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# Implementation of local content regulation

## The case study of a foreign-owned mining operation in Tanzania

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This publication results from Sustainable development solutions for Tanzania – strengthening research to achieve SDGs, a collaborative project between the UONGOZI Institute in Dar es Salaam, Tanzania, and UNU-WIDER in Helsinki, Finland, with a main research objective of informing the development and implementation of policies aiming for economic transformation and sustainable development in Tanzania and the East African region. With financial support provided by the Ministry for Foreign Affairs of Finland, the joint project was launched in 2018 with key research questions giving the partners a framework for collaboration and the research work to be undertaken. The project focuses on macroeconomic perspectives, domestic resource mobilization, extractives, industrialization, sustainable livelihoods, and gender as a cross-cutting issue. The project provides local stakeholders a platform for research and policy discussions on Tanzania and bridges these discussions to the regional and international development debate.

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**Abstract:** Based on a case study of an anonymous mining company in Tanzania, this study assesses the implementation of the local content (LC) regulations and guidelines in the country. The analysis focused on the key LC aspects of the direct workforce (employment and training), procurement of goods and services, and technological transfer to uncover the extent to which the company implements the LC regulations. Findings show that the share of Tanzanian nationals in the total workforce of the company was as high as 98 per cent, with the wage share of the nationals increasing from 80 per cent (2018) to 84 per cent (2020). The trend is attributable to the company's investments in its own succession plans targeting skills and employment transfer from foreigners to Tanzanians. The value of local procurement also increased from 85 per cent (2018) to 87 per cent (2020). In 2020 for instance, three out of the top five local vendors (in terms of the value of supplies) were joint ventures between local and foreign companies. Measuring mining companies' commitment to the regulations on technology transfer remains difficult, mostly because the regulations lack clarity on what exactly technology transfer entails. The study also discusses other challenges confronting LC implementation in the mining sector of Tanzania and the potential policies to address such challenges.

**Key words:** local content regulation, mining company, direct workforce, procurement of goods and services, technology transfer, Tanzania

**JEL classification:** N50, N57, O10, O13

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# 1 Introduction

Local content (LC) initiatives have been conceptualized to play an important role in fostering socio-economic development, by addressing unemployment challenges, boosting private sector development, and advancing the capabilities of the local workforce and enterprises (Acheampong et al. 2016; IPIECA 2016; Kazzazi and Nouri 2012; Lange and Kinyondo 2019; Tordo et al. 2013). Such initiatives have been commonly applied not only in resource-rich developing countries (Ramdoo 2018) but also in the developed world including OECD countries (Dietsche 2018; Stone et al. 2015).

Tanzania has developed LC measures in several sectors, one among which is the mining sector. Such measures include both general measures and sector-specific regulations. The former includes multi-sectoral LC guidelines and a national economic empowerment policy. Sector-specific measures include Tanzania's Mineral Policy 2009 (United Republic of Tanzania 2009), the Mining Act 2019 (Chapter 123; United Republic of Tanzania 2019), and the Mining (LC) (Amendments) Regulations, 2018 as amended in 2019 (United Republic of Tanzania 2018). The multi-sectoral LC guidelines are not backed by legal instruments unlike the mining LC regulations based on the Mining Act 2019 (Chapter 123).

Despite years of implementation, the literature on LC implementation remains scarce. Using the mining industry as a case, the present study attempts to fill this gap by responding to two research questions: (i) To what extent are LC measures being implemented in the mining industry? (ii) What are the challenges associated with implementing LC measures in the mining industry?

This paper is organized as follows. The next section reviews the literature on LC in Tanzania. Section 3 presents key features of the LC regulatory environment in Tanzania, followed by Section 4 that describes the data used in this study and the associated methodological approach. Sections 5 and 6 present findings from the study and policy recommendations and Section 7 concludes this study report.

