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# Who really controls Zambia's mining wealth? Stakeholder influence on inward Foreign Direct Investment

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#### **Abstract**

**Purpose:** This study examines the influence of key stakeholders including the Zambian government, local communities, multinational enterprises (MNEs), and foreign investors on inward Foreign Direct Investment (FDI) in Zambia's mining sector. It seeks to understand how stakeholder dynamics shape investment decisions and sustainability outcomes in this resource-dependent economy.

**Design/Methodology/Approach:** A mixed-methods approach with a convergent parallel design is employed, integrating quantitative and qualitative data. An Autoregressive Distributed Lag (ARDL) model assesses long-term and short-term relationships between Stakeholders' influence and FDI trends, while historical data, policy shifts, corporate social responsibility (CSR) practices, investor perceptions and local economic linkages provide contextual insights.

**Findings:** The findings reveal that Stakeholders' influence exert significant influence on FDI through measures such as CSR expectations and policy shifts and yet disparities in benefit-sharing persist. Foreign investors, especially from China, drive capital inflows but often with limited local economic spill overs. Moreover, policy stability, particularly in taxation and regulatory frameworks, is critical for attracting FDI, with recent reforms showing positive effects. However, Zambia's heavy reliance on mining FDI perpetuates vulnerability to commodity price fluctuations.

**Practical Implications:** The study recommends policy measures to enhance regulatory consistency, promote value addition in mining, and diversify into agriculture and renewable energy. Strengthening local content policies and fostering multi-stakeholder dialogue are essential to ensure FDI contributes to inclusive growth. MNEs should align CSR strategies with community development needs to secure social license to operate.

**Originality/Value:** This study contributes to the literature by providing a comprehensive stakeholder analysis of FDI in Zambia's mining sector, bridging gaps between policy, corporate practice, and community impacts. Unlike previous studies focusing solely on macroeconomic factors, this research highlights the interplay between governance, investor behaviour and local development, offering nuanced insights for policymakers and investors in resource dependent economies.

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#### **INTRODUCTION**

Foreign direct investment (FDI) in Zambia's mining sector has long been a cornerstone of economic growth, yet the distribution of its benefits remains contested. While multinational corporations (MNCs) dominate extraction, the extent to which local stakeholders including the government, traditional leaders, and civil society shape FDI inflows and their outcomes is poorly understood. Studies suggest that Zambia's heavy reliance on copper exports has entrenched external control over mineral wealth, often sidelining domestic interests (Fraser and Lungu 2007). However, emerging research highlights the role of stakeholder bargaining power in negotiating investment terms, from tax incentives to corporate social responsibility commitments (Hansen et al. 2020). This study examines the dynamics of influence among key actors; foreign investors, state institutions, and local communities to determine who ultimately dictates the allocation of mining resources. By analysing policy frameworks, corporate disclosures, and community engagement practices, the study challenges the narrative of passive local participation and explores how stakeholder interactions either reinforce or disrupt foreign dominance in Zambia's mineral economy.

#### OVERVIEW OF STAKEHOLDER INFLUENCE IN ZAMBIA'S MINING SECTOR

Zambia's mining sector, as the cornerstone of the country's economy, attracts diverse stakeholders with competing and sometimes overlapping interests. The sector contributes 72% of export earnings, 44% of government revenues, and 9% of GDP, making it a critical arena for economic and political influence (World Bank 2022). Foreign investors, particularly from China, Australia, and Canada, dominate the sector, drawn by Zambia's abundant copper reserves and cobalt deposits (Mining for Zambia 2023). These multinational corporations prioritise profit maximisation and stable fiscal policies, often lobbying against frequent tax regime changes that have characterised Zambia's mining landscape with ten tax policy revisions in sixteen years (Zambia Extractive Industries Transparency Initiative [ZEITI] 2021). The government, as both regulator and beneficiary through tax revenues, seeks to balance attracting foreign direct investment (FDI) with maximising national benefits, creating inherent tensions in policy formulation (Lombe and Cheelo 2023).

Local communities near mining operations have distinct interests centered on employment opportunities, environmental protection, and social infrastructure development. While mining accounts for only 2.4% of formal employment (International Labour Organization [ILO], 2021), it remains a crucial source of livelihoods in mining regions. Civil society organizations, empowered by initiatives like the Extractive Industries Transparency Initiative (EITI), push for greater transparency in revenue flows and contract terms, challenging both government and corporate opacity (EITI 2020). The Zambia EITI's work has revealed gaps in licensing procedures and enabled civil society to advocate for legal reforms on subnational revenue distribution (ZEITI 2022). Traditional leaders also wield influence as custodians of land under customary tenure, though all land ultimately remains vested in the presidency (Zambia Land Alliance, 2020), creating complex dynamics in mining land acquisitions.

International financial institutions like the IMF and World Bank exert indirect influence through structural adjustment programs and debt relief conditions. Zambia's 2021 \$1.4 billion IMF Extended Credit Facility came with macroeconomic reform prescriptions that impacted mining sector governance (International Monetary Fund [IMF] 2021). The Hichilema administration's 2022 mineral royalty tax deductibility reform, intended to attract investment while maintaining revenues, reflects this delicate balancing act between competing stakeholder demands (Mining Review Africa 2022). Labor unions represent another critical constituency, advocating for worker protections amidst industry volatility as seen when a 1.5% royalty increase in 2019 prompted threats of 20,000 job cuts (Zambia Federation of Employers [ZFE] 2020).

The interplay of these stakeholder interests creates a complex governance environment. While FDI in mining has shown positive long-term GDP impacts (United Nations Conference on Trade and Development [UNCTAD] 2021), Zambia's heavy reliance on the sector makes it vulnerable to commodity price shocks and external investor decisions (African Development Bank [AfDB] 2022). Recent moves toward financial modelling transparency and beneficial ownership disclosure suggest growing recognition of the need to align stakeholder interests more equitably (Fraser Institute 2023). As Zambia positions critical minerals as strategic for national development (Ministry of Mines and Minerals Development [MMMD] 2023), understanding these competing stakeholder dynamics becomes essential for designing policies that ensure mining wealth benefits both investors and Zambian citizens equitably. The tension between short-term investor priorities and long-term national development goals remains unresolved, with the government's recent proactive steps in financial data requests from companies signaling a shift toward more assertive resource nationalism.

