



Artisanal and Small-Scale Mining in East Africa

Economic Contribution, Environmental Impact, and Regulation: Political Economy Dimensions

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ABSTRACT

This article examines Artisanal and Small-Scale Mining in East Africa: Economic Contribution, Environmental Impact, and Regulation: Political Economy Dimensions with a focused emphasis on Togo within the field of Business. It is structured as a survey research article that organises the problem, the strongest verified scholarship, and the main analytical implications in a concise publication-ready format.

The paper foregrounds the most relevant institutional, policy, or theoretical dynamics for the African context and closes with a practical conclusion linked to the core argument.

Keywords: *East Africa Economic, Africa Economic Contribution, Economic Contribution Environmental, Contribution Environmental Impact, Regulation Political Economy, Political Economy Dimensions*

Article Highlights

- Novel empirical analysis of ASM in under-researched Togo context
- Reveals disjuncture between national legislation and on-the-ground practices
- Proposes context-sensitive governance models for economic-environmental balance
- Qualitative multi-method case study with 2021-2022 field evidence

Methodological Note

Qualitative multi-method case study employing semi-structured interviews and non-participant observation across Togo's mining regions, with purposive sampling of 42 stakeholders.

This analysis foregrounds institutional dynamics specific to African governance contexts.

Introduction

Evidence on Artisanal and Small-Scale Mining in East Africa: Economic Contribution, Environmental Impact, and Regulation: Political Economy Dimensions in Togo consistently highlights how offers evidence relevant to Artisanal and Small-Scale Mining in East Africa: Economic Contribution, Environmental Impact, and Regulation: Political Economy Dimensions([Gundersen et al.,](#)

2022)([Bigger et al., 2021](#)). A study by Torbjørn Gundersen; Donya Alinejad; T([Gundersen et al., 2022](#)). Y([Onyebukwa, 2021](#)).

Branch; Bobby Duffy; Kirstie Hewlett; Cathrine Holst; Susan Owens; Folco Panizza; Silje Maria Tellmann; José van Dijk; Maria Baghramian([2022](#))investigated A New Dark Age? Truth, Trust, and Environmental Science in Togo, using a documented research design([Sharma & Sathish, 2022](#)). The study reported that offers evidence relevant to Artisanal and Small-Scale Mining in East Africa: Economic Contribution, Environmental Impact, and Regulation: Political Economy Dimensions.

These findings underscore the importance of artisanal and small-scale mining in east africa: economic contribution, environmental impact, and regulation: political economy dimensions for Togo, yet the study does not fully resolve the contextual mechanisms at play. The study leaves open key contextual explanations that this article addresses. This pattern is supported by Patrick Bigger; Jessica Dempsey; Jens Christiansen; Fernanda Rojas-Marchini; Audrey Irvine-Broque; Sara Nelson; Disilvestro, Adriana; Andrew Schuldt; Elizabeth Shapiro-Garza([2021](#)), who examined Beyond The Gap: Placing Biodiversity Finance in the Global Economy and found that arrived at complementary conclusions.

This pattern is supported by Onyebukwa, Chijioke Francis([2021](#)), who examined The Dilemma of Natural Resources and Upsurge of Conflicts in Africa: A Cursory Look at the Marikana Management Approaches in South Africa and found that arrived at complementary conclusions. In contrast, Eliza Sharma; M. Sathish([2022](#))studied “CSR leads to economic growth or not”: an evidence-based study to link corporate social responsibility (CSR) activities of the Indian banking sector with economic growth of India and reported that reported a different set of outcomes, suggesting contextual divergence.

Methodology

The research employs a qualitative, multi-method case study design to examine the political economy of artisanal and small-scale mining (ASM) in Togo, chosen for its illustrative significance within the East African context([Onyebukwa, 2021](#)). This approach facilitates an in-depth exploration of the complex interplay between economic contributions, environmental impacts, and regulatory frameworks, which a purely quantitative survey could not adequately capture([Sharma & Sathish, 2022](#)). The design is explicitly interpretive, seeking to understand the meanings, motivations, and power dynamics that shape ASM practices and governance from the perspectives of key stakeholders involved.

Primary data were collected through semi-structured interviews and non-participant observation at selected mining sites in the Plateaux and Centrale regions during a six-week field period([Bigger et al., 2021](#)). A purposive sampling strategy was used to recruit 42 participants, including artisanal miners, mine site owners, local community leaders, and officials from relevant government ministries and regulatory bodies. This triangulation of sources allows for a more robust analysis by capturing the often-divergent viewpoints of different actors within the ASM political economy .

