Entering the mining value chain: A firm survey from the Copperbelt, Zambia

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- This policy brief presents findings from a study exploring the characteristics of firms participating in the mining global value chain (GVC) in the town of Kitwe, located in the heart of the Copperbelt in Zambia.
- We surveyed 1,055 firms, with the results showing that 9.1% of them have supplied a mine in the last five years.
- Firms that supply mines are slightly older and more likely to be registered with local authorities. Micro-enterprises (those with fewer than 10 employees) are 10 percentage points less likely to supply a mine.
- Exploring self-reported constraints to entering the mining GVC, we find that competition, low demand from mines, and lack of connections are the main obstacles, followed by bribes and corruption. These results contrast previous literature that has emphasised tax policy, regulation, and credit access.
- Firm representatives uniformly agree that mining firms should procure more goods and services from Zambian firms, and 74% report a desire to be part of the mining global value chain.
- Firms report that bribes and corruption pose an obstacle to transacting with mines. This may render local content policies, a popular policy tool to boost backward linkages, inefficient.

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Backward linkages in a mineral-rich economy

The mining industry has long been accused of acting like an enclave industry with weak linkages to the domestic and local economy in which it operates. If micro, small-, and medium-sized enterprises (MSMEs) in low- and middle-income countries struggle to enter the mining global value chain (GVC), it reduces the potential for domestic economic growth and shared prosperity from the mining sector. We set out to shed light on firms in the mining town of Kitwe, Zambia, focusing on recent supplier experiences with the mining industry. We surveyed firms with at least one full-time employee and with a permanent structure.

Zambia, a country rich in copper alongside other metals and minerals such as gold and emeralds, has a vibrant mining industry with a long history (Sikamo et al., 2016). An estimated 14% of national GDP and more than 70% of foreign exchange stems from copper mining alone (African Development Bank, 2019). Copper has been industrially mined for over a century in the Copperbelt, and in recent years, new copper mines have opened up in the nearby Northwestern Province (Mulder et al., 2024). The country plans to significantly boost its copper production in the coming decades to meet the growing global demand driven by the green energy transition, which relies heavily on copper for electric vehicles and other electronics.

In the face of an expected "boom" in global copper demand, it is imperative that we understand the local linkages and constraints to a deeper economic integration of the mining sector into the local economy.

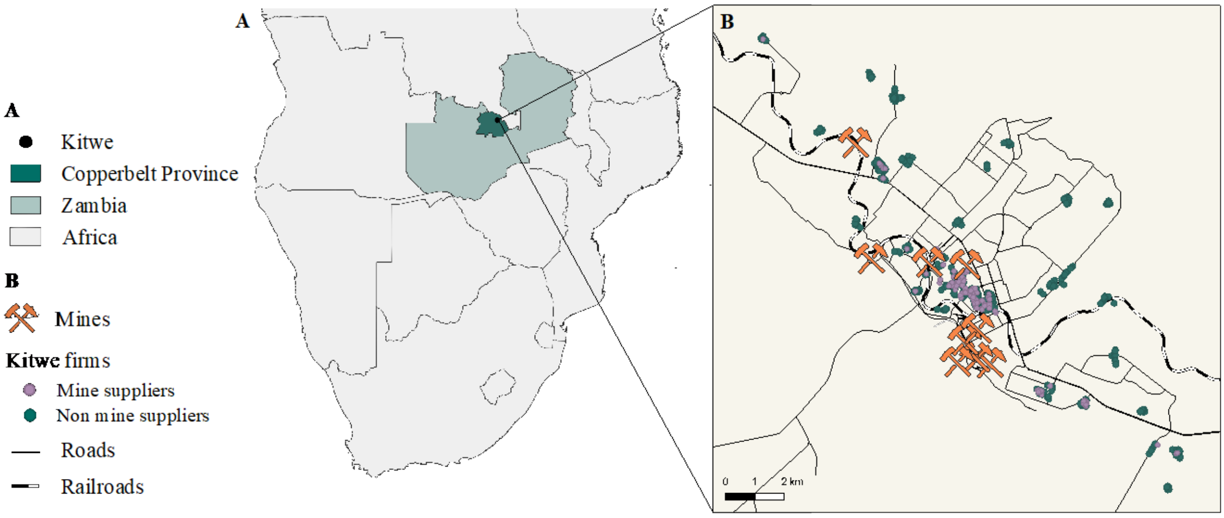
A firm survey in Kitwe, Zambia

We collected a questionnaire from 1,055 firms in the city of Kitwe, Zambia[1]. The sample inclusion restrictions were that the firm has a) a permanent structure from where it operates and b) at least one full-time employee. Out of the surveyed, 1,055 firms, 91.5% were registered formal firms.

