

An Evaluation of Mineral Resources Governance in Zimbabwe's Platinum Group Metals Sector

A Publishable Paper Based on PhD Thesis Research

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Abstract- This paper evaluates mineral resources governance (MRG) in Zimbabwe's platinum group metals (PGMs) sector, assessing governance performance against international benchmarks and stakeholder expectations. Despite possessing the world's third-largest PGMs reserves, Zimbabwe experiences significant governance deficits resulting in revenue leakages estimated at US\$32 billion over two decades and persistent poverty affecting over 7 million citizens. Using a sequential exploratory mixed-methods approach combining key informant interviews (n=31), focus group discussions, document analysis, and survey data (n=214), the paper evaluates governance across four dimensions: legislative and legal institutional environment, extractive sector operating environment, value derivation, and revenue management. The evaluation reveals critical governance failures including constitutional-legal misalignment (scoring 29/100 on Resource Governance Index), regulatory fragmentation across multiple agencies with overlapping mandates, weak institutional capacity (insufficient human, financial, and technological resources), limited transparency and accountability (non-adoption of EITI standards), security sector conflicts of interest undermining regulatory enforcement, community exclusion from decision-making, and environmental governance weaknesses. Quantitative analysis demonstrates significant knowledge gaps among stakeholders, with educational attainment (bachelor's degree: +1.4177 log-odds), geographic location (Midlands: +1.2712), and information access (radio ownership: +1.0328) predicting governance awareness. The paper concludes that Zimbabwe's MRG framework performs poorly against international benchmarks, requiring comprehensive reforms including constitutional alignment, regulatory consolidation, transparency enhancement, institutional capacity building, and technology-enabled governance systems.

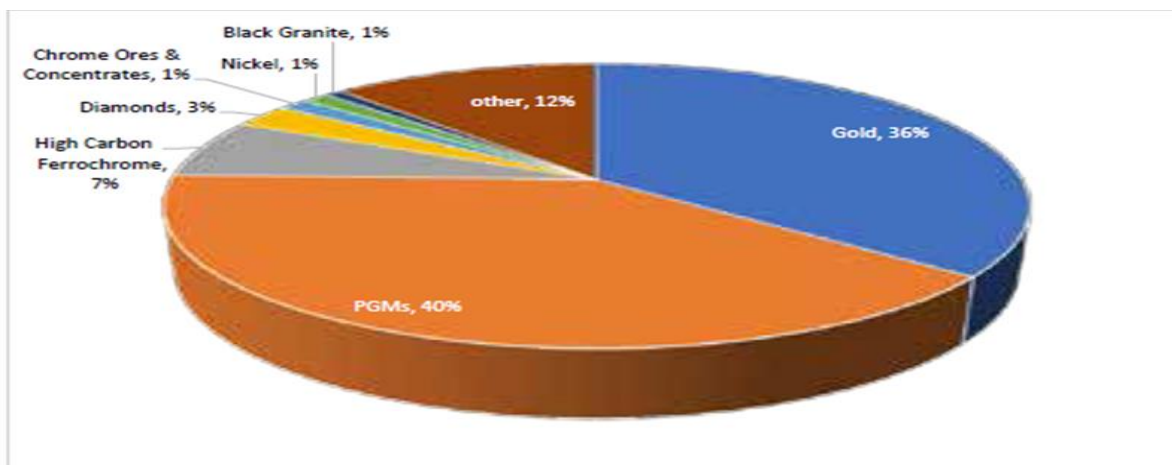
Index Terms- Mineral Resource Governance Evaluation, Platinum Group Metals, Zimbabwe, Governance Performance, Institutional Capacity, Transparency

I. INTRODUCTION

Mineral resources governance (MRG) evaluation is essential for understanding how effectively countries manage their resource wealth and identifying areas requiring reform (NRGI, 2017). Effective evaluation frameworks assess governance performance across multiple dimensions including legal frameworks, institutional capacity, transparency mechanisms, revenue management, and stakeholder engagement (Bebbington et al., 2018). Such evaluations enable benchmarking against international standards, identification of governance gaps, and evidence-based policy formulation.

Zimbabwe presents a compelling case for MRG evaluation. The country hosts the world's third-largest platinum group metals reserves after South Africa, with the Great Dyke containing the second-largest known PGMs resources globally and the world's largest high-grade chrome ore resources (Dzinomwa et al., 2014). PGMs are essential raw materials in automotive catalytic converters, electronics, medical devices, and industrial applications, positioning Zimbabwe to benefit significantly from global demand (Taninouchi, 2023). The sector contributes approximately 12% to GDP, with PGMs accounting for 40% of mineral revenues (Reserve Bank of Zimbabwe, 2022).

Figure 1: Distribution of Mineral Revenue



Source: Reserve Bank of Zimbabwe (2022)

Despite this mineral wealth, Zimbabwe's economy has contracted severely, with hyperinflation, mounting debt (approximately US\$20 billion), and poverty affecting over 7 million people (World Bank, 2023; AFDB, 2024). The Corruption Perceptions Index ranks Zimbabwe 158/196 (2021) on perceived corruption levels. Between 2000 and 2020, Zimbabwe lost over US\$32 billion through illicit financial flows, largely attributed to weak MRG frameworks (Kurebwa, 2021). Current losses are estimated at US\$1.2–1.9 billion annually through smuggling and revenue leakages (U.S. International Trade Administration, 2024).

The Natural Resource Governance Institute's Resource Governance Index (RGI) provides systematic evaluation of MRG performance across countries. Zimbabwe's gold mining sector scored only 29 out of 100 points in 2017, ranking 81st out of 89 countries assessed (NRGI, 2017). This score declined from 31 points in 2013, indicating deteriorating governance performance. Component scores revealed particularly weak performance in revenue management, value realization, and the extractive industry operating environment.

Figure 2: Zimbabwe RGI and Component Scores



Source: NRGI (2017)

This paper provides a comprehensive evaluation of MRG in Zimbabwe's PGMs sector, addressing three key questions: (1) How does Zimbabwe's MRG framework perform against international benchmarks and evaluation criteria? (2) What are the critical governance gaps and failures in the PGMs sector? and (3) What are the implications of governance performance for sectoral development and national welfare? Through this evaluation, the paper contributes evidence-based insights for policy reform and identifies priority areas for governance strengthening.

