INTERNATIONAL JOURNAL OF SOCIAL SCIENCE, MANAGEMENT, PEACE AND CONFLICT RESEARCH (IJSMPCR)
Journal homepage: https://ijsmpcr.com/

Assessing impact of illegal mining and its security implications in Plateau State, Nigeria.

By

[1]MILAHAM Brenda Obidah., [2]YUSUF Usman Alhaji Ass Prof., [3]MOHAMMED Bello Babanumma Prof., & [4]OKOLOAGU Emmanuel Nnabueze

[1-4]Institute for Governance and Development Studies, Nasarawa State University Keffi, Nigeria

International Journal of Social Science, Management, Peace and Conflict Research, 10(01), 001-019

Publication history: Received on September 18; Revised September 22; Accepted September 29, 2026

https://doi.org/10.63532/IJSMPCR.2026.10101

Abstract

While the extractive industry holds immense potential for economic diversification in developing economies, unregulated mineral extraction has increasingly metamorphosed into a profound internal security threat. This study investigates the security implications of illegal mining in Plateau State, Nigeria, specifically this study employed Institutional Failure Theory to examine impact on two critical variables: community security and arms proliferation. Adopting a mixed method research design of survey administration and Key Informant Interview, the study leveraged on Krejcie and Morgan (1970) Scientific sampling technique on structured questionnaires to elicit primary data from a purposively selected sample of 384 respondents and 12interviewees, comprising local mining communities, traditional leaders, and security personnel across four Local Government Areas (Barkin Ladi, Jos North, Mangu, and Wase). Data were analysed using descriptive statistics and Ordinary Least Squares (OLS) regression techniques. The findings reveal a strong, statistically significant relationship between illegal mining and the deterioration of community security, evidenced by heightened violence, social mistrust, and the erosion of traditional leadership structures. Furthermore, the study established that illegal mining significantly drives arms proliferation, with illicit mining revenues actively financing the acquisition of small arms and transforming mining sites into hubs for weapons trade and local fabrication. The study concludes that illegal mining in Plateau State has transcended mere environmental and economic infractions to become a primary catalyst for communal instability and the militarisation of local economies, driven by deep-seated institutional failures. Consequently, the study recommends the establishment of a Joint Community Mining Security Framework coordinated by the Nigeria Security and Civil Defence Corps (NSCDC) and traditional institutions to restore local order, alongside a coordinated, intelligence-led security crackdown to dismantle the illicit financial and arms supply chains sustaining mining-related violence.

Keywords: Arms Proliferation, Community Security, Illegal Mining, Institutional Failure Theory

Introduction

Globally, the extractive industry functions as a catalyst for national revenue generation, employment creation, and rural-urban transformation through the development of transport networks, processing industries, and export markets (Moomen et al., 2020). In developing economies such as Nigeria, mining holds the potential to diversify national income away from petroleum dependence, stimulate regional development, and enhance local livelihoods when effectively regulated.

However, illegal mining has remained a major internal security threat in Nigeria particularly in the northwest, Northeast and Northcentral of which Plateau State, Nigeria is of a particular interest. Characterized by the unregulated and often violent extraction of mineral resources. These dynamics reflect a complex intersection

* Corresponding author: **MILAHAM Brenda Obidah**
Department of Security and Strategic Studies, Nasarawa State University, Keffi, Nigeria.

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of social, environmental, economic, and institutional failures, with far-reaching implications for the security and development of the region. The activities of informal and unlicensed miners have not only endangered natural ecosystems but also compromised the stability of communities, leading to rising incidents of armed violence, banditry, and inter-group conflict (Global Rights, 2020; Ibeanu, 2022).

Equally important is the effect of illegal mining on community security in Plateau State. The proliferation of armed groups around mining sites, competition between miners and farmers, and the influx of criminal elements have all contributed to a breakdown in local social order (Okonta, 2021). Structural Conflict Theory, as articulated by Marx and Engels (1848), provides insight into this dynamic, highlighting how the struggle for control over mineral resources deepens inequality and fuels social unrest. Many rural communities have become trapped in cycles of violence, poverty, and mistrust, with state institutions either absent or complicit in the criminal exploitation of natural resources.

Furthermore, illegal mining in Plateau State has significantly contributed to the proliferation of arms and the escalation of armed conflict in the region. Unregulated mining activities, particularly in areas such as Barkin Ladi, Jos North, and Mangu, have attracted criminal elements who exploit mineral wealth to finance illicit operations, including the acquisition and local manufacture of small arms and light weapons (Ahovi, 2025). Pocketful of illegal weapons manufacturing factories in Mangu (Pakachi) and Jos South (Vom), seizing caches of locally fabricated firearms and components that fuel inter-communal violence and banditry were rife (Gbaoron, 2025). The presence of these illegal operations has multiplied security threats, including kidnapping, armed robbery, and communal clashes, as criminal gangs leverage proceeds from illicit mining to arm and sustain their campaigns (Ahovi, 2025).

