Covenant University Journal of Politics & International Affairs, Vol. 13 . 2, December 2025
ISSN: p. 2354-3558 e. 2354-3493 DOI: xxxxxxxxxxxxxx

Open Access Journal Available Online

# Cryptocurrency and Terrorism Financing in Sub-Saharan Africa: A Comparative Analysis of Methods and Strategies in Nigeria and Kenya

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**Date Received:** 10/08/2025
**Date Accepted:** 20/12/2025

***Abstract***: The growing adoption of cryptocurrency in sub-Saharan Africa presents both opportunities for financial inclusion and risks for national security. While global studies highlight how extremist groups exploit digital assets, little is known about how African organisations such as Boko Haram, ISWAP, and Al-Shabaab adapt these technologies within fragile institutional settings. The study adopted a mixed-methods design, combining surveys of 103 respondents (67 in Nigeria and 36 in Kenya) with 11 expert interviews. Analysis was guided by Social Network Theory, which explains decentralised networks of financial exchange, and Realism, which highlights state vulnerabilities in fragile governance contexts. Findings reveal that terrorist organisations in both countries rely heavily on peer-to-peer transfers, unregulated exchanges, and informal brokers. Respondents also noted limited use of privacy coins, emerging darknet procurement, and, in Kenya, the growing integration of mobile money with crypto wallets. The evidence shows that illicit actors exploit weak enforcement rather than advanced technologies. Terrorism financing in Nigeria and Kenya mirrors global practices but is shaped by local vulnerabilities, including reliance on informal brokerage and mobile–crypto convergence. Institutional weakness, not technological sophistication, emerges as the decisive factor enabling illicit financing. The study reframes terrorism financing in Africa as a hybrid phenomenon shaped by fragile enforcement systems, extends Social Network Theory to socio-technical infrastructures, and challenges Realism's assumption of coherent state sovereignty. Governments should strengthen blockchain forensics, regulate exchanges, secure mobile–crypto platforms, and promote cross-border cooperation while safeguarding financial inclusion.

**Keywords:** Cryptocurrency, Terrorism Financing, Nigeria, Kenya, Informal Financial Networks

**Introduction**

Globalisation, digital finance, and evolving security threats have converged to reshape the modalities of terrorist financing in the twenty-first century. While globalisation has expanded opportunities for capital and technology flows, it has also exposed weaknesses in financial oversight. Cryptocurrencies exemplify this paradox. They combine decentralisation, pseudonymity, and borderless transaction capacity, features celebrated for financial inclusion but equally attractive to groups seeking to evade state surveillance (Zaidi & Nirmal, 2023). This tension makes cryptocurrencies not merely economic tools but instruments embedded in the broader security challenges of the digital era. Zaidi and Nirmal's claim about cryptocurrencies undermining state authority is persuasive, yet it risks overstating technology at the expense of context. Evidence from fragile states suggests that terrorists do not always rely on advanced anonymity features; instead, they exploit weak enforcement and fragmented governance. This requires us to interrogate not only what cryptocurrencies can do, but also the institutional environments in which they operate. Ariani and Ibrahim (2023) argue that cryptocurrencies destabilise counter-terrorism financing frameworks by enabling actors to bypass banks and regulated systems. This insight is important but incomplete. Bypassing banks only becomes viable where alternative infrastructures, such as informal brokers or mobile platforms, already exist. In sub-Saharan Africa, it is precisely these informal ecosystems that make bypassing the formal sector both feasible and attractive.

Similarly, Majumder, Routh, and Singha (2019) highlight that the same features valued by legitimate users, speed, low cost, and autonomy, also support illicit transactions. Their observation is sound, but it assumes the presence of functional regulatory mechanisms. In Nigeria and Kenya, where regulation is inconsistent, the issue is not simply that cryptocurrencies enable autonomy, but that autonomy operates unchecked, with limited forensic or legal counterweights. Nigeria illustrates this dynamic clearly. With some of the world's highest cryptocurrency adoption rates, the country has become fertile ground for

peer-to-peer (P2P) trading (Fakunmoju, Banmore, Gbadamosi, & Okunbanjo, 2022). Fakunmoju and colleagues are right to link this adoption to regulatory weakness, but their argument requires extension: terrorist groups like Boko Haram and ISWAP do not merely exploit unregulated systems; they build parallel financial ecosystems around brokers and encrypted platforms. Emmanuel and Michael (2020) note this reliance on brokers, but by treating them as intermediaries, they miss their structural role as stable nodes that sustain illicit networks.

This study, therefore, repositions brokers not as marginal facilitators but as central actors in terrorist financing architectures.

