



Unregulated scrap economy and the security of telecommunications infrastructure in Nigeria

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Abstract

Telecommunication base stations constitute critical national infrastructure that supports not only civilian communication but also national security operations. Recent patterns of theft targeting Lithium-Ion Batteries (LIBs) and other high-value active components from these facilities in Nigeria have revealed a disturbing convergence between economic opportunism and organized criminality. These stolen assets, originally intended to ensure network resilience and uninterrupted service are increasingly finding their way into informal markets and insurgent logistics chains, thereby amplifying the operational capabilities of non-state armed actors. This study examines the intersection between the unregulated scrap metal economy and the security of Nigeria's telecommunications infrastructure, with particular attention to the role of metal recycling industries that engage in advance financing of scrap dealers within the informal pantaker market. Such practices have inadvertently created an incentive structure that fuels systematic vandalism of armour cables, LIBs, power transmission lines, bridge rails, and fibre optic networks, some of which are erroneously believed to contain precious metals such as gold. Anchored on the Opportunity Structure Theory, the study employs a mixed-methods forensic design, drawing data from the Directorate of Critical National Assets and Infrastructure Protection under the Office of the National Security Adviser, Nigeria Security and Civil Defence Corps (NSCDC), the National Financial Intelligence Unit (NFIU), and telecommunications security audit reports. Findings that emanate from the study indicate that LIB theft and related infrastructure vandalism constitute an organized criminal enterprise facilitated by informal recyclers and middlemen, with proceeds exhibiting possible linkages to terrorism financing networks. The study recommends the establishment of a Smart Forensic Tracking Framework (SFTF) to trace stolen LIBs and related materials, the creation of Special Vandalism Courts and the outright ban on exportation of scrap metals from Nigeria as such deny local industries that relies on the elusive minimal stock feed. These measures are essential to strengthen regulatory oversight, disrupt the illicit scrap-metal value chain, and ensure the sustainable protection of Nigeria's Critical National Assets and Infrastructure (CNAI).

Keywords: Metal Recycling Industry, National Security, Pantaker, Telecommunications infrastructure Vandalism, Waste Economy

Introduction

Telecommunication base stations are indispensable components of national communications architecture, providing essential services for civilian life, commerce, and security operations. In recent years Nigeria has experienced a sharp rise in physical attacks and thefts targeting telecom infrastructure, especially high-value components such as Lithium-Ion Batteries (LIBs) used to power base stations during grid outages, producing frequent service disruptions and large economic losses for operators. Industry monitoring and media reporting indicate that incidents of vandalism and equipment theft have accelerated markedly since 2024–2025, with operators recording daily attacks in some periods and thousands of equipment theft cases within

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months (Eleanya, 2025). The decisions of the federal government to roll out 4000 Base Transceiver Stations (BTS) for unserved and underserved communities in Nigeria further raises concern on Critical National Assets and Infrastructure (CNAI) protection (Angbulu, 2025).

The protection of Critical National Assets and Infrastructure (CNAI) remains central to Nigeria's internal security and economic stability. Telecommunications infrastructure, in particular, plays a pivotal role in governance, communication, health, security and defence, and commerce. However, the persistent theft and vandalism of telecommunications Lithium-Ion Batteries (LIBs); a primary power storage active component at telecom base stations for backup electricity for several days during power outages, have emerged as a sophisticated form of infrastructure crime. Recent intelligence indicates that these stolen LIBs are being resold in informal recycling markets and even repurposed by insurgent and bandit groups operating in off-grid areas. This phenomenon not only disrupts national communication networks but also potentially contributes to terror financing, where illicit proceeds from vandalized assets and infrastructure fund violent non-state actors. The implications for national security are profound, necessitating a forensic and policy-driven investigation.