# 2 Literature review

The volume of research on LC in Tanzania has risen in recent years. The driving force behind such a trend includes increasing discoveries of minerals and gas reserves in the country, the subsequent increasing foreign direct investment (FDI) in the extractive industry, and the uncertainty about whether Tanzania is optimally localizing gains from the extractive industry. The recent gas discovery has raised expectations (in the Tanzanian population and, particularly, in host communities) on the potential linkages that the extractive industries can offer to the domestic economy. Such expectations arise from statements such as 'Tanzania is expected to be one of the leading producers and exporters of natural gas in the coming decade' (see the discussion in Kinyondo and Villanger 2017: 3).

Research on LC in Tanzania has covered the analysis of legal and institutional frameworks (; Butler 2004; Ellis and McMillan 2018; Lee and Dupuy 2018; Ovadia 2016), the interactions between mining companies and local communities (Bishoge et al. 2022; Lange and Kinyondo 2019; Jacob et al. 2016; Pedersena and Kweka 2017), and the challenges linking small-scale suppliers, including farmers, to the extractive industry (Bezu et al. 2019; Lange and Kinyondo 2019; Kinyondo and Villanger 2017). The political economy of the extractive industry, including state involvement in

the industry beyond its regulatory function, has also been an area of research interest (for instance, see Jacob et al. 2016; Lobe et al. 2019; Mmari and Bukurura 2016).

Relative to other resource-rich nations in sub-Saharan Africa, Tanzania's LC regulatory environment is considered to be less developed. It is constrained by overlapping institutional mandates (Ovadia 2019; Pedersena and Kweka 2017) and by being the least detailed (Ovadia 2016). In the absence of explicit measurements, the regulations only *encourage* foreign companies to engage local companies (Ovadia 2016). Tanzania's mining laws are also considered inadequate when it comes to the overall objective of maximizing local gains. The laws seem to fit the resource nationalism narrative, especially through maximizing economic rents from large-scale mining companies, but lack adequate means, for instance, to address challenges facing the artisanal miners (Kinyondo and Huggins 2019).

These limitations, as noted by Lange and Kinyondo (2019), suggest that the Tanzanian government is being pulled by two contradictory objectives. On the one hand, there is a need to advance policies that support increasing economic benefits from natural resource extraction. On the other hand, there is a need to make the country sufficiently attractive for FDI in the extractive industry (Lange and Kinyondo 2019). Some of the literature has therefore called for increased enforcement of regulations (Ovadia 2019) coupled with explicit LC measures and targets. Despite these calls, Tordo et al. (2013) advocate for a cautious approach to introducing explicit LC targets as supply bottlenecks may worsen when too ambitious LC targets are set. The need to put in place clear lines of regulatory authority is also encouraged, particularly in the areas of training and skills development and the development of small and medium enterprises (Ovadia 2019).

Despite offering useful insights, these qualitative studies fail to answer an important question on the extent to which the current extractive operations fulfil LC provisions.[1] Few studies have attempted to fill such gaps, although with opposing conclusions. Hansen (2013), for instance, finds few linkages between the extractive industry and local benefits, a finding that amplifies the already widespread concerns that extractive FDI leaves too few development benefits for Tanzanian society. On the other side, Ellis and McMillan (2018) confirm successful LC initiatives, particularly in employment generation and skills development. The same study also observed differences between foreign and local companies, with the former spending more on training than the latter. The work presented in our study complements the findings from Hansen (2013) and Ellis and McMillan (2018) by presenting trends from one of the largest mining operations in Tanzania on LC benefits using specific LC metrics included in the LC regulations.

## 3 LC regulatory framework in Tanzania

The conceptualization of LC in Tanzania is based on the definition of LC as presented by the government entity that is mandated to regulate LC in the country, that is, the National Economic Empowerment Council (NEEC). NEEC defines LC as the value created in the economy through the deliberate utilization of human and material resources and services in investments to stimulate

[1] Such provisions range from forbidding provision of any type of services by an international service provider to mining set-ups in Tanzania if the same does not feature at least a 20 per cent equity stake owned by Tanzanians, submission and approval of the LC plan, an employment and training sub-plan and succession plan, and the programme for a research and development sub-plan. The provisions also include the requirements to submit technology transfer programmes and reports and an annual LC performance report. The regulations compel mining companies to use local insurance and legal and financial services.

the development of capabilities and encourage local investments, ownership, and participation (NEEC 2019).