The paper is structured as follows: Section 2 reviews evaluation frameworks and benchmarks for MRG. Section 3 outlines the research methodology. Section 4 presents evaluation findings across four governance dimensions. Section 5 discusses the implications of governance performance. Section 6 concludes with recommendations for governance strengthening.

II. LITERATURE REVIEW: EVALUATION FRAMEWORKS FOR MINERAL RESOURCE GOVERNANCE

2.1 Conceptualising MRG Evaluation

Mineral resource governance evaluation involves systematic assessment of the systems, institutions, and processes through which mineral wealth is managed (NRGI, 2017). Evaluation frameworks assess governance performance against normative criteria derived from international standards, best practices, and stakeholder expectations. Such evaluations serve diagnostic functions, identifying governance gaps and informing reform priorities (Bebbington et al., 2018).

The Natural Resource Governance Institute (NRGI, 2013) identifies four components determining governance quality: institutional and legal setting, reporting practices, safeguard and quality control, and enabling environment. NRGI (2017) further groups determinants into value derivation and revenue management, mineral resources institutionalisation, and the enabling environment. The Resource Governance Index (RGI) operationalises these components into measurable indicators, enabling cross-country comparison and performance tracking over time.

Transparency International Zimbabwe (2018) identifies five dimensions of resource governance relevant to evaluation: access to information, public participation, adherence to the law, coherence, and inclusiveness. Access to information ensures stakeholders have necessary data for informed decisions (Centre for MRG, 2017). Public participation facilitates hearing diverse voices, fostering transparency and accountability (Maguwu, 2016). Adherence to law guarantees decision-making within legal frameworks (Mlambo-Ngcuka, 2017). Coherence refers to consistency and alignment of policies and regulations (Zimbabwe Democracy Institute, 2016). Inclusiveness emphasises including all relevant stakeholders regardless of social or economic status (Chiyaka, 2018).

2.2 International Evaluation Benchmarks

2.2.1 Extractive Industry Transparency Initiative (EITI) Standard

The Extractive Industries Transparency Initiative (EITI), launched in 2002, establishes global standards for transparency and accountability in the extractive sector. EITI requirements are categorised into seven areas: multi-stakeholder group oversight, licenses and contracts, monitoring production, revenue collection, revenue allocation, socio-economic contribution, and outcomes and impacts (EITI, 2016). Implementation involves regular reporting, independent reconciliation of company payments and government revenues, and public dissemination of findings. EITI validation assesses country performance against these requirements, with compliant countries demonstrating systematic transparency practices. As of 2024, 55 countries have implemented EITI, including regional peers such as Ghana, Tanzania, and Zambia. Zimbabwe's non-adoption represents a significant gap in transparency performance, limiting accountability mechanisms and public access to information (ZEPARU, 2018).

2.2.2 Resource Governance Index (RGI)

The Resource Governance Index, produced by NRGI, evaluates governance quality in extractive sectors of resource-

producing countries worldwide. The RGI assesses three components: value realization (capturing the full value of resources through licensing, taxation, and state participation), revenue management (managing revenues to ensure sustainable and equitable outcomes), and enabling environment (broader governance context including rule of law, corruption control, and accountability mechanisms) (NRGI, 2017).

Scores are categorized as good (74+ points), satisfactory (60-73 points), weak (45-59 points), poor (30-44 points), and failing (0-29 points). Zimbabwe's 2017 score of 29 points falls in the failing category, indicating severe governance deficiencies. Component scores reveal particular weaknesses: value realization (38 points), revenue management (25 points), and enabling environment (24 points) (NRGI, 2017).

2.2.3 African Mining Vision (AMV) Framework

The African Mining Vision (AMV), adopted in 2009 by African Union member states, establishes continental standards for mineral resource governance (UNECA, 2020). The AMV framework evaluates governance against nine principles: (1) transparent and accountable governance, (2) broad-based development, (3) optimal benefit capture, (4) environmental sustainability, (5) community engagement, (6) regional integration, (7) knowledge generation, (8) capacity building, and (9) international cooperation.

AMV implementation involves country-level assessment against these principles, with biennial reporting on progress. Zimbabwe has formally committed to AMV principles, but implementation remains limited (Nwapi, Andrews and Bebbington, 2018). Evaluation against AMV benchmarks reveals significant gaps in transparency, community engagement, and benefit-sharing mechanisms.

2.2.4 World Bank Governance Indicators

The World Bank's Worldwide Governance Indicators (WGI) provide broader governance context for MRG evaluation. Six dimensions are assessed: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption (World Bank, 2022). Zimbabwe performs poorly across all dimensions, with percentile rankings consistently below 20% since 2000, indicating severe governance deficits that constrain extractive sector performance.

2.3 Regional and Country Benchmarks

2.3.1 Botswana: High-Performance Benchmark

Botswana represents a high-performance benchmark for MRG evaluation. The mining sector contributes about 40% of GDP and 50% of direct government revenue (Bank of Botswana, 2020). Botswana's RGI score of 71 points (2017) ranks 18th globally, reflecting strong performance across all governance dimensions. Key success factors include: clear legal frameworks defining state ownership and regulatory authority, transparent licensing processes, effective revenue management including sovereign wealth funds, strong institutional capacity, and sustained political commitment to good governance (Lewin, 2010).

Evaluation of Botswana's performance reveals consistent adherence to transparency principles, with public disclosure of

mining contracts, regular reporting of production and revenue data, and effective parliamentary oversight. The country's removal from the Financial Action Task Force (FATF) grey list in 2021 demonstrates the integrity of its anti-money laundering and illicit financial flow mechanisms.

2.3.2 South Africa: Regional Comparator

South Africa provides a regional comparator for MRG evaluation. The country is ranked first globally in PGMs production, with the mining sector contributing significantly to economic growth (U.S. Geographical Survey, 2017). South Africa's RGI score of 58 points (2017) ranks 23rd globally, reflecting moderate governance performance. The Mining Charter, embedded within the Minerals and Petroleum Resources Development Act (2002), establishes frameworks for local content, community engagement, and industry transformation. However, evaluation reveals ongoing challenges including limited community benefits (79% of residents in some mining communities reporting no benefits), enforcement weaknesses, and social tensions (Dechambenoit, 2020). These challenges highlight that even relatively strong governance frameworks require continuous improvement and adaptation.