#### INWARD FOREIGN DIRECT INVESTMENT IN ZAMBIA'S MINING SECTOR

Zambia's mining sector has long been the cornerstone of its economy, attracting significant inward foreign direct investment (FDI) due to its abundant mineral resources, particularly copper, cobalt, and emeralds. The country's liberalised economic policies since the 1990s have positioned it as a prime destination for multinational mining corporations, with over 80% of total FDI inflows channeled into the extractive industries (World Bank 2022). This heavy reliance on mining FDI has created a complex interplay between economic growth, environmental sustainability, and social equity, raising critical questions about who truly benefits from Zambia's mineral wealth. The sector's development trajectory reveals both the promises and pitfalls of resource-dependent growth models in developing economies.

The historical context of mining FDI in Zambia demonstrates a shift from diversified investment patterns pre-2000 to concentrated mining sector dominance in subsequent years (Fessehaie and Morris 2023). This transition coincided with global commodity price surges that made Zambia's copper reserves particularly attractive to foreign investors. Studies indicate that while FDI contributed to mining sector recapitalisation and increased output, it failed to generate the anticipated dynamic economic growth or diversification effects (Saad-Filho and Weeks 2023). Instead, the mining sector's overwhelming share of FDI has reinforced Zambia's dependence on primary commodity exports, leaving the economy vulnerable to price volatility in international markets (Simutanyi 1996). Copper prices and external demand remain the primary drivers of mining FDI, overshadowing other economic factors that could promote more balanced development (Lombe and Cheelo 2023).

The regulatory framework governing mining FDI reveals significant tensions between investment promotion and environmental and social protections. Zambia has established various policies and laws, including the Mineral Resources Development Policy, National Policy on Environment, Environmental Management Act, and Mines and Mineral Development Act, to guide mining activities (Zambia Ministry of Mines 2021). However, research suggests these instruments lack adequate mechanisms to effectively curb environmentally degrading practices or ensure equitable distribution of mining benefits (Wambwa et al. 2023). Regulatory institutions like the Zambia Environmental Management Agency and Mines Safety Department often face capacity constraints, insufficient funding, and political interference, limiting their enforcement capabilities (Wambwa et al. 2023). This regulatory gap has allowed some mining companies to operate with relative impunity, prioritising profit over environmental stewardship and community welfare (Haglund 2023).

Environmental concerns associated with mining FDI present one of the most pressing challenges for Zambia's sustainable development. The extractive nature of mining operations inevitably leads to ecological degradation, affecting local communities' rights to a clean and healthy environment (Sikamo et al. 2016). While international environmental standards exist, their non-binding nature limits their effectiveness in Zambia's context (Nyambe and Mwitwa 2023). Case studies reveal that environmental damage from mining activities often disproportionately affects vulnerable populations living near extraction sites, creating social tensions and undermining the potential benefits of FDI (Kragelund 2022). The concentration of Chinese investment in Zambia's mining sector has drawn particular scrutiny regarding environmental practices, with some studies suggesting a correlation between relaxed regulatory vigilance and increased FDI inflows (Lee 2023).

The socioeconomic impact of mining FDI presents a mixed picture. On one hand, foreign investment has brought capital infusion, technology transfer, and employment opportunities to Zambia's mining regions. Studies of major operations like Konkola Copper Mines demonstrate positive contributions to government revenue, export earnings, and GDP growth (Zambia Extractive Industries Transparency Initiative 2023). The sector's multiplier effects have created ancillary economic activities and infrastructure development in mining communities (Fraser and Lungu 2022). However, critics argue that these benefits often fail to translate into broad-based improvements in living standards or economic diversification. The enclave nature of many mining operations limits their integration with the local economy, while profit repatriation and tax avoidance practices reduce the net gains for Zambia (Larmer et al. 2023).

The governance of mining FDI involves multiple stakeholders with competing interests, including the Zambian government, foreign investors, local communities, and civil society organisations. The government faces the difficult task of balancing the need for investment with the imperative to protect national interests and ensure sustainable development. Recent reforms, such as the 2024 Mineral Regulation Commission Act, represent attempts to strengthen oversight and modernise Zambia's regulatory framework (Zambia Ministry of Justice 2024). These measures aim to combat illegal mining activities, promote transparency, and encourage responsible sourcing practices among mining companies and mineral traders (Mining Watch Zambia 2023). However, the effectiveness of these institutional innovations remains to be seen, particularly in addressing power asymmetries between the state and multinational corporations (Caramento et al. 2023).

Civil society organisations have emerged as important actors in holding both government and mining companies accountable for their actions. Environmental and human rights groups have increasingly turned to legal avenues to challenge harmful mining practices, though court decisions have often favoured corporate respondents (Chibbabbuka et al. 2021). This judicial trend reflects the broader challenges of enforcing accountability in a sector where economic imperatives frequently overshadow environmental and social concerns. The growing activism around mining issues suggests that stakeholder conflicts over Zambia's mineral wealth will likely intensify unless more inclusive governance mechanisms are developed (Garbarino 2023).

Looking forward, Zambia's experience with mining FDI offers important lessons for resource-dependent economies. The country's heavy reliance on extractive industry investment has yielded limited transformative development, while creating significant environmental liabilities and social tensions. Diversification strategies targeting non-mining sectors like agriculture, tourism, and manufacturing could help mitigate vulnerabilities to commodity price shocks (African Development Bank 2023). Infrastructure development, particularly in electricity supply and transportation networks, remains critical for attracting more balanced FDI flows (Zambia Development Agency 2023). Regional cooperation within the Southern African Development Community (SADC) could provide opportunities for adopting best practices in mining regulation and environmental protection (SADC Secretariat 2023).