Our survey focuses on Kitwe, a larger town situated in the heart of the Copperbelt. Figure 1 shows the town of Kitwe, with main roads, railways and mines indicated. We included actual mines, such as mine shafts – of which there are several inside the town of Kitwe – as well as mining headquarters. Figure 1 shows a pattern with mine suppliers, indicated by purple dots, being located closer to the main cluster of mines. In contrast, green dots – representing non-mine suppliers – are more geographically spread.

[1] The module was collected as part of a research study undertaken by UC Berkeley and the IGC. The data collection took place during January to March 2024. The survey team visited the different areas of Kitwe and followed a left-hand rule to construct a random sample. The sample may be undersampling large firms, due to lower response rates.

FIGURE 1: Map of Zambia and firm locations in Kitwe

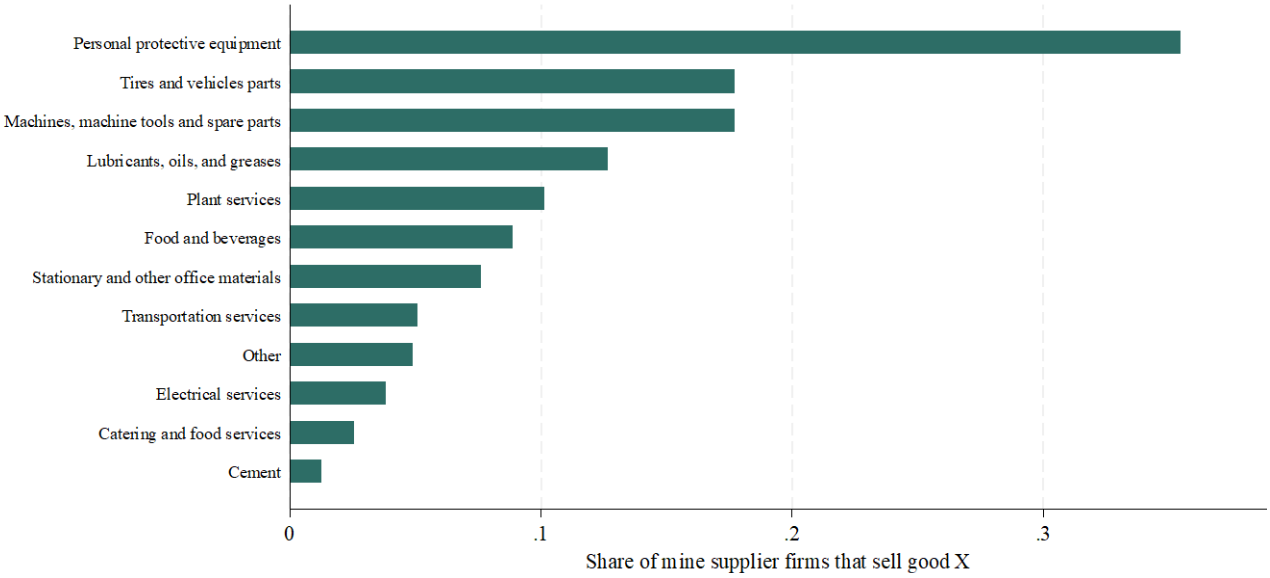


Out of the 1,055 firms surveyed, 9.10% of firms are regularly (0.95%) and occasionally (8.15%) selling to mining firms. Firms that supply to mines are older and have more full-time workers. Having a male business owner is associated with an insignificant but quantitatively large effect on the likelihood of having supplied at least one mine in the last 12 months. This echoes previous research, which found that women owners (who constitute 28% of owners) have a harder time entering the mining global value chain in Zambia (Kanyinji & Tembo, 2019).