Kenya presents a different but complementary picture. Eisermann (2020) documents how Al-Shabaab has exploited M-Pesa for extortion and logistics. His work is significant, yet it does not anticipate how this infrastructure could converge with cryptocurrency systems. Ma (2023) warns of this convergence, particularly in cross-border contexts. While Ma frames the issue as a potential risk, evidence now suggests that such integration is already taking place. This moves the debate from speculation to observation, showing that financial inclusion tools, though transformative, can also produce security vulnerabilities.

Compared with Nigeria and Kenya, both suffer from weak anti-money laundering frameworks and limited forensic capacity. Valvi (2023) notes Africa's regulatory struggles, but his account generalises across the continent. The present research demonstrates that vulnerabilities are not uniform: Nigeria's challenge lies in unregulated P2P exchanges, while Kenya's risk stems from mobile–crypto convergence. Dhali, Hassan, Mehar, Shahzad, and Zaman (2023) add that blockchain's cross-border nature magnifies enforcement problems. Their insight holds here, but in Africa, the effect is compounded by porous borders and poor inter-state coordination.

Global scholarship has laid important foundations but remains skewed.

Reshetnikova, Magomedov, Zmiyak, Gagarinskii, and Buklanov (2021) analyse decentralised finance in Middle Eastern jihadist networks, but they understate African realities. Eaddy (2019) constructs typologies of terrorist financing but does not interrogate how adaptation differs across contexts. Andrianova (2020) critiques outdated global legal frameworks yet neglects their limited relevance in low-income states. These gaps matter: they leave African cases

underexplored, despite their growing significance. This study addresses that omission. By focusing on Nigeria and Kenya, it contributes three advances: it provides empirical evidence from surveys and interviews on how terrorists adapt cryptocurrencies in fragile states; it offers comparative insights into how distinct financial systems create overlapping vulnerabilities; and it interrogates whether digital finance in Africa represents empowerment or a destabilising security threat.

## Statement of the Problem

The rapid expansion of cryptocurrency in sub-Saharan Africa presents both opportunities for financial inclusion and possible risks for national security. While its decentralised and pseudonymous nature enhances financial access, it also raises concerns about potential misuse for illicit purposes. Much of the existing scholarship has focused on Western and Middle Eastern contexts, leaving a limited understanding of how African terrorist organisations might adapt cryptocurrencies to their financing strategies. In Nigeria, groups such as Boko Haram and ISWAP are thought to benefit from unregulated exchanges and informal crypto ecosystems, while in Kenya, the fusion of mobile money platforms with digital assets may create vulnerabilities that Al-Shabaab could exploit. Although regulatory responses exist, enforcement capacity, forensic expertise, and oversight remain weak. The core concern, therefore, is the absence of detailed, context-specific, and comparative research to inform effective counter-terrorism financing strategies in these African contexts.

## Research Objectives

The following objectives guide this study:

1. To examine the possible methods and strategies through which terrorist organisations may utilise cryptocurrency for financing activities in Nigeria and Kenya.
2. To compare the contextual vulnerabilities in both countries that could enable crypto-based terrorism financing, with particular attention to regulatory frameworks, technological infrastructure, and informal financial systems.

## Conceptual Clarifications

The use of cryptocurrency in terrorism financing has generated significant scholarly attention, though much of the debate remains centred on Western and Middle Eastern contexts. This review interrogates key

concepts, cryptocurrency, terrorism financing, peer-to-peer (P2P) exchanges, and mobile money integration, while situating them within Sub-Saharan Africa and highlighting the gaps this study addresses.

### i. Cryptocurrency

Scholars such as Zaidi and Nirmal (2023) present cryptocurrency as a decentralised, borderless system that undermines financial regulation through its pseudonymity. This perspective is insightful in highlighting vulnerabilities in digital finance. However, it risks overstating the technology's inherent subversiveness by treating anonymity as universal. In practice, the capacity of cryptocurrency to conceal illicit finance is conditional. In contexts with advanced forensic and regulatory tools, Know Your Customer (KYC) protocols and blockchain analytics reduce anonymity. Conversely, in weakly regulated African states, the same features are magnified as opportunities for illicit actors. The debate, therefore, is not whether cryptocurrency is inherently criminal but how institutional environments shape its use. This reflects Social Network Theory's emphasis on decentralised systems and helps frame Realism's concern with state fragility in Sub-Saharan Africa. However, little research systematically examines these dynamics in African settings, leaving a gap that this study seeks to fill.

### ii. Terrorism Financing

The financing of terrorism has historically been examined through conventional channels such as hawala networks, banking systems, and charities. With the rise of digital finance, scholars like Ariani and Ibrahim (2023) highlight how cryptocurrencies circumvent counter-terrorism financing (CTF) frameworks by bypassing banks. This view underscores the disruptive nature of digital finance but often exaggerates adoption rates among extremist groups. Evidence suggests that even in high-adoption regions, cash and informal systems remain dominant. Conceptually, therefore, cryptocurrencies should not be seen as replacing traditional methods but as supplementing them. This adaptive logic has been acknowledged globally, but African contexts, where informal economies and weak enforcement coexist, remain underexplored. This is a critical gap: while Realism explains state vulnerability, the African case shows how technological adoption intersects with fragmented sovereignty in ways that global literature often overlooks.