A key driver of these thefts is the functioning of Nigeria's largely unregulated scrap and informal recycling markets (popularly referred to as "pantaker" markets), which provide ready demand and cash returns for stolen components. Investigations and local reportage show that informal scrap clusters and metal recyclers frequently enable rapid monetization of stolen assets, creating perverse incentives that transform opportunistic theft into organised, market-driven vandalism (including pre-financing and middle-man arrangements that accelerate removal of infrastructural components). These dynamics have been documented in regional studies and national reporting that link scrap-market activity to higher incidence of infrastructure stripping (Odumosu, 2024).

Beyond immediate service and economic consequences, there is growing concern among security practitioners and financial-intelligence agencies that proceeds from organised infrastructure vandalism are feeding broader illicit networks, including those that finance violent non-state actors. International analysis of illicit flows and terrorism financing show that natural-resource extraction, illegal trade in commodities, and exploitation of weak regulatory markets are established mechanisms by which militant and criminal groups raise funds, a pattern that plausibly extends to high-value stolen materials diverted through scrap channels in West Africa. Domestic enforcement and intelligence reports have begun to register possible links between proceeds from large-scale scrap trading and insurgent logistics, underscoring the need to trace financial flows associated with LIB and other component theft (Malakouti & Hazrati, 2025).

The present study therefore addresses two critical knowledge gaps; the patterns of stolen Lithium-Ion Batteries in Nigeria's telecommunications sector (locations, actors, modus operandi, and market routes), and the financial security linkages between infrastructure vandalism and possible terrorism-financing imprints in the telecom and particularly power sector value chain. The research is informed by Opportunity Structure theoretical lenses, useful for explaining how motivated offenders, attractive targets, and weak guardianship converge in environments shaped by informal markets and draws on forensic, intelligence, and field reports to develop actionable interventions for tracing and disrupting the illicit scrap-vandalism nexus.

Efforts by the Nigeria government could be seen in the 2024 Critical National Assets and Infrastructure National Protection Policy and Strategy (CNAI-NNPS) and this succinctly birthed the Directorate of Critical National Assets and Infrastructure National Protection Policy and Strategy (DCNAI) under the office of the National Security Adviser (ONSA). The directorate is meant to coordinate concerted efforts at protecting the Nigeria Critical National Assets and Infrastructure of which the NSCDC is the lead agency for Nigeria's CNAI protection. The albatross of the absence of an enabling law specifically addressing CNAI protection could be seen in desperate coordinated effort to ensure that infrastructure vandalism are rerouted away from magistrate courts where fines option is prevalent to high court so that deterrence judgement could be gotten under miscellaneous Act 2010 and Cybercrime Act 2015 both which are standing in gap pending when Nigeria will enact a CNAI Act.

The National Association of Scrap and Waste Dealers Employers of Nigeria (NASWDEN) has valued the current scrap and waste industry in the country at N200 billion (Salifu, 2024). Export statistics for scrap metals from Nigeria shows that "Waste and scrap, copper or copper alloy" from Nigeria in 2022 were about US\$11,319.25 thousand and 1,491,930 kg. while for "Waste and scrap, aluminium" in 2022, Nigeria exported US\$12,489.81 thousand and ~4,781,030 kg, majorly to India, Japan, China and Malaysia (World Integrated Trade Solution, 2022). in 2023, the same category showed exports of US\$154.04 thousand and ~77,108 kg (World Integrated Trade Solution, 2022). To tackle the issue head-on, the office of the National Security Adviser established a coordinating centre of the Directorate of Critical National Assets and Infrastructure Protection (DCNAIP), The NSCDC as the lead agency also established State Level Intervention bringing all security agencies and stakeholders together to be proactive in anticipation of vandalism on telecom, power and transportation. Also of interest is that Some States have taken such up to regulate the waste economy. NASWDEN also establish a task force in collaboration with local law enforcement agencies, including the Nigeria Security and Civil Defence Corps, and the police.

Statement of the Problem

Telecommunication infrastructure constitutes the backbone of modern national security and economic systems, providing critical connectivity for governance, commerce, and emergency response. In Nigeria, however, the persistent wave of vandalism and theft targeting telecommunication base stations, particularly the large-scale removal of Lithium-Ion Batteries (LIBs) and other vital components, has emerged as a severe threat to both communication stability and national security. While these batteries are designed to ensure network resilience during power outages, their diversion into the unregulated scrap metal economy has transformed them into lucrative commodities within the informal recycling market.