> **Despite only 9.10% of firms reporting that they have sold goods or services to a mining firm in the last five years, 74% of firms wish to sell to mining firms or increase the sales volume of existing orders. This points to a high level of unmet demand among firms in Kitwe for joining the mining global value chain.**

Despite only 9.1% of firms reporting that they have sold goods or services to a mining firm in the last five years, 74% of firms wish to sell to mining firms or increase the sales volume of existing orders. However, only 5% of the Zambian mining industry's input requirements are sourced domestically (Fessehaie & Rustomjee, 2018). This points to a high, unmet demand for joining the mining global value chain among firms in Kitwe. The question is: What is holding them back?

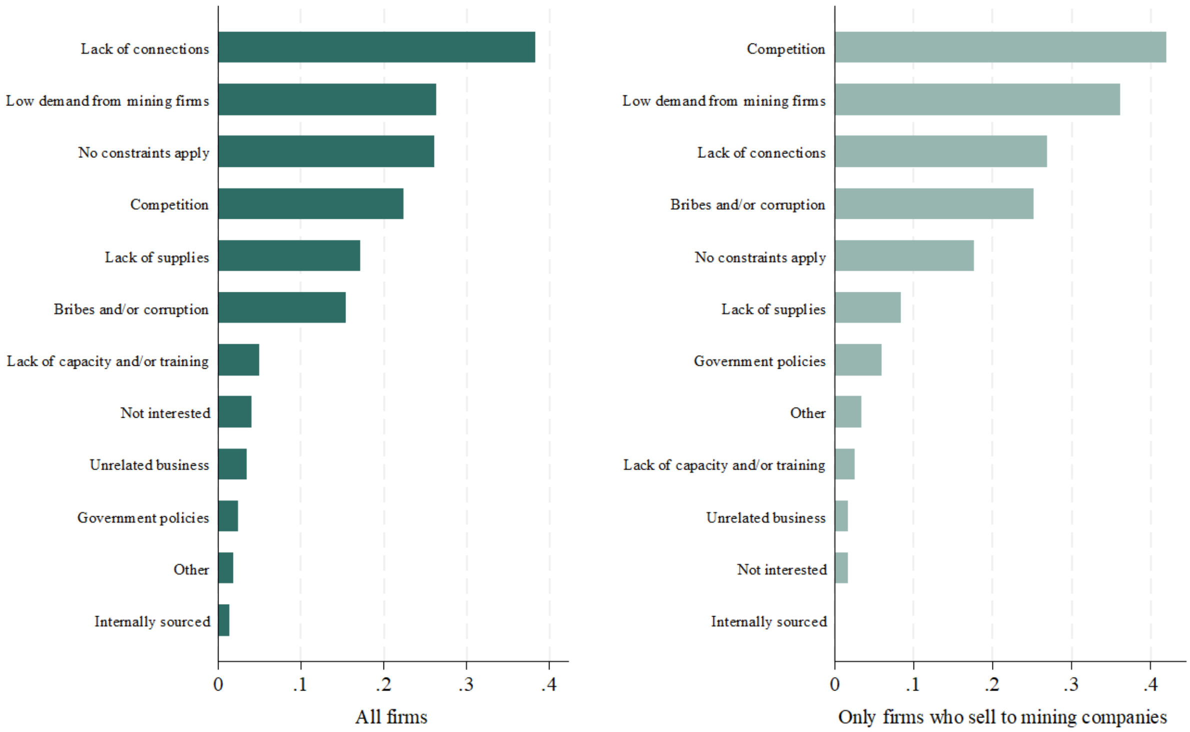
FIGURE 2: Goods and services sold by firms to mining companies



Constraints to joining the mining global value chain

We directly asked firms which constraints hinder them from selling more to mines. Figure 3 shows that lack of connection is the most common constraint among all firms, followed by low demand and high competition. Caramento (2021) highlights how privatisation has further complicated efforts to deepen backward linkages in Zambia's copper mining sector, noting that liberalisation shifted procurement toward international suppliers, decreasing local demand and increasing competition. The right side of Figure 3 shows that firms that are mine suppliers cite competition and low demand as the main reasons, followed by lack of connections, despite being connected with at least one firm within the last 5 years. Bribes and corruption, as well as a lack of supplies, are commonly listed constraints for both groups.