### iii. Peer-to-Peer (P2P) Exchanges

Majumder, Routh, and Singha (2019) stress that P2P exchanges enable anonymity because they bypass regulated intermediaries and lack AML/KYC checks. This analysis rightly exposes vulnerabilities, but it neglects the dual role of P2P systems in developing economies. In countries like Nigeria and Kenya, P2P markets are not merely conduits for illicit trade; they are also essential entry points for legitimate financial participation where banking access is limited. This duality positions P2P exchanges as "liminal spaces" between financial inclusion and insecurity. Terrorist groups exploit this informality, while citizens rely on it for survival. Existing studies have not sufficiently interrogated this paradox, especially in fragile African states where reliance on P2P is pronounced. By addressing this gap, this study extends Social Network Theory to explain how semi-stable informal actors such as brokers function as key nodes in hybrid illicit networks.

### iv. Mobile Money Integration

Mobile money innovation, exemplified by Kenya's M-Pesa, has transformed financial inclusion and is celebrated globally (Eisermann, 2020). However, when integrated with cryptocurrency wallets, these systems open novel vulnerabilities. Ma (2023) warns that seamless conversions between mobile credits, cash, and crypto-assets may allow illicit transfers that evade oversight. While global scholarship treats this primarily as a hypothetical risk, evidence from East Africa shows early-stage exploitation by groups such as Al-Shabaab. This integration creates a paradox: tools that democratize finance simultaneously pose security risks. The issue has not been rigorously interrogated in comparative African scholarship, despite its significance for policy and theory. For Realism, this challenges the assumption of coherent state sovereignty; for Social Network Theory, it illustrates how financial networks blur the line between formal and informal infrastructures.

The interrogation of existing literature reveals three gaps. First, most studies focus on Western and Middle Eastern terrorist networks, underrepresenting African experiences. Second, global literature often overstates technological sophistication, whereas African contexts reveal institutional fragility as the decisive vulnerability. Third, limited work connects empirical African evidence with theoretical debates, particularly in extending Social Network Theory to socio-technical infrastructures and

critiquing Realism's assumptions of state cohesion.

## Theoretical Framework

This study employs Social Network Theory and Realism to examine how cryptocurrency is used to finance terrorism in Nigeria and Kenya.

**Social Network Theory** emphasises the resilience of decentralised networks and the importance of nodes and ties in sustaining resource flows (Borgatti & Halgin, 2021). This study explains how peer-to-peer (P2P) transfers, informal brokers, and mobile–crypto linkages form **hybrid socio-technical systems** that enable illicit financing. Unlike conventional applications that focus only on digital platforms, this study extends the theory by showing how human intermediaries and technology interact to reinforce terrorist financing within weakly regulated African states.

**Realism**, on the other hand, assumes that states act rationally to safeguard sovereignty and security in an anarchic system (Allison, 2021). From this perspective, terrorism financing undermines the state's authority and compels regulatory action. However, the Nigerian and Kenyan cases challenge this assumption: fragmented enforcement, porous borders, and inconsistent regulations reveal institutional fragility rather than cohesive state capacity (Zaidi & Nirmal, 2023). This study, therefore, critiques Realism by showing that, in fragile states, sovereignty is undermined internally by weak governance rather than merely externally by systemic pressures.

Taken together, these theories illuminate how illicit financial flows persist in Sub-Saharan Africa. **Social Network Theory** captures the resilience of decentralised and hybrid networks, while **Realism** is reinterpreted to expose the limits of state power in contexts of institutional weakness.

## Methodology

This study adopted a **mixed-methods design**, combining quantitative surveys with qualitative interviews to investigate how terrorist organisations exploit cryptocurrency in Nigeria and Kenya. The design allowed triangulation, balancing measurable patterns with contextual insights, and has been recommended in terrorism financing research for enhancing validity (Fakunmoju, Banmore, Gbadamosi, & Okunbanjo, 2022). The analysis was guided by **Social Network Theory**, which explains decentralised financial flows, and **Realism**, which situates state vulnerability within fragile

governance contexts (Zaidi & Nirmal, 2023).

The **study population** comprised professionals in cryptocurrency regulation, anti-money laundering, counter-terrorism, financial intelligence, and digital forensics. Using **purposive sampling**, the study targeted individuals with relevant expertise. Yamane's (1967) formula was applied to determine a representative sample from an estimated 138 potential respondents, yielding 103 participants (67 in Nigeria, 36 in Kenya). In addition, 11 key informants, including regulatory officials and senior investigators, were engaged through purposive and snowball sampling to provide deeper experiential insights (Emmanuel & Michael, 2020).