Ultimately, the question of who controls Zambia's mining wealth cannot be answered by examining FDI statistics alone. The distribution of benefits and costs associated with mining investment reveals complex power dynamics that extend beyond formal ownership structures. While foreign investors may control significant portions of Zambia's mineral production, the long-term sustainability of this arrangement depends on creating more equitable and environmentally responsible models of resource governance. There is need to explore innovative approaches to stakeholder engagement and benefit-sharing that can align private investment objectives with Zambia's broader development goals.

## STAKEHOLDER INFLUENCE AND INWARD FOREIGN DIRECT INVESTMENT IN ZAMBIA'S MINING SECTOR

The mining sector in Zambia has long been a focal point for foreign direct investment (FDI), driven by the country's abundant copper and cobalt reserves. However, the distribution of control and benefits from these investments remains contested among various stakeholders, including the government, multinational corporations (MNCs), local communities, and international financiers. The Zambian government has historically promoted FDI through liberal policies, aiming to spur economic growth and job creation (Fraser and Lungu 2007). Yet, critics argue that these policies often prioritise MNC interests over national welfare, leading to revenue losses through tax incentives and profit repatriation (Lombe and Kalinda 2019). MNCs, particularly those from China, Canada, and Australia, dominate Zambia's mining sector, leveraging their financial and technological advantages to secure favorable extraction rights (Haglund 2016). Their influence is further reinforced by international financial institutions, which condition investment flows on regulatory concessions (Burdzik 2014). Meanwhile, local communities and civil society organisations have increasingly demanded greater equity and environmental accountability, challenging the dominance of foreign investors (Carmody and Hinfelaar 2017). These competing interests create a complex dynamic where FDI inflows are shaped not only by market potential but also by power struggles among stakeholders. While the government seeks to balance investor attraction with national development goals, the disproportionate influence of MNCs raises concerns about who truly controls Zambia's mineral wealth. Understanding these stakeholder dynamics is critical for assessing whether FDI in Zambia's mining sector delivers equitable and sustainable benefits.

#### EMPIRICAL STUDIES ON STAKEHOLDER INFLUENCE IN AND INWARD FDI

The literature on stakeholder influence on inward Foreign Direct Investment (FDI) in Zambia's mining sector reveals a complex interplay between government policies, corporate strategies, and local community engagement. Research by Yangailo and Chambani (2023) highlights the broader impact of industrialisation on Zambia's economic growth, emphasising the role of FDI as a key driver, though their study does not specifically dissect stakeholder dynamics in the mining sector. Meanwhile Phiri (2011) provides a more focused analysis, identifying copper prices, external demand, and infrastructure (particularly electricity supply) as critical determinants of mining FDI in Zambia. However, while this study acknowledges the role of government and urbanisation in shaping FDI, it underplays the influence of non-state stakeholders such as local communities and civil society organisations.

Corporate social responsibility (CSR) and stakeholder engagement are emerging themes in the literature, yet their direct linkage to FDI inflows remains underexplored. For instance, studies on Ghana's

mining sector, such as the case of Newmont Ahafo mines, demonstrate how CSR initiatives can enhance corporate reputation and community relations, but they do not establish a clear causal relationship between stakeholder engagement and FDI attraction. In Zambia, while mining firms like those on the Copperbelt engage in CSR, there is limited empirical evidence on whether these practices significantly sway investor decisions or government policies on FDI.

A significant gap in the literature pertains to the role of local communities and their capacity to influence mining FDI decisions. While studies such as Munalula and Matildah (2016) discuss the impacts of Chinese FDI on African communities, including employment and environmental concerns, they do not explicitly examine how these communities exert influence over investment inflows in Zambia. Similarly, Domela et al. (2023) explore determinants of Chinese FDI in South Africa's mining sector, including political stability and trade openness, but their findings are not directly transferable to Zambia's context, where stakeholder dynamics may differ due to varying regulatory frameworks and socio-economic conditions. Another research gap lies in the comparative analysis of stakeholder influence across different mining jurisdictions in Africa. While UNCTAD (2022) notes the growing role of Chinese and other emerging investors in African mining, it does not delve into how stakeholder pressures such as regulatory demands from host governments or activism from local NGOs shape FDI strategies in Zambia relative to other resource-rich countries like Zimbabwe or South Africa. Furthermore, the literature lacks longitudinal studies tracking how shifts in stakeholder power (e.g., from state-centric to community-inclusive models) have historically influenced FDI trends in Zambia's mining sector.

In conclusion, while existing research provides insights into economic and policy drivers of mining FDI in Zambia, there is a notable absence of focused studies on stakeholder influence, particularly from non-state actors. There is need to investigate how local communities, advocacy groups, and industry watchdogs shape FDI inflows, as well as the interplay between CSR practices and investment attractiveness. Additionally, comparative studies across African mining economies could yield valuable lessons for Zambia in optimising stakeholder engagement to sustain and diversify FDI in its mining sector.

#### **METHODS**

This research employs a mixed-methods strategy with a convergent parallel design, gathering and analysing both quantitative (QUAN) and qualitative (QUAL) data simultaneously, as outlined by (Edmonds and Kennedy 2017). In this concurrent triangulation approach, the two types of data are collected independently but concurrently, with findings later compared and synthesised into a unified framework. NVivo was used for qualitative analysis, while EViews and Stata facilitated the storage and examination of quantitative data, enabling parallel analysis.

#### Quantitative Data Analysis

To assess the influence of stakeholders on foreign direct investment (FDI) inflows, this study applied a quantitative research design, utilising an Autoregressive Distributed Lag (ARDL) model (Okeke and Kalu, 2022; Assefa, 2020; Pesaran and Shin 1998). Stakeholder influence data was obtained from the World Bank's World Governance Indicators (WGI), while inward FDI figures were sourced from the World Development Indicators (WDI), consistent with prior research. The timeframe from 1965 to 2023 was chosen to capture long-term FDI trends and stakeholder dynamics, as well as to incorporate the most recent reliable data. Additionally, this period spans the governance of all major political regimes in the country, including the United Independence Party (UNIP), the Movement for Multi-Party Democracy (MMD), the Patriotic Front (PF), and part of the United Party for National Development (UPND) era. This ensures that the findings remain generalisable across different administrations and policy environments. Table 1 summarises the data sources.