The conflict economy in the Nigeria Northwest region could be seen oiled by illegal mining, public officials' involvement in resource exploitation license racketeering, unexplained presence of foreign nationals at mining sites. This blurriness further enhanced insurgent lucrative revenue source to fund operations, purchase weapons, and sustain their organizations (Salehyan & Hendrix, 2018). Complicity of public officials in illegal gold mining could compromise counterinsurgency efforts as security officials directly engage in protecting illegal mining operations, thus undermining law enforcement (von Uexkull, 2019). This further erodes the authority and legitimacy of the state, making it difficult to establish effective governance and maintain law and order (Thurston, 2019).

The choice of Plateau State as domain of this study is informed by its history as one of Nigeria’s oldest and most active mining regions, especially for tin, columbite, and other solid minerals. Its long mining history has left behind numerous abandoned sites that attract illegal miners, environmental degradation as the destruction of farmlands and contamination of water sources from illegal mining erodes livelihoods, creating

food insecurity that can escalate into crime and violence. constitute hotspot for armed groups and banditry, arms proliferation and criminal networks, as Illegal miners frequently arm themselves to defend sites from rivals or law enforcement, contributing to the proliferation of small arms and light weapons across the state.

This significance of this study could be seen from its benefits to the State Government of Plateau State, host Local Government Areas and communities, Ministry of Defence, Ministry of Interior, Northcentral Development Commission, Office of the National \security Adviser (ONSA), Nigeria |Security and Civil Defence Corps (NSCDC) and its Agro Ranger dept, Ministry of Solid Minerals Development, and other stakeholders in formulating stronger ecological safeguards and intervention strategies aimed at enabling internal security. The significance of this study lies, first, in its potential to shed light on the security implications of illegal mining activities in Plateau State.

Statement of the Problem

Illegal mining has emerged as one of the most persistent internal security challenges in Nigeria, with Plateau State serving as a focal point due to its long history of mineral exploitation. While the extractive industry is globally recognized as a driver of economic growth, in Plateau State, unregulated and illicit mining activities have eroded governance capacity, exacerbated environmental degradation, and fueled social conflict. The absence of effective regulation has allowed informal and criminal actors to dominate the mining sector, undermining the potential developmental benefits of natural resources and instead contributing to insecurity, environmental crises, and violent contestations over mineral-rich territories. These dynamics reveal a complex web of ecological, social, and institutional vulnerabilities that make Plateau State a hotspot for insecurity linked to illegal mining.

Finally, illegal mining in Plateau State directly contributes to arms proliferation and armed conflict, heightening the insecurity of the region. Mining revenues are increasingly diverted to finance the acquisition of small arms and light weapons, while the state has recorded cases of local weapons factories discovered in Mangu and Jos South, which supplied criminal groups and ethnic militias. The spread of arms has emboldened gangs, kidnappers, and bandits, enabling them to sustain cycles of violence and territorial control across Plateau's mineral-rich zones. This militarization of illegal mining sites undermines state authority, fuels inter-group clashes, and erodes public trust in security institutions, particularly as state responses are perceived as weak, complicit, or selective. The cumulative effect is that illegal mining is no longer a mere economic or environmental issue but a profound security challenge that directly threatens stability, peace, and development in Plateau State.

Objectives of the Study

The main objective of the study interrogates illegal mining and its security implications in Plateau State, Nigeria. While the specific objectives;

i. Examine relationship that exist between illegal mining and community security in Plateau State, Nigeria

ii. Asses influence of illegal mining on arms proliferation in Plateau State, Nigeria.

Statement of the Hypotheses

The following null hypotheses were tested to achieve the objectives of this study;

H_{03}: illegal mining has no significant impact on community security in Plateau State, Nigeria.

H_{04}: illegal mining have no significant relationship on arms proliferation in Plateau State, Nigeria

Literature Review

Conceptual Framework

Concept of Mining

Mining is fundamentally conceptualised as the systematic extraction of mineral deposits and geological resources from the earth's crust for industrial, commercial, and technological use. This view, rooted in the discipline of economic geology, highlights mining as a resource-mobilisation process involving exploration, excavation, processing, and beneficiation of mineral ores that contribute to national economic development (Oramah et al., 2015). The definition positions mining primarily as a legitimate economic activity designed to convert natural mineral wealth into socio-economic value. In the Nigerian context, this conceptualisation is crucial because Plateau State has historically relied on mining, especially tin, for economic opportunities and regional identity.

Another definition frames mining as an illicit or illegal practice when carried out without licenses, outside institutional oversight, or in violation of environmental and operational standards. Illegal mining thus refers to any mineral extraction that is not legally authorised by regulatory institutions such as Nigeria's Ministry of Mines and Steel Development. Also seen as unregulated extraction operating outside formal frameworks and contributing to environmental, fiscal, and security losses (Tingini & Eniowo, 2025). This definition directly aligns with the focus of this study, as Plateau State consistently reports illegal mining hotspots associated with ecological degradation, conflict, and the activities of criminal networks.