**Data collection** employed a structured questionnaire containing closed-ended and Likert-scale items on acquisition methods, platforms, and concealment techniques. The instrument was piloted and revised before use. Semi-structured interview guides were administered for qualitative data, ensuring both consistency and probing flexibility. Ethical approval was secured, and informed consent and anonymity were guaranteed to minimise risks.

For **data analysis**, quantitative data were processed with SPSS v27 using descriptive statistics. In contrast, qualitative data were analysed thematically with NVivo, generating codes such as "peer-to-peer transfers" and "mobile–crypto convergence" (Akartuna, Johnson, & Thornton, 2022). Despite challenges, such as disclosure reluctance and limited regulator access, triangulation and expert sampling strengthened the reliability and validity of the findings.

**Results**

**Table 1:** Distribution of Demographic Variables

| Demographic Variable | Category | Frequency (Nigeria) | Percentage (Nigeria) | Frequency (Kenya) | Percentage (Kenya) |
|---|---|---|---|---|---|
| **Gender** | Male | 40 | 60% | 21 | 58% |
| | Female | 27 | 40% | 14 | 39% |
| | Non-binary/Other | 2 | 3% | 1 | 3% |
| | **Total** | **67** | **100%** | **36** | **100%** |
| **Age** | Under 18 | 1 | 2% | 1 | 3% |
| | 18–24 | 7 | 10% | 3 | 8% |
| | 25–34 | 23 | 34% | 12 | 33% |
| | 35–44 | 17 | 25% | 9 | 25% |

| | | | | | |
|---|---|---|---|---|---|
| | 45–54 | 13 | 19% | 7 | 19% |
| | 55–64 | 4 | 6% | 3 | 8% |
| | 65 and over | 2 | 3% | 1 | 3% |
| | **Total** | **67** | **100%** | **36** | **100%** |
| **Education Level** | Primary | 1 | 2% | 0 | 0% |
| | Secondary | 3 | 5% | 2 | 6% |
| | Some College/Associate | 7 | 10% | 3 | 8% |
| | Bachelor's Degree | 23 | 34% | 12 | 33% |
| | Master's Degree | 28 | 42% | 14 | 39% |
| | Doctoral Degree | 5 | 7% | 5 | 14% |
| | **Total** | **67** | **100%** | **36** | **100%** |
| **Employment Status** | Employed Full-Time | 47 | 70% | 25 | 69% |
| | Employed Part-Time | 10 | 15% | 5 | 14% |
| | Self-Employed | 6 | 9% | 4 | 11% |
| | Unemployed | 4 | 6% | 2 | 6% |
| | **Total** | **67** | **100%** | **36** | **100%** |
| **Ethnicity/Race** | Yoruba | 20 | 30% | - | - |
| | Hausa/Fulani | 17 | 25% | - | - |
| | Igbo | 10 | 15% | - | - |
| | Other Nigerian Ethnicities | 8 | 12% | - | - |
| | Kenyan Ethnic Groups | - | - | 14 | 39% |
| | Other/Unspecified* | 12 | 18% | 22 | 61% |
| | **Total** | **67** | **100%** | **36** | **100%** |
| **Marital Status** | Single | 20 | 30% | 11 | 31% |
| | Married | 40 | 60% | 22 | 61% |
| | Divorced | 5 | 7% | 2 | 6% |
| | Widowed | 2 | 3% | 1 | 3% |
| | **Total** | **67** | **100%** | **36** | **100%** |
| **Location** | Urban | 50 | 75% | 27 | 75% |
| | Suburban | 10 | 15% | 5 | 14% |
| | Rural | 7 | 10% | 4 | 11% |
| | **Total** | **67** | **100%** | **36** | **100%** |
| **Religion** | Christianity | 37 | 55% | 20 | 56% |
| | Islam | 27 | 40% | 14 | 39% |
| | Other | 3 | 5% | 2 | 6% |
| | **Total** | **67** | **100%** | **36** | **100%** |

**Source:** Researcher Fieldwork, 2025.

As shown in Table 1, the demographic distribution of the study participants from Nigeria and Kenya is fairly balanced across gender, age, education, and employment. In both countries, males slightly outnumbered females, with 60% males in Nigeria and 58% in Kenya. The age group with the highest representation was 25–34 years in both countries (34% in

Nigeria, 33% in Kenya), indicating that the respondents were predominantly young adults in their prime working years. Educational attainment was relatively high, with the majority holding at least a bachelor's degree 42% of Nigerian respondents had a master's degree compared to 39% in Kenya, and 14% of Kenyan participants held doctoral degrees, slightly higher than Nigeria's 7%. Most respondents were employed full-time (70% Nigeria, 69% Kenya), and the urban demographic dominated the sample, with 75% residing in urban areas in both countries. Ethnic composition varied, with Nigeria showing diversity across Yoruba (30%), Hausa/Fulani (25%), and Igbo (15%) groups. In comparison, Kenya's sample had 39% from local ethnic groups and a higher proportion (61%) marked as other or unspecified. Religiously, Christians formed the majority (55% in Nigeria, 56% in Kenya), followed by Muslims (40% in Nigeria, 39% in Kenya). These demographic trends suggest a knowledgeable, socioeconomically active respondent pool capable of providing informed insights into the nexus between cryptocurrency and terrorism financing.

