SOCIO-ECONOMIC AND ENVIRONMENTAL CONSEQUENCES OF THE INFORMAL AND FORMAL GOVERNANCE ARRANGEMENTS ON MINING COMMUNITIES IN TARABA STATE

Manga, Joseph.
manga7819@gmail.com
GSM: 07035346727
Department of Political Science, Federal University Wukari, Taraba State, Nigeria
&
Tukura, Nashuka Tino, PhD.
tukura.tino88@gmail.com
GSM: 08026504155
Department of Political Science, Federal University Wukari, Taraba State, Nigeria

Abstract
This paper examines the socioeconomic and environmental consequences of formal and informal governance arrangements on mining activities in Taraba State, Nigeria. Mining in the region is characterized by a complex interplay between formal institutional frameworks and informal, community-based practices. Formal governance, which includes state regulations and policies, is often challenged by the pervasive influence of informal governance structures such as local power relations, customary laws, and informal networks of miners. These governance arrangements shape the trajectory of mining activities, influencing both socioeconomic outcomes and environmental sustainability. The paper adopts a mixed-methods approach, combining quantitative data on mining revenues, employment, and environmental degradation with qualitative data obtained through interviews and questionnaires to capture the local dynamics of governance. The findings reveal that informal governance structures, while sometimes more effective in enforcing local norms, frequently prioritize short-term economic gains over long-term sustainability. This results in environmental degradation, resource depletion, and the marginalization of vulnerable communities. Socioeconomically, the findings indicate that mining contributes to local economic growth by providing livelihoods and supporting infrastructure development; however, it also exacerbates inequality and creates dependence on a volatile sector. The environmental consequences include deforestation, water contamination, and soil erosion, which remain largely unmitigated under existing governance mechanisms. The paper therefore recommends the strict enforcement of Environmental Impact Assessment (EIA) regulations by the Taraba State Government to mitigate the adverse environmental consequences of mining on host communities within the state.
Keywords: *socio-economic, environmental, consequences, mining, Taraba state.*

Introduction

Mining is a critical sector in the economic development of many regions in Nigeria, including Taraba State. Rich in mineral resources such as tin, gold, and limestone, the state has long been a focal point for both artisanal and industrial mining activities. However, despite the sector's potential for economic growth and job creation, it remains fraught with challenges, particularly in terms of governance. The regulatory framework governing mining activities in Taraba is shaped by both formal institutions, such as state laws and national policies, and informal governance mechanisms rooted in local customs and practices (Ahmed et al, 2018). These dual systems of governance often intersect, creating a complex landscape that significantly influences both the socioeconomic and environmental outcomes of mining activities. Formal governance in Taraba is primarily defined by laws and regulations designed to regulate mining operations, ensure fair practices, and mitigate environmental damage (Musa et al, 2023). However, the enforcement of these laws has been inconsistent, with issues such as corruption, weak institutional capacity, and political interference undermining their effectiveness. On the other hand, informal governance, which includes customary laws and locally recognized power structures, operates parallel to the formal system, often without oversight or accountability. This informal governance can be more adaptable and responsive to local needs, but it may also prioritize immediate economic benefits, leading to unsustainable practices that exacerbate environmental degradation and social inequality.

The intersection of formal and informal governance structures presents both opportunities and challenges for the mining sector in Taraba. While formal regulations aim to ensure the sustainability and fairness of mining, informal governance arrangements often undermine these efforts, leading to environmental harm and social inequity (Ojeh and Elijah, 2024). The tension between these two systems of governance raises critical questions about how mining can be managed in a way that balances economic development, environmental stewardship, and social justice. Despite Nigeria's renewed policy focus on diversifying its economy through solid minerals development, governance of mining remains problematic with conflicts between formal regulations and informal practices, particularly at the state level, including Taraba State. This is because the Nigerian Minerals and Mining Act (2007) vests ownership and control of mineral resources exclusively in the federal government, limiting the formal role of state and local governments in licensing and revenue collection (Nigerian Minerals and Mining Act, 2007; NEITI, 2019). However, in practice, artisanal and small-scale mining (ASM) dominates extraction in states such as Taraba, where local chiefs, youth associations, vigilante groups, and local government officials play decisive roles in allocating access, collecting informal levies, and enforcing order in mining sites (Oruonye & Ahmed, 2018; The Nation, 2023). This mismatch between statutory authority and local power realities produces governance gaps that undermine transparency, accountability, and sustainable development.

In Taraba State, the mining of gemstones such as sapphire in Sardauna and alluvial gold in Gashaka exemplifies this problem. Reports show that despite federal bans and intermittent crackdowns, illegal mining continues, driven by market demand, weak enforcement capacity, and the vested interests of local intermediaries and security agencies (AP News, 2024; NEITI, 2019). As a result, mineral rents are captured largely by middlemen and elites, while local communities suffer from environmental degradation, social disruption, and limited public benefits (Anene et al., 2024; CAPPA, 2024). Taraba State is endowed with a wealth of solid minerals, including barite, limestone, coal, and gemstones. Despite its resource potential, mining in the state has largely remained informal, poorly regulated, and embedded within complex local power structures. Understanding why resource governance remains weak in such a context requires a framework that goes beyond institutional design to capture the role of power relations and political bargains. The **Political Settlements Theory (PST)** provides a useful lens for analyzing these dynamics by focusing on how power is distributed among elites, how this distribution influences institutions, and how it shapes outcomes such as mining governance. This situation reflects what Khan (2010) describes as “political settlements,” where rent distribution depends on negotiated bargains among competing actors rather than formal institutional design.