2.3.3 Democratic Republic of Congo: Low-Performance Comparator

The Democratic Republic of Congo provides a low-performance comparator with parallels to Zimbabwe. Despite enormous mineral wealth, the DRC's RGI score of 44 points (2020) reflects persistent governance challenges. Evaluation reveals improvements in legal frameworks through the 2018 Mining Code, but implementation weaknesses including poor application of rules, ineffective revenue management, lack of publicly accessible data on reserves and production, and a "failing" enabling environment rating (NRGI, 2020). The DRC experience demonstrates that legal reform alone is insufficient without addressing underlying governance challenges,

institutional capacity constraints, and political economy dynamics.

2.4 Zimbabwe's MRG Performance: Existing Evaluations

Existing evaluations of Zimbabwe's MRG performance reveal consistent findings of governance deficiencies. The 2017 RGI evaluation of the gold sector provides the most systematic assessment, with failing scores across all dimensions (NRGI, 2017). Key findings include: weak legal framework with the outdated Mines and Minerals Act (1961), limited transparency in licensing and contract allocation, inadequate revenue management with no publicly accessible production data, weak enforcement of environmental and social regulations, and constrained civil society participation.

The African Peer Review Mechanism (APRM, 2024) evaluation of Zimbabwe's governance highlighted extractive sector challenges including policy incoherence, institutional fragmentation, and corruption. The report recommended strengthening transparency mechanisms, enhancing stakeholder engagement, and building institutional capacity.

Academic evaluations (Murombo, 2016; Chigumira et al., 2019; ZELA, 2021) have documented specific governance failures: overlapping institutional mandates creating regulatory confusion, limited community benefits from mining activities, environmental degradation from inadequate enforcement, and illicit financial flows facilitated by weak oversight. These evaluations converge on the need for comprehensive governance reform.

2.5 Evaluation Framework for This Study

This study adopts an evaluation framework integrating international benchmarks (EITI, RGI, AMV) with stakeholder-derived criteria. The framework organizes evaluation around four thematic pillars:

Figure 3: Conceptual Framework



Source: Researcher's own illustration

1. Legislative and Legal Institutional Environment: Evaluating constitutional provisions, mining legislation, environmental laws, and regulatory institutions against benchmarks of clarity, coherence, transparency, and enforcement capacity.

2. Extractive Sector Operating Environment: Assessing broader governance context including corruption levels, political stability, regulatory quality, rule of law, and accountability mechanisms.

3. Value Derivation/Realisation: Evaluating licensing processes, exploration and production oversight, environmental protection, revenue collection, and local socio-economic impacts.

4. Revenue Management: Assessing national budgeting, sub-national revenue sharing, sovereign wealth fund management, and fiscal and monetary policy frameworks.

Evaluation criteria are derived from international standards (EITI requirements, RGI indicators, AMV principles) and stakeholder expectations articulated through key informant interviews and survey responses. Performance is assessed against these criteria, with gaps identified and prioritized for reform.

III. METHODOLOGY

3.1 Research Paradigm

This study adopted a pragmatist research paradigm, which enabled a flexible combination of methods addressing both subjective and objective aspects of MRG (Kivunja and Kuyini, 2017). Pragmatism focuses on distilling desired results of specific MRG practices, problems, processes, principles, and systems, ultimately leading to developing approaches for obtaining desired outcomes (Cordeiro, 2020). The paradigm maintains that the best research techniques are those contributing to the most effective answer to the research issue (Muzari et al., 2022).

The philosophical roots of pragmatism are grounded in works of classical pragmatists Charles Sanders Peirce, William James, and John Dewey. Pragmatism serves as a metatheoretical paradigm and guiding philosophy for developing, implementing, and evaluating specific studies and research methods (Allemang, Sitter and Dimitropoulos, 2022). The researcher invoked application of relevant theories as tools for practical MRG research because the paradigm helps understand complex and unpredictable MRG phenomena (Lake, 2020).

3.2 Research Approach

The research adopted a mixed methods research approach to explore MRG in Zimbabwe's extractive sector focusing on PGMs. According to Ghambi (2021), a mixed methods approach answers research questions using qualitative information and descriptive and inferential statistics. The researcher considered this approach appropriate as it gathers reliable data, helping answer research questions from both qualitative and quantitative perspectives (Siedlecki, 2020).

The study employed a sequential exploratory mixed-methods approach, which enhanced the study by first conducting an in-depth qualitative phase to explore key governance challenges and stakeholder perspectives. The researcher interviewed key informant stakeholders in government, mining companies, civil society, and communities to identify critical issues influencing MRG. Qualitative insights gathered from these stakeholders informed a follow-up stage using a targeted quantitative instrument to measure prevalence and intensity of these issues across different mining regions and stakeholder groups.

3.3 Research Design

The study followed a case study design focusing on governance of mineral resources using the PGMs sector comprising extractive industry entities, including those under the Platinum Producers Association (PPA) and the Chamber of Mines Zimbabwe (COMZ). This design is contextual as it searched and probed for the precise nature of the problem. The study adopted descriptive statistics which provided a full description of the MRG phenomenon within its context (Urbina, Ruiz and Villa, 2023), helping summarize and clarify quantitative data guided by initial qualitative findings.