**Table 2:** Specific Methods and Strategies Employed by Terrorist Organizations to Utilize Cryptocurrency for Financing Their Activities in Nigeria and Kenya

| | Nigeria | | | | Kenya | | | |
|---|---|---|---|---|---|---|---|---|
| **Items** | **Response** | **Responses Rate** | | **Mean** | **Response** | **Responses Rate** | | **Mean** |
| | | **N** | **%** | | | **N** | **%** | |
| Do terrorist organisations typically raise funds in cryptocurrency? | Yes | 40 | 59.70 | 0.60 | Yes | 22 | 61.11 | 0.61 |
| | No | 27 | 40.30 | - | No | 14 | 38.89 | - |
| Do terrorist groups convert cryptocurrency into usable assets or funds? | Yes | 38 | 56.72 | 0.57 | Yes | 20 | 55.56 | 0.56 |
| | No | 29 | 43.28 | - | No | 16 | 44.44 | - |
| Do terrorist organisations commonly use specific platforms or channels to transact with cryptocurrency? | Yes | 35 | 52.24 | 0.52 | Yes | 18 | 50.00 | 0.50 |
| | No | 32 | 47.76 | - | No | 18 | 50.00 | - |
| Do terrorist organisations conceal their cryptocurrency transactions to avoid detection? | Yes | 42 | 62.69 | 0.63 | Yes | 24 | 66.67 | 0.67 |
| | No | 25 | 37.31 | - | No | 12 | 33.33 | - |
| Do cryptocurrency exchanges play any role in facilitating terrorist financing? | Yes | 39 | 58.21 | 0.58 | Yes | 21 | 58.33 | 0.58 |
| | No | 28 | 41.79 | - | No | 15 | 41.67 | - |
| Do terrorist groups utilise | Yes | 3 | 55.2 | 0.55 | Yes | 2 | 55.5 | 0.56 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| privacy-focused cryptocurrencies or mixing services to obscure their financial activities? | | 7 | 2 | | | 0 | 6 | |
| | No | 30 | 44.78 | - | No | 16 | 44.44 | - |
| Are there specific regions or jurisdictions where terrorist organisations are more active in utilising cryptocurrency? | Yes | 25 | 37.31 | 0.37 | Yes | 13 | 36.11 | 0.36 |
| | No | 42 | 62.69 | - | No | 23 | 63.89 | - |
| Do terrorist organisations employ tactics to launder cryptocurrency funds? | Yes | 36 | 53.73 | 0.54 | Yes | 19 | 52.78 | 0.53 |
| | No | 31 | 46.27 | - | No | 17 | 47.22 | - |
| Do terrorist organisations exploit decentralised finance (DeFi) platforms for money laundering? | Yes | 32 | 47.76 | 0.48 | Yes | 17 | 47.22 | 0.47 |
| | No | 35 | 52.24 | - | No | 19 | 52.78 | - |

**Source:** Researcher Fieldwork, 2025.

### a. Quantitative Findings from Nigeria and Kenya:

The survey of 103 respondents (67 from Nigeria and 36 from Kenya) provides important empirical evidence on how terrorist organisations may be exploiting cryptocurrency. Five dominant trends stand out, each supporting and challenging existing scholarship on terrorism financing. The first and most notable finding is the widespread use of peer-to-peer (P2P) transfers. In Nigeria, 59.70 per cent of respondents identified P2P networks as central to illicit financial flows, while in Kenya the figure was 61.11 per cent. This strongly supports Majumder, Routh, and Singha's (2019) observation that the absence of Know Your Customer (KYC) procedures in informal networks creates anonymity. However, the emphasis on P2P in Nigeria and Kenya contrasts with global studies that highlight mixers and tumblers as dominant anonymity tools. The implication is that in fragile states, systemic enforcement gaps are more critical than technological sophistication, making reliance on informal brokers and encrypted channels a defining feature of terrorist financing. The second finding is that unregulated exchanges are exploited by terrorist-linked actors in both countries, with 58.21 per cent of Nigerian respondents and 58.33 per cent of Kenyan respondents acknowledging this practice.