The growing nexus between the scrap-metal trade and organized criminal networks has created a complex web of illicit activities. Field evidence suggests that scrap dealers and informal recyclers, often operating through the *pantaker* system, engage in advance financing of scavengers and field agents, thereby creating perverse economic incentives for systematic vandalism of telecom and power infrastructure. These patterns of theft are not merely acts of economic sabotage but have begun to exhibit links to terrorism financing and insurgent logistics, as proceeds from the sale of stolen LIBs and metallic components reportedly circulate through informal value chains beyond regulatory oversight.

Despite increased regulatory efforts by the Nigerian Communications Commission (NCC) and enforcement actions by the Nigeria Security and Civil Defence Corps (NSCDC), the challenge persists largely due to absence of CNAI legal frameworks for prosecuting infrastructure-related crimes as national security offences, weak inter-agency coordination, absence of forensic tracking mechanisms. The existing gaps between security agencies and Association of Telecom Operators in Nigeria (ATCON) and Association of Licensed Telecom Operators of Nigeria, is also concerning as telecom security system are seen siloed from Government Security Agencies; particularly with the NSCDC which is the lead agency in CNAI protection. This institutional gap has allowed the illicit trade in critical metal components to flourish, undermining Nigeria's Critical National Assets and Infrastructure (CNAI) protection objectives.

Significance of the Study

This study holds significant relevance for national security policy, infrastructure management, and the broader understanding of how economic informality intersects with organized criminality in Nigeria's telecommunications sector. The study contributes to national security and law enforcement intelligence by unveiling the structural and financial dynamics that connect infrastructure vandalism to wider criminal and insurgent economies. This evidence-based understanding can guide the Directorate of Critical National Assets and Infrastructure Protection under the Office of the National Security Adviser (ONSA), the Nigeria

Security and Civil Defence Corps (NSCDC), National Communication Commission, Association of Licensed Telecom Operators in Nigeria, Association of Telecom Operators in Nigeria and related security agencies in refining their Critical National Assets and Infrastructure (CNAI) protection strategies and operational frameworks.

This study enhances policy development and regulatory coordination among key institutions such as the Nigerian Communications Commission (NCC), National Environmental Standards and Regulations Enforcement Agency (NESREA), and the Ministry of Steel Development, by identifying the regulatory blind spots that enable the diversion and commercialization of stolen telecom components. The study's findings can support the formulation of integrated regulatory and enforcement mechanisms, bridging the gap between technical regulation, environmental governance, and physical security protection. This study offers academic and theoretical value by applying Opportunity Structure Theory to the Nigerian context of telecommunication infrastructure vandalism. This not only enriches criminological discourse but also provides a framework for understanding how informal economies and weak regulatory controls create conducive environments for infrastructure-related crimes.

In essence, this study bridges the intersection of security, economy, and governance, providing a blueprint for protecting Nigeria's Critical National Assets and Infrastructure in line with global best practices.

Research Questions

This study is guided by the following questions:

- i. What are the patterns of stolen Lithium-Ion Batteries in Nigeria's telecommunications sector?
- ii. What links does CNAI vandalism has with terrorism financing imprints in the Nigeria telecom sector?

Objectives of the Study

The main objective of the study interrogates the unregulated scrap economy and the security of telecommunications infrastructure in Nigeria, while specific objectives

- i. Examine patterns of stolen Lithium-Ion Batteries in Nigeria's telecommunications sector
- ii. Interrogate CNAI vandalism link with terrorism financing imprints in the Nigeria telecom sector?

