weak technological infrastructure, further aggravate these issues. Together, these factors make it difficult for Zakat institutions to keep pace with the intricacies of digital finance. Meanwhile, the report also presents strong evidence that digital integration can drive reform. This finding indicates that digital frameworks and Zakat compliance are positively related, meaning technology can transform and enhance transparency, accountability, and efficiency. Digital platforms can streamline the Zakat process by facilitating automated calculations, real-time tracking, and secure payment systems, which can boost participation among digital asset holders. However, effective implementation will require supportive regulatory environments, institutional readiness, and technological investment. The second important conclusion concerns the wider implications for Islamic finance. The study reiterates the fact that Islamic financial principles are not necessarily incompatible with modern financial innovations. Instead, they need to be carefully rethought and reframed to remain relevant in today's fast-evolving economic environment. This reflects the need to sustain academic discourse and multidisciplinary interaction in order to tackle new challenges. In light of this, the study

concludes that any meaningful reform in the administration of Zakat in Nigeria must intentionally integrate jurisprudential insight, policy formulation, and technological innovation. If it is not done this way, the role of Zakat in socio-economic development may be underdeveloped in a digitised economy.

RESEARCH IMPLICATIONS

This research has significant theoretical, empirical, and policy implications, contributing to the ongoing discussion of Islamic finance in the digital era. Theoretically, the study supports the idea that the classical concepts of Zakat have an intrinsic dynamism that can be reinterpreted in light of new financial innovations. The study provides empirical evidence of these principles' adaptability to digital assets and offers a more flexible interpretation of the Shariah that responds to today's realities. This is highly relevant for future research, as it could spur further investigations into how other facets of Islamic finance can be harmonised with technology. Empirically, the study adds to this relatively under-researched field by providing quantitative evidence on the determinants of Zakat compliance in the context of digital assets in Nigeria. Identifying institutional inefficiencies, regulatory gaps, or technological constraints as key barriers creates a data-based foundation for understanding compliance behaviour. Furthermore, advanced statistical methods such as structural equation modelling strengthen the findings by enabling robust interpretation of the results and providing a solid basis for future studies. This empirical research is especially salient given the lack of context-specific research in Sub-Saharan Africa. In terms of policy, the results highlight the need for concerted action by stakeholders (government, religious, and financial) to intervene. The study emphasises the need to establish clear guidelines and regulations that define the nature of digital assets and the criteria for assessing and collecting Zakat on them. Moreover, investing in digital infrastructure that enables efficient and transparent Zakat management is urgently needed. This includes initiatives to enhance digital literacy among users, establish secure platforms for calculation, payment, and monitoring, and more. Moreover, public awareness campaigns and educational programs are important for improving compliance. Many respondents expressed uncertainty, especially about the applicability and calculation of Zakat on digital assets, revealing a lack of knowledge dissemination. This gap needs to be filled through partnership-building among scholars, institutions, and technology providers to make information accessible and accurate. Thus, the research suggests that a comprehensive strategy is needed to successfully integrate the Zakat system into the digital financial system, incorporating theoretical considerations, empirical data, and real policy implementation. This is essential not only to enhance compliance, but also to enable Zakat to perform its broader socio-economic functions in an increasingly digital world.

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