Chinese Mining FDI in DRC: Opportunities, Challenges, and Geopolitical Dynamics

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Abstract: As The global shift toward renewable energy technologies has elevated cobalt and copper to the status of strategic minerals, essential for the development of electric vehicles and clean energy systems, the DRC emerges as a pivotal supplier due to its vast mineral reserves. This study investigates the multifaceted economic, social, and environmental implications of Chinese investment in the mining sector of the Democratic Republic of Congo (DRC), with a study of the complex development paradox arising from China's emergence as the predominant investor in this mineral-rich province, analyzing it through the dual perspectives of opportunities and risks. Using a mixed-methods approach that incorporates quantitative surveys of 230 participants and qualitative interviews with various stakeholders including local miners, Chinese investors, and government officials. Findings indicate that while Chinese investments have contributed approximately $2.6 billion annually to the DRC's GDP and spurred infrastructure development. The article concludes that the China-DRC partnership provides a more equitable, development-focused framework rooted in mutual benefit and respect for national sovereignty, marking a new chapter in African development.

***Keywords*:** foreign direct investment, sino-DRC relations, mining sector, sicomines deal

1. Introduction

The global shift toward renewable energy technologies has elevated cobalt and copper to the status of strategic minerals, essential for the advancement of electric vehicles and clean energy systems. According to Barton and North [1], this transformation is especially evident in the Haut-Katanga region of the Democratic Republic of the Congo (DRC), which possesses approximately 70% of the world's cobalt reserves along with substantial high-grade copper deposits.

China's engagement with the DRC has evolved significantly since the ideological alignments of the 1960s. As Bintu and Kafarhire [2] note, this relationship reached a turning point with the signing of the 2007 "Contract of the Century" a landmark US$6 billion resources-for-infrastructure deal. Chailan and Ramirez [3] observe that this agreement laid the foundation for Chinese state-owned enterprises (SOEs) to finance critical infrastructure projects in exchange for long-term mineral access. This model has since been replicated across the continent, with Haut-Katanga representing one of its most intensive applications.

The China-DRC partnership reflects a broader transformation in North-South relations, offering an alternative to conventional Western development paradigms. Letube [4] contends that this evolving relationship grants African nations greater agency, in contrast to the conditionality often attached to Western aid. Advocates highlight tangible benefits: mining exports to China accounted for 22% of the DRC's GDP, according to the World Bank [5]; infrastructure investments have reduced transport costs in Katanga by 37% [6]; and technology transfers have raised copper recovery rates to 93% [7]. Additionally, Chinese firms directly employ 38,000 Congolese workers [8], with many more engaged in ancillary sectors.

Nonetheless, critical perspectives caution against unbalanced outcomes. Geenen [9] highlights the risk of Dutch Disease, emphasizing that while mining generates 89% of exports, it employs just 2.3% of the national labor force [10]. Garrett and Lintzer [11] argue that although government revenues have increased, the structural dependence on resource exports may limit long-term economic diversification. Chen [12] points out that Chinese mining ventures have created thousands of jobs, both directly and through infrastructure-related projects. However, Matanzima and Loginova [13] raise concerns over displacement, environmental degradation, and the social unrest stemming from insufficient community engagement.

The juxtaposition of substantial economic benefits and significant socio-environmental challenges underscores the complexity of Chinese investment in the DRC's mining sector. This article seeks to address this duality by offering a critical examination of the opportunities and risks associated with Chinese mining FDI in the DRC, with a particular focus on the Haut-Katanga region.

2. Methodology

This study utilized a mixed-methods approach to investigate the economic and social impacts of Chinese mining investment in the Democratic Republic of the Congo (DRC). Quantitative data were gathered through structured questionnaires administered to 230 local workers and business owners, with a focus on employment, income distribution, and sectoral shifts. Descriptive statistics were analyzed using SPSS. In addition, semi-structured interviews with government officials, Chinese investors, and community leaders offered insights into regulatory challenges, corporate accountability, and cultural integration. The research concentrated on Haut-Katanga, which hosts major Chinese-operated ventures such as Tenke Fungurume and Sicomines, employing a combination of purposive and snowball sampling to ensure respondent diversity.