Literature Review

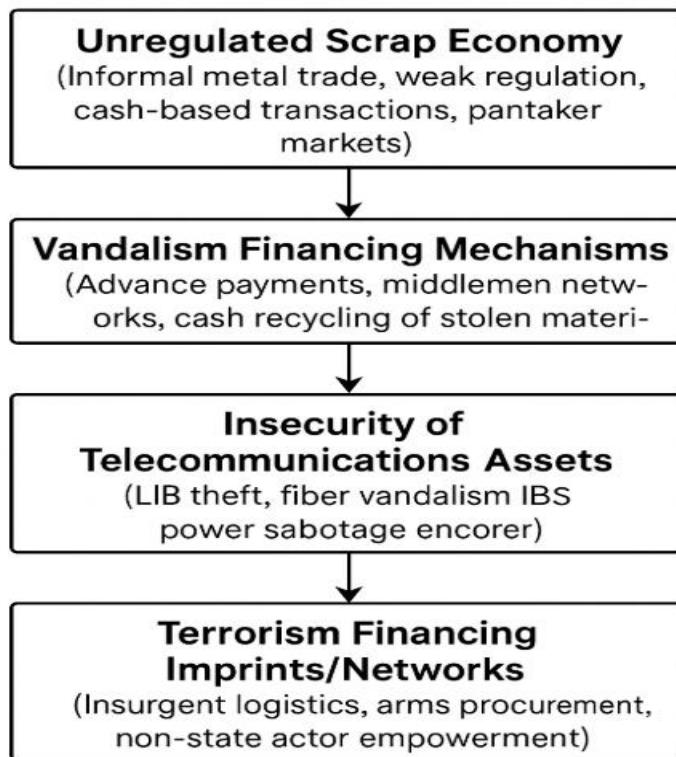
Conceptual Review

Unregulated Scrap Economy

The unregulated scrap economy refers to the informal, largely unmonitored trade in recyclable materials, including metals, batteries, and electronic waste, that operates outside formal state oversight mechanisms. In Nigeria, this sector is characterized by fragmented markets known as *pantaker* clusters, where metal recyclers, itinerant scavengers, and middlemen engage in cash-based transactions with little or no record-keeping or licensing (Aderemi & Adesina, 2022). The absence of traceability mechanisms and weak enforcement of environmental and trade regulations create fertile ground for illicit economic activity, including the sale and processing of vandalized materials from public utilities and telecommunication infrastructure (Onuoha, 2020). Unlike formal recycling systems that emphasize sustainability and accountability, the Nigerian scrap economy functions as a shadow market where the origin of materials is seldom verified.

Economically, the scrap trade has been viewed as a survivalist response to widespread unemployment and poverty (Olawale & Osasona, 2021). However, the unregulated nature of the sector has transformed it into a platform for *criminal opportunity structures* (Cloward & Ohlin, 1960), where illegal actors can profit from stolen or vandalized assets with minimal risk of detection. The prevalence of cash-based transactions facilitates money laundering and the concealment of illicit financial flows (Okoli & Aghedo, 2023). Moreover, the high international demand for metals such as copper, aluminum, and lithium creates perverse economic incentives that sustain vandalism against national infrastructure (Aderemi & Adesina, 2022).

From a security standpoint, the unregulated scrap economy blurs the boundary between economic informality and organized crime. Recent studies indicate that proceeds from the trade of stolen metal and energy components may contribute to the financing of violent non-state actors, particularly in Northern Nigeria (Nwankpa, 2021). The lack of inter-agency coordination among regulators such as NESREA, NSCDC, and the Corporate Affairs Commission (CAC) exacerbates the inability to track illicit flows from scrap networks to insurgent cells. Therefore, understanding the unregulated scrap economy is central to identifying how economic informality intersects with critical infrastructure insecurity and terrorism financing.