LC is not a new phenomenon in Tanzania. Its regulatory frameworks can be traced back to the 2000s when the government and the private sector identified mechanisms for improving local participation in the country. Such engagement paved the way for developing the National Economic Empowerment Policy in 2004. The policy intended to ensure that Tanzanians have access to opportunities to participate effectively in all sectors of the economy (United Republic of Tanzania 2004).

In 2019, the government introduced multi-sectoral LC guidelines. The guidelines aim to ensure the deliberate utilization of Tanzanian human and material resources, goods, works, and services. They emphasize deliberate measures to ensure the capacity development of Tanzanians, technology transfer, and that the local communities benefit from investments in their areas. In addition, the LC guidelines identify cross-cutting issues necessary to enhance opportunities for Tanzanians to engage in foreign investments operating in the country. Such issues include public procurement, education, science and technology, employment, finance, and insurance. Much as the guidelines are pro-multiple sectors, the mining sector is mentioned in the guideline document as among the priority sectors.

The institutionalization of LC in Tanzania was further enhanced by introducing the Natural Wealth and Resources (Permanent Sovereignty) Act 2017 and the Natural Wealth and Resources (Review and Re-Negotiation of Unconscionable Terms) Act 2017. While the former emphasizes that Tanzanians are the owners of natural resources and must benefit from them, the latter mandates the government to renegotiate or outright remove terms that parliament deems unconscionable. Thus, the government could remove clauses in the Mining Act that are considered unfavourable to local participation in the mining industry (Kinyondo and Huggins 2018).

The specific LC agenda in the mining industry can be traced from the Mineral Policy of 2009 and the Mining Act of 2010. Specifically, the Mining Act requires (i) applications for a special mining license to contain a procurement plan of goods and services available in Tanzania, (ii) a plan for the employment and training of Tanzanians, (iii) a succession plan for expatriate employees, and (iv) technological transfer.

The Mining Act of 2010 was amended to explicitly introduce LC measures in 2017 to comply with the newly introduced strategic laws. This was followed by the development of mining LC regulations in 2018, and the key changes brought forth by the Mining LC (Amendments) Regulations 2019. The regulations intend to (i) develop local employment and the domestic labour market, (ii) transfer skills, technology, and knowhow to locals, (iii) create local value, increase local linkages, and develop domestic industry, (iv) diversify the economy, (v) promote innovation, technology, research, and development, vi) ensure local ownership of the mining industry, (vii) create revenue streams from minerals, and (viii) develop local community projects. The Mining Commission, under the Ministry of Minerals, was established to oversee the implementation of the mining sector LC regulations.

The LC measures, both general and sector-specific, intend to transform the short-term benefits of foreign mining investment into long-term local development through two main domains: direct workforce and supply chain.

## 4 Methodology and data

To respond to the first research question—to what extent are the LC measures being implemented in the mining industry?—the study uses administrative data from an anonymous mining company. The identity of the company is not disclosed for the confidentiality of the management information that was provided to the researchers. The data entirely focused on the specific reporting template required by the national LC guidelines. To measure progress or lack of progress on LC measures, the company's administrative data were analysed descriptively. Some of the data covered three years to allow for trend analysis.

Data for the second research question—on the challenges associated with implementing LC measures in the mining industry—come from the interviews with the company's officials and the documentary review of published reports. The analysis of the challenges associated with LC implementation in Tanzania uses a problem tree analytical approach. The approach categorizes the causes of the development challenges (i.e., LC implementation, in this case), between the root, underlying, and immediate causes.