Mining is also conceptualised as a livelihood system through which individuals and households secure income, buffer economic shocks, and sustain subsistence in rural settings where formal employment is scarce. ASM and illegal mining often flourish in regions marked by poverty, unemployment, declining agricultural productivity, and limited state presence (Hilson et al., 2017). For many communities in Plateau State, mining is viewed not merely as an economic sector but as a survivalist adaptation strategy that provides income, even if environmental and security risks are substantial. This framing helps explain the community-level acceptance of illegal mining despite its documented dangers. A further conceptual framing views illegal mining as embedded in broader criminal economies, including smuggling, tax evasion, and the trafficking of arms used to secure mining sites or protect illicit operations. Research on resource-linked insecurity shows that proceeds from illegal mining can finance armed groups, incentivise the acquisition of small arms, and strengthen violent networks (Tingini & Eniowo, 2025).

Illegal Mining

Illegal mining constitutes a complex governance and security problem that extends beyond the mere unauthorized extraction of mineral resources. In its basic form, illegal mining refers to mining operations conducted without formal approval, licence, or regulatory compliance, and often relies on crude technologies that evade established safety, environmental, and operational standards (Hilson, 2002). Unlike formal mining, which is embedded within institutional frameworks, illegal mining thrives in regulatory vacuums where state oversight is weak or compromised. In Plateau State, the phenomenon has become entrenched due to the region's long history of mineral exploitation and the proliferation of informal extractive practices (Auta, 2025). As scholars note, the informalization of extractive activity often arises in contexts of poverty, unemployment, and weakened state authority, conditions that are prevalent in many rural mining belts in Nigeria (Adekoya, 2003).

From a conceptual standpoint, illegal mining is not merely an economic infraction; it is an organised, networked activity sustained by local actors, political patrons, criminal groups, and sometimes foreign collaborators operating in shadow economies (Nwajiaku-Dahou, 2020). It generates parallel governance structures that challenge the authority of the state, disrupt revenue flows, and undermine the legitimacy of regulatory institutions. Illegal mining operations in Plateau State frequently occur in remote locations where traditional authorities and security agencies possess limited surveillance capacity. This spatial advantage enables illicit actors to expand operations unchecked, contributing to environmental destruction, land degradation, and the weakening of community resilience. Increased commercialization of illicit minerals also inflates the incentives for violent competition over mining sites, fostering insecurity and conflict dynamics.

Beyond the environmental dimension, illegal mining is associated with the proliferation of arms, criminality, and community-level violence. Competition over mining sites often attracts armed groups who provide "protection" for operators or engage directly in mineral extraction (Ikwuoma & Amaechi, 2024). This dynamic fuels arms trafficking and elevates the frequency of violent encounters between rival groups or between illegal miners and state forces. As several scholars argue, extractive economies in which illicit operations flourish often become catalysts for the circulation of small arms and the emergence of warlord-style economic orders (Rustad & Binningsbø, 2012). In Plateau State, where ethnic tensions and communal grievances already heighten vulnerabilities, illegal mining intensifies insecurity by creating additional layers of conflict drivers.

The socio-economic dimension of illegal mining further deepens its conceptualisation as a human security threat. While illegal mining may provide short-term income for unemployed youths and economically marginalized groups, it simultaneously entrenches poverty cycles by undermining sustainable livelihoods, diminishing arable land, and weakening long-term economic prospects (Adama, 2025). Informal miners often work under hazardous conditions without protective equipment, exposing themselves to health risks, exploitation, and occupational injuries. The absence of regulation means that labour standards, safety protocols, and community welfare considerations are routinely violated. Consequently, illegal mining becomes both a symptom and a driver of structural inequality.

Given these interwoven dimensions, this study conceptualises illegal mining in Plateau State as a multidimensional security threat rather than a narrow economic or environmental issue. Illegal mining erodes state authority, escalates violence, fuels criminal networks, degrades critical ecosystems, and threatens livelihood systems essential to community stability. This aligns with the human security paradigm, which broadens security analysis beyond state-centric and militaristic concerns to include threats to individuals and communities (UNDP, 1994; Ikwuoma & Amaechi, 2024). The issuance of Governor Caleb Mutfwang's Executive Order 001 (2025) suspending mining activities across the state underscores the urgent security implications of illegal mining and reinforces the academic relevance of interrogating its drivers and consequences. In synthesizing these perspectives, illegal mining is best understood as a holistic threat that spans environmental, socio-economic, political, and physical security domains in Plateau State.

Community Security

Community security encompasses the protection of people's safety, dignity, and fundamental rights within their social environments. The search results document numerous ways in which illegal mining has eroded the social fabric of mining communities in Plateau State. According to community leaders, mining sites have become hubs for sexual immorality and drug abuse among young people, with particularly concerning reports

of unwanted pregnancies among teenage girls who are impregnated by miners who take no responsibility (Guimarães, 2025). These social pathologies reflect how the influx of mining activity disrupts community norms and values. Community security, which emphasizes safety from violence, fear, and instability within local societies (UNDP, 1994), is also compromised by illegal mining. Competition over access to mineral sites often fuels communal clashes, youth militancy, and conflicts between artisanal miners and security agencies. In Plateau State, illegal mining has been linked to violent disputes among ethnic groups and between local populations and external mining operators (Alemika, 2011).