FIGURE 3: Constraints to supplying the mining industry, reported by firms



How can Zambia strengthen local backward linkages?

Forging stronger linkages between local firms and mining firms in Kitwe would help strengthen the economic footprint of the mining sector in Zambia and generate more inclusive growth. We note that micro-enterprises have particular challenges in joining the mining global value chain. Most respondents agreed that mining firms operating in Zambia should purchase more goods and services from Zambian firms, and 74% reported being interested in supplying more goods and services to mining firms. Studies find that firms integrated into multinational supply chains experience substantial growth in sales, workforce, and assets, highlighting the positive impact of integration with larger, established networks (Alfaro-Ureña et al., 2022). However, it remains a policy challenge to increase backward linkages between the mining sector and the local economy, as well as help local firms achieve their targets.

Despite this interest, local suppliers often find it challenging to penetrate the technical and high-skill service sectors, such as mining, due to capacity gaps and high financing costs (Ba & Jacquet, 2022). Firms report that they suffer from a lack of supplies, preventing them from fulfilling demands for larger orders from mining companies. Previous studies have found that the mines, instead, report poor quality and lack of adherence to international product standards as obstacles to purchasing from local suppliers (Fesshaie et al., 2015). Therefore, in reality, both the quantity and quality of goods and services provided locally may need to be considered.

Both existing and potential mine suppliers report that bribes and corruption pose obstacles to transacting with mines. Local content policies, a popular policy tool to boost local backward linkages of the mining industry, may be inefficient in a context with high corruption (Ba & Jacquet, 2022). Proper monitoring and evaluation of local content policies, along with a whistleblowing system, could help foster a more successful integration of the industry into the local economy.

Policy recommendations

- Improve networking opportunities and connections between local firms and mining companies, especially for micro-enterprises and women-owned firms.
- Build capacity among existing local firms through programs aiming to increase the scale of the business and quality of output.
- Support future entrepreneurship through world-class education geared toward the mining sector (Lombe, 2018).
- Ensure proper monitoring and evaluation of local content policies alongside a whistleblowing system.

References

African Development Bank. (2019). Analysis of input goods and services in Zambia's mining industry. Opportunities for creating domestic linkages in the short and medium term. African Development Bank: African Natural Resource Centre.

Alfaro-Ureña, A., Manelici, I., & Vasquez, J. P. (2022). The effects of joining multinational supply chains: New evidence from firm-to-firm linkages. *The Quarterly Journal of Economics, 137*(3), 1495–1552.

Ba, D. G., & Jacquet, J. B. (2022). Local content policies in west Africa's mining sector: Assessment and roadmap to success. *The Extractive Industries and Society,* 9, 101030.

Benshaul-Tolonen, A. (2024). Backward linkages in the copper mining sector in Zambia. Unpublished.

Caramento, A. (2019). Cultivating backward linkages to Zambia's copper mines: Debating the design of, and obstacles to, local content. *The Extractive Industries and Society, 7.*

Fessehaie, J., das Nair, R., Ncube, P., & Roberts, S. (2015). *Growth promotion through industrial strategies—Zambia* (Working Paper No. 6). CCRED.

Fessehaie, J., & Rustomjee, Z. (2018). Resource-based industrialisation in Southern Africa: Domestic policies, corporate strategies and regional dynamics. *Development Southern Africa, 35*(3), 404–418.

Kanyinji, P., & Tembo, G. (2019). Supplier entry barriers to the mining global value chain in Zambia: A regression analysis. *Asian Journal of Business and Management, 7*(4), ISSN: 2321-2802.

Lombe, W. C. (2018). Local content in Zambia—a faltering experience? In J. Page, & F. Tarp (Eds.), *Mining for Change: Natural Resources and Industry in Africa* (pp. 422–446). Oxford University Press.

Mulder, N., Bryan, G., Lee, N., Oliveira Cunha, J., Shawa, B., Wani, S., & Werker, E. (2024). Unlocking economic prosperity in the Zambian Copperbelt (Policy Paper). International Growth Centre.

Sikamo, J., Mwanza, A., & Mweemba, C. (2016). Copper mining in Zambia – history and future. *Journal of the Southern African Institute of Mining and Metallurgy, 116*(6), 491–496.