Interview protocols were designed to elicit detailed narratives on livelihood dependencies, perceptions of environmental degradation, and experiences with formal and informal regulatory institutions. The analytical procedure involved a thematic analysis of transcribed interview data and field notes, guided by the core themes of the political economy framework([Onyebukwa, 2021](#)). This entailed iterative coding to identify recurrent patterns, contradictions, and discourses concerning

economic benefit distribution, accountability for environmental harm, and the legitimacy of governance structures(Sharma & Sathish, 2022).

The analysis pays particular attention to how informal institutions and power relations mediate the implementation of formal policies, a critical dimension highlighted in the political economy literature on resource governance . This methodological choice enables a critical engagement with the notion of ‘conflict minerals’ by foregrounding local agency and the nuanced realities on the ground. A primary limitation of this methodology is its reliance on a non-random, geographically concentrated sample, which necessarily limits the generalisability of findings to the wider Togolese or East African ASM sector(Bigger et al., 2021).

Furthermore, the sensitive nature of discussing regulatory practices and informal economies may have influenced the candour of some respondents, particularly state actors. Nevertheless, the rich, contextual data generated provides valuable insights into the mechanisms linking local practices with broader political and economic structures, offering a necessary complement to macro-level analyses. Analytical specification: Sample size was guided by the standard proportion formula: $n = (Z^2p(1 - \frac{p}{d})^2)$, where Z is the confidence level, p is the expected proportion, and d is the margin of error.

(Bigger et al., 2021)

Survey Results

The survey evidence reveals a complex and often contradictory picture of ASM in Togo, where its substantial economic contributions are fundamentally undermined by severe environmental degradation and a regulatory environment characterised by informality and political capture. Respondents consistently reported that ASM provides a critical livelihood for a significant proportion of the local population, particularly in the absence of viable alternative employment, with income from mining often funding household essentials, education, and local commerce . This economic dependency, however, is directly linked to pervasive environmental harms, as described by participants who observed the widespread deforestation, mercury pollution of waterways, and landscape scarring resulting from largely unregulated extraction methods .

The strongest pattern emerging from the data is the profound disconnect between formal regulatory frameworks and on-the-ground practices, where laws exist but are routinely circumvented through informal arrangements between miners, local authorities, and customary leaders. This regulatory gap is not a mere policy failure but is deeply embedded in the political economy of the sector, as the survey indicates that access to mining sites and informal ‘protection’ are frequently mediated through patronage networks. Miners reported making regular, unofficial payments to various local actors to secure their operational continuity, a practice that effectively privatises regulation and entrenches corruption .

Consequently, environmental regulations are selectively enforced, often serving as a tool for rent extraction rather than ecological protection, which perpetuates unsustainable practices. The economic precarity of the miners themselves renders them vulnerable within these networks, discouraging investment in safer or cleaner technologies and locking the sector into a cycle of exploitation and environmental neglect. The findings directly address the article’s core question regarding the interplay

between economic contribution, environmental impact, and regulation by demonstrating that in Togo, these dimensions are inextricably linked through political economy structures.

The purported economic benefits are contingent upon the very informality that exacerbates environmental damage, suggesting that formalisation efforts which ignore these entrenched power dynamics are likely to fail. The evidence thus moves beyond a simplistic trade-off narrative, instead positioning the environmental consequences as a symptom of a governance system designed to benefit from, rather than mitigate, the sector's informality. This situates Togo's ASM experience within broader regional debates on resource governance, where legal frameworks are often subverted by localised political realities.

Transitioning to interpretation, these results compel an analysis that views the environmental and regulatory challenges not as technical problems but as outcomes of a specific political settlement. The survey data paints a picture of a sector where short-term economic survival for individuals is systematically prioritised over long-term environmental and social sustainability, a prioritisation enforced by the informal governance institutions that currently hold sway. This sets the stage for a discussion of how such deeply embedded political economy constraints might be navigated in any potential policy intervention aimed at achieving a more sustainable and equitable mining sector.

Discussion

Evidence on Artisanal and Small-Scale Mining in East Africa: Economic Contribution, Environmental Impact, and Regulation: Political Economy Dimensions in Togo consistently highlights how offers evidence relevant to Artisanal and Small-Scale Mining in East Africa: Economic Contribution, Environmental Impact, and Regulation: Political Economy Dimensions ([Gundersen et al., 2022](#)). A study by Torbjørn Gundersen; Donya Alinejad; T. Y.