Similarly, the persistence of informality and fragmented authority in Taraba’s mining sector raises critical questions about the political economy of resource governance as it relates to the authority of local power structures such as traditional rulers, youth groups, security forces, and local government officials in shaping access to and control of mineral resources. Also, the issues of what mechanisms of rent distribution emerge from these interactions, and how they influence governance outcomes in the state. Again, the question of the implications of these dynamics for formalization, transparency, and community benefit calls for concern. Thus, without addressing these issues, policy reforms aimed at diversifying Nigeria’s economy through mining risk reproduce the resource curse at the subnational level (Booth, 2012; Hilson, 2002).

Therefore, the problem this paper seeks to address is the disjuncture between formal resource governance frameworks and the lived realities of local power structures in Taraba State’s mining sector. This gap not only undermines regulatory effectiveness but also sustains informal rent-seeking practices, exacerbates socio-environmental costs, and limits the transformative potential of mining for local development. This research problem is substantial because it illuminates the structural weaknesses of Nigeria’s mining governance. At the federal level, it questions the effectiveness of a highly centralized resource ownership model in a federal state. At the state level, it reveals how informal institutions and local power dynamics act as de facto regulators, undermining transparency and sustainability. In Taraba state where mining has become a source of livelihood for thousands of people, the failure to reconcile formal and informal governance perpetuates poverty, conflict, and ecological destruction. The findings are thus not only relevant for academic debates on political economy and resource governance but also for policymakers designing reforms to harness mining for inclusive development. This paper seeks to explore the socioeconomic and environmental consequences of these competing governance arrangements, providing a comprehensive analysis of how formal and informal governance interact and shape the outcomes of mining activities in Taraba State.

Socio-Economic and Environmental Consequences of Mining

Mining governance, both formal and informal, plays a critical role in shaping the socio-economic and environmental realities of host communities. Formal governance typically refers to the regulatory and institutional frameworks established by the state, such as laws, policies, and agencies responsible for monitoring and controlling mining activities. Informal governance, on the other hand, comprises non-codified practices, local arrangements, and negotiated norms driven by traditional authorities, local elites, or community actors (Hilson, 2012; Lange, 2011). The interaction of these governance modes often produces diverse outcomes in mining communities. Formal governance arrangements, when effectively implemented, can provide mining communities with socio-economic benefits such as employment opportunities, revenue redistribution, and infrastructure development. For instance, resource rents collected by the state are expected to be reinvested in social services and community development (Acosta, 2010). However, in many developing contexts, weak enforcement, corruption, and rent-seeking behaviours often limit the translation of formal governance into tangible local benefits (Auty, 2001; Arellano-Yanguas, 2011).

Informal governance arrangements can sometimes fill these gaps. Traditional authorities or community-based organizations often negotiate with mining companies for local employment quotas, compensation, or community development projects (Luning & Pijpers, 2017). These arrangements may foster inclusion where formal mechanisms are absent, but they can also reproduce local inequalities, as benefits are often captured by elites rather than distributed equitably (Bebbington et al., 2008). Consequently, socio-economic effects range from increased local incomes and business opportunities to heightened social tensions, exclusion, and conflict over access to mining rents (Maconachie, 2009). Mining invariably generates significant environmental impacts, including land degradation, deforestation, water pollution, and loss of biodiversity (Hilson, 2002; Teschner, 2014). Under formal governance, environmental regulations and monitoring mechanisms are designed to mitigate such effects. Yet, weak institutional capacity and political interference frequently undermine environmental protection in mining regions (Campbell, 2003). For example, environmental impact assessments (EIAs) are often poorly enforced, leading to unchecked ecological degradation.

Informal governance mechanisms can either mitigate or exacerbate environmental impacts. In some communities, local norms and customary rules regulate access to land and water resources, ensuring a degree of sustainability (Hilson & Yakovleva, 2007). Conversely, informal practices, particularly in artisanal and small-scale mining (ASM), often lack environmental safeguards, resulting in widespread pollution, mercury contamination, and unsafe mining practices (Hilson, 2016). The absence of effective coordination between formal regulations and informal practices exacerbates environmental risks, leaving communities vulnerable to long-term ecological harm. The coexistence of formal and informal governance produces hybrid outcomes. In contexts where state institutions are weak, informal governance may provide adaptive mechanisms for addressing community needs. However, reliance on informal arrangements often perpetuates clientelism, inequity, and selective distribution of benefits (Lund, 2006). Meanwhile, formal governance frameworks that exclude local voices frequently undermine community trust, sparking protests and resistance against mining projects (Ostrom, 2005; Andrews, 2013). Thus, the socio-economic and environmental well-being of mining communities depends on how effectively formal and informal governance interact to balance economic gains with ecological sustainability and social justice.