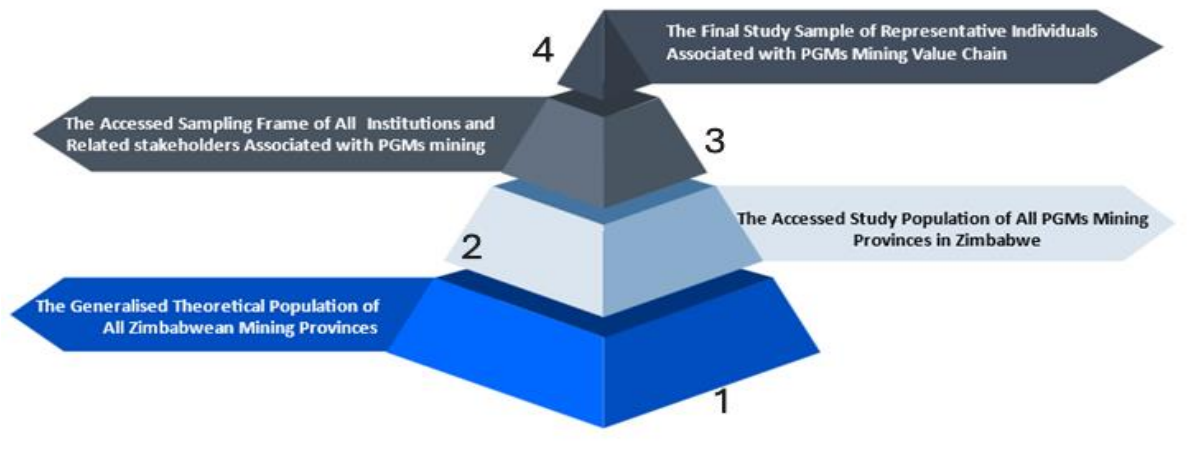
The study opted for mixed methods sequential exploration as a specific research design. Qualitative exploration was used with the objective of gaining in-depth understanding of experiences, perspectives, and challenges related to mineral resources governance from viewpoints of various stakeholders in the PGMs sector. The researcher coordinated Focus Group Discussions (FGDs) to reach respondents outside the key informant group. Document analysis included insights from literature review, reviewing existing policies, laws, regulations, and reports related to MRG in Zimbabwe.

3.4 Population and Sample Size

The study population comprised all stakeholders actively involved in PGMs MRG in three provinces: Harare, Midlands, Mashonaland East, and Mashonaland West. This set included government ministries, quasi-government agencies, policymakers, private-sector actors, CSOs, NSAs, local communities, and other interest groups. A sampling frame was developed representing 2000 elements from government ministries, labour unions, civil society organisations, mining companies, financial institutions, and parliament of Zimbabwe.

For qualitative sampling, the researcher used purposive sampling targeting key stakeholders with relevant information and capacity to respond to MRG framing and application. Snowball sampling complemented purposive sampling through referrals facilitating access to other capable key respondents until data saturation at 31 responses.

Figure 4: Sampling Breakdown



Source: Researcher's own illustration

For quantitative sampling, the researcher employed the Cochran sampling method to determine required sample size:

$$n_0 = Z^2 pq / e^2 \text{ (Equation 1)}$$

Where:

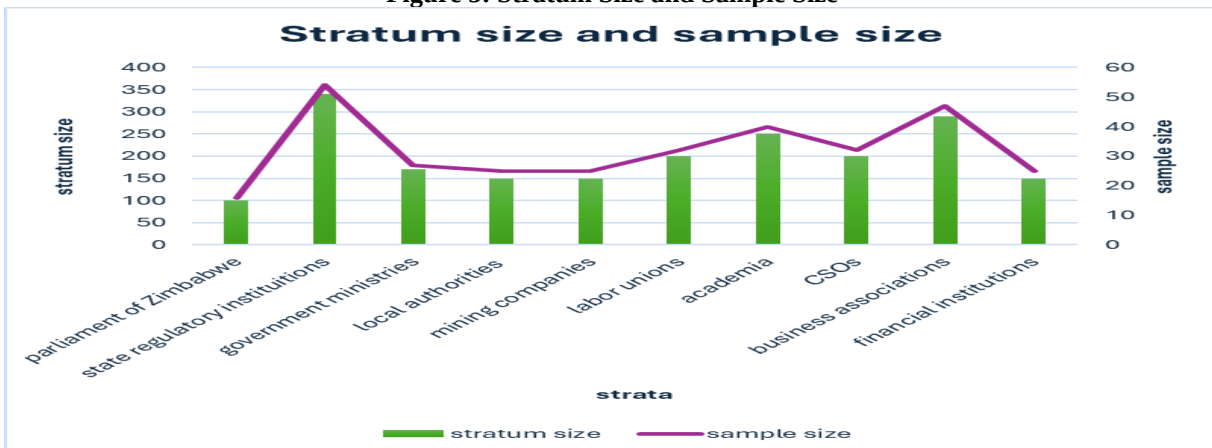
- n_0 is the Cochran sample size
- Z is the Z-score (1.96 for 95% confidence level)
- e is desired margin of error (0.05)
- p is estimated proportion of population (0.5)
- q is $1-p$ (0.5)

Using modified Cochran formula due to small sampling frame:

$$n = n_0 / [1 + ((n_0 - 1)/N)] \text{ (Equation 2)}$$

Where N is population size (2000). The calculated sample size was 323 participants. Stratified random sampling was applied across ten strata, with sample size from each stratum proportionate to stratum size relative to total population.

Figure 5: Stratum Size and Sample Size



Source: Researcher's own illustration

3.5 Data Collection Methods

Qualitative data collection employed key informant interviews aimed at gaining in-depth insights into stakeholder experiences, perceptions, and roles in mineral resources governance. The researcher interviewed officials from academia, business associations, civil society organisations, financial institutions, government ministries, labour unions, local

authorities, mining companies, parliament of Zimbabwe, and state regulatory bodies. Focus group discussions involved facilitated discussions among small groups in mining areas to elicit collective views and explore diverse perspectives on governance issues. Document analysis involved systematic review of existing texts, including policies, laws, reports, and archival data.

Table 1: Delve Criteria for data analysis

Criteria	Description
Study Relevance	The articles chosen were focused on MRG, including those in Zimbabwe's PGMs sector.
Material Publication Date	The more recent studies of the last 10 years (2016 -2025) took precedence to ensure and guarantee a more up-to-date approach to MRG systems.
Source Credibility	Peer-reviewed journals, government reports, industry white papers, international publications, local and international position papers and reputable news sources
Empirical Data	Quantifiable studies encompassing local and international MRG indicators, legal frameworks, and economic analysis.
Study Comparative Analysis	Comparative articles of Zimbabwe's PGMs sector governance to other mineral-rich countries.
Study Legal and Policy Documents	Local and international Statutes, laws, and regulations that affect PGM governance.
Preferred Language	By and large English-language reports were utilized due to accessibility and provided a range of relevant studies.

Source: Research data

Quantitative data collection employed a structured questionnaire focusing on collecting numerical data to measure participant perceptions, behaviours, and governance indicators across four thematic areas: legislative and legal institutional environment, extractive sector operating environment, value derivation, and revenue management.