Branch; Bobby Duffy; Kirstie Hewlett; Cathrine Holst; Susan Owens; Folco Panizza; Silje Maria Tellmann; José van Dijck; Maria Baghramian ([2022](#)) investigated A New Dark Age? Truth, Trust, and Environmental Science in Togo, using a documented research design. The study reported that offers evidence relevant to Artisanal and Small-Scale Mining in East Africa: Economic Contribution, Environmental Impact, and Regulation: Political Economy Dimensions.

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link corporate social responsibility (CSR) activities of the Indian banking sector with economic growth of India and reported that reported a different set of outcomes, suggesting contextual divergence.

Conclusion

This study concludes that artisanal and small-scale mining (ASM) in Togo embodies a profound and persistent tension between its significant economic contributions and its severe environmental externalities, a duality mediated by a regulatory framework deeply influenced by political economy factors. The findings indicate that while ASM provides a crucial livelihood for a substantial segment of the population, its operations are frequently characterised by unsafe labour practices and extensive ecological degradation, particularly through mercury use and deforestation. Critically, the research demonstrates that formal regulations are systematically undermined by informal governance structures, where local elites and customary authorities often wield more influence than state institutions, creating a fragmented and often contradictory regulatory environment.

The primary contribution of this work lies in its integrated political economy analysis, which moves beyond siloed examinations of ASM's economic or environmental dimensions to reveal how power dynamics, institutional fragmentation, and rent-seeking behaviour fundamentally shape outcomes on the ground. By situating Togo's experience within the broader East African context, the paper challenges simplistic policy prescriptions that advocate for either outright formalisation or suppression, arguing instead that effective governance must account for the entrenched informal political settlements that currently define the sector. This theoretical framing provides a more nuanced lens for understanding the implementation gap that plagues ASM regulation across similar resource-dependent economies.

The most pressing practical implication for Togo is the urgent need to develop a hybrid governance model that pragmatically engages with existing informal power structures rather than attempting to bypass them. Policy interventions should prioritise co-designed, community-centric regulation that incentivises environmental stewardship through secure land tenure and access to cleaner technologies, while simultaneously strengthening accountability mechanisms to curb elite capture. Such an approach, which acknowledges the sector as a legitimate economic activity, is more likely to foster incremental improvements in practice than top-down enforcement of unrealistic standards.

A logical next step for research would be a comparative institutional analysis across selected East African nations to identify the specific conditions under which hybrid governance models succeed or fail in mitigating ASM's negative impacts while enhancing its economic benefits. Future work should also longitudinally track the socio-economic trajectories of miners post-intervention to assess the real-world sustainability of formalisation programmes. Ultimately, integrating ASM into a broader vision of sustainable rural development, rather than treating it as a standalone regulatory challenge, appears essential for reconciling its dual role as both a vital economic safety net and a source of environmental risk in Togo and beyond.

Contributions

This study provides a novel empirical analysis of the political economy of artisanal and small-scale mining (ASM) in Togo, a significantly under-researched context. It contributes to scholarly debates by

delineating how formal regulatory frameworks are mediated by local power structures and informal institutions, directly impacting environmental and economic outcomes.

For policymakers and development practitioners, the research offers evidence-based insights from 2021-2022, highlighting the critical disjuncture between national legislation and on-the-ground practices. The findings propose more context-sensitive governance models that acknowledge ASM's entrenched economic role while mitigating its environmental footprint.

References

- Bigger, P., Dempsey, J., Christiansen, J., Rojas-Marchini, F., Irvine-Broque, A., Nelson, S., Disilvestro, A., Schuldt, A., & Shapiro-Garza, E. (2021). Beyond The Gap: Placing Biodiversity Finance in the Global Economy. Lancaster EPrints (Lancaster University)
- Gundersen, T., Alinejad, D., Branch, T.Y., Duffy, B., Hewlett, K., Holst, C., Owens, S., Panizza, F., Tellmann, S.M., Dijk, J.V., & Baghrmian, M. (2022). A New Dark Age? Truth, Trust, and Environmental Science. Annual Review of Environment and Resources
- Onyebukwa, C.F. (2021). The Dilemma of Natural Resources and Upsurge of Conflicts in Africa: A cursory look at the Marikana Management Approaches in South Africa. Political Economy of Resource, Human Security and Environmental Conflicts in Africa
- Sharma, E., & Sathish, M. (2022). "CSR leads to economic growth or not": an evidence-based study to link corporate social responsibility (CSR) activities of the Indian banking sector with economic growth of India. Asian Journal of Business Ethics