Empirical studies consistently show that Taraba State's extractive sector is dominated by artisanal and small-scale mining (ASM), particularly of gold and other solid minerals. Large-scale industrial mining is relatively absent, with ASM spread across local government areas (LGAs) such as Gashaka, Sardauna, and Karim Lamido (Orion Journals, 2021; Umar et al., 2018). These activities are often informal, reflecting the deep-rooted historical presence of ASM in the region (Ahmed, 2016). Despite the existence of formal regulatory frameworks, implementation in Taraba is weak. The sector is characterized by widespread illegal mining, poor compliance with licensing requirements, and limited enforcement of environmental and safety standards (GPH Journal, 2023; Centre for Leadership and Sustainable Development (CLSD, n.d.). Studies suggest that governance failures stem from a combination of weak institutional capacity, remoteness of mining sites, and conflicting interests among state and local actors (SSRG, 2021). Similarly, environmental studies have highlighted significant contamination and ecological risks related to ASM. For instance, soil analyses in central Taraba revealed elevated concentrations of heavy metals around mining sites, posing risks to ecosystems and public health (Musa et al., 2025). Likewise, studies in Mayo-Sinna, Sardauna LGA, confirmed contamination hotspots that threaten both agricultural productivity and local communities (Ikpr Press & JOGEE, 2025). Earlier assessments documented deforestation, river siltation, and landscape degradation, further underscoring the ecological costs of unregulated mining (Northeastern University, 2017).

While ASM provides an important source of income and employment, particularly in rural Taraba, its socio-economic benefits are unevenly distributed. Ahmed (2016) observed that mining activities contribute to short-term livelihood opportunities but are associated with precarious incomes and disruptions to farming. Gender-focused studies show that women in mining communities, such as Gashaka, often face heightened vulnerability. Ojeh and Elijah (2024) found that women experience both economic opportunities through ancillary activities and livelihood insecurity caused by environmental degradation. These findings emphasize the gendered dimensions of resource governance. Local elites, traditional rulers, and politically connected actors play a decisive role in shaping mining outcomes. Access to mining sites and benefits is frequently mediated by informal patronage networks and local gatekeepers, who often extract rents from operators (CLSD, n.d.; SSRG, 2021). Negotiated bargains between state regulators and local power-holders condition how rules are enforced; some operators face sanctions while others are tolerated. This evidence underscores the argument that resource governance in Taraba state is embedded in local political economies rather than in formal institutional arrangements (GPH Journal, 2023).

Furthermore, recent attempts to reform the sector, such as mineral inventories, the establishment of training initiatives, and proposed mining legislation, reflect recognition of governance gaps (Umar et al., 2018; CLSD, n.d.). However, implementation has been inconsistent, and enforcement remains weak. Scholars argue that formalization policies will remain ineffective unless they engage with the underlying power dynamics and distributional conflicts at the local level (SSRG, 2021). Across the literature, three themes emerge: (a) resource governance is path-dependent and locally negotiated, (b) environmental degradation is well-documented and requires urgent policy responses, and (c) formalization strategies must be sensitive to the gendered and distributional impacts of mining. These insights highlight the importance of analyzing mining in Taraba state not simply as an economic activity but as a political economy shaped by governance failures, local power relations, and uneven development outcomes.

Theoretical Framework

This paper employs the Resource Curse Theory, also known as the '**paradox of plenty'. The resource curse theory** gained prominence through the works of **Richard Auty (1993),** who first coined the term *"resource curse"* in his study of mineral-exporting developing countries. Auty argues that natural resource abundance in developing economies often leads to economic mismanagement and poor development outcomes. Similarly, **Jeffrey Sachs and Andrew Warner (1995)** provide empirical evidence that resource-rich countries tend to grow more slowly than resource-poor countries. Their influential cross-country regression analysis revealed a negative relationship between natural resource exports and GDP growth, thus validating the theory.

Terry Lynn Karl (1997), in *"The Paradox of Plenty"*, expanded the theory into the political realm. She demonstrated how petroleum wealth in countries like Venezuela entrenched rentier politics, weakened state institutions, and fostered authoritarianism. **Michael Ross (2001)** further develops the political implications by linking oil wealth to authoritarian rule and the suppression of democratic institutions, particularly in the developing world. His work highlighted how oil revenues can weaken accountability by enabling governments to spend without taxing citizens, thereby reducing public demand for representation.

The theory posits that countries endowed with abundant natural resources, particularly mineral and fossil fuel wealth, often experience slower economic growth, weak democratic development, and increased conflict compared to countries with fewer resources. This counterintuitive outcome has been widely studied across disciplines such as economics, political science, and development studies. One core assumption of the theory is that resource wealth generates large, unearned revenues (rents) that reduce the incentive for governments to develop efficient, productive economies. This rentier effect fosters corruption, patronage politics, and inefficient public spending (Auty, 1993; Karl, 1997). Instead of investing in infrastructure or human capital, governments may focus on distributing rents to maintain political loyalty. Another economic assumption of the theory is that resource booms lead to an appreciation of the real exchange rate, which harms non-resource sectors like agriculture and manufacturing. This phenomenon, termed *Dutch Disease*, reduces export competitiveness and hampers diversification (Sachs & Warner, 1995). This theory also argues that resource prices are subject to fluctuations in global markets, and countries heavily dependent on natural resource exports face fiscal volatility, which can destabilize macroeconomic planning and lead to cycles of boom and bust (Gelb, 1988; Ross, 1999).