Data were collected in Haut-Katanga, the Democratic Republic of the Congo's primary mining hub, which hosts over five million residents and possesses extensive cobalt and copper reserves. A mixed-methods research design was employed, integrating structured questionnaires (n=230) with semi-structured interviews. The respondents comprised workers, business owners, government officials, Chinese investors, and community leaders. Quantitative data were analyzed using descriptive statistics, while qualitative data were subjected to thematic analysis. Participants were selected through convenience and snowball sampling to ensure a broad representation, particularly among individuals with direct or expert knowledge of the mining sector.

3. Findings and discussion

This section delineates the principal findings derived from survey data and stakeholder interviews, in accordance with the study's objectives to assess awareness, economic impacts, and social outcomes of Chinese mining investments in Haut-Katanga.

3.1 Awareness of Chinese mining sector

Awareness of Chinese mining investment is high, with 82.2% of respondents (n=189) recognizing their presence and 77.8% viewing them as significant, as shown in Table2. Perceptions of economic impact were generally positive, with 58.3% (n=134) noting contributions to growth, though 29.6% (n=68) expressed uncertainty or disagreement, suggesting an opportunity to improve communication and ensure broader benefits.

Table 1. Awareness of Chinese investments in the Democratic Republic of Congo

Chinese Investment in the Mining Sector	F	%	F	%	F	%
	Yes				No	
Awareness of Chinese Investments	189	82.2			41	17.8
	Significant		No role		Minimal	
Perceived Significance	179	77.8	4	1.7	47	20.4
	Yes		Not sure		No	
Economic Growth Impact	134	58.3	28	12.2	68	29.6

3.2 Chinese investment in Haut-Katanga, DRC

Chinese mining investments in Haut-Katanga focus on critical minerals, namely copper and cobalt, which are vital for the global energy transition and align with China's Belt and Road Initiative. These investments have facilitated infrastructure development, job creation, and regional economic growth. Although these contributions are widely recognized by local stakeholders, 29.6% of respondents expressed uncertainty regarding the direct economic benefits. With only 26.1% of the local population employed by Chinese firms, there is potential to enhance local participation. Strengthening local procurement, fostering environmental collaboration, and promoting vocational upskilling particularly for the 30.4% with technical training could expand access to skilled employment and promote inclusive development. These initiatives would support a sustainable and mutually beneficial partnership between China and the Democratic Republic of the Congo.

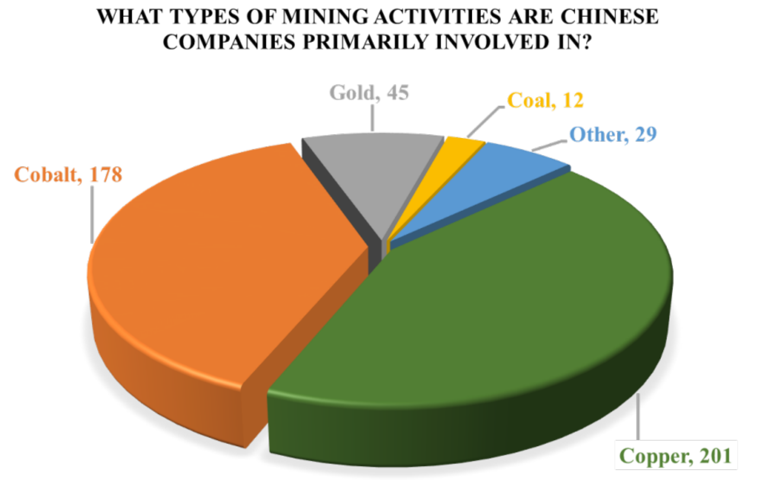

Figure 1. A Visual representation of the Descriptive Statistics of the Chinese activities in the Mining Sector of Democratic Republic of Congo

3.3 Economic implication of Chinese investment in the DRC mining

Chinese mining investment has significantly shaped Haut-Katanga's economy, with 63% of respondents reporting improved employment. The sector directly employs 41.3% of surveyed individuals, while 31.3% benefit indirectly through services such as transport and small businesses. Mining exports contribute $2.6 billion annually to the DRC's GDP, underscoring the sector's national importance. However, only 16.5% reported personal economic gains likely linked to the dominance of low- to mid-skill roles, as 37% hold only secondary education. Additionally, 48.7% observed no improvement in public services, highlighting the need to channel revenues into healthcare, education, and infrastructure. With 41.3% having shifted from agriculture to mining and only 12.6% in non-mining work, economic diversification is critical. Targeted upskilling for the 30.4% with vocational training can expand access to higher-skilled jobs, supporting equitable and sustainable regional development.