3.6 Data Analysis Methods

Qualitative data analysis employed thematic analysis, a methodical approach to identifying, analysing, and interpreting patterns and themes within qualitative data sets. The researcher used Delve and NVIVO data analysis software to facilitate thematic analysis, leveraging core functionalities to effectively organise and visualise qualitative data. Coding processes involved systematic tagging of data with predetermined codes based on research framework and emerging inductive MRG data.

Quantitative data analysis employed Stata statistical software for data management, analysis, and visualisation. Frequencies were calculated to generate descriptive statistics, and inferential analysis applied appropriate statistical regressions including logistic regression and multinomial logistic regression. Control variables were included to address confounding factors.

3.7 Data Validity and Reliability

Data reliability was ensured through systematic and replicable approaches to data collection and analysis. Data validity was ensured through member checking (respondent validation) and methodological triangulation. Member checking involved sharing research findings, interpretations, and data summaries with key informants to ensure accurate reflection of their perspectives. Methodological triangulation involved using multiple methods and data sources including key informant interviews, FGDs, document analysis, and literature search.

For quantitative reliability, internal consistency of the research instrument was evaluated using Cronbach's alpha coefficient, which yielded 0.85, indicating high internal

consistency among items. Expert review, content congruence with relevant legislation, and construct validity checks using response patterns further validated the instrument.

3.8 Ethical Considerations

The research was conducted in line with rules and regulations of the Mines and Minerals Act in Zimbabwe. Permission was requested from institutions before conducting research. The researcher obtained ethical clearance from Africa University's Ethics Committee. Informed consent was obtained from all participants, with clear explanation of study purpose, methods, and potential risks and benefits. Confidentiality and anonymity were safeguarded through use of pseudonyms (SH1–SH31) and secure data storage. Respondents were assured participation was voluntary and had no bearing on access to services and benefits.

IV. EVALUATION FINDINGS

4.1 Respondent Characteristics

Of 323 targeted participants, 214 completed questionnaires (73% response rate). Males constituted 59% of respondents, females 41%. Educational attainment: master's degree (49%), PhD (23%), diploma (15%), certificate or lower (13%). Age distribution: 51+ years (32.6%), 41-50 years (23.3%), 31-40 years (23.3%), 20-30 years (20.8%). Geographic distribution: Harare (54%), Mashonaland West (16%), Midlands (8%), other provinces (22%). Institutional affiliation: business associations (22.4%), mining companies (13.9%), academia (12.7%), other stakeholders (51%).

4.2 Evaluation of Legislative and Legal Institutional Environment

4.2.1 Constitutional Alignment

Evaluation against constitutional provisions reveals significant misalignment. Section 315(2) requires that negotiation and execution of State contracts, including mineral concessions, guarantee transparency, integrity, cost-effectiveness, and competitiveness. Section 298(1)(b)(ii) stipulates equitable revenue distribution among central, provincial, and local governments. Section 301(3) requires minimum 5% of national revenues allocated to provinces and local authorities. Section 73 establishes the right to an optimal environment and mandates pollution prevention.

Evaluation Finding 1: Constitutional provisions promoting transparency, accountability, and equitable resource distribution are not effectively implemented, creating a significant gap between constitutional aspirations and practical governance. SH19 confirmed: "The current situation is inconsistent with the aspirations of the supreme law of the country, which makes it irrelevant for implementation." This evaluation reveals constitutional-legal misalignment as a fundamental governance weakness.

4.2.2 Legislative Adequacy

The Mines and Minerals Act (Chapter 21:05), originally enacted in 1961, remains the primary legislation governing mining. Despite multiple amendments, evaluation reveals significant inadequacies:

- **Outdated provisions:** The Act does not address modern governance challenges including digitalisation, transparency requirements, and complex revenue management (Veritas Zim, 2023).
- **Limited transparency requirements:** The Act lacks provisions for public disclosure of contracts, beneficial ownership, and revenue flows (Murombo, 2016).
- **Weak enforcement mechanisms:** Penalties for non-compliance are insufficient to deter violations, and enforcement capacity is limited (Chigumira et al., 2019).
- **Inadequate community protections:** Provisions for community engagement and benefit-sharing are weak and poorly enforced (ZELA, 2021).

Evaluation Finding 2: The Mines and Minerals Act performs poorly against legislative adequacy benchmarks, requiring comprehensive reform to address modern governance challenges.

4.2.3 Regulatory Fragmentation

Evaluation reveals significant regulatory fragmentation across multiple institutions with overlapping mandates:

- **Ministry of Mines and Mining Development:** Policy formulation, mining rights administration
- **Environmental Management Agency (EMA):** Environmental compliance, EIAs
- **Zimbabwe Revenue Authority (ZIMRA):** Taxation, royalty collection
- **Minerals Marketing Corporation of Zimbabwe (MMCZ):** Mineral sales regulation
- **Zimbabwe Mining Development Corporation (ZMDC):** State-owned mining assets

- **Ministry of Finance and Economic Development:** Fiscal oversight
- **Reserve Bank of Zimbabwe:** Monetary policy, foreign currency management
- **Ministry of Local Government:** Local development planning
- **Zimbabwe Parks and Wildlife Management Authority:** Protected areas
- **Security sector entities:** Enforcement, with some engaged in mining operations

SH6 and SH7 indicated: "The existing governance structure exhibits insufficient coordination among regulatory bodies. This fragmentation results in inefficiencies in MRG and frequently leads to conflicting policies." SH7 remarked: "The regulatory landscape is characterised by overlapping mandates from multiple agencies, complicating effective governance, rendering adherence to set procedures near impossible."

Evaluation Finding 3: Regulatory fragmentation creates significant inefficiencies, policy conflicts, and governance gaps. The multiplicity of institutions with overlapping mandates undermines coherent governance and creates arbitrage opportunities.

4.2.4 Policy Consistency and Stability

Evaluation reveals significant policy inconsistency and regulatory instability. Frequent amendments to the Indigenisation and Economic Empowerment Act have generated uncertainty. Zimbabwe has modified various legislative measures via statutory instruments, with over 300 statutory instruments implemented between January 2023 and June 2024 (Veritas, 2024).

SH3 remarked: "The regulatory environment is unpredictable. The frequent changes in laws and regulations render long-term planning nearly unfeasible for our organisation." Chigumira (2021) found that policy volatility negatively impacts foreign direct investment, especially in capital-intensive sectors such as PGMs.

Evaluation Finding 4: Policy inconsistency and regulatory instability create an unpredictable investment environment, undermining long-term planning and sectoral development.