## 5 Findings and discussion

### 5.1 Implementation of LC measures in the mining industry

#### *5.1.1 Direct workforce: employment*

In 2018, the share of Tanzanian nationals in the workforce was already high at 97 per cent, increasing to 98 per cent by 2020 (Table 1). The two rates are higher by 3 percentage points compared with the average for 17 mining companies in Tanzania whose data were published by Mzumbe University (see DELCE 2020). The two rates are also higher than the averages of the mining companies in Nigeria (Appendix Table A1) and Ghana (Appendix Table A2).

In absolute terms, the number of Tanzanians employed by the company increased by 37 individuals between 2019 and 2020, with the number of foreigners declining marginally by five during the same period (from 56 to 51 foreigners). The trend is attributed to the company's succession plans that target skills and employment transfer from foreigners to Tanzanians. It is worth mentioning that the overall workforce share of Tanzanian nationals is likely to be high because they dominate the low- to medium-skilled positions that tend to characterize mining activities. This could change in the future with increasing automation in mining reducing the use of low-skilled labour and increasing the need for technical skills. In terms of sex disaggregation, at 86 per cent, the company's employees are predominately male. Worldwide, the mining sector is overwhelmingly a male occupation. The disaggregation of employees by sex follows the national LC guidelines.

Similar to the shares of nationals in the workforce, much of the company's wage bill is retained locally. This is reflected in Table 1 where Tanzanian employees captured 84 per cent of the company's wage bill in 2020, an increase from 80 per cent in 2018 and 2019. In absolute terms, as the company's total wage bill was increasing, the amount accruing to national employees was also increasing. For instance, between 2019 and 2020, the company's wage bill for national employees increased by 22.9 billion Tanzanian shillings (TZS), while that of foreign workers declined by TZS1.5 billion. The trend is also attributed to the company's succession plans and deliberate efforts to provide more benefits to nationals.

Table 1: Local content (LC) metrics on the direct workforce—employment

| | 2018 | 2019 | 2020 |
|---|---|---|---|
| % of employed nationals (male) | 97 | 97 | 97 |
| No. of employed nationals (male) | 1,576 | 1,758 | 1,780 |
| No. of employed foreigners (male) | 54 | 54 | 50 |
| Total | 1,630 | 1,812 | 1,830 |
| % of employed nationals (female) | 98 | 99 | 100 |
| No. of employees (female) | 193 | 215 | 230 |
| No. of employed foreigners (female) | 3 | 2 | 1 |
| Total | 196 | 217 | 231 |
| % of employed Tanzanians | 97 | 97 | 98 |
| No. of employed Tanzanians | 1,769 | 1,973 | 2,010 |
| No. of employed foreigners | 57 | 56 | 51 |
| Total | 1,826 | 2,029 | 2,061 |
| % of employed Tanzanians with disability | — | 100 | 100 |
| No. of Tanzanians with disability | 0 | 1 | 1 |
| No. of foreigners with disability | 0 | 0 | 0 |
| Total | 0 | 1 | 1 |
| Annual wage bill retained locally % of total | 80 | 80 | 84 |
| Wage bill to Tanzanians (TZS million) | 75,656 | 93,059 | 116,000 |
| Wage bill to foreigners (TZS million) | 19,335 | 23,308 | 21,788 |
| Total | 97,009 | 118,386 | 139,808 |

Note: '—' represents data not applicable.

Source: authors' compilation based on study data.

### *5.1.2 Direct workforce: training*

The company focuses on in-house training as the primary delivery mechanism for the capacity-building component of LC. As presented in Table 2, the proportion of national employees to have been engaged in training sessions increased from 5 per cent (2018 and 2019) to 6 per cent (2020). The 6 per cent share in 2020 amounts to 117 national employees—an increase from 93 national employees in 2018 and 2019. These training sessions covered a range of thematic areas. The management courses, for instance, covered topics, from business management, leadership, and planning to maintenance management, community projects management, planning, and scheduling.