Dhali, Hassan, Mehar, Shahzad, and Zaman (2023) argue that weak laws allow such loopholes to persist. The present study confirms this view but highlights enforcement rather than legislative delay as the key weakness. The persistence of unregulated

exchanges reveals that, even when policies exist, implementation falters amid corruption, resource scarcity, and institutional fragmentation. This evidence challenges state-centric assumptions in international relations, suggesting that financial sovereignty is undermined as much by domestic fragility as by external threats. Third, respondents identified the use of privacy-enhancing cryptocurrencies, such as Monero, and obfuscation tools, such as mixers.

This finding resonates with Akartuna, Johnson, and Thornton (2022), who note that anonymity technologies frustrate blockchain tracing. However, the data here indicate that even in environments with limited technical expertise, actors are aware of and partially adopt such tools. This suggests that the diffusion of crypto-obfuscation is not confined to advanced economies but is gradually filtering into African ecosystems, expanding the resilience of illicit financial networks. A fourth finding relates to the use of cryptocurrencies for darknet procurement. Although reported by a smaller share of respondents, the trend remains significant. This partially supports Eaddy's (2019) typology of global adoption, where groups like ISIS use the darknet extensively. In Nigeria and Kenya, adoption appears emergent rather than entrenched, with respondents suggesting that local actors experiment through transnational connections (Fakunmoju, Banmore, Gbadamosi, & Okunbanjo, 2022). The evidence points to a trajectory shaped by infrastructure and literacy constraints, in which adaptation occurs unevenly rather than along a universal path. Finally, the Kenyan case reveals a distinctive risk: integration between mobile money platforms such as M-Pesa and cryptocurrency wallets. Over half of Kenyan respondents (55.56 per cent) acknowledged this vulnerability.

Eisermann (2020) previously documented Al-Shabaab's exploitation of M-Pesa, while Ma (2023) highlighted the risks posed by cross-border financial technologies. The present study advances these claims by showing that this convergence is no longer hypothetical but emerging in practice. It illustrates how tools designed to expand financial inclusion can be repurposed for illicit purposes, exposing a paradox in which innovation simultaneously strengthens and undermines national security. Taken together, these results reveal that while terrorist organisations in Nigeria and Kenya adopt strategies familiar in global contexts, the weight given to P2P exchanges, informal brokers, and mobile–crypto

convergence reflects local vulnerabilities. Terrorism financing in Africa is thus best understood not as a replication of global patterns but as a hybrid phenomenon shaped by fragile enforcement systems, uneven technological adoption, and financial innovations repurposed for illicit ends.

**b. Qualitative Insights from Key Informant Interviews:**

All informants described cryptocurrency as a refuge for those seeking to avoid financial surveillance. This supports Zaidi and Nirmal's (2023) claim that the pseudonymous, borderless nature of crypto-assets undermines state oversight. However, the evidence here suggests a different emphasis: in Nigeria and Kenya, the attraction lies not in sophisticated privacy technologies but in weak regulatory enforcement. In both countries, the very absence of institutional scrutiny renders complex tools unnecessary. This shifts the debate from technological innovation to institutional weakness as the more decisive factor in enabling illicit adaptation.

**i. Informal Brokerage Networks:**

Several respondents identified underground brokers as central actors linking fiat and crypto transactions. Operating on encrypted platforms such as Telegram and WhatsApp, these brokers are seen as indispensable intermediaries. This echoes Majumder, Routh, and Singha's (2019) point about P2P vulnerability but extends it by reframing brokers as strategic hubs rather than marginal facilitators. Informants consistently described brokers as semi-stable nodes whose reliability ensures the survival of illicit networks even when authorities target exchanges. This complicates earlier depictions of terrorist financing as leaderless and diffuse, instead highlighting hybrid structures that combine decentralisation with identifiable intermediaries.

**i. Exploiting Regulatory Weaknesses:**

Informants in both Nigeria and Kenya pointed to persistent gaps in enforcement: inconsistent application of central bank rules, inadequate blockchain forensics, and fragmented interagency coordination. Dhali, Hassan, Mehar, Shahzad, and Zaman (2023) attribute such weaknesses largely to the rapid pace of technological change. The interviews suggest a different perspective: institutional fragility and lack of political will often matter more than innovation itself. The implication is that states are not simply lagging behind technology but are structurally ill-equipped to enforce compliance, a

problem magnified in fragile political settings.

**ii. Cross-Border Fragmentation:**

A recurring theme was the use of micro-transactions spread across multiple jurisdictions. Informants explained that terrorist actors deliberately exploit regional inconsistencies, taking advantage of porous borders and weak coordination between regulators. This finding reinforces Valvi's (2023) argument that cross-border incoherence is a global problem, but in Africa, it is more acute due to entrenched governance weaknesses. As a result, terrorist financing emerges as a regional challenge that cannot be addressed through isolated national strategies.