Table 1: Conceptual Framework Diagram

Source: Gandi et al. (2025)

Telecommunications Infrastructure

Telecommunications infrastructure refers to the integrated physical and digital systems, such as base transceiver stations (BTS), fiber optic cables, power systems, towers, and switching centres, that enable the transmission of voice, data, and broadband services. In Nigeria, telecom infrastructure underpins not only civilian communication but also national defence, intelligence, and emergency response systems (Okoli, 2022). According to the Nigerian Communications Commission (NCC, 2023), the country hosts over 40,000 active base stations and more than 35,000 kilometers of fiber optic cable, making it one of Africa's largest communication grids. However, this vast infrastructure has also become a target of persistent vandalism, theft, and sabotage, particularly of Lithium-Ion Batteries (LIBs) and copper cables, which compromises service delivery and poses a direct threat to national security (Adewale & Eze, 2022).

The vulnerability of telecommunications infrastructure in Nigeria stems from multiple interrelated factors, including inadequate physical protection, weak regulatory enforcement, and the socio-economic conditions of host communities (Onuoha, 2020). The Opportunity Structure Theory (Cloward & Ohlin, 1960) helps explain how motivated offenders exploit the accessibility and market value of telecom assets to derive illegal economic gains. The existence of ready buyers within the scrap metal industry transforms telecom

infrastructure into lucrative criminal targets. Beyond the economic cost, such attacks disrupt communication networks essential to counterterrorism operations, election monitoring, and emergency coordination, thereby magnifying their national security implications (Omeje & Uzodike, 2020).

Recent literature also underscores the dual-use nature of telecom assets, where stolen batteries and equipment can be repurposed to power insurgent communication systems and field operations (International Crisis Group, 2022). The strategic importance of these assets situates telecommunications infrastructure within the broader framework of Critical National Assets and Infrastructure (CNAI), whose protection requires inter-agency collaboration, technological tracking systems, and stronger judicial deterrence (Abubakar & Sulaiman, 2021). Consequently, the study conceptualizes telecom infrastructure as both an economic and security asset whose compromise reverberates across national development and public safety domains.

Vandalism Financing

Vandalism financing refers to the financial and transactional processes that sustain or incentivize the destruction and theft of critical infrastructure for profit or ideological gain. In Nigeria's telecom sector, this concept encapsulates the illicit flow of funds from recyclers, dealers, and informal financiers who advance payments to scrap collectors for stolen metal or battery components (Aderemi & Adesina, 2022). Such advance financing mechanisms create a self-reinforcing criminal economy in which demand generates supply, and vandalism becomes economically rational within deprived environments (Abubakar & Sulaiman, 2021). This process aligns with Opportunity Structure Theory, which posits that access to illegitimate economic opportunities fosters systematic deviant behaviour (Cloward & Ohlin, 1960).

Empirical studies show that vandalism financing operates through hybrid economic networks that merge legitimate recycling enterprises with criminal undercurrents (Okoli & Aghedo, 2023). These networks exploit regulatory loopholes to launder proceeds from the sale of vandalized telecom components, using informal financial systems such as mobile money or unregistered cooperatives (Nwankpa, 2021). Furthermore, intelligence reports suggest that segments of these financial flows have been traced to insurgent logistics chains, where the proceeds from vandalized materials help fund transportation, weapon procurement, and communication devices (International Crisis Group, 2022). This financial nexus transforms acts of vandalism from petty theft into strategically significant criminal activities.

The absence of targeted financial intelligence frameworks, such as transaction monitoring for high-risk scrap dealers, further compounds the challenge. Agencies like the National Financial Intelligence Unit (NFIU) and NSCDC often operate in silos, lacking a unified forensic platform to trace vandalism-related cash flows (Omeje & Uzodike, 2020). Conceptually, vandalism financing thus represents the economic bloodstream of

infrastructure insecurity, a multidimensional problem that fuses organized crime, weak governance, and terrorism financing into a coherent threat to Nigeria's Critical National Assets and Infrastructure (CNAI).