Table 2. A Descriptive Statistics of the Chinese economic benefits in the mining sector of Democratic Republic of Congo

	Frequency (f)	Percentage (%)
What economic benefits have you observed from Chinese investment in the mining sector? (Select all that apply)		
Increased job opportunities	178	77.4
Improved infrastructure (roads, electricity, etc.)	154	67.0
Higher government revenues	92	40.0
Investment in local businesses	67	29.1
Technology transfer	23	10.0
None of the above	34	14.8

Chinese mining investments in Haut-Katanga present strong opportunities for economic development. Among 230 surveyed participants, 77.4% cited job creation, and 67% reported improved infrastructure mainly roads and electrification. Additionally, 40% noted increased government revenue, and 29.1% observed new investments in local businesses. These outcomes reflect the potential for a sustainable China-DRC economic partnership. However, the distribution of benefits remains uneven. Only 14.8% of respondents reported direct personal gains, especially those outside core mining areas, indicating a need to extend infrastructure and economic access across the region. With 41.3% of the workforce now in mining up from 12% in 2010 economic diversification is urgent. Upskilling the 37% holding only secondary education and the 30.4% with vocational training could enable broader participation in higher-value roles.

Environmental collaboration also remains limited; just 9.6% observed ecological improvements. Joint initiatives in reforestation, water management, and sustainable mining can boost both environmental outcomes and community trust. Policy enhancements should emphasize local procurement, modeled after successful cases like Ghana's, and reinvest mining revenues into public services, education, and climate resilience. These efforts can ensure that Haut-Katanga's resources generate inclusive, long-term development for both the DRC and China.

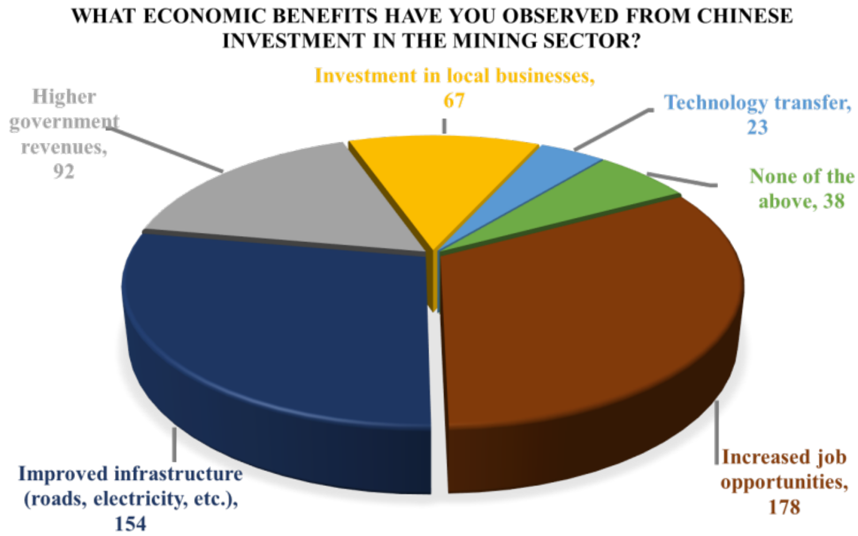

Figure 2. A Visual representation of the Descriptive Statistics of the Chinese investment economic benefits in the Mining Sector of Democratic Republic of Congo

3.4 Social and environmental implications

Chinese mining activities in Haut-Katanga face environmental scrutiny, with 52.2% of respondents raising concerns primarily over water pollution (81.7%), soil degradation (70.0%), and deforestation (60.0%). Despite this, nearly half (48.7%) of respondents expressed tolerance, indicating room for dialogue. However, only 10.4% observed active conservation efforts, while 44.3% noted none, underscoring the need for stronger environmental collaboration.