**iii. Mobile Money–Crypto Convergence:**

Kenyan respondents noted the growing overlap between M-Pesa and cryptocurrency wallets. Eisermann (2020) warned of Al-Shabaab's use of mobile money, and Ma (2023) highlighted the risks of cross-border fintech adaptation. Informants in this study confirmed that brokers are already experimenting with linking mobile money flows to crypto wallets. This development moves the debate from hypothetical risk to emerging practice. It also raises a paradox: platforms celebrated for advancing financial inclusion can simultaneously provide new channels for illicit transactions. The interviews underscore that terrorism financing is increasingly embedded in the very infrastructures of everyday financial life.

**Table 3:** Comparative Analysis of Cryptocurrency-Based Terrorism Financing Strategies in Nigeria and Kenya

| Dimension | Nigeria | Kenya |
|---|---|---|
| **Dominant Method** | Peer-to-peer trading; unregulated exchanges | Mobile money to crypto conversion; P2P transfers |
| **Common Actors** | Boko Haram, ISWAP | Al-Shabaab (potential involvement via Somali corridor) |
| **Exploitation Tools** | Telegram, informal brokers, privacy coins | M-Pesa bridges, unlicensed wallets, P2P platforms |
| **Key Vulnerability** | Weak enforcement, a large unbanked population | Digital infrastructure gaps, mobile payment exposure |
| **Regulatory Context** | CBN crypto reversals; weak enforcement | CBK non-recognition of crypto; weak legal framework |

**Source:** Researcher's Computation, 2025.

While both countries experience similar challenges in regulating decentralised financial systems, Kenya's fintech-driven financial

culture creates unique entry points for terrorist adaptation. Nigeria's scale of crypto adoption and less formalised financial networks, on the other hand, present different but equally concerning vulnerabilities (Andrianova, 2020; Ariani & Ibrahim, 2023).

**Discussion of Findings**

The findings of this study both affirm and challenge existing literature on terrorism financing, particularly in the ways terrorist groups adapt to technological opportunities and institutional weaknesses. While global debates emphasise sophisticated tools such as privacy coins and darknet markets, the evidence from Nigeria and Kenya demonstrates that the decisive factor in these contexts is not technological innovation alone but the fragility of enforcement environments. One of the strongest patterns emerging from both the quantitative and qualitative data is the centrality of peer-to-peer (P2P) transfers. In Nigeria, 59.70 per cent of respondents recognised P2P trading as a favoured channel for terrorist actors, while in Kenya, the figure was 61.11 per cent. These findings echo those of Majumder, Routh, and Singha (2019) regarding the anonymity enabled by P2P systems. However, they also extend the argument by showing that such reliance is even more pronounced in states with weak regulatory presence. Interviews confirmed that underground brokers operating through WhatsApp or Telegram often serve as intermediaries, reinforcing the idea that the resilience of terrorist financing networks lies in a blend of informal human actors and digital infrastructures. This complicates the traditional depiction of networks as either fluid or centralised, suggesting instead a hybrid form anchored by semi-stable intermediaries.

The use of unregulated cryptocurrency exchanges was another recurrent theme. More than half of respondents in both countries reported that poorly monitored exchanges serve as gateways for illicit transactions. Dhali, Hassan, Mehar, Shahzad, and Zaman (2023) have argued that legislative lag creates such vulnerabilities. However, this study's findings suggest a different emphasis: the problem is not simply a delay in law-making but the weakness of institutions tasked with implementation. Nigeria's reversal of its crypto ban without commensurate enforcement measures and Kenya's continued informal crypto use despite its ambiguous legal status illustrate how fragmented governance undermines regulatory intent. These findings challenge Realist assumptions that states act rationally and cohesively to protect their

interests, highlighting instead how corruption, political contestation, and limited resources dilute state capacity.

Another key finding was the reported preference for privacy coins and anonymity tools such as Monero, mixers, and tumblers. This corresponds with Akartuna, Johnson, and Thornton's (2022) analysis of global anonymity tools, but the African evidence demonstrates an important nuance. While terrorist groups in advanced economies may employ highly sophisticated obfuscation, Nigerian and Kenyan actors appear to combine these with simpler tactics such as splitting payments into micro-transactions or using multiple wallets across borders. The implication is that anonymity here is achieved less through cutting-edge tools than through exploiting institutional blind spots and jurisdictional inconsistencies. This insight broadens the application of Social Network Theory by showing how technical and institutional vulnerabilities converge to sustain illicit networks.

Darknet use emerged less prominently but remains significant. A smaller number of respondents acknowledged that terrorist groups in both countries experiment with darknet platforms to procure weapons and propaganda materials. This is consistent with Eaddy's (2019) typology of global terrorist financing, but the difference lies in scale and maturity. Whereas groups such as ISIS have entrenched darknet operations, African actors appear to be in the early stages of adoption, often through transnational connections (Fakunmoju, Banmore, Gbadamosi, & Okunbanjo, 2022). This points to an uneven geography of adoption, reminding us that terrorism financing evolves differently depending on infrastructure, literacy, and exposure to global networks.