**Table 1.** Variables in the study

Variable	Description	Source
IRQ	Stakeholder influence (Institutional Regulatory Quality)	World bank - WGI
VAC	Stakeholder influence (Voice and accountability estimate)	World bank - WGI
FDI	Foreign Direct Investment net inflows (% of GDP)	World bank - WDI

Source: Authors

This research used secondary time series data, which is particularly valuable for detecting trends and patterns over time. Time series analysis enables the examination of historical events and the projection of future developments. Recent methodological progress has also made it possible to conduct causal inference

using time series data. Since this study aims to assess the influence of Stakeholders on inward FDI while investigating both short-run and long-run causal dynamics, time series data was deemed the most appropriate choice.

For quantitative analysis, the Autoregressive Distributed Lag (ARDL) model was applied, a method well-suited for time series data, particularly when variables exhibit unit roots and cointegration (Shrestha and Bhatta 2018). This approach is effective in evaluating both long-term and short-term linkages between stakeholder influence and inward FDI. Hypothesis testing was performed by analysing the ARDL model results, which were further validated through diagnostic checks to ensure robustness. The statistical hypotheses tested in this study are outlined below:

H1<sub>0</sub>: Stakeholder influence has no short run relationship with inward FDI.

H1a: Stakeholder influence has a short run relationship with inward FDI.

H2<sub>0</sub>: Stakeholder influence has no long run relationship with inward FDI.

H2<sub>a</sub>: Stakeholder influence has a long run relationship with inward FDI.

#### **Qualitative data analysis**

This study primarily collected qualitative data through focus group discussions. Following established methodological guidelines, each focus group consisted of six to twelve participants with varied backgrounds and expertise to ensure diverse perspectives (Lazar et al. 2017; Wilson 2014). The data was analysed using thematic, content, and grounded analysis techniques within NVivo. Thematic analysis was employed to identify recurring patterns and themes (Braun and Clarke 2006; Lester et al. 2020; Morgan 2022) concerning stakeholder influence on inward FDI, building on existing frameworks (Saad 2014). Content analysis was used to assess the prevalence and distribution of key concepts (Bengtsson 2016; Elo et al. 2014; Erlingsson and Brysiewicz 2017), providing deeper insights into the mechanisms linking stakeholder dynamics to FDI inflows. Additionally, grounded analysis facilitated the development of new theoretical insights (Charmaz and Thornberg 2021; Edgington 1967; Timmermans and Tavory 2012).

The convergent parallel mixed-methods design proved highly effective, allowing simultaneous collection and integration of qualitative and quantitative data (Tashakkori and Newman 2010). This approach enabled a comprehensive exploration of the complex interplay between stakeholder influence and FDI (Schoonenboom and Johnson 2017).

#### Measurement of variables and justification

Accurate variable measurement is essential for robust research. In this study, the independent variable (Stakeholder influence) was proxied by Regulatory quality and Voice and accountability indices, measured on a scale of -2.5 to 2.5, consistent with prior studies (Khan et al. 2023; Haven et al. 2022; Matsudaira 2015; Ali et al 2022; Mkonyi 2022). The dependent variable (FDI inflows) was operationalised as net FDI inflows as a percentage of GDP, aligning with existing literature on Foreign Direct investments (Mkonyi 2022; Mahmood and Chaudhary 2013; Kaulu and Haabazoka 2023).

Table 2. Measurement of variables

Type of variable	Variables	Proxy	Code	Unit of measurement	Reference	Source of data
Dependant	Foreign direct investment	FDI net inflow (% of GDP)	FDI	Percentage	Mahmood and Chaudhary (2013); Kaulu and Haabazoka (2023)	World bank
Independent	Stakeholder influence	Institutional Regulatory Quality	IRQ	Index of -2.5 to 2.5	Khan et al. (2023); Haven et al. (2022); Matsudaira (2015)	World bank
Independent	Stakeholder Influence	Voice and accountability estimate	VAC	Index of -2.5 to 2.5	Ali et al. (2022); Mkonyi (2022)	World bank

#### Quantitative data analysis procedure

The quantitative analysis followed a structured sequence of steps. First, descriptive statistics were computed to summarise the data characteristics. Subsequently, stationarity was assessed through unit root testing. Appropriate lag lengths were then determined using established information criteria. The analysis

proceeded with bounds testing to evaluate long-term relationships, followed by short-term dynamics examination via the Error Correction (EC) mechanism within the ARDL framework. Finally, diagnostic checks were conducted to verify model validity.

#### Unit root testing and Optimal lag selection

Stationarity properties were examined using both Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests. Lag length optimisation differed between tests: AIC guided lag selection for ADF, while SIC was applied for PP. The tests operated under the null hypothesis of non-stationarity (presence of unit roots). The ARDL approach was specifically chosen for its ability to handle variables with differing integration orders - some I(1) (requiring differencing) and others I(0) (stationary in level form).

#### Model formulation and dynamic Analysis

The ARDL framework, recognised for its robustness with mixed-integration time series data (Shrestha and Bhatta 2018), served as the primary analytical tool. This approach remains valid when variables demonstrate I(0) or I(1) properties, though becomes inappropriate with I(2) or higher-order integration. Key advantages of this methodological approach include the fact that it accommodates variables with different stationarity properties and allows simultaneous estimation of short-term adjustments and long-term equilibrium relationships. Besides, it allows for superior performance with limited sample sizes compared to alternative cointegration techniques. As such, this analysis framework ensures comprehensive examination of both immediate effects and enduring relationships between Stakeholder influence measures and foreign investment flows. The study's specific ARDL specification for examining Stakeholder influence (proxied by IRQ and VAC) on FDI inflows for the years 1965 to 2023 takes the following form:

$$FDI_t = f(IRQ_t, VAC_t) \tag{1}$$

In equation 1, FDI refers to foreign direct investment inflows (measured as a percentage of GDP), IRQ is Stakeholder influence with proxy of Institutional regulatory quality measured in index of -2.5 to 2.5) while VAC is Stakeholder influence with proxy of Voice and accountability estimate also measured in index of -2.5 to 2.5). Equation 1 can also be written as follows:

$$FDI_t = \lambda_0 + \lambda_1 IRQ_t + \lambda_2 VAC_t + \mu_t \tag{2}$$

The logs of each variable were taken in order to minimise the volatility and multi collinearity of the time series data. The following log linear model is therefore obtained by applying logs to equation 2:

$$log FDI_t = \lambda_0 + \lambda_1 log IRQ_t + \lambda_2 log VAC_t + \mu_t$$
(3)