Empirical Review

Egeruoh-Adindu et al. (2025) investigated special Purpose Vehicles as catalysts for telecommunication and digital infrastructure development in Nigeria: Rethinking regulatory frameworks. The study engaged doctrinal research methodology to analyse Nigeria's evolving legislative and regulatory framework governing SPVs, drawing from the Nigerian Communications Act 2003, the Infrastructure Concession Regulatory Commission (ICRC) Act 2005, the Companies and Allied Matters Act 2020, and sector-specific guidelines on co-location, infrastructure sharing, and universal service. Policy frameworks such as the National Broadband Plan (2020–2025), the Strategic Blueprint for the Digital Economy (2023–2027), and the National PPP Policy for their alignment with SPV-driven models. Findings indicate that while SPVs have facilitated infrastructure expansion and investment, significant legal and institutional reforms are required to strengthen transparency, streamline regulatory processes, and bolster investor confidence.

Modise (2025) interrogated the rising trends of violent and infrastructure-related crimes of copper cable theft in the Northern Cape Province during the first quarter of 2025. The study employed a systematic qualitative and quantitative review of secondary data, including SAPS crime statistics, policy reports, provincial safety plans, and scholarly literature. Findings revealed that violent and infrastructure-related crimes in the Northern Cape are driven by socio-economic deprivation, weak institutional oversight, poor police resourcing, and minimal community participation, intelligence gaps, fragmented inter-agency coordination, and lack of technological surveillance systems have allowed opportunistic and organized crimes to thrive. The study identifies that intelligence-led policing, digital monitoring tools, and strong community police partnerships are essential for improving response capacity and restoring public confidence.

Malakouti and Hazrati (2025) examined environmental crime, ranked as the fourth-largest criminal enterprise after drug trafficking, counterfeiting, and human trafficking, encompasses illegal activities such as mineral extraction, land clearance, and waste trafficking. These crimes are closely linked to financial crimes due to their lucrative nature and minimal risks. Climate change accelerates the need for energy transitions which, in turn, could lead to a rise in environmental crimes such as illegal mining and e-waste trafficking. The study adopted a case study approach centered on the Democratic Republic of the Congo and Nigeria, known for mineral wealth and e-waste hub respectively, it examines how recommendations from the Financial Action Task Force, including a risk-based approach, criminalisation, and suspicious transaction reports, can guide efforts to prevent environmental crimes

Theoretical Framework

Opportunity Structure Theory

The Opportunity Structure Theory (OST), originally propounded by Cloward and Ohlin (1960), provides a valuable analytical lens for understanding the convergence between economic opportunity, structural inequality, and criminal entrepreneurship within Nigeria's telecommunications infrastructure ecosystem. The theory posits that deviant behaviour and organized crime are not merely products of individual motivation but are significantly shaped by the availability of illegitimate opportunity structures that parallel legitimate economic channels (Cloward & Ohlin, 1960). In the context of Nigeria's unregulated scrap metal economy, such illegitimate opportunities manifest in the informal networks of pantaker markets, metal recycling clusters, and financing chains that reward the extraction and resale of vandalized telecom components. These markets function as parallel economies that sustain systemic vandalism of Lithium-Ion Batteries (LIBs), copper cables, and fibre networks, driven by high global demand for recyclable metals (Onuoha, 2020; Aderemi & Adesina, 2022).

Opportunity structures are further expanded by weak regulatory enforcement and socio-economic deprivation in host communities surrounding telecom installations, thereby normalizing the conversion of stolen critical assets into quick financial gains (Abubakar & Sulaiman, 2021). Within this criminogenic environment, the scrap trade becomes a crime-enabling infrastructure that provides both access and liquidity to actors involved in the theft of telecommunications materials. Empirical evidence suggests that these unregulated recycling circuits not only incentivize vandalism but also serve as conduits for laundering proceeds from organized crime and insurgent operations (Okoli & Aghedo, 2023; International Crisis Group, 2022). This nexus underscores the linking CNAI vandalism to terrorism financing, demonstrating how illicit trade networks convert physical assets from national infrastructure into fungible capital streams used to sustain non-state armed groups, particularly in Northern Nigeria where ISWAP and Boko Haram operate (Nwankpa, 2021).