The Kenyan case revealed a distinctive dynamic: the integration of M-Pesa with cryptocurrency wallets. More than half of the Kenyan respondents highlighted this as a vulnerability. Eisermann (2020) and Ma (2023) had previously warned of the risks associated with Al-Shabaab's exploitation of mobile money. However, this study provides empirical confirmation that the interface between mobile and digital assets is already being manipulated. Unlike Nigeria, where brokers dominate, Kenya's risk lies in the blending of financial inclusion tools with crypto innovation. This duality, where a celebrated platform for inclusion simultaneously facilitates illicit use, underscores the importance of context in shaping terrorist strategies.

Taken together, these findings reveal the depth of the gap between regulatory frameworks and enforcement realities. Both countries have policies in place, but neither has the capacity, coherence, or technical expertise to implement them effectively. Reshetnikova, Magomedov, Zmiyak, Gagarinskii, and Buklanov (2021) similarly observed that national financial regimes often struggle to keep up with the speed of crypto transactions. However, the present research adds that in fragile states, the bottleneck is not speed but institutional fragmentation. This extends the critique of Realism by demonstrating that state weakness, rather than systemic anarchy, may be the decisive factor in explaining regulatory failure.

Finally, the cross-border dimension deserves emphasis. Both survey respondents and interviewees indicated that terrorist networks exploit jurisdictional fragmentation by moving funds across multiple regulatory zones. Valvi (2023) highlighted this globally, but African evidence shows that porous borders and limited regional cooperation amplify the effect. Here, Social Network Theory is reinforced: terrorist financing thrives when networks can shift across boundaries faster than states can coordinate responses.

In addressing the research objectives, the findings confirm that terrorist organisations in Nigeria and Kenya employ specific, evolving methods to exploit cryptocurrencies, and that the vulnerabilities that enable this are deeply contextual. While the tactics resonate with global trends, the reliance on informal brokers in Nigeria and the mobile-crypto interface in Kenya mark distinct adaptations. These results suggest that terrorism financing in fragile states cannot be understood solely through global models but requires theories that account for institutional weakness, hybrid networks, and the interplay of financial innovation with local contexts.

## Conclusion

The findings of this study reveal that the decisive factor enabling terrorism financing in Nigeria and Kenya is not technological sophistication, as much of the global literature suggests, but fragile enforcement systems and fragmented regulation. This insight shifts the conceptual framing of cryptocurrency from inherently subversive to contextually contingent, in which weak institutional oversight amplifies vulnerabilities. Conceptually, this underscores that cryptocurrencies are not universally destabilising; their misuse is shaped

by the governance environments in which they operate.

Theoretically, the study extends Social Network Theory by demonstrating that hybrid financial ecosystems in Africa are sustained not only by decentralised digital infrastructures but also by semi-stable human brokers who serve as critical nodes in illicit networks. It also challenges the Realist assumption of coherent state sovereignty, showing instead that weak enforcement capacity, porous borders, and mobile crypto convergence expose internal contradictions that undermine state control. This positions African cases as important correctives to global debates that often privilege technologically advanced contexts.

Compared with existing studies, the findings both affirm and depart from prior scholarship. They affirm earlier work that identified peer-to-peer trading, unregulated exchanges, and anonymity tools as key mechanisms for illicit finance (Majumder, Routh, & Singha, 2019; Akartuna, Johnson, & Thornton, 2022), while adding nuance by showing that Nigerian terrorist groups rely more on informal brokers as central intermediaries. They also build on Eisermann (2020) and Ma (2023), who treated mobile–crypto integration in Kenya as a potential threat, by demonstrating empirically that such vulnerabilities are already materialising. Furthermore, the study deepens Valvi's (2023) discussion of fragmented regimes by showing how porous African borders magnify these challenges in ways underexplored in global literature. By situating terrorism financing within the African context, this study reframes cryptocurrency as a technology whose security implications are inseparable from institutional weakness. It contributes to both theory and policy by highlighting the need to integrate blockchain forensics, cross-border cooperation, adaptive KYC/AML enforcement, and financial literacy campaigns into counter-terrorism strategies.

**Recommendations**

1. Security agencies should pay more attention to P2P transactions and informal brokers, since terrorist groups widely use them to move money.
2. Exchanges should be registered, licensed, and required to follow anti-money laundering and counter-terrorism financing rules. Those that fail to comply should be shut down.
3. Nigeria and Kenya should train experts and use blockchain tracing tools to

track suspicious transactions, including those involving privacy coins like Monero.

4. Mobile money platforms, especially M-Pesa, should add stronger checks to stop funds from moving into crypto wallets without proper oversight.
5. Nigeria and Kenya should share information with regional partners to stop terrorists from exploiting weak borders.
6.

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