Analysis in the ARDL model can be done in two steps. Step one looks at long run associations in the model while step two looks at the short run. Equation 4 represents the ARDL model specification for this study.

$$\Delta \log FDI_{t} = \alpha_{0} \sum_{i=1}^{p} \beta_{1 j} \Delta \log FDI_{t-k} + \sum_{i=1}^{p} \beta_{2 j} \Delta \log IRQ_{t-k} + \sum_{i=1}^{p} \beta_{3 j} \Delta \log VAC_{t-k} + \lambda_{1} \log FDI_{t-1} + \log IRQ_{t-1} + \lambda_{3} \log VAC_{t-1} + \varepsilon_{t}$$
(4)

In this equation;  $\alpha_0$  is the intercept,  $\Delta$  is the first difference operator, p is the lag order and  $\mathcal{E}_t$  is the error term. The bounds test was used to check for long run equilibrium in the relationships amongst IRQ, VAC and FDI. In this test, the null hypothesis is Ho:  $\delta_1 = \delta_2 = \delta_3 = 0$  (that is, there is no cointegration) and the alternative is H1:  $\delta_1 \neq \delta_2 \neq \delta_3 \neq 0$  (there is cointegration). If the calculated F statistic or absolute t-statistic is greater than the upper level bound or absolute upper level bound respectively, H0 is rejected (Pesaran and Shin 1998). The conclusion is that there is cointegration in the relationship amongst IRQ, VAC and FDI. If the statistics are below the lower bound, there is no cointegration. If the calculated statistics are between the upper and lower bounds, the result is inconclusive.

The JJ test (Johansen and Juselius 1990), "cumulative sum recursive residuals (CUSUM) and cumulative of square of recursive residuals (CUSUMSQ)" can be used to check the robustness of the cointegration (Brown et al. 1975; Chandio et al. 2020).

The short run relationships between IRQ, VAC and FDI were assessed using the following ECM form of the ARDL model.

$$\Delta \log FDI_{t} = \alpha_{0} \sum_{i=1}^{p} \beta_{1 j} \Delta FDI_{t-k} + \sum_{i=1}^{p} \beta_{2 j} \Delta IRQ_{t-k} + \sum_{i=1}^{p} \beta_{3 j} \Delta VAC_{t-k} + \alpha ECM_{t-1} + \varepsilon_{t}$$
(5)

#### **Diagnostics Tests**

Model fit was checked using the R<sup>2</sup>. This value ranges from 0 to 1. The higher the value, the better the fit with 1 implying perfect fit and 0 implying no fit at all. Breusch-Godfrey test was used to check serial correlation. Jarque-Bera test of normality, ARCH and white test of heteroscedasticity, RESET test of linearity and CUSUM of square tests of model stability were the other diagnostic tests carried out to check the respective characteristics.

#### **RESULTS AND DISCUSSION**

#### Results

#### Qualitative findings of the study

Qualitative findings of this study indicate that, the influence of stakeholders on foreign direct investment (FDI) inflows in Zambia's mining sector presents a complex interplay of positive and negative effects, shaped by policy frameworks, corporate practices, and socio-economic dynamics. On the positive side, the Zambian government has implemented policy amendments aimed at enhancing the sector's attractiveness to investors, such as revising tax regimes and improving regulatory clarity. These efforts have contributed to stabilising FDI inflows, particularly in copper mining, which remains the primary focus of foreign investors due to bullish global prices and Zambia's rich mineral reserves. Interviewees stressed that Multinational corporations (MNCs), especially those from China and India, have brought capital, infrastructure, and employment opportunities, highlighting their role in boosting export earnings and contributing significantly to GDP during peak periods. Additionally, FDI has facilitated limited technology transfer and skills development, particularly in large-scale operations like Konkola Copper Mines (KCM), where on-the-job training and employment creation have been documented.

However, stakeholder influence has also introduced significant challenges. Policy instability, including abrupt tax hikes and inconsistent enforcement, has deterred long-term investment, with instances like the 2012 tax reforms causing temporary disinvestment. Based on the data collected, this study found that the dominance of MNCs in extractive activities has reinforced Zambia's economic dependency on copper, limiting diversification and exacerbating vulnerabilities to commodity price fluctuations. Critically, the concentration of FDI in mining has failed to translate into broad-based economic growth, with spill over effects into sectors like agriculture and manufacturing remaining weak. Local communities often perceive FDI as exploitative, citing environmental degradation, inadequate CSR initiatives, and preferential hiring of expatriates over locals. For example, CSR programs in mining regions have been criticised as superficial, failing to address systemic poverty or foster meaningful community engagement. During focus group discussions, representatives from civil society and environmental activists further highlighted their campaign against the ecological costs of mining, however, their advocacy is frequently undermined by weak regulatory enforcement and prioritisation of short-term revenue over sustainability.

Additionally, respondents emphasised that international stakeholders, such as the IMF and World Bank, have indirectly shaped FDI trends by tying financial support to policy reforms, including transparency measures like the Extractive Industries Transparency Initiative (EITI). While these interventions aim to improve governance, their impact is often diluted by institutional weaknesses and corruption. The growing reliance on Chinese investment has also sparked debates about neo-colonialism, with concerns over labour abuses and limited value addition to the local economy.

In conclusion, qualitative results of this study show that while stakeholders like the government and MNCs have driven FDI inflows through policy incentives and capital injection, their influence is marred by structural inefficiencies, socio-environmental trade-offs, and uneven distribution of benefits. The net effect is thus a mixed one: FDI has bolstered mining output and fiscal revenues but at the cost of reinforcing economic monoculture and marginalising local stakeholders. For Zambia to harness FDI more equitably, stronger institutional frameworks, diversified investment targets, and inclusive community participation are essential.