The training also covered mining operations-related topics. They ranged from data mining and other information technology skills, heavy equipment machine lifting, and machine operation to blasting, geographical information systems, filter mechanics, and the use of fire pump trucks and advanced architectural drawings. Other mining-related courses that the company invested in national employees include safety-related (first aid coordination, safety standard, emergency rescue) programmes. The diversity of the training courses went as far as to also include training on the compliance of labour and mining laws.

Table 2: Tanzanian employees benefiting from the company's sponsored training

| | 2018 | 2019 | 2020 |
|---|---|---|---|
| % of nationals trained (male) | 5 | 5 | 6 |
| No. nationals trained (male) | 84 | 84 | 105 |
| No. of nationals untrained (male) | 1,492 | 1,758 | 1,786 |
| Total | 1,576 | 1,842 | 1,891 |
| % of nationals trained (female) | 5 | 4 | 5 |
| No. nationals trained (female) | 9 | 9 | 12 |
| No. of nationals untrained (female) | 184 | 215 | 230 |
| Total | 193 | 224 | 242 |
| % of nationals trained | 5 | 5 | 6 |
| No. nationals trained | 93 | 93 | 117 |
| No. of nationals untrained | 1,676 | 1880 | 1,893 |
| Total | 1,769 | 1,973 | 2,010 |

Source: authors' compilation based on study data.

### *5.1.3 Procurement of goods and services*

#### *5.1.3.1 Procurement of goods*

The value of procurement locally sourced was already high at 85 per cent in 2018, increasing to 87 per cent in 2020. The company's management data show that three out of the top five local vendors in 2020 (in terms of the value of supplies) are joint ventures (JVs) between local and foreign companies. The trends indicate JVs as a potential vehicle to retain mining sector benefits locally (Table 3).

Table 3: LC investment in the procurement of non-financial goods and services

| | 2018 | 2019 | 2020 |
|---|---|---|---|
| Value of procurement accrued to local vendors (%) | 85 | 85 | 87 |
| Value of goods and services from local vendors (US$ million) | 380.9 | 379.8 | 85.5 |
| Value of imported goods and services (US$ million) | 70.0 | 69.3 | 12.8 |

Source: authors' compilation based on study data.

#### *5.1.3.2 Procurement of services (financial and legal)*

LC in financial-related services is regulated by Regulations 31, 32, and 34 of the Mining (LC) Regulations 2018, and the key changes brought forth by the Mining (LC) (Amendments) Regulations 2019. The national LC guidelines, however, are silent on procuring financial services. Table 4 shows that the legal fees lead the way with 100 per cent localization. Audit fees follow next where about 41 per cent of the value was retained locally, an increase from 39 per cent in 2018. The local share of insurance fees has been on the decline standing at 18 per cent in 2020, a rate that is close to half of the rate in 2018. It is worth mentioning that in the absence of benchmarks (e.g., national targets) and comparable data from other countries, it is difficult to place value judgements on the observed local shares.

Table 4: LC investment in the procurement of financial and legal services

| | 2018 | 2019 | 2020 |
|---|---|---|---|
| Audit services | | | |
| % TZS value of audit fees received by local suppliers | 38.8 | 31.6 | 40.8 |
| Value of audit fees received by local suppliers (TZS million) | 369.0 | 263.2 | 636.7 |
| Value of audit fees received by foreign suppliers (TZS million) | 582.1 | 568.7 | 923.2 |
| Total (TZS million) | 951.17 | 831.85 | 1,559.88 |
| Insurance services | | | |
| % of TZS value of insurance fees received by local suppliers | 24.7 | 23.6 | 18.3 |
| Value of insurance fees received by local vendors (TZS billion) | 1.6 | 1.9 | 2.1 |
| Value of insurance fees received by foreign vendors (TZS billion) | 4.9 | 6.3 | 9.5 |
| Total (TZS billion) | 6.49 | 8.18 | 11.64 |
| Legal services | | | |
| % of TZS value of legal fees received by local vendors | 100 | 100 | 100 |
| Value of legal fees received by local vendors (TZS million) | 1,173.5 | 1,173.5 | 1,173.5 |
| Value of legal fees received by foreign vendors (TZS million) | 0 | 0 | 0 |
| Total (TZS billion) | 1,173.5 | 1,173.5 | 1,173.5 |

Source: authors' compilation based on study data.