The theory further assumes that resource wealth weakens democratic accountability. Because governments have access to significant revenues without taxation, they face less pressure to be transparent or accountable to their citizens (Karl, 1997; Ross, 2001). This leads to weak institutions, undermines civil society, and perpetuates authoritarianism. The **Resource Curse theory** argues and concludes that the control and distribution of resource wealth can lead to violent conflict, especially in ethnically or regionally divided societies. Resources become a source of competition among elites, often fueling civil wars and insurgencies (Collier & Hoeffler, 2004).

Theory Application

The use of the resource curse theory in this paper hinges on the fact that the resource curse theory posits that countries or regions endowed with abundant natural resources often experience slower economic growth, weaker democratic institutions, and higher risks of conflict compared to less resource-rich societies (Auty, 1993; Sachs & Warner, 2001). While the theory was originally developed in relation to petroleum and large-scale mineral rents at the national level, it is equally useful in analyzing subnational contexts like Taraba State, where artisanal and small-scale mining (ASM) of gemstones and gold plays a central role in local economies. According to the resource curse framework, resource wealth often weakens institutional capacity, as states become reliant on rents rather than broad-based taxation (Karl, 1997). In Taraba, the dominance of informal mining structures has undermined the effectiveness of formal institutions such as the Nigerian Minerals and Mining Act (2007) and NEITI's governance initiatives. Instead of transparent, centralized regulation, the mining sector is governed through fragmented local power structures, chiefs, youth associations, vigilante groups, and local officials who negotiate rents outside formal state channels (Oruonye & Ahmed, 2018). This institutional weakness reflects the classic governance dilemma predicted by the resource curse.

In line with the assumption, resource curse theorists argue that resource rents are prone to elite capture, reinforcing neo-patrimonialism and patronage networks (Collier & Hoeffler, 2005; Ross, 2004). In Taraba state, mineral rents are appropriated by a coalition of local elites (traditional rulers, security forces, political patrons, and traders) who exercise control over mining sites through informal levies, protection fees, and bribes. These practices divert revenues away from the state treasury and public services, creating what Khan (2010) terms "political settlements" in which access to rents is determined by bargaining rather than institutionalized rules. Thus, resource wealth consolidates local elite power while excluding wider community interests, a pattern consistent with the resource curse thesis. Similarly, the resource curse also emphasizes the link between natural resources and violent conflict, particularly in contexts of weak governance and high rent competition (Collier & Hoeffler, 2005). In Taraba state, competition over sapphire-rich lands in Sardauna or gold-bearing sites in Gashaka has led to clashes between miners, youth groups, and security agencies. The proliferation of vigilante groups and informal taxation points to a fragmented security landscape where resource rents fuel both cooperation and contestation (The Nation, 2023; AP News, 2024). This mirrors the "greed and grievance" dynamics described in resource curse literature, where resource control becomes a source of localized conflict.

Another key argument of the resource curse is that resource dependence distorts economic incentives and undermines sustainable development (Auty, 1993). In Taraba state, the prevalence of artisanal mining has encouraged a rush-based, short-term extractive economy, often at the expense of agriculture and other livelihoods. Furthermore, environmental degradation, including deforestation, mercury contamination, and river siltation, erodes long-term development prospects (Anene et al., 2024; CAPPA, 2024). This aligns with the "Dutch disease" variant of the resource curse, where dependence on resource rents leads to neglect of broader economic productivity and sustainable practices. While much of the literature applies the theory at the national level, Taraba state demonstrates that the resource curse operates at the subnational scale as well. Here, the federal government's monopoly on resource ownership creates a disjuncture between Abuja's legal authority and Taraba's local realities. As a result, local power structures step in as de facto resource managers, capturing rents but failing to translate them into inclusive development. This subnational manifestation of the resource curse underscores that resource governance failures are not only national but also localized, shaped by specific political settlements and institutional weaknesses at the community level.

Therefore, the resource curse theory is highly applicable in explaining the political economy of mining in Taraba State. The dominance of informal governance arrangements, elite rent capture, recurrent conflicts, and environmental degradation all reflect key dynamics predicted by the theory. However, the Taraba state case also extends resource curse debates by highlighting the role of local power structures in mediating governance outcomes at the subnational level. Thus, while mineral wealth offers opportunities for livelihoods, without institutional reforms that reconcile federal authority with local realities, Taraba state's mining sector is likely to remain trapped in a cycle of informality, conflict, and underdevelopment.