4.3 Evaluation of Extractive Sector Operating Environment

4.3.1 Corruption Levels

Corruption evaluation reveals pervasive corruption across the PGMs value chain. Zimbabwe's Corruption Perceptions Index ranking of 158/196 (2021) reflects severe corruption challenges. Zimbabwe's Anti-Corruption Commission observed rampant corruption sustained by non-competitive bidding procedures in issuing mining licenses and lack of transparency regarding mining claim owners (AFRODAD, 2021).

SH24 (Transparency International Zimbabwe) remarked: "Corruption across different levels of government and regulatory bodies compromises the overall governance framework." Specific corruption manifestations include:

- **Licensing corruption:** Mining concessions granted under questionable conditions without adequate due diligence or competitive bidding (Auditor General's Report, 2017).

- **Revenue leakage:** Underreporting of production, transfer pricing, and smuggling deprive government of revenues (Ncube and Tafirenyika, 2022).
- **Enforcement corruption:** Bribery to circumvent environmental impact assessments and other regulatory requirements (EMA officials).
- **Elite capture:** Politically connected individuals benefiting from mining concessions and revenue flows (Saunders, 2021).

Evaluation Finding 5: Corruption is pervasive across the PGMs sector, undermining revenue generation, regulatory effectiveness, and governance integrity.

4.3.2 Political Interference

Evaluation reveals significant political interference in governance processes. SH10 mentioned: "Power politics and political interference in all national processes including government systems and processes. The net effect is that political interference compromises MRG by distorting decision-making processes, creation of politically protected persons whose activities deepen smuggling and corruption."

SH4 in Zivagwe Rural District Council stated: "The primary causes of issues in Zimbabwe's artisanal mining stem from unethical, unprofessional, and corrupt power dynamics among various stakeholders, including state actors and political elites." Chitongo et al. (2021) highlighted prevalence of political hegemony in disorganised and chaotic ASM operations.

Evaluation Finding 6: Political interference distorts decision-making, undermines institutional autonomy, and creates conditions for impunity, particularly for politically connected actors engaged in illicit activities.

4.3.3 Security Sector Role

Evaluation reveals unique governance challenges arising from security sector involvement in mining. SH10 disclosed: "Some security entities have running partnerships with foreign investors across all mineral categories, which makes this crucial sector both a player and an enforcer of security in the sector." This dual involvement creates:

- **Conflicts of interest:** Security forces tasked with enforcement are simultaneously economic actors with interests in extraction.
- **Opaque enforcement regimes:** Security-linked entities operate with minimal oversight.
- **Illicit financial flows:** Security sector involvement facilitates smuggling and revenue leakage.
- **Impunity:** Security sector actors benefit from political protection, limiting accountability.

Evaluation Finding 7: Security sector involvement in mining operations creates fundamental conflicts of interest and undermines regulatory enforcement, representing a unique governance challenge requiring specific attention.

4.3.4 Rule of Law and Judicial Effectiveness

Evaluation reveals weaknesses in rule of law and judicial effectiveness. SH11 and SH17 believed a fair and efficient

judiciary is crucial for enforcement of mining laws. However, evaluation indicates:

- **Limited enforcement:** Penalties for illegal mining and contract violations are rarely enforced effectively.
- **Judicial capacity constraints:** Courts lack specialized expertise in mining law and complex financial crimes.
- **Political influence:** Judicial independence is compromised, with politically connected actors avoiding accountability.

Evaluation Finding 8: Weak rule of law and limited judicial effectiveness undermine enforcement of mining laws and contracts, allowing non-compliance to persist with limited consequences.

4.4 Evaluation of Value Derivation

4.4.1 Licensing and Allocation Processes

Evaluation of licensing processes reveals significant transparency and integrity deficits:

- **Non-competitive allocation:** Mining licenses frequently allocated through non-competitive processes, with politically connected individuals benefiting (AFRODAD, 2021).
- **Limited public information:** Details of licensing processes, winning bids, and contract terms are not publicly disclosed.
- **Multiple allocations:** The study found prevalent problems with multiple allocations of the same mining rights.
- **Lack of beneficial ownership transparency:** Ultimate owners of mining companies are not publicly disclosed, enabling anonymous control of resources.

SH8 noted: "Access to information about mining deals is limited, which complicates efforts to hold companies or the government accountable for resource mismanagement."

Evaluation Finding 9: Licensing processes lack transparency and integrity, creating opportunities for corruption and limiting accountability.

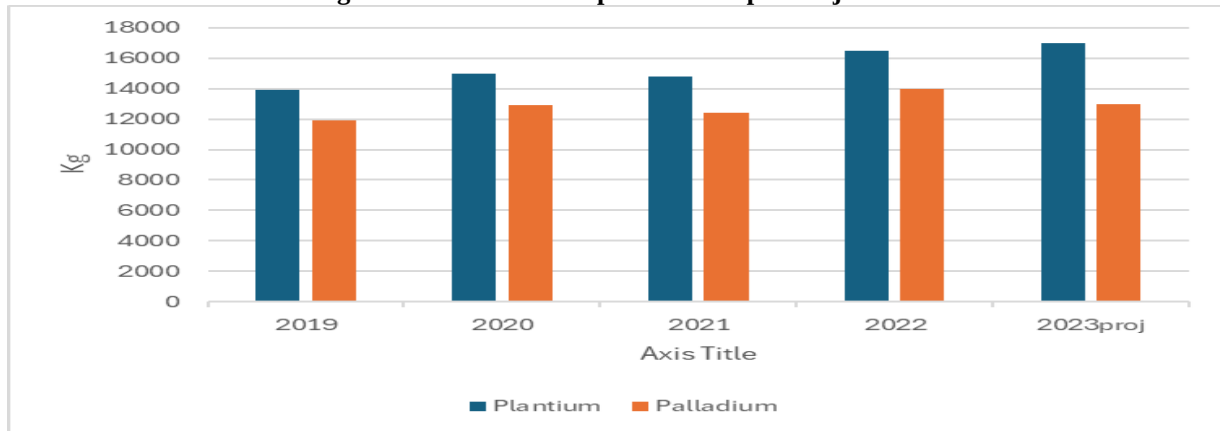
4.4.2 Production and Export Monitoring

Evaluation reveals significant weaknesses in production and export monitoring:

- **Underreporting:** Companies underreport production to reduce tax and royalty obligations (Ncube and Tafirenyika, 2022).
- **Smuggling:** Significant quantities of PGMs are smuggled out of the country, with estimated monthly losses of US\$100 million (SARW, 2025).
- **Limited monitoring capacity:** Regulatory bodies lack technological tools and human resources for effective monitoring.
- **Inadequate data systems:** Absence of integrated digital systems for tracking production and exports.