### *5.1.4 Technology transfer*

Data on technology transfers were provided to the researchers in qualitative form. It is worth noting that one of the challenges for technological transfers in capital-intensive industries such as mining is that most types of equipment are patented and invented by non-mining companies (e.g., software companies), which the mining companies use under licence. Because of such limitations, technological transfer can be assessed in terms of the skills necessary to operate the equipment.

Table 5 reports on the company's activities that can be associated with technology transfer. Technology transfer that the company invested in ranges from assembling heavy mining equipment to operating several types of equipment. The advantages of such training are both short term and long term. It is short term because training beneficiaries gain skills and can apply such skills immediately in their current area of work. It is long term because the training creates a national pool of labour for future work opportunities in the same mining industry.

Table 5: Reported activities associated with technology transfer

| Activities | Perceived outcomes |
|---|---|
| Use of simulator equipment: two simulator bases with seven kits (i.e. jumbo simulator kit, light vehicle kit, underground trucks kit, 785 truck kit, tele-remote bogger kit, bogger kit, solo kit) | 1. Minimizes equipment damage because operators do not use the real machine until proven competent in the simulator<br>2. Generates confidence in operators when exposed to the real machine<br>3. Quick and easy to build multi-skilled employees<br>4. Cost reduction<br>5. Promotes employees' marketability and employability |
| Heavy mining equipment assembly and maintenance | 1. Cost reduction<br>2. Promotes employees' marketability and employability<br>3. Enhances maintenance effectiveness and efficiency |
| Advanced mining equipment training | 1. Enhances production effectiveness and efficiency<br>2. Creates a national labour pool for future opportunities<br>3. Cost reduction using local equipment operators |

Source: authors' compilation based on study data.

In the context of LC regulations and guidelines in Tanzania, one key challenge with technology transfer is the lack of clarity on what exactly technology transfer entails and the extent to which investors are required to report. The national LC guidelines require investors to report on the duration of the transfers, financial spending, the methods of transfers, and entities that companies collaborate on the transfers. In the absence of a clear conceptualization of technology transfer, systematic reporting from the companies to the regulatory bodies is lacking.

### 5.2 Challenges of LC implementation

The data presented in Section 5.1 show that the company has locally retained significant values from direct employment and procurement of goods and services. This section takes the analysis beyond a single company focus to a sector-wide focus (Table 6). Experience from developing countries shows overall limited LC in most mining operations that involved foreign investments. The reasons point to three root causes for the sub-optimal LC in the mining sector.

The first cause is the disconnection between the mining industry and the institutions of higher education. Given their complex operations, constantly evolving technologies and business models, and the industry's competitive nature; the mining companies are compelled to deploy the best skills possible in their operations. Some of the skills are not supplied by the existing technical schools in developing nations, resulting in the underlying cause of the scarcity of locally qualified technicians meeting the needs of the industry. Such deficiencies compel investors to fill the gaps by hiring expatriates, resulting in low shares of Tanzanian nationals in the management and technical cadres.

A good example is the struggle mining companies face when recruiting underground mining technicians from the national pool of labour force. Such situations worsen when most technical colleges—the mainstay of the supply of technicians to the mining industry—have been transformed into universities that prioritize academic degrees over technical skills. The situation is further worsened when the technical and vocational training sub-sector is perceived as the last resort for prospective students with limited chances of earning degrees.

Another important underlying factor for sub-optimal LC in the mining industry is the dishonesty of some national employees. The behaviour has negatively affected investors' trust in national employees, which has ultimately limited the opportunities available to nationals to fill sensitive positions (the immediate cause of low LC in mining operations). The ethical competencies of national employees are well reported in national business surveys (for instance, see REPOA 2020).