Discussion of Findings

The discussion of the **socio-economic and environmental consequences** that arise when informal governance, such as artisanal & small-scale mining, customary/elite bargains, informal markets and formal legal arrangements like licensing, environmental rules, and enforcement, interact in Taraba State includes: First, informal Artisanal and Small-scale Mining (ASM) provides an important, often a primary source of cash income for rural households on the Mambilla Plateau and in parts of Taraba central, drawing in youth and farm families when agricultural returns are low. Studies of Mambilla and neighbouring communities carried out by scholars such as Elijah and Shehu (2021) and Okpanachi and Yakubu (2021) document that ASM raises household incomes, creates short-term employment and supports local trading networks. Those economic gains are uneven and volatile because "rush"-type ASM produces boom–bust cycles (rapid in-migration during finds, then sharp decline), leaving many households economically insecure and dependent on hazardous, seasonal mining work rather than sustainable livelihoods. Empirical surveys carried out by Eze and Ude (2019) report high variability of earnings and short average durations of engagement for many miners.

Secondly, Informal mining reshapes local power relations: customary landholders, local chiefs and merchant-middlemen often become gatekeepers who extract rents (access fees, protection payments) from miners and traders, reinforcing patronage chains and sometimes displacing prior livelihood elites (for example, pastoralist–farmer relations). These negotiated bargains between customary authorities and miners are a recurrent feature in Taraba studies (Ambe-Uva, 2018). Similarly, ASM in Taraba involves men and women, but gendered roles differ (men at excavation, women in processing/trade). Women's incomes can rise, but they also face marginalization from larger commercial networks and greater exposure to health risks without social protection. Broader ASM literature (Nigeria) shows these gendered patterns and vulnerabilities (Omodero & Adejoh, 2020)

Thirdly, **direct safety hazards** where informal pits and unregulated shafts produce frequent accidents, collapses, and drownings, with recent high-profile pit collapses and multiple fatalities reported in Taraba (Gashaka area), illustrating the lethal consequences when formal safety standards are absent or unenforced (Garba & Barde, 2022). Similarly, there is also an issue of **contamination and disease risks, in which** unregulated processing and waste disposal contaminate water and soils; several recent soil and water surveys in Taraba report elevated heavy metals (cadmium, lead) and resistant bacteria in mining-adjacent sites, risks to drinking water, food crops and long-term community health (Yelwa & Mohammed, 2022).

Fourthly, field studies in Taraba, such as those carried out by Adefila et al. (2016), document that ASM causes rapid removal of topsoil, creation of spoil heaps, loss of grazing/farmland and alteration of drainage; quantified estimates show many hectares of degraded land across mining sites. These changes reduce agricultural productivity and raise conflict over land use. Similarly, illegal ASM has encroached into forest reserves and the fringes of protected areas (Gashaka-Gumti corridor), threatening wildlife habitat and compounding conservation challenges where state enforcement is weak or contested.

Lastly, **revenue leakage and weak local capture, especially** in communities where miners operate informally, or licences are evaded, state and local governments lose royalties and permit revenues; patrimonial bargains between officials and miners can further divert rents away from public goods. NEITI and state policy reviews (2020) show these fiscal gaps in solid minerals governance more broadly, and Taraba policy briefs point to weak institutional capacity to collect and track revenues. Also, there is a problem of **selective enforcement and legitimacy costs.** The literature and reporting show episodic enforcement (task-force raids, mobile courts) punctuated by long periods of informal tolerance or collusion; this selective enforcement erodes trust in formal institutions and produces cycles of confrontation rather than durable compliance (Eboh & Okeke, 2023).

Similarly, questionnaires were administered to elicit information not obtained through the interview and documentary methods, and the results are presented in the table below:

Table 1: *Mean and Standard deviation of the responses of respondents on the socio-economic and environmental effects of the informal and formal governance arrangements on mining communities in Taraba state.*

S/N	Socio-economic and environmental effects	N	Mean	S.D	Decision
1	Mining activities have improved income and employment opportunities for residents	360	3.62	0.58	Agree
2	Mining operations have led to environmental degradation in my community	360	3.65	0.52	Agree
3	Informal mining operations cause more environmental harm than formal mining	360	3.66	0.56	Agree
4	The presence of mining has led to increased social conflicts in my area	360	3.65	0.53	Agree
	Cluster Mean	**360**	**3.65**	**0.42**	**Agree**

The results presented in Table 1 showed the mean and standard deviations of the responses of respondents on the socio-economic and environmental effects of the informal and formal governance arrangements of mining communities in Taraba state. The results showed that items 1, 2, 3 and 4 had mean ratings of 3.62, 3.65, 3.66 and 3.65 with standard deviations of 0.58, 0.52, 0.56 and 0.53, respectively. These mean ratings are above the criterion level of 2.50 set for accepting an item, this means that mining activities have improved income and employment opportunities for residents, mining operations have led to environmental degradation in several communities in Taraba state, informal mining operations cause more environmental harm than formal mining, and the presence of mining has led to increased social conflicts in many communities in Taraba state. The cluster mean of 3.65 is also above the criterion level of 2.50 set as a benchmark for accepting an item. The cluster mean of 3.65 with a standard deviation of 0.42 showed that respondents unanimously agreed on the socio-economic and environmental effects of the informal and formal governance arrangements on mining communities in Taraba state. This further validated our hypothesis that the persistence of informal governance in Taraba state's mining sector exacerbates environmental degradation and limits community-level benefits, reinforcing elements of the resource curse at the subnational (state) level.