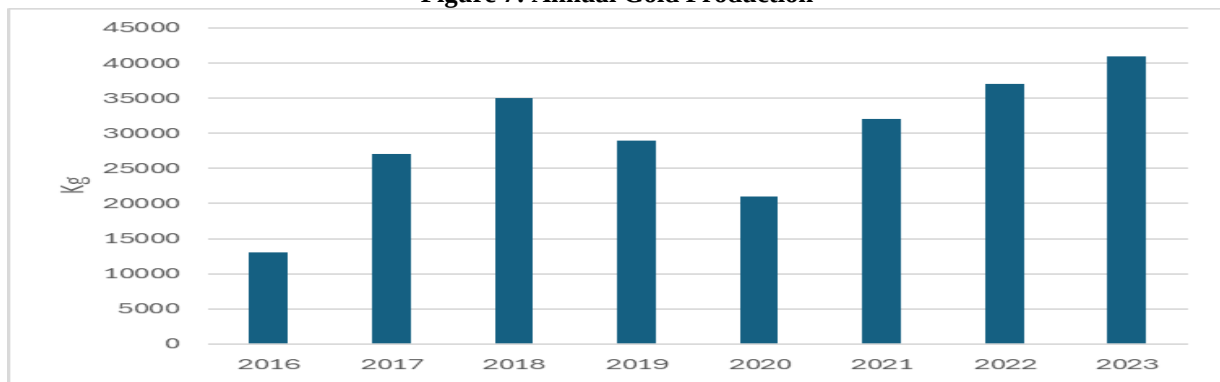
SH5 stated: "There is a significant amount of platinum and other precious metals that leave the country illegally, depriving the government of much-needed revenue."

Figure 6: Platinum Group Metals Output Projections



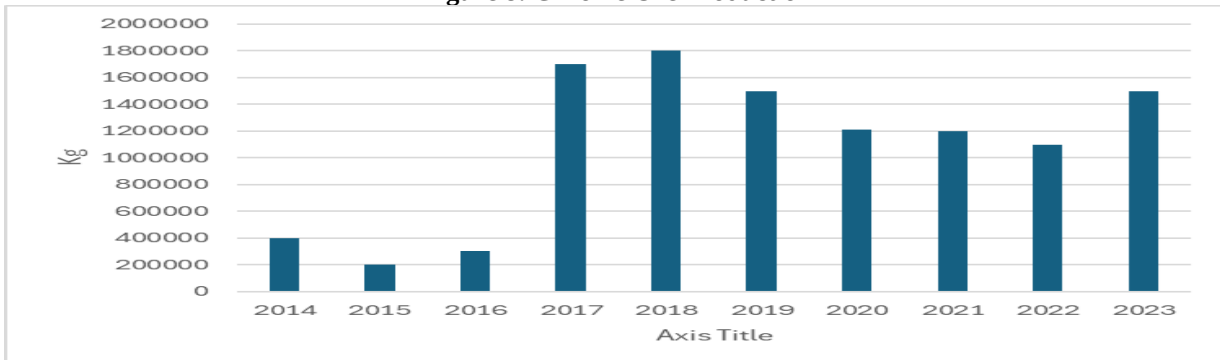
Source: Ministry of Mines, Chamber of Mines (2022)

Figure 7: Annual Gold Production



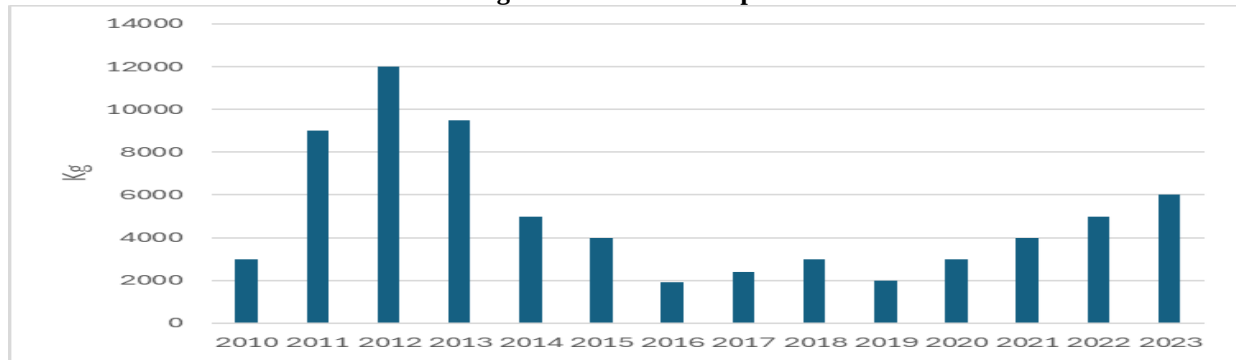
Source: Chamber of Mines (2022)

Figure 8: Chrome Ore Production



Source: Chamber of Mines and Ministry of Mines (2022)

Figure 9: Diamond Output



Source: Ministry of Mines and Development (2022)

Evaluation Finding 10: Production and export monitoring is severely deficient, enabling substantial underreporting and smuggling that deprive government of revenues.

4.4.3 Environmental Governance

Evaluation reveals significant environmental governance weaknesses:

- **Limited compliance:** Mining companies often prioritise economic benefits over environmental protection (Dube et al., 2022).
- **Inadequate enforcement:** EMA lacks resources and capacity to effectively enforce environmental regulations.
- **EIA circumvention:** Companies employ bribery to circumvent environmental impact assessment requirements.
- **Degradation impacts:** Water pollution, air quality degradation, and land disturbance affect mining communities.

SH22 (EMA official) remarked: "While the laws are in place, their implementation lacks effectiveness." Community members near mining sites expressed concerns about pollution of water sources and degradation of air quality.

Environmental governance frameworks include the Environmental Management Act (Chapter 20:27), Water Act (Chapter 20:24), and other legislation, but enforcement remains weak.