A weak private sector is the second root cause of low LC in mining operations. The weak private sector has, in turn, resulted in limited domestic industries producing equipment and other material inputs to the mining sector (underlying cause). Even if local suppliers exist, they lack the necessary ethical business practices. They tend to be unsure of what they supply, coupled with a lack of necessary technical skills and capacities to serve the sector adequately. Overall, most local suppliers do not have the capacities they claim to have, and they operate informally with limited knowledge, for example, on tax regimes, including the tendency of operating outside the value-added tax regime. Local vendors tend to claim high-profit margins from dealerships with foreign suppliers to the mining industry, even with established business partnerships. In some cases, local vendors ignore tender announcements out of the erroneous belief that mining companies have already preselected suppliers before tender announcements.

Local professional service providers, such as auditors and insurers, also struggle to cope with the complexity and volume of mining operations. Local insurers, for instance, tend to be financially constrained to absorb the risks of large-scale mining operations. Different from international banks, local banks lag in offering advanced online banking services, and interconnectivity with

client systems. This emanates from the overall underdevelopment of the financial sector, particularly in the areas of insurance and banking.

Table 1: Summary of causal analysis of the key challenges in LC-related investments in the mining sector

| | Immediate causes | Underlying causes | Root causes |
|---|---|---|---|
| Low LC in the mining sector | • The low share of benefits being retained locally<br>• Limited opportunities available to Tanzanians to fill sensitive positions | • Unavailability of skills required by the sector (e.g., underground mining skills)<br>• The mismatch between education being provided by the existing technical colleges and the constantly evolving technologies and business models<br>• Dishonesty of national employees | • Disconnect between the industry and institutions of higher education |
| | • Limited success in joint ventures between foreign and local vendors to serve the sector | • Limited domestic industries producing equipment and other material inputs to the mining sector<br>• Lack of necessary behavioural, technical, and financial skills and capacities to adequately serve the sector<br>• Constrained technological integration and compatibility | • Weak private sector to serve the mining sector |
| | • Limited incentives to invest in LC | • Most mining companies are not subjected to audit processes<br>• Lack of an online system to process investors' procurement plans<br>• Inefficient systems to verify ownership of companies supplying to mining companies | • Constrained capacity of regulatory agencies to monitor and enforce LC implementation |
| Lack of data on the foreign components of direct workforce and procurement | • Limited data on wage bills to foreign workers and procurement of imports | • Non-abiding to the reporting template<br>• Absence of investors' in-house structure to report and monitor LC | • Non-binding nature of the national LC guidelines<br>• Limited awareness of LC regulatory requirements of investors |

Source: authors' compilation based on study data.

Despite the willingness of the FDIs in the mining sector to source all or majority of the materials and services locally, the private sector struggles to optimize opportunities provided by, for

instance, JV with foreign suppliers of goods and services to the mining sector.[2] One of the constraining factors is the private sector's struggle in raising finances (including collaterals) to acquire equity in potential JVs. According to the 2018 Mining (LC) Regulations in Tanzania, foreign vendors investing US$100 million in an enterprise within the industry will be required to secure a local partner who can raise US$20 million.[3] The situation is more challenging for short-term supply contracts, which local vendors consider unprofitable to pursue a JV.

The third root cause of low LC in the mining sector is the constrained capacity of regulatory agencies to monitor and enforce LC implementation. This is the case, for instance, in Tanzania where human and financial resource constrains limit the capacity of regulators to verify the owners of supplying companies as well as investing in auditing multiple mining operations (underlying causes). The regulatory process is also paper-based, resulting in delays in approving or disapproving investors' procurement plans.