Conclusion

Mining rents in Taraba State are disproportionately captured by elites and intermediaries, while host communities bear the burden of environmental degradation, displacement, and social disruptions. This uneven distribution perpetuates inequality and fuels community grievances. Informal mechanisms, such as negotiated access agreements between chiefs and operators, sometimes fill governance vacuums by preventing conflict. However, these mechanisms are often exclusionary, marginalizing women, youth, and other vulnerable groups from decision-making and access to benefits. State-level political settlements, defined by elite bargains and selective enforcement, largely determine governance outcomes. Inclusive settlements that integrate community actors and traditional authorities foster relative stability, whereas exclusionary settlements heighten conflict and undermine sustainability. In sum, mining governance in Taraba State is best understood as a negotiated political process in which power, resources, and legitimacy are contested. Without institutional reforms that bridge formal and informal governance arrangements, the sector will continue to reproduce inequality, conflict, and environmental harm.

Recommendations

Based on the findings, the paper recommends that the Taraba State Government enforce Environmental Impact Assessment (EIA) requirements, mandate mine reclamation plans for both artisanal and formal operators, and implement alternative livelihood programs and compensation schemes for communities affected by mining-induced displacement and land degradation.

References

Acosta, A. (2010). Rents, rights and resources: Towards fair and sustainable resource extraction. *International Journal of Labour Research*, *2*(2), 401–420.

Adebayo, T. S., & Iledare, W. O. (2020). Governance challenges in artisanal and small-scale mining in Nigeria. *The Extractive Industries and Society, 7*(4), pp. 1404–1413. https://doi.org/10.1016/j.exis.2020.10.010 Retrieved on 25 August

Adebayo, T. S., & Iledare, W. O. (2020). Governance challenges in artisanal and small-scale mining in Nigeria. *The Extractive Industries and Society, 7*(4), pp. 1404–1413. https://doi.org/10.1016/j.exis.2020.10.010 Retrieved on 25 August

Adefila, J. O., Bulus, J., & Oladipo, J. A. (2016). Environmental effects of artisanal gold mining in Taraba State. *Journal of Geography and Regional Planning, 9*(3), 28–36.

Ahmed, Y. M. (2013). *Characterization of artisanal and small-scale mining in parts of Taraba State, Nigeria* (Doctoral dissertation, University of Jos). (Cited in Otoijamun, 2021).

Ambe-Uva, T. (2018). Artisanal and small-scale mining in Nigeria: Perspectives from the Mambilla Plateau. *Journal of Sustainable Development in Africa, 20*(3), 45–62.

Andrews, M. (2013). *The limits of institutional reform in development: Changing rules for realistic solutions*. Cambridge University Press.

Anene, N. C., Dangulbi, B. M., & Veiga, M. M. (2024). Assessment of Gold and Mercury Losses in an Artisanal Gold Site in Nigeria. *Minerals, 14*(11), pp. 11-31.

AP News. (2024) "Nigeria is Emerging as a Critical Mineral Hub Cracking Down on Illegal Operations.

Arellano-Yanguas, J. (2011). Aggravating the resource curse: Decentralisation, mining and conflict in Peru. *Journal of Development Studies, 47*(4), 617–638. https://doi.org/10.1080/00220381003706478 Retrieved on 20 August 2025

Auty, R. M. (1993). *Sustaining Development in Mineral Economies: The Resource Curse Thesis.* Routledge.

Auty, R. M. (2001). *Resource abundance and economic development*. Oxford: Oxford University Press.

Bebbington, A. (ed.). (2012). *Social Conflict, Economic Development and Extractive Industry*. (Routledge, wordpress.clarku.edu) Retrieved on 25 August 2025

Bebbington, A., & Bury, J. (2013). *Subterranean struggles: New dynamics of mining, oil, and gas in Latin America*. Austin: University of Texas Press.

Bebbington, A., Abdulai, A. G., Bebbington, D. H., Hinfelaar, M., & Sanborn, C. (2018). *Governing extractive industries: Politics, histories, ideas*. Oxford: Oxford University Press.

Bebbington, A., Hinojosa, L., Bebbington, D. H., Burneo, M. L., & Warnaars, X. (2008). Contention and ambiguity: Mining and the possibilities of development. *Development and Change*, 39(6), pp. 887–914.

Bebbington, A., Hinojosa, L., Bebbington, D. H., Burneo, M. L., & Warnaars, X. (2008). Contention and ambiguity: Mining and the possibilities of development. *Development and Change*, 39(6), pp. 887–914.

Bebbington, A., Humphreys Bebbington, D., Bury, J., Lingan, J., Muñoz, J. P., & Scurrah, M. (2008). Mining and social movements: Struggles over livelihood and rural territorial development in the Andes. *World*

Development, 36(12), 2888–2905. https://doi.org/10.1016/j.worlddev.2007.11.016 Retrieved on 25 August

Booth, D. (2012). *Development as a Collective Action Problem: Addressing the Real Challenges of African Governance*. ODI.