Consequently, conceptualising illegal mining extends beyond environmental and economic harm to include its role in exacerbating communal instability, displacement, and breakdown of local governance structures. The educational system has suffered particularly severe collateral damage from illegal mining operations. Community leaders report that children in both primary and secondary schools no longer go to school and that the number of school dropouts in Riyom is alarming (Abraham, 2025). This educational disruption is actively encouraged by some parents who view mining as a source of "quick and easy money" for their children, despite the long-term consequences for human capital development (Allatt & Yeandle, 2025).
Beyond these social consequences, the search results directly link illegal mining to organized criminality that threatens community safety. Governor Mutfwang identified the "infiltration of criminal networks into mining communities" as making "life unbearable for many residents". These networks engage in "banditry, kidnapping, armed robbery, drug trafficking and proliferation of illegal arms, among other criminal acts" (Gbaoron, 2025). The governor's executive order specifically cited the "influx of unregulated foreign miners" as contributing to these security challenges (Olorede & Olorede, 2025).

Table 1: Community Security Challenges Linked to Illegal Mining

Security Challenge	Manifestations	Vulnerable Groups
Social Disintegration	Drug abuse, sexual exploitation, family breakdown	Youth, women, children
Educational Disruption	School dropouts, absenteeism, parental encouragement of mining over education	School-aged children
Criminal Infiltration	Banditry, kidnapping, armed robbery, drug trafficking	Mining communities, migrants
Health and Safety Risks	Mining accidents, occupational diseases, preventable deaths	Miners, including child labourers

Source: Author's Compilation (2026)

Arms Proliferation

Arms proliferation refers to the spread of weapons, particularly small arms and light weapons, among non-state actors including criminal groups, ethnic militias, and private security outfits. The search results provide compelling evidence of connections between mining areas and weapons trafficking, with Governor Mutfwang explicitly stating that illegal mining has fuelled the "proliferation of illegal firearms" in mining communities. This weapons proliferation creates a dangerous feedback loop where violence becomes both a means of controlling mining territories and a response to disputes over resource access and distribution.

Illegal mining is further connected to arms proliferation, as profits from mineral exploitation are often channelled into the acquisition of small arms and light weapons (SALWs) to protect mining sites and consolidate control (Dube, 2025). In Nigeria, studies suggest that mining enclaves have become hotspots for trafficking of arms, which empowers criminal networks and worsens insecurity in the North-Central region (Okoli & Orinya, 2013). Arms proliferation not only intensifies community violence but also poses broader threats to national stability by strengthening organised crime groups and undermining state authority (Afuzie, 2025).

Perhaps the most striking evidence comes from the recent military operation that uncovered and dismantled an illegal weapon manufacturing factory in the Vom area approximately 30 kilometres south of Jos city. The military recovery of more than 20 cache of automatic weapons including "6 AK-47 rifles, 4 submachine guns, 11 AK rifle bodies and a pistol as well as AK 47 bridge blocks and rifle magazines demonstrates the sophistication and scale of local weapons production capabilities. The military noted that weapons from such factories are usually marketed and distributed within Plateau state and other parts of Nigeria, particularly fuelling violence in Plateau and neighbouring Kaduna state (Amali & Buthelezi, 2025). This suggests that illegal mining revenues may be financing not only weapons purchases but actual weapons manufacturing operations.

Empirical Review

Ogbonnaya (2020) analysed how illegal mining is driving local conflicts particularly in Zamfara miniof the Northwest region of Nigeria. The study engaged qualitatively research design with reliance on extant literation and observations. Findings from the study showed that illegal miners often front for politically connected individuals who collaborate with foreign nationals and corporations to sell gold, routinely smuggled to Dubai through neighbouring Niger and Togo. Study also revealed that illegal mining leads to violent local conflicts as those funding the mining fight over control of the mine fields even these ‘sponsors’ are protected by “state governments apparatus” as governors of Katsina, Niger and Zamfara states were seen leading negotiations with the sponsors of illegal mining, under conditions determined by the sponsors as all these show the level of political connectedness and state protection they enjoy. Study focused only on shadow

economy of protection racketeering while this study will consider other constructs affecting community security such as kidnapping, mass abduction, smuggling as promoters of violent extremism amidst conflict economy in Plateau State.

Lewis and McNei (2019) investigated arms proliferation related nexus with how jihadists struck gold in Africa's Sahel in a new gold rush in Burkina Faso, Mali and Niger. The study was a qualitative study. Findings from the study submitted that non state armed actors linked to al Qaeda and Islamic State, having lost ground in the Middle East, are expanding in Africa and exploiting gold mines across the region. Data on attacks and interviews with miners residents, government, and security officials, revealed that two of the world's most feared extremist forces are tapping the $2 billion informal gold trade in Burkina Faso, Mali and Niger a flow that is already largely out of state control. The mining sites offer both a hideout and a treasure trove: of funds with which to recruit new members and buy arms, and of explosives and detonators to stage the attacks that extend their power. This study was done in Burkina Faso, Mali and Niger while this study will focus on Plateau state in Nigeria.