#### Quantitative findings of the study

This section presents the study's findings based on quantitative data analysis particularly the ARDL model. It starts with descriptive statistics, followed by inferential statistical results. Next, the outcomes of stationarity tests are discussed. The findings related to the long-run hypothesis are then examined, followed

by testing of the short-run hypothesis. Finally, a summary of the diagnostic test results is provided.

#### Descriptive statistics

The summary statistics are presented in Table 3, which primarily include the measures of central tendency and dispersion for Foreign Direct Investment (FDI) and Stakeholder Influence (IRQ, VAC). The average Stakeholder influence (IRQ) is 0.358, with a maximum value of -0.038 and a minimum of -0.521. The standard deviation of 3.421 indicates that the FDI inflow values are relatively close to the mean. The positive skewness of 0.398 suggests that most of the data points are clustered near the lower end, with fewer outliers closer to the upper end. Similarly, the positive skewness of 0.130 in VAC implies that while most years displayed lower Stakeholder influence in terms of voice and accountability estimate, a few years had significantly higher influence. In contrast, the negative skewness of -0.0049 in Stakeholders' influence (IRQ) suggests that while most years showed relatively high Stakeholders' influence in terms of institutional regulatory quality (with minimal leftward skew), a few years had notably lower levels in the same regard.

Regarding Kurtosis, the FDI inflow was found to be approximately mesokurtic, indicating it has a tail behavior similar to a normal distribution. The value of 0.123 is close to 0, signifying that the FDI data is approximately normally distributed, with no significant outliers. This supports the reliability of the dataset for further statistical analysis or modeling (Kallner 2018; Kim 2013). Furthermore, the Jarque-Bera test statistic showed a p-value greater than 0.05, indicating that the FDI inflow follows a normal distribution.

**Table 3.** Descriptive statistics

Measure	FDI inflows	IRQ	VAC
Mean	3.176	- 0.358	0.320
Median	2.451	- 0.297	0.248
Maximum	7.914	- 0.038	0.571
Minimum	- 0.879	- 0.521	- 0.166
Std. Dev	3.421	0.217	0.321
Skewness	0.398	- 0.0049	0.130
Kurtosis	0.123	- 2.013	2.650
Jarque-Bera	1.789	1.423	1.342
Observations	27	18	18

Source: Author computations

#### Correlation between IRO, VAC and FDI

Table 4 below illustrates the correlations between IRQ, VAC, and FDI. The results indicate a significant positive correlation between Stakeholders in terms of voice and accountability estimate (VAC) and FDI, implying that as the number of Voice and accountability estimate in a country increases, FDI inflows also increase, and vice versa. Similarly, a strong positive correlation was found between Stakeholders influence in terms of Institutional regulatory quality (IRQ) and FDI, suggesting that higher institutional regulatory quality in a country is associated with higher FDI inflows, and vice versa.

Table 4. Correlations among IRQ, VAC and FDI

	Log FDI Inflow	Log VAC	Log IRQ
Log FDI	1.0000		
Log VAC	0.7430	1.0000	
Log IRQ	0.6981	0.0542	1.0000

Source: Author computations

#### Stationarity tests

Prior to conducting time series analysis, it is necessary to perform stationarity tests. This is especially important for ARDL models, which require that none of the variables be integrated of order I(2). However, the variables can be I(0), I(1), or a combination of both. The ADF test was applied alongside the PP test for robustness. The results of the stationarity tests, presented in Table 5, show that the variables are all I(1) and I(0). This result allows for the use of the ARDL model.

**Table 5.** Stationarity Tests

	With Constant	Prob.	With Constant	Prob.	Without	Prob.
	t-Statistic		and trend t- Statistic		Constant and trend t-Statistic	
Log FDI	- 2.162	0.132	- 2.143	0.654	- 0.341	0.516
Log VAC	- 2.714**	0.072	- 2.891	0.175	- 0.721	0.399
Log IRQ	- 0.899	0.932	- 1.879	0.645	0.802	1.940
ΔLog FDI	-7.015***	0.000	- 4.011*	0.085	- 5.012***	0.000
ΔLog VAC	-7.994***	0.000	- 8.012***	0.000	- 7.043***	0.000
ΔLog IRQ	- 3.897**	0.042	- 3.987**	0.039	- 2.998***	0.043
Log FDI	- 2.451	0.356	- 2.123	0.765	- 0.345	0.6231
Log VAC	- 3.487*	0.081	- 2.803	0.089	- 0.412	0.3895
Log IRQ	- 0.998	0.814	- 0.078	0.598	0.734	0.8723
$\Delta$ Log FDI	- 6.0121***	0.000	- 1.399***	0.000	5.891**	0.0000
ΔLog VAC	- 8.1240***	0.000	- 3.004***	0.000	9.012**	0.0000
ΔLog IRQ	- 3.0134**	0.036	- 3.032**	0.069	- 4.023**	0.0021

Note: Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests with 10% (\*), 5% (\*\*) and 1%(\*\*\*)

significant levels.

Source: Author computations

#### **Optimal Lag selection**

To evaluate the long-term and short-term relationships between VAC, IRQ, and FDI inflow, the ARDL method is employed. This requires determining the optimal lag structure. According to all information criteria, the optimal lag length is found to be lag one, as indicated in Table 6.

Table 6. VAR Optimal Lag Selection

Lag	LogL	LR	FPE	AIC	SC	HQ
0	- 26.0215	NA	0.00002	1.98718	3.0431	2.1340
1	43.9816	108.4306*	1.45320*	- 2.3214	- 1.2134*	- 1.8956*
2	58.5231	17.01327	0.00000	- 2.0765	- 0.3254	- 1.3679

Note: Lag chosen by criteria Source: Author computations

#### **Bounds** test

The results of the bounds test are presented in Table 7. For FDI, VAC and IRQ as outcome variables, the F statistics are 5.9671, 5.8915, and 4.7988, respectively. Two of these statistics exceed the upper bound critical value at the 5% significance level, indicating the presence of two cointegration vectors.