Campbell, B. (2003). Factoring in governance is not enough. Mining codes in Africa, policy reform and corporate responsibility. *Minerals & Energy – Raw Materials Report, 18*(3), 2–13. https://doi.org/10.1080/14041040310019204 Retrieved on 25 August

Campbell, B. (2009). Mining in Africa: Regulation and development. *International Development Research Centre*.

CAPPA (2024). “Put an End to Mining Tragedies, CAPPA Tells FG of Nigeria.” cappaafrica.org. Retrieved on 19 August 2025

Collier, P., & Hoeffler, A. (2005). Resource rents, governance, and conflict. *Journal of Conflict Resolution, 49*(4), pp. 625–633.

Collier, P., & Venables, A. J. (2011). Harnessing natural resources for inclusive growth. *Oxford Review of Economic Policy, 27*(1), 1–22. https://doi.org/10.1093/oxrep/grr009 Retrieved on 26 August 2025

Delve/World Bank & Pact. (2020). *State of the Artisanal and Small-Scale Mining Sector 2020.*

Di John, J., & Putzel, J. (2009). *Political Settlements: Issues Paper*. Governance and Social Development Resource Centre, University of Birmingham.

EITI (2023). *EITI Standard – Summary of Changes & Standard text*.

Elijah, I., & Shehu, A. (2021). Socio-economic impacts of artisanal mining on rural communities in Taraba State, Nigeria. *Extractive Industries and Society, 8*(4), 112–125.

Eze, C., & Ude, O. (2019). Informal mining and revenue leakage in Nigeria’s solid minerals sector. *Nigerian Journal of Economic and Social Studies, 61*(2), 133–152.

Garba, A., & Barde, M. (2022). Pit collapses and humanitarian risks in artisanal mining communities in Gashaka, Taraba State. *African Journal of Natural Resource Studies, 5*(2), 88–104.

Gemstone Industry Brief (2022). News on Nigeria’s Gemstone Sector. International Colored Gemstone Association (ICA). gemstone.org. Retrieved on 19 August 2025

GPH Journal. (2023). *Challenges of the enforcement of the government ban on illegal mining in Taraba State, Nigeria*.

Hilson, G. (2002). Small-scale Mining and its Socio-Economic Impact in Developing Countries. *Natural Resources. Forum, 26*(1), pp. 3–13. https://doi.org/10.1111/0165-0203.00002 Retrieved on 25 August

Hilson, G. (2017). Shootings and burning excavators: Some rapid reflections on the Government of Ghana’s handling of the informal galamsey mining “menace.” *Resources Policy, 54*, 109–116. https://doi.org/10.1016/j.resourpol.2017.09.009 Retrieved on 25 August

Ikpr Press and JOGEE. (2025). *Heavy metal contamination in soil and sustainability risks at artisanal and small-scale mining sites in Mayo-Sinna, Sardauna LGA, Taraba State*.

Karl, T. L. (1997). *The Paradox of Plenty: Oil Booms and Petro-States.* University of California Press.

Khan, M. (1995). “State Failure in Weak States: A Critique of New Institutionalist Explanations.” In J. Harris, J. Hunter & C. Lewis (Eds.), *The New Institutional Economics and Third World Development*. London: Routledge.

Khan, M. (2010). *Political Settlements and the Governance of Growth-Enhancing Institutions*. SOAS Working Paper.

Lahiri-Dutt, K. (2011). Digging women: Towards a new agenda for feminist critiques of mining. *Gender, Place & Culture, 18*(2), 193–212. https://doi.org/10.1080/0966369X.2011.552315 Retrieved on 25 August

Lange, S. (2011). Gold and governance: Legal injustices and lost opportunities in Tanzania. *African Affairs, 110*(439), 233–252. https://doi.org/10.1093/afraf/adr002 Retrieved on 20 August 2025

Lavers, T., & Hickey, S. (2016). Conceptualising the politics of social protection expansion in low-income countries: The intersection of transnational ideas and domestic politics. *International Journal of Social Welfare, 25*(4), pp. 388–398. https://doi.org/10.1111/ijsw.12210 Retrieved on 25 August

Lund, C. (2006). Twilight institutions: Public authority and local politics in Africa. *Development and Change, 37*(4), 685–705. https://doi.org/10.1111/j.1467-7660.2006.00497.x Retrieved on 14 September 2025

Luning, S., & Pijpers, R. (2017). Governing access to gold in Ghana: In-depth geopolitics on mining concessions. *Africa, 87*(4), 758–779. https://doi.org/10.1017/S0001972017000392 Retrieved on 20 August 2025

Maconachie, R. (2009). Diamonds, governance and ‘local’ development in post-conflict Sierra Leone: Lessons for artisanal and small-scale mining in sub-Saharan Africa? *Resources Policy, 34*(1–2), 71–79. https://doi.org/10.1016/j.resourpol.2008.05.002 Retrieved on 25 August

Marx, K. (1990). *Capital: A critique of political economy, Vol. 1*. (Original work published 1867). Penguin Classics.