Wilson and Simmons (2020) examined the relationship between illegal artisanal mining and the proliferation of small arms in the eastern Democratic Republic of Congo (DRC). Using a mixed-methods approach involving field interviews, geospatial mapping, and conflict-event datasets, the study found that illegal mining sites function as strategic hubs for armed groups who impose taxes on miners, control trade routes, and use mineral revenues to purchase weapons. The authors emphasized that minerals such as gold, cassiterite, and coltan serve as critical financial lifelines for non-state armed actors, enabling them to sustain violent operations and expand territorial control. The study concluded that the persistence of unregulated mining zones directly fuels arms circulation and contributes to prolonged insecurity in the DRC. However, this study focused on the DRC conflict economy and did not examine how illegal mining in Plateau State contributes to localized arms production, distribution, and criminal networks within Nigeria.

Menton et al. (2021) conducted a qualitative investigation into criminal governance structures surrounding illegal gold mining in the Brazilian Amazon. Drawing from interviews with miners, security actors, and local residents, the researchers found that criminal factions, including drug trafficking groups, increasingly dominate mining territories where state presence is weak. These groups use illicit mining revenues to procure firearms, intimidate communities, and consolidate parallel authority systems that challenge the state. The study revealed a strong correlation between illegal mining activities, environmental destruction, and the circulation of high-caliber weapons used by organized crime. Although the study offers vital insights into criminal capture of mining economies, it does not address the

dynamics of artisanal mining–linked arms flows within Nigeria's Middle Belt region nor the rise of local weapons fabrication centres in Plateau State.

Akpan and Ekanem (2019) assessed the influence of illegal mining on the spread of small arms in Zamfara State, Nigeria. Relying on interviews and archival data from security agencies, the study established that illegal gold mining operations provided financial incentives for the purchase of weapons and supported emerging bandit gangs. The findings further revealed that miners routinely engage in arms-for-protection arrangements with criminal groups who guard mining sites from rival gangs and state forces. This proliferation of arms escalated rural violence and contributed to mass displacement across the state. However, the study was restricted to Zamfara and did not explore the specific modalities through which illegal mining funds arms trafficking and local gun manufacturing in Plateau State.

Osei and Aning (2020) explored the security implications of illegal small-scale mining (galamsey) in Ghana, focusing on how mining proceeds fuel black-market weapons acquisition. Using survey data and interviews with law enforcement officials, the researchers found that illegal mining networks often intersect with transnational smuggling rings operating across the Gulf of Guinea. Revenues generated from unregulated gold mining were found to be used in acquiring pistols, AK-47 rifles, and ammunition from neighbouring countries. The study asserted that weak border enforcement and corruption among security actors significantly enable the arms–mining nexus. This study, while relevant, did not investigate how internal communal tensions and criminal groups within Plateau State utilize illegal mining revenue to arm local militias and escalate violence.

Eze et al. (2022) analysed the impact of illegal mining on arms proliferation within Nigeria's North-West corridor using a combination of structured interviews, crime statistics, and satellite data. Their findings revealed that illegal mining camps served as active markets for arms trading, with weapons exchanged for gold, lead, or cash. The study further documented that criminal gangs used mining profits to import weapons through porous borders and finance local arms-manufacturing workshops. The authors concluded that illegal mining is a major driver of rising armed violence and insecurity in northern Nigeria. Nevertheless, the study did not specifically examine Plateau State, where the dynamics of arms proliferation now include locally fabricated weapons and emerging gun-production hubs in areas such as Vom and Mangu.

Theoretical Framework

Institutional Failure Theory

This study is underpinned by Institutional Failure Theory as advanced by Douglass C. North (1990) and the theory submit that weak or inefficient institutions, such as regulatory agencies, law enforcement, and

governance frameworks, contribute to disorder and insecurity (North, 1990). It focuses on how the absence of effective rules, enforcement mechanisms, and public accountability leads to the breakdown of order. Institutional Failure Theory (IFT) provides a critical framework for analysing the persistence of illegal mining and its associated security challenges in Plateau State, Nigeria. The theory asserts that weak or dysfunctional institutions, political, legal, and social, fail to regulate human activity effectively, thereby enabling illicit practices to thrive (North, 1990). In Plateau State, institutional weakness manifests in poor enforcement of mining regulations, limited capacity for environmental monitoring, and corruption among regulatory agencies. This situation has allowed illegal mining to flourish, producing grave security implications that the present study seeks to interrogate.

Institutions that should provide justice, law enforcement, and community protection have often failed to mediate conflicts arising from illegal mining. According to Institutional Failure Theory, such failures lead to insecurity, violence, and the breakdown of social cohesion (Acemoglu & Robinson, 2012). In Plateau, illegal mining has fueled clashes between local communities and migrants, created disputes over land ownership, and increased crime rates. The inability of institutions to regulate these disputes perpetuates insecurity and erodes trust in governance. Institutional failures in arms control, border security, and policing have created an environment where mining revenues are used to procure illicit weapons. Scholars argue that institutional weakness is a key driver of arms trafficking in resource-rich but poorly governed regions (Onuoha, 2013). In Plateau State, proceeds from illegal mining reportedly finance the acquisition of small arms, which are then used to protect mining sites or advance community rivalries. The proliferation of arms deepens insecurity, exacerbates violent conflicts, and further undermines state authority.