Table 7. Bounds Test Results

Variable	LOG FDI	LOG VAC	LOG IRQ
F-Statistic	5.9671*	5.8915*	4.7988
Optimal lags	(1,0,1,0)	(1,0,1,0)	(1,1,1,1)
Best trend specifications	Constant & trend	Constant & trend	Constant & trend
Critical values	10%	5%	1%
Lower Bound (0)	3.39	4.04	4.98
Upper Bound (1)	3.99	5.04	6.02
Diagnostics:			
R2	0.895	0.423	0.892
Adj. R2	0.610	0.430	0.945

Note 1: Note: 5% (\*) significant level

Source: Author computations

For robustness, the Johansen cointegration test was also run and the results are in Table 8. These indicate the presence of at least one cointegration equation. This suggests that long run association exists between FDI inflow and Stakeholder influence.

Table 8. Johansen cointegration test

Cointegration equations	Eigenvalue	Statistic	Critical value at 5%	Prob.		
Trace statistic						
None	0.89562	54.01432	50.0023	0.0398		
At most 1	0.39876	18.16740	27.9875	0.7894		
At most 2	0.34897	5.14379	15.2345	0.7412		
At most 3	0.24136	0.91269	3.9876	0.3991		
	Maxin	num Eigenvalue				
None	0.94315	33.4132	27.0123	0.0098		
At most 1	0.42136	12.9786	22.9465	0.4897		
At most 2	0.23760	3.9985	12.8960	0.9956		
At most 3	0.24681	0.8976	3.9874	0.7567		

Source: Author computations

#### The Long-run model results

The results of the long and short run estimates are shown in Table 9. The findings show that in the long run, Stakeholder influence has a positive relationship with FDI at the 5% level ( $\beta$ = 0.1984, p=0.002) and ( $\beta$ = 0.1790, p=0.004) for proxies of voice and accountability and institutional regulatory quality respectively.

#### **Short Run Dynamics**

The short run results are also shown in panel two of Table 9. Similar to the long run results, Stakeholder influence in terms of Voice and accountability estimate was found to have positive short run relationship with FDI inflow at the 5% level. The estimated coefficient for voice and accountability estimate was 0.1973 while that of Institutional regulatory quality was 0.2437). The cointegration coefficient was found to be -0.7138 (p=0.0002). This means that in the short run, when there is a shock in the model, there is a 71.38% speed of adjustment to equilibrium. Overall, this model is able to explain 76.54% ( $\mathbb{R}^2$ ) of changes in FDI inflow.

**Table 9.** ARDL (1, 0, 1, 0) Regressing determinants on FDI using AIC

Variable	Coefficient	SE	T-statistic	P-value			
Panel 1: Long run estimates							
Log VAC	0.1984	0.0508	2.9801	0.0023			
Log IRQ	0.1790	0.0876	2.4319	0.0041			
_	Panel 2: Short run est	timates					
ΔLog VAC	0.1973	0.04332	4.1348	0.0008			
ΔLog IRQ	0.2437	0.04761	2.8768	0.0275			
ECM (-1)	- 0.7138	0.34216	- 4.9981	0.0002			
	Diagnostic tests (p-value i	in brackets)					
Durbin-Whiteson statistic	1.8023						
Adjusted R <sup>2</sup>	0.7654						
$\mathbb{R}^2$	0.7531						
X <sup>2</sup> SERIAL Breusch-Godfrey test	LM 1.2349 (0.21341	)					
X <sup>2</sup> White	23 (0.40123)						
X <sup>2</sup> NORMAL	3.054789 (0.3217	(8)					
X <sup>2</sup> ARCH	2.045321(0.1795	5)					
X <sup>2</sup> RESET	4.231567(0.05123	34)					
F-statistic	11.98570 (0.000)	1)					

Source: Author computations

#### **Results of Hypothesis Testing**

Table 10 summarises the results of hypothesis testing. Both hypotheses were supported. These are; Stakeholder influence has a short run relationship with inward FDI and Stakeholder influence has a long run relationship with inward FDI.

**Table 10:** Results of hypothesis tests

Hypotheses	Outcome
H1a: Stakeholder influence has a short run relationship with inward FDI.	Supported
H2a: Stakeholder influence has a long run relationship with inward FDI.	Supported

#### **Diagnostic Tests**

Diagnostic tests are presented in panel three of Table 9. The model successfully passed several diagnostic checks, including the Breusch-Godfrey test for serial correlation, the Jarque-Bera test for normality, the ARCH and White tests for heteroscedasticity, the RESET test for linearity, and the CUSUM and CUSUM of squares tests for model stability. Regarding model stability, the results from the CUSUM and CUSUM of squares tests showed that all plots remained within the 5% critical boundaries, confirming the stability of the estimated model parameters throughout the estimation period.

#### Discussion

The findings of this study demonstrate both positive and negative stakeholder impacts on inward FDI, with particular emphasis on the role of policy stability, regulatory frameworks, labour relations, and corporate social responsibility initiatives. It has been found that stakeholders including the Zambian government, local communities, multinational enterprises (MNEs), and international investors play a critical role in shaping inward foreign direct investment (FDI) in Zambia's mining sector. The government's policies, particularly tax reforms and regulatory stability, emerged as significant determinants of FDI inflows. For instance, the Hichilema administration's introduction of mineral royalty tax deductibility from corporate income tax in 2021 was instrumental in reviving investor confidence after years of policy unpredictability under previous regimes. This aligns with previous research by Phiri (2011), which emphasised that inconsistent fiscal policies, especially in mining taxation, deterred long-term FDI commitments, reinforcing the vulnerability of Zambia's economy to commodity price shocks. Similarly, Ndaba (2015) found that FDI concentration in mining post-2000 led to limited spillover effects on broader economic growth due to policy instability, corroborating the present study's observation that regulatory coherence is pivotal for sustainable investment.