Limited awareness of LC regulatory requirements on the side of investors is also an obstacle to increasing LC in mining operations. In addition, the non-binding nature of the national LC guidelines coupled with the absence of LC-related legislation in other sectors contribute to the overall low LC in most developing nations. In Tanzania, for example, cement-producing companies (which use minerals such as limestone for cement production) prefer to belong to the manufacturing sector—the sector outside the existing mining and petroleum LC laws and regulations. The non-binding nature of the national LC guidelines in Tanzania also contributes to low LC. Non-binding incentivizes some investors to ignore the reporting template (underlying cause) with the ultimate results being the limited availability of sector-wide data, particularly foreign components of the direct workforce and procurement.

## 6 Policy recommendations and conclusion

Several recommendations can be drawn from this study. For regulatory reforms, it is recommended to improve Mining (LC) Regulations 2018 (Regulation 8(6)) by introducing different approaches to share ownership in JV, including (i) revisiting the current minimum limit of at least 20 per cent local ownership; (ii) allowing JVs to involve more than one local company; (iii) consenting JVs to be for an intended business and not based on total company shares; and (iv) allowing for JVs to be formed by raising capital through the Dar es Salaam Stock Exchange.

Other regulatory-related recommendations include:

- the need to harmonize different definitions of a local company and interpretations in different parts of the regulations and between the act and the regulations;
- review and reduce the number of days associated with regulators approving or disapproving investors' submissions procurement documents; regulators need to be made accountable beyond acknowledging receipts of procurement plans to the time they approve or disapprove the plans;
- reduce the significant volume of LC-related reporting;

[2] In Tanzania, Regulation 8(6) of the Mining (LC) Regulations 2018 states that 'a non-indigenous Tanzanian company [that] intends to provide goods or services to a contractor, a subcontractor, licensee, the Corporation or other allied entity within Tanzania shall incorporate a JV company with an indigenous Tanzanian company and afford that indigenous Tanzanian company an equity participation of at least [20 per cent]'.

[3] The regulations came at a time when the private sector was struggling in Tanzania.

- include a mining industry representative in the LC committees;
- give more clarity on what technology transfer entails; and
- harmonize the existing governing instruments on LC in Tanzania.

On the coordination and promotion of LC, the following are recommended:

- invest in educating the business community on the available JV opportunities in the mining sector;
- facilitate JVs by selecting several local vendors who will be presented to foreign vendors serving the sector in a competitive bidding process;
- education sector needs to embed training on work ethic; and
- invest in exchange programmes for technical and managerial mining cadres between Tanzania and advanced peer countries to advance local capacities. Co-creating such programmes (mining companies and government) may also be considered an alternative possibility.

This study adds to the existing literature by tracking the LC contribution of a foreign-owned mining operation in Tanzania. With the exception of technology transfer, data on the other LC metrics offer useful insights into the extent to which benefits from the company's operations are retained locally. Future studies will need to go beyond company-level case studies by collecting and analysing sector-level data. Such data could stratify mining operations by ownership categories (local versus foreign) as well as by the size of mining operations (capital invested or pool of employees). In time series type studies, the baseline year can be used as a benchmark allowing one to value and judge progress over time. In the absence of mandatory national targets, the baseline year remains the most feasible benchmark.

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## Appendix A

Table A1: Local content (LC) in direct workforce (employment) in Nigeria

| Local | Foreign | Total | % Local |
|---|---|---|---|
| 9,582 | 291 | 9,873 | 97 |
| | | | |
| Male | Female | Total | % Female |
| 9,530 | 343 | 9,873 | 3 |
| | | | |
| Physically challenged persons | Able-bodied men | Total | % Physically challenged persons |
| 6 | 9,867 | 9,873 | 0 |

Source: authors' compilation based on Badejo (2019: 45).

Table A2: LC in direct workforce (employment) in Ghana

| | Industry employees | | International oil companies | |
|---|---|---|---|---|
| | Number | Percentage | Number | Percentage |
| Ghanaians | 5,600 | 80 | 2,315 | 64 |
| Expatriates | 1,400 | 20 | 1,297 | 36 |
| Total | 7,000 | 100 | 3,612 | 100 |

Source: authors' compilation based on Boas & Associates (2015: 81).