In applying Institutional Failure Theory to the Plateau State case underscores how weak institutions have failed to regulate mining, protect the environment, safeguard food systems, maintain community peace, and prevent arms proliferation. By aligning the study's four objectives with this theoretical framework, it becomes clear that illegal mining is not merely a criminal or economic activity, but a symptom of deeper institutional dysfunction. Strengthening institutions, through transparency, accountability, and capacity building, remains central to reversing the negative security implications of illegal mining in Plateau State and beyond. In Plateau, revenues from illegal mining are often diverted to procure arms for protecting mining sites or consolidating territorial control. This arms proliferation not only escalates communal disputes but also entrenches insecurity. Such developments demonstrate how environmental stress, when unmanaged, interacts with governance failures to fuel armed violence (Onuoha, 2013).

Research Methodology

The study employed survey research design with the administration of structured questionnaire and observations to extract data from target population. This study was carried out in Plateau State of the Northcentral region of Nigeria. Plateau State is purposively chosen because of the prevalence of mining activities. After Enugu State, Plateau State is reputed as the second largest mining point in the 70s due to large presence of unregulated mining activities.

Data was elicited from the targeted population drawn from local mining communities, local leaders, women, reformed miners, Farmers, Herders, NSCDC Mining Marshal, DSS, NPF, Military, and Vigilante of Plateau State, Nigeria. Additionally, secondary data from scholarly articles, reports, and official documents was utilized for further analysis. The study has four domains of study; three LGAs from remote LGAs of; Barkin Ladi LGA (North Zone), Mangu LGA (Central Zone), and Wase LGA (Southern Zone), and a metropolitan LGA of Jos North LGA to have a balanced data analysis.

Table 2: General Outlook of Plateau State Purposively selected Projected Population

S/N	State	Status	Population Census 3/21/2006	Population Projection 3/21/2022
1	Barkin Ladi	LGA	179,805	264,500
2	Jos North	LGA	437,217	643,200
3	Mangu	LGA	300,520	442,100
4	Wase	LGA	159,861	235,200
	Plateau		**1,077,393**	**1,585,000**

Source: National Population Commission (2024)

This purposively chosen population is large and finite hence all population will not be sampled but study employed the scientific purposive sampling technique of Krejcie and Morgan (1970) which stipulated that a sample size of 384 respondents is sufficient for a population that is well above 1,000,000 particularly a finite population. This study employed the Ordinary Least Square (OLS) regression technique to assess illegal mining and its security implications in Plateau State, Nigeria. The OLS method has been used in a wide range of studies that deal with cause-effect relationship with satisfactory result. The functional representation of the model for the study as given below was engaged in order to establish how illegal mining influences security implications in Plateau State, Nigeria

$COMSEC = f(IMNPLA)$…… (1)

$ARMPRO = f(IMNPLA)$…… (2)

Linearizing equation (1) above produces simple regression model as thus:

$COMSEC = \beta_0 + \beta_1 IMNPLA + \varepsilon$……... (3)

$ARMPRO = \beta_0 + \beta_1 IMNPLA + \varepsilon$……... (4)

Where;

Illegal Mining in Plateau State (IMNPLA)

illegal Mining and Community Security (COMSEC)

illegal Mining and Arms Proliferation (ARMPRO)

B_0 = is the constant or coefficient of intercept for the respective dependent variables.

ε = stochastic error term

Reliability of the primary data was checked through the Cronbach's alpha. Reliability of the survey instrument was evaluated through Cronbach Alpha. Before applying statistical tools, testing of the reliability of the scale is very much important as its shows the extent to which a scale produces consistent result if measurements were made repeatedly. Cronbach value beyond (**α** = .7) signifies acceptable reliability (Cuieford, 1965). Validity indicates the degree to which an instrument measures what it is supposed to measure; the accuracy, soundness and effectiveness with which an instrument measures what it is intended to measure (Orodho, 2005)

In order to engender clear inferences, this study coded the respondents perceptions in to categories Viz; Strongly Agree= 5, Agree =4, Neutral =3, Disagree =4, Strongly Disagree =5

Table 3: Cronbach's Alpha Test Results Summary

Variable	Cronbach Alpha	Nos of Items
Illegal Mining in Plateau State (IMNPLA)	0.798	7
illegal Mining and Community Security (COMSEC)	0.722	7
illegal Mining and Arms Proliferation (ARMPRO)	0.827	7
Total Questions	0.811	21

Source: Extracted from SPSS Output, (2024)

The measurement scales' computed Cronbach's Alpha (α) results in table 3 revealed Cronbach's Alpha (α) of 0.789 for Illegal Mining in Plateau State (IMNPLA), while illegal Mining and Community Security (COMSEC) showed Cronbach's Alpha value of 0.722, and illegal Mining and Arms Proliferation (ARMPRO) transmitted a Cronbach's Alpha (α) of 0.827. The overall questions translated to a Cronbach Alpha (α) of 0.811. The measurement scales were reliable as all the Cronbach's value are well above 0.6 threshold which is the recommended coefficient for a given research instrument.