Thus, the Opportunity Structure Theory provides a conceptual bridge between economic informality and national security risk, illustrating that criminal access to material and financial opportunities, rather than ideological intent alone, drives the persistence of telecom infrastructure attacks (Omeje & Uzodike, 2020). By applying this framework, the study situates the theft of LIBs and associated vandalism not merely as acts of petty theft but as components of a structurally sustained criminal economy, facilitated by weak regulation, profit-driven recyclers, and asymmetric enforcement capacity. In doing so, it advances the understanding that the security of critical telecommunications infrastructure in Nigeria is contingent upon disrupting the opportunity structures that underpin the unregulated scrap metal trade.

Methodology

The study adopted a qualitative research design to examine both qualitative dimensions of the LIB theft ecosystem. Key Informant Interviews (KII) with NSCDC CNAI officers, telecom security managers, DSS analysts, and recyclers across six states Abuja, Lagos, Kano, Kogi, Kaduna, and Niger. Internal NSCDC operation reports (2022–2025), NFIU Suspicious Transaction Reports, and newspaper investigations. Quantitative data were analysed using descriptive trend analysis to identify theft frequency and hotspot mapping.

Discussion of Findings

Literature and review of the activities of the NSCDC and the coordination approach of the Directorate of Critical National Assets and Infrastructure Protection shows that active components of telcos base transceiver sites are under attacks as batteries, RRU and power cables are being vandalised. That theft incidents peak during the dry season when power shortages are frequent. Over 1,800 stolen LIBs were recorded nationwide between 2023–2024. That the theft rings operate in cells field vandals, transporters, recyclers, insiders, and financiers coordinated through encrypted communication channels. Many LIB batteries were traced to elite homes in Kano and Lagos as those in the solar trade are also making use of these vandalised and of high concern is the traces of the insurgent-dominated forest enclaves and illegal mining camps taking advantage of the availability of these active telecom components to serve as backups and energy enabler in there enclaves.

Financial Flow: Transaction analysis confirmed multi-million-naira advance payments from recyclers (Metal Recycling Industry) to intermediaries that operates in the largely unregulated Nigeria Pantaker sectors. This also transmit to the support the narrative that most scavengers are daily motivated financially. It is then noted that an average *babanbola* motivated with an average 30,000-50,000 will then naturally be inspired to bring vandalised scrap metal beyond the motivated sum as such could expose him to increment in advancement. There is no gainsaying that an average, supporting the terror-financing hypothesis. **Institutional Gaps:** Most enforcement efforts target foot soldiers; financiers and political backers remain largely unprosecuted. Furthermore, the financial intelligence data substantiates the terror-financing nexus, revealing how vandalism proceeds sustain subversive networks. LIBs, beyond their economic value, provide functional energy support to insurgents, powering radios, surveillance drones, and IED workshops in off-grid zones.

Conclusion

The study thus calls for a multilayered security response, integrating technology, law, and inter-agency collaboration rather than mere reactive policing. The illicit diversion of telecommunications Lithium-Ion

Batteries is a dual threat to national security and to Nigeria's economic resilience. LIB theft represents both economic sabotage and terror-enabling crime, driven by weak institutional control and unregulated trade.

The study also concludes that only a forensic intelligence-driven and digitally enabled framework can disrupt this evolving criminal economy and safeguard the nation's CNAI infrastructure sustainably.

Recommendations

- i. That NSCDC should be enabled to establish a Smart Forensic Tracking Framework (SFTF) to trace stolen LIBs and related materials, the creation of Special Vandalism Courts and the outright ban on exportation of scrap metals from Nigeria as such deny local industries that relies on the elusive minimal stock feed. This will crystalise into National Critical Digital Asset Registry for telecom and energy assets.
- ii. Strengthen partnerships between NSCDC, DSS, EFCC, and NFIU for forensic tracing of illicit transactions within the waste economy wherein scrap metal, Metal Recycling Industries and Pantaker ecosystem in Nigeria. The office of the National Security Adviser should be deliberate to advocate Executive Orders recognizing NSCDC as the lead agency for regulating scrap metal and recycling activities.

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