Local communities and labour stakeholders also influence FDI through corporate social responsibility (CSR) expectations and social license to operate. The study highlights that mining MNEs in Zambia face increasing pressure to address socio-economic disparities, a legacy of colonial and post-independence mining practices (Cronjé et al. 2017). Communities on the Copperbelt region, for example, reported divergent experiences with CSR across different operational eras colonial, nationalised, and privatised with the latter era often criticised for prioritising shareholder returns over local development (Blowfield and Murray, 2014). This contrasts with findings from Zimbabwe, where mining FDI was found to have a more pronounced positive impact on GDP growth due to stronger linkages between MNEs and local enterprises (UNCTAD 2017). The Zambian case thus underscores the need for MNEs to align CSR strategies with host-country development goals to mitigate resistance and foster stakeholder collaboration.

International investors, particularly from China, Canada, and the EU, have been identified in this study as key actors driving FDI trends. The study notes that Chinese investments in Zambia's mining sector have surged, mirroring broader African trends where China dominates critical mineral supply chains (Zhang & Liang 2023). However, unlike OECD countries where mining FDI is often coupled with stringent environmental regulations and economic diversification (Sun and Hasi 2024), Zambia's reliance on extractive-sector FDI has perpetuated resource dependency. This echoes concerns raised by the World Bank (2015) and UNCTAD (2017) about the "resource curse" in low-income economies, where FDI inflows fail to catalyse structural transformation. The present study adds nuance by revealing that while FDI has recapitalised Zambia's mining sector, its benefits such as employment and technology transfer remain unevenly distributed, exacerbating inequalities.

Comparatively, the study's findings diverge from optimistic assessments of mining FDI in other contexts. For example, research on Zimbabwe's mining sector demonstrated robust GDP linkages from FDI, attributed to better integration of domestic suppliers into MNE value chains (UNCTAD 2017). In contrast, Zambia's experience reflects weaker local participation, partly due to an underdeveloped enabling environment for downstream industries like mineral processing (Phiri 2011). This gap underscores the importance of policies that incentivise value addition, as seen in OECD countries where economic complexity and environmental regulations reduce mineral dependency (Sun and Hasi 2024). The study thus reinforces calls for Zambia to diversify its FDI base beyond mining, leveraging sectors like agriculture and renewable energy to mitigate external shocks.

#### **CONCLUSION**

This study underscores the significant influence of stakeholders including the Zambian government, local communities, multinational enterprises (MNEs), and international investors on inward foreign direct investment (FDI) in Zambia's mining sector. The findings highlight that policy stability, particularly in taxation and regulatory frameworks, plays a crucial role in attracting and sustaining FDI. The government's recent reforms, such as the mineral royalty tax deductibility policy, have contributed to renewed investor confidence, aligning with previous research that emphasises the detrimental effects of policy unpredictability on long-term investment (Phiri 2011; U.S. Department of State 2023). However, despite these improvements, Zambia's heavy reliance on mining FDI continues to expose the economy to commodity price volatility, reinforcing the need for diversification.

Local communities and labour stakeholders also shape FDI outcomes through their expectations of corporate social responsibility (CSR) and equitable benefit-sharing. The study reveals that while some MNEs have made efforts to engage with communities, disparities persist, particularly in regions with a long history of mining activities. This suggests that stronger regulatory enforcement of CSR commitments and greater inclusion of local stakeholders in decision-making could enhance the sector's social sustainability. Furthermore, the influx of Chinese and other foreign investments has brought capital and technology but has also raised concerns about uneven economic spill overs and environmental impacts. Comparative insights from other resource-dependent economies, such as Zimbabwe, indicate that Zambia could improve FDI benefits by fostering stronger linkages between mining operations and local industries.

Despite its contributions, this study has some limitations. Firstly, the study focuses primarily on large-scale mining, leaving artisanal and small-scale mining (ASM) largely unexplored, even though ASM plays a significant role in Zambia's informal economy. Secondly, external factors such as global commodity price fluctuations and geopolitical influences were not deeply analysed but remain critical in shaping FDI trends.

To maximise the positive impact of FDI, policymakers should prioritise regulatory consistency, incentivise value addition in the mining sector, and promote economic diversification into agriculture and renewable energy. Strengthening local content policies to enhance skills transfer and domestic procurement could also ensure broader economic benefits. Additionally, fostering transparent dialogue between MNEs, government agencies, and communities will be essential in mitigating conflicts and ensuring sustainable development.

In light of the complex dynamics between foreign direct investment (FDI) and domestic stakeholder interests in Zambia, it is imperative that a nuanced policy framework be instituted to harness the benefits of foreign capital while mitigating its potential adverse effects. One critical area of intervention lies in the correction of market failures such as negative externalities arising from industrial activities often associated with FDI-led projects especially in the mining sector. The government should consider the implementation of targeted environmental taxation regimes, such as carbon taxes, which would serve not only to internalize the social costs of environmental degradation but also to incentivize cleaner production technologies among foreign investors. This fiscal instrument could further contribute to expanding the state's revenue base, enabling increased investment in the provision of merit goods such as public healthcare, education, and environmental conservation sectors that are often underfunded yet critical for equitable development and long-term welfare maximization.

Moreover, Zambia's heavy reliance on the agricultural sector particularly in the context of an FDI landscape skewed towards extractive industries and mono cultural agricultural exports, exposes the economy to significant structural vulnerabilities. These include susceptibility to international commodity price shocks due to the low price elasticity and inherent volatility of primary products. To counteract these risks, the government must formulate and enforce industrial policies that promote diversification of the economic base, including the development of value-addition chains in agro-processing and the incentivization of investment in knowledge-intensive sectors. Strategic stakeholder engagement, including with local communities, civil society organizations, and domestic investors, should be institutionalized to ensure that FDI projects align with national development goals and sustainability imperatives. In this vein, the establishment of clear performance benchmarks for foreign investors particularly in areas such as employment creation, technology transfer, and environmental stewardship could enhance accountability and maximize developmental returns. These policy recommendations underscore the importance of adopting a proactive and context-sensitive regulatory approach to FDI in all sectors besides mining, one that balances the imperatives of economic growth, environmental integrity, and social equity in Zambia's development trajectory. By addressing these challenges, Zambia can harness FDI not only as a driver of growth in mining and other sectors but also as a catalyst for inclusive and resilient economic transformation.

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