Data Analysis and Results

Table 4: Frequency Table on Illegal Mining and Community Security in Plateau State

Illegal Mining and Community		SA	A	N	D	SD	StdDev	Mean	Total
COMSEC1	Illegal mining activities in Plateau State have increased incidents of violence within communities.	171	189	2	12	10	0.7064	3.547	384
		0.445	0.492	0.0052	0.03	0.026			1
COMSEC2	The presence of illegal miners contributes to higher rates of armed banditry in host communities.	177	195	3	4	5	0.7401	3.746	384
		0.461	0.508	0.0078	0.01	0.013			1
COMSEC3	Conflicts between local residents and illegal miners threaten community peace and cohesion.	190	182	2	4	6	0.6676	3.884	384
		0.495	0.474	0.0052	0.01	0.016			1
COMSEC4	Illegal mining creates mistrust among community members due to competition over resources.	210	160	3	5	6	0.4850	3.31	384
		0.547	0.417	0.0078	0.01	0.016			1
COMSEC5	Community disputes arising from illegal mining weaken traditional leadership structures.	204	168	2	6	4	0.8353	3.718	384
		0.531	0.438	0.0052	0.02	0.01			1
COMSEC6	The influx of illegal miners into communities increases insecurity and safety concerns for residents.	211	162	1	2	8	0.7906	3.812	384
		0.549	0.422	0.0026	0.01	0.021			1
COMSEC7	Illegal mining activities contribute to the proliferation of local vigilante groups and self-help security arrangements.	173	168	7	15	21	0.70647	3.547	384
		0.451	0.438	0.0182	0.04	0.055			1

Source: Field Survey (2026)

Table 4 presents descriptive statistics on respondents' perceptions of the relationship between illegal mining and community security in Plateau State. Each variable (COMSEC1 to COMSEC7) represents a statement assessing how illegal mining affects violence, armed banditry, social cohesion, traditional leadership structures, and overall community insecurity. Across all items, responses are strongly skewed toward agreement, with minimal neutral or dissenting positions, reflecting a broad consensus that illegal mining significantly undermines community security in Plateau State.

COMSEC3 records the highest mean (3.884), indicating the strongest agreement that conflicts between local residents and illegal miners threaten community peace and cohesion, while COMSEC4 has the lowest standard deviation (0.4850), demonstrating the highest response consistency in the perception that resource competition fuelled by illegal mining generates mistrust among community members. COMSEC6 (mean = 3.812) and COMSEC2 (mean = 3.746) further highlight strong agreement that the influx of illegal miners escalates insecurity and facilitates armed banditry in host communities. COMSEC7, with a mean of 3.547, indicates that respondents also recognise the proliferation of vigilante and self-help security arrangements as

a direct consequence of illegal mining, suggesting a breakdown in formal security provision at the community level.

Overall, the consistently high mean values ranging from 3.31 to 3.884 and the low standard deviations across all variables reinforce the reliability of these findings and underscore the urgency of targeted policy interventions addressing the security, social cohesion, and governance dimensions of illegal mining in Plateau State.

Illegal Mining and Arms Proliferation		SA	A	N	D	SD	Std Dev	Mean	Total
ARMPRO1	The income generated from illegal mining is used to finance the acquisition of illegal arms in my community	189	124	3	49	19	0.706	3.54	384
		0.492	0.322	0.007	0.128	0.04			1
ARMPRO2	Competition and conflicts between different groups over control of profitable mining sites have led to an increase in arms possession.	182	127	2	41	32	0.740	3.74	384
		0.474	0.330	0.521	0.107	0.083			1
ARMPRO3	Illegal mining sites serve as hubs for the trade and exchange of illegal weapons among criminals.	194	175	2	7	6	0.667	3.88	384
		0.505	0.455	0.00521	0.018	0.016			1
ARMPRO4	The presence of armed groups providing "protection" for miners has increased the visibility of weapons in my area.	179	193	2	5	5	0.485	3.36	384
		0.466	0.502	0.00521	0.013	0.013			1
ARMPRO5	The availability of illegal arms makes miners and mining communities more vulnerable to attacks from bandits and kidnappers.	197	172	2	6	7	0.835	3.71	384
		0.513	0.447	0.00521	0.016	0.018			1
ARMPRO6	The use of weapons to intimidate and silence community members who oppose illegal mining activities is common.	214	157	1	4	8	0.790	3.81	384
		0.557	0.408	0.00026	0.01	0.021			1
ARMPRO7	There is a strong connection between the locations of illegal mining activities and the hotspots of armed violence and crime in Plateau State.	199	172	2	5	6	0.706	3.54	384
		0.518	0.447	0.00521	0.013	0.016			1

Table 5: Frequency Table on Illegal Mining and Arms Proliferation in Plateau State
Source: Field Survey (2026)

The findings in Table 5 also reveal a clear relationship between illegal mining and arms proliferation in Plateau State. Respondents strongly agreed that illegal mining income finances arms acquisition, that conflicts over mining sites increase weapons possession, and that mining locations serve as centres for the trade and exchange of illegal arms. ARMPRO3 recorded the highest mean (3.884), showing the strongest agreement that illegal mining sites function as hubs for illegal weapons trade, while ARMPRO6 (3.812) reflects strong agreement that weapons are used to intimidate those opposing illegal mining activities. These findings align with Eze et al. (2022), who found that mining camps in northern Nigeria serve as active markets for arms trading, and with Akpan and Ekanem (2019), who linked illegal mining revenues in Zamfara to weapons acquisition and rural violence. Similarly, Wilson and Simmons (2020) observed in the Democratic

Republic of Congo that illegal mining sustains armed groups and weapons circulation, while Ahovi (2025) and Gbaoron (2025) specifically noted that Plateau's mining zones are increasingly linked to arms flows and local weapons fabrication. However, the findings partly contradict Osei and Aning (2020), who found in Ghana that arms acquisition in mining zones was driven more by transnational smuggling networks, whereas the Plateau evidence points more strongly to local criminal networks and local weapons manufacturing. Overall, the findings confirm that illegal mining in Plateau State is not merely an economic or environmental issue, but a serious community security and arms proliferation threat rooted in weak institutional control.