Joint projects in reforestation, water management, and sustainable mining could mitigate ecological harm and build local trust. Socially, 38.7% of participants reported minor improvements in living standards, and just 9.6% recognized major gains. Meanwhile, 28.3% perceived no change, pointing to the need for deeper investment in education, healthcare, and vocational training. These findings suggest that aligning corporate initiatives with community priorities could enhance the social and environmental outcomes of Chinese mining in the region.

3.5 Analysis of secondary data

This study's secondary data analysis draws on statistical reports, historical records, and prior studies on Chinese mining in Haut-Katanga. It explores the social, economic, and strategic drivers behind these investments, linking China's industrial ambitions with the DRC's development goals. Chinese firms are primarily motivated by access to cobalt and copper key inputs for sustainable energy and EV production. Secondary data shows 87.4% of their operations focus on copper and 77.4% on cobalt [14]. With the DRC supplying 70% of global cobalt, Haut-Katanga plays a critical role in China's resource strategy. Major projects include China Molybdenum's $2.65 billion acquisition of Tenke Fungurume and the Kamoa-Kakula joint venture, expected to produce 800,000 tons of copper annually by 2027 [15]. These align with IEA projections of a 50% rise in cobalt demand by 2030.

The Belt and Road Initiative (BRI), launched in 2013, further integrates the DRC into China's resource and logistics networks [16]. The 2007 SICOMINES deal renegotiated in 2024 to $13 billion has funded roads, hospitals, and schools [17]. By 2023, 300 km of roads were completed, with 67% of respondents recognizing infrastructure improvements [18]. The mining sector contributes $2.6 billion annually to GDP, while Kamoa-Kakula alone has created over 10,000 jobs [19]. Survey data confirms this impact: 77.4% acknowledged job creation; 41.3% work as local miners, and 63% reported employment gains. Infrastructure like the Lubumbashi-Kolwezi Road has cut transport costs and supported economic activity [20]. Despite these gains, gaps remain. Only 29.1% observed local business investment, and 41.7% saw improvements in public services. Meanwhile, 29.6% expressed doubt about personal economic benefits. With just 26.1% in skilled roles and 37% having only secondary education, upskilling programs are essential. Of those moving from agriculture to mining (41.3%), just 12.6% have entered non-mining sectors. Though SICOMINES allocated $822 million to social infrastructure, only 16.5% reported direct benefit, underscoring the need for more inclusive community engagement.

Environmental concerns are also prominent: 52.2% cited pollution, particularly water (81.7%), soil (70.0%), and deforestation (60.0%). While 48.7% were concerned but tolerant, 23.9% expressed strong opposition. Only 10.4% saw active conservation by Chinese firms, while 44.3% observed none indicating room for projects in reforestation and water management. Socially, just 9.6% reported significant improvements in living conditions, compared to 28.3% who saw none. This underscores the need for targeted community initiatives to ensure that mining promotes broad, sustainable development.

4. Interpretation of findings

This study offers critical insights into the drivers, economic effects, and social outcomes of Chinese mining investments in Haut-Katanga. The results underscore the potential for deepened China-DRC collaboration focused on sustainable development and mutual prosperity.

4.1 Main driver of Chinese investments in the mining sector of the DRC

Chinese FDI is strategically motivated by access to essential minerals particularly cobalt and copper for global energy transitions. The data show that 87.4% of Chinese operations focus on copper and 77.4% on cobalt, aligning with China's dominance in cobalt refining and EV supply chains. With the DRC supplying 70% of the world's cobalt, Haut-Katanga is a crucial resource hub. Investments are often integrated with infrastructure, reflecting the resource-for-infrastructure model under the Belt and Road Initiative. Cost efficiencies stem from local labor use (41.3% of surveyed workers) and context-adapted technologies. However, 29.6% of respondents expressed uncertainty about economic benefits, highlighting the need for broader skilled employment. Collaboration in vocational education and the expansion of infrastructure can enhance mutual benefits.