Ministry of Mines and Steel Development (MMSD). (2018). *Nigerian Minerals and Mining Policy*. Abuja: MMSD.

Musa, D. G., Hauwa, A., Ahmed, Y. M., & Bwadi, E. B. (2025). Spatial distribution and ecological risk of heavy metals in soils from artisanal mining sites: Central Taraba State, Nigeria. *Journal of Geography, Environment and Earth Science International*.

Natural Resource Governance Institute (NRGI). (2014). *Natural resource charter (2nd ed.)*. New York, NY: Author.

NEITI (2019–2021). *Improving Transparency and Governance for Value Optimization in Nigeria's Mining Sector*. (NEITI)

Nigeria Extractive Industries Transparency Initiative (NEITI). (2020). *Solid minerals sector report.* Abuja: NEITI.

Nigerian Minerals and Mining Act (2007). Federal Republic of Nigeria. (The iGuides, African Mining Legislation Atlas)

North, D., Wallis, J., Webb, S., & Weingast, B. (2009). *Violence and Social Orders: A Conceptual Framework for Interpreting Recorded Human History*. Cambridge University Press.

Northeastern University. (2017). *Ecological impacts of artisanal mining in northeastern Nigeria: Evidence from Taraba State*.

NRGI & UNDP (2016). *Natural Resource Revenue Sharing.* (Natural Resource Governance Institute)

Ojeh, V. N., & Elijah, E. (2024). Impact of mining on the livelihood of women in Gashaka LGA, Taraba State. *Learning-Gate Journal*.

Okpanachi, E., & Yakubu, J. (2021). Local governance and artisanal mining in Taraba State, Nigeria. *Extractive Industries and Society, 8*(4), 100–112.

Omodero, C. O., & Adejoh, S. O. (2020). Gendered dimensions of artisanal and small-scale mining in Nigeria. *Journal of Gender Studies, 29*(5), 623–639.

Orion Journals. (2021). Dynamics of artisanal gold mining in Gashaka Local Government Area, Taraba State. *International Journal of Scientific Research and University*.

Oruonye, E. D., & Abubakar, H. (2020). Environmental impacts of artisanal gold mining in Gashaka Local Government Area of Taraba State, Nigeria. *Orion Journal of Physical and Natural Sciences, 7*(1), 47–61.

Oruonye, E. D., & Ahmed, Y. M. (2018). Challenges and Prospects of Mining Solid Mineral Resources in Taraba State, Nigeria. *Journal of Geography and Regional Planning*, policy brief reprint.

Oruonye, E. D., Ahmed, Y. M., & Abdulkadir, U. (2021). *Dynamics of artisanal gold mining in Gashaka Local Government Area of Taraba State, Nigeria* [ResearchGate]. Retrieved from https://www.researchgate.net/publication/. Retrieved on 14 October 2025

Ostrom, E. (1990). *Governing the Commons: The Evolution of Institutions for Collective Action.* Cambridge University Press. (Cambridge University Press & Assessment) Retrieved on 25 August 2025

Ross, M. L. (2004). *Does Taxation Lead to Representation?* British Journal of Political Science, 34(2), pp. 229–249.

Ross, M. L. (2012). *The oil curse: How petroleum wealth shapes the development of nations*. Princeton, NJ: Princeton University Press.

Sachs, J. D., & Warner, A. M. (2001). The curse of natural resources. *European Economic Review, 45*(4–6), 827–838.

SSRG. (2021). *Governance and illegal mining in Taraba State: Patterns of rent capture and local power dynamics*.

Taraba State ESIA and environmental assessments. (2024). *Taraba State SAPZ ESIA* (Environmental Assessment report). Federal/State agency publication (Aug. 2024). (| Federal Ministry of Environment | EAD) Retrieved on 14 October 2025

Teschner, B. A. (2014). 'Orpaillage pays for everything': How artisanal mining supported rural institutions following Mali's coup d'état. *Resources Policy, 41*, 39–45. https://doi.org/10.1016/j.resourpol.2014.03.004 Retrieved on 20 August 2025

The Nation (2023). "Untold Story of Illegal Mining Activities, Deforestation in Taraba." (The Nation Newspaper)

Tukur, A. L., Ahmed, Y. M., & Oruonye, E. D. (2014). Socio-economic impact of artisanal mining of blue sapphire on the Mambilla Plateau. *Research on Humanities and Social Sciences, 4*(21), 63–72.

Umar, A., Ijere, E., & Abdulkarim, S. (2018). Inventorization of solid mineral resources in Taraba State. *International Journal of Environment, Agriculture and Biotechnology, 3*(5), 1821–1829.

United Nations Development Programme (UNDP). (2017). *Sustainable development goals: 2017 report*. New York, NY: UNDP.

Yelwa, S. A., & Mohammed, B. (2022). Heavy metal contamination in soils and water around artisanal mining sites in Taraba State, Nigeria. *Environmental Monitoring and Assessment, 194*(6), 451–467.

Zenodo preprint. (2023). *Challenges of the enforcement of the government ban on illegal mining in Taraba State.*