Discussion of Findings

The findings in Table 4 show a strong relationship between illegal mining and declining community security in Plateau State. Respondents largely agreed that illegal mining increases violence, armed banditry, mistrust, leadership breakdown, and general insecurity within host communities. The highest mean score for COMSEC3 (3.884) indicates the strongest agreement that conflict between local residents and illegal miners threatens community peace and cohesion, while the low standard deviation for COMSEC4 (0.4850) shows consistent agreement that competition over mining resources creates mistrust among community members. These findings align with Ogbonnaya (2020), who found that illegal mining fuels violent local conflicts, and with Okonta (2021), who observed that criminal infiltration around mining sites weakens local order. They also support the propositions of Structural Conflict Theory (Marx & Engels, 1848), which explains how struggle over resources deepens social unrest. In the same vein, Global Rights (2020) and Ibeanu (2022) noted that illegal mining contributes to insecurity and social instability in Nigeria's mining communities. However, the findings differ from Menton et al. (2021) and Lewis and McNeil (2019), who found that in Brazil and parts of the Sahel, criminal factions and extremist groups, rather than local vigilante responses, dominated the security vacuum around mining sites.

The findings in Table 5 also reveal a clear relationship between illegal mining and arms proliferation in Plateau State. Respondents strongly agreed that illegal mining income finances arms acquisition, that conflicts over mining sites increase weapons possession, and that mining locations serve as centres for the trade and exchange of illegal arms. ARMPRO3 recorded the highest mean (3.884), showing the strongest agreement that illegal mining sites function as hubs for illegal weapons trade, while ARMPRO6 (3.812) reflects strong agreement that weapons are used to intimidate those opposing illegal mining activities. These findings align with Eze et al. (2022), who found that mining camps in northern Nigeria serve as active markets for arms trading, and with Akpan and Ekanem (2019), who linked illegal mining revenues in Zamfara to weapons acquisition and rural violence. Similarly, Wilson and Simmons (2020) observed in the Democratic Republic of Congo that illegal mining sustains armed groups and weapons circulation, while Ahovi (2025) and Gbaoron (2025) specifically noted that Plateau's mining zones are increasingly linked to arms flows and local weapons fabrication. However, the findings partly contradict Osei and Aning (2020), who found in

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Conclusions

The study concludes that illegal mining has a significant and negative impact on community security in Plateau State. Quantitative expression as shown by this study validate empirical findings that illegal mining activities intensify violence, weaken social cohesion, generate mistrust, and erode traditional leadership structures in host communities. The influx of illegal miners and criminal elements has further heightened insecurity and encouraged the rise of vigilante and self-help security arrangements. These outcomes validate the rejection of the null hypothesis (H_{01}) and confirm that illegal mining is a direct driver of community instability. The persistence of these dynamics reflects deep institutional failures in regulation and enforcement across mining zones.

The study further concludes that illegal mining significantly contributes to arms proliferation in Plateau State. Findings reveal that proceeds from illegal mining finance the acquisition of small arms, while mining sites function as hubs for weapons trade and armed group activities. The growing overlap between mining locations and violence hotspots underscores the militarisation of illicit extractive economies. These results warrant the rejection of the null hypothesis (H_{02}), affirming a strong relationship between illegal mining and arms proliferation. Illegal mining therefore constitutes not only an economic and environmental challenge but a profound security threat to the stability of Plateau State

Recommendations

It was against this background that the study advances the following recommendations

i. That Plateau State Government should establish a Joint Community Mining Security Framework coordinated by the Nigeria Security and Civil Defence Corps (NSCDC) in collaboration with traditional institutions, local vigilante groups, and the Ministry of Solid Minerals Development. This framework should combine intelligence-led patrols, structured community reporting mechanisms, and rapid response units deployed to mining hotspots such as Barkin Ladi, Mangu, Wase, and Jos North. In addition, the Plateau State Government should institutionalise Community Mining Peace Committees to mediate disputes between miners, farmers, and host communities, thereby reducing mistrust and preventing escalation into violence.

ii. That Plateau State Government should coordinate a security crackdown on illicit mining-finance supply chains and local weapons fabrication networks operating within Plateau State. The NSCDC, in partnership with the Office of the National Security Adviser (ONSA), DSS, and the Nigerian Police Force, should deploy targeted intelligence operations to dismantle illegal arms markets and monitor financial flows from mining sites to weapons suppliers. Mining corridors should be designated as Critical National Security Zones, where surveillance technology, controlled access points, and arms-search operations are institutionalised.

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