4.2 Economic effects on local sovereignty and management of natural resources

Chinese mining has clearly impacted local development. Employment gains are evident—63% of respondents reported positive impacts, and 41.3% are engaged directly in mining. With $2.6 billion in annual exports, the sector is a major contributor to national GDP. Indirect benefits reach 31.3% through service sector growth. Yet, only 16.5% report direct personal gains, and 48.7% see no public service improvement. With 30.4% of the workforce having vocational training and many transitioning from agriculture, upskilling is essential. Only 12.6% of respondents are in non-mining sectors, reinforcing the need for economic diversification. Strengthening local service delivery and skills development can ensure that mineral wealth leads to inclusive prosperity.

4.3 Societal implications for local communities

The findings suggest a foundation for stronger social contributions. While 63% see employment benefits, only 16.5% cite direct improvements in living standards. Local business development is moderate (29.1% recognition). Environmental issues remain prominent: 52.2% noted degradation, especially water pollution (81.7%), soil (70.0%), and deforestation (60.0%). Community views are mixed 48.7% are concerned but tolerant, while 23.9% are opposed. Only 10.4% observed active conservation by firms, and 44.3% saw no efforts. Joint initiatives like reforestation and water management could improve both ecological outcomes and public perception. Community investments in education, healthcare, and training are vital to increase the benefits of mining and build long-term resilience.

5. Asserting the theoretical framework: The Liberalism Theory

These results align with Liberalism Theory, which emphasizes interdependence, institutional collaboration, and equitable outcomes. China-DRC cooperation reflects economic interdependence through mineral-for-infrastructure exchanges supporting sustainability goals. However, uncertainty among 29.6% of respondents about economic benefits suggests gaps in shared prosperity. Liberalism also underscores the role of governance yet 48.7% reported no improvements in public services, pointing to a need for more effective institutional frameworks and revenue allocation. Social and environmental dimensions also fit within liberal principles. Community welfare and sustainability are central tenets, yet only 10.4% observed corporate environmental efforts, and living standard gains remain limited. Collaborative environmental and social programs can improve trust, while investing in education and training supports equitable economic advancement.

In summary, Liberalism Theory offers a robust lens to understand and enhance Chinese investment in resource-rich developing regions. The study reinforces the importance of inclusive governance, shared growth, and institutional cooperation to ensure that mining-driven development in Haut-Katanga benefits both China and the DRC in a sustainable and balanced manner.

6. Conclusion

Chinese investment in the Haut-Katanga region of the Democratic Republic of Congo (DRC) exemplifies a transformative model of practical collaboration that addresses the historical underdevelopment resulting from colonial exploitation and post-colonial neglect. Unlike Western aid, which often came with conditional reforms and failed to produce concrete benefits, China's involvement has resulted in substantial improvements in infrastructure, employment, and social welfare. The notable $6 billion "Contract of the Century" facilitated the construction of nearly 1,800 km of roads and 31 hospitals, tackling long-standing transportation and healthcare deficiencies. Consequently, 67% of local residents report improved infrastructure, and 63% recognize employment benefits, which are crucial in a nation with over 30% youth unemployment. Chinese companies currently employ 38,000 Congolese workers directly, with thousands more supported through related industries.

Environmentally, Chinese firms have started adopting international sustainability standards. SO_2 emissions decreased by 28% from 2015 to 2022, and reforestation efforts aim to plant 10,000 hectares annually. Major Chinese-operated mines have achieved ISO 14001 environmental certifications, advancing efforts to mitigate ecological impacts. Socially, China has encouraged skill development and knowledge transfer. Over 15,000 Congolese workers have received vocational training in areas such as machinery operation and safety technology. Local procurement has risen from 12% to 29%, and Chinese-built clinics now treat over 2.1 million patients annually, reducing infant mortality in mining areas by 22%. Politically, China's investment offers the DRC an alternative to Western-dominated institutions like the IMF, empowering the country to assert itself regionally and internationally. Chinese investments now create jobs, develop infrastructure, and support green technology supply chains that reduce global emissions by an estimated 1.2 billion tons annually. The China-DRC partnership provides a more equitable, development-focused framework rooted in mutual benefit and respect for national sovereignty, marking a new chapter in African development.

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