Evaluation Finding 11: Environmental governance is inadequately developed, with limited compliance, weak enforcement, and significant ecological degradation resulting from mining activities.

4.4.4 Community Benefits and Local Content

Evaluation of community benefits reveals significant gaps:

- **Limited community engagement:** Communities are infrequently consulted during significant mining decision-making processes.
- **Inadequate benefit-sharing:** CSR initiatives are perceived as superficial rather than substantive engagement benefiting impacted communities.

- **Community dissatisfaction:** A community leader remarked: "The benefits promised by mining companies seldom reach the local population."
- **Shift to CSP demands:** Communities no longer favour CSR but rather community social partnerships with meaningful benefit-sharing and participation.
- **Indigenisation limitations:** Equity empowerment is minimalistic, with beneficiaries lacking access to financial resources and genuine decision-making authority.

SH24 from ZNCC advocated: "Localising procurement expenditure leads to more equitable distribution of benefits, establishes industrial linkages, fosters gainful employment, promotes edu-skill development, facilitates industrialisation, and contributes to poverty alleviation."

Evaluation Finding 12: Community engagement and benefit-sharing mechanisms are inadequate, with communities receiving limited benefits and lacking meaningful participation in governance processes.

4.5 Evaluation of Revenue Management

4.5.1 Revenue Collection Effectiveness

Evaluation reveals significant weaknesses in revenue collection:

- **Collection inefficiencies:** Substantial revenues are lost due to inefficiencies in tax collection and illicit financial flows (ZIMRA officials).
- **Limited capacity:** ZIMRA suffers from acute shortage of skilled personnel, limited technological tools, and insufficient funding for field audits.
- **Underreporting:** Companies underreport earnings, reducing tax and royalty obligations.
- **Transfer pricing:** Multinational corporations engage in sophisticated tax avoidance strategies.

SH14 and SH21 from ZIMRA noted: "Tracking and collecting revenues from certain mining companies poses challenges, especially those that underreport their earnings."

Evaluation Finding 13: Revenue collection is severely compromised by capacity constraints, underreporting, and sophisticated tax avoidance, resulting in substantial revenue leakage.

4.5.2 Revenue Transparency

Evaluation reveals limited transparency in revenue management:

- **Non-adoption of EITI:** Zimbabwe has not signed the Extractive Industries Transparency Initiative, limiting transparency mechanisms.
- **Limited public information:** Information about mineral revenues, their allocation, and use is not publicly accessible.
- **Weak reporting:** Government reports lack detailed, disaggregated information on mineral revenues and expenditures.
- **Concealment of contracts:** Mining contracts are not publicly disclosed, limiting scrutiny of fiscal terms.

SH8 expressed concerns regarding "lack of transparency in contracts and revenue flows between the government and mining companies."

Evaluation Finding 14: Revenue transparency is severely limited, with citizens lacking access to information about mineral revenues, contracts, and government receipts.

4.5.3 Revenue Allocation and Use

Evaluation reveals weaknesses in revenue allocation and use:

- **Limited community benefit:** Communities near mining areas receive minimal benefits despite resource extraction.
- **Constitutional non-compliance:** Section 301(3) requiring minimum 5% of national revenues allocated to provinces is not effectively implemented.
- **Weak sub-national revenue sharing:** Rural District Councils receive minimal levies tied to workforce rather than output.
- **Lack of sovereign wealth fund:** Zimbabwe lacks mechanisms for intergenerational equity through resource revenue investment.

Evaluation Finding 15: Revenue allocation fails to ensure equitable distribution of benefits, with limited resources reaching local communities and weak mechanisms for intergenerational equity.

4.5.6 Stakeholder Knowledge Evaluation

Quantitative evaluation of stakeholder knowledge reveals significant variation across demographic and geographic factors.

Knowledge Determinants:

- **Education:** Bachelor's degree holders show +1.4177 log-odds in knowledge compared to certificate holders; master's degree holders +1.1192; doctorate holders +1.6404.
- **Age:** Negative coefficient (-0.4282) indicating knowledge decline with age, but age squared (+0.0057) suggesting convex relationship.
- **Geography:** Midlands (+1.2712) and Mashonaland Central (+1.907) show higher knowledge than Harare.
- **Information access:** Radio ownership (+1.0328) positively influences knowledge.

- **Institutional affiliation:** Labour unions (-1.2277), civil society (-3.208), parliament (-2.2748), and financial institutions (-1.7177) show lower knowledge than mining companies.

Evaluation Finding 16: Stakeholder knowledge of revenue management varies significantly, with education, geography, and information access as key determinants. Critical oversight institutions (parliament, civil society) demonstrate lower knowledge levels, limiting their effectiveness.

4.5.7 Stakeholder Behaviour Evaluation

Behaviour evaluation reveals:

- **Discussion frequency:** 83% frequently discuss PGMs revenue management, 17% rarely discuss.
- **Age effects:** Age negatively influences behaviour (-0.6324), age squared positive (+0.0079).
- **Residence duration:** Length of residence shows negative effect (-0.0379).
- **Gender:** Females show 1.2596 units higher multinomial logit for infrequent discussion.

Evaluation Finding 17: Stakeholder engagement with revenue management issues varies by age, residence duration, and gender, with women less frequently engaged in discussions.

4.5.8 Stakeholder Attitude Evaluation

Attitude evaluation reveals:

- **Age effects:** Age negative (-0.4508), age squared positive (+0.0056) for dissatisfaction.
- **Geography:** Geographic location positively influences dissatisfaction (+0.2014).
- **Gender:** Females show 0.9270 units higher multinomial logit for neutral attitudes.
- **Institutions:** Institutional affiliation influences satisfaction, with one-unit increase corresponding to +1.1118 for complete satisfaction.

Evaluation Finding 18: Stakeholder attitudes toward revenue management are influenced by age, geography, gender, and institutional affiliation, with significant dissatisfaction expressed, particularly in mining areas.

4.6 Stakeholder Knowledge of Legislative Environment

Evaluation of legislative knowledge reveals:

- **Institutional variation:** Labour unions (-1.2277), civil society (-3.208), parliament (-2.2748), financial institutions (-1.7177) show lower knowledge than mining companies.
- **Geographic variation:** Mashonaland East (+1.3138) shows higher knowledge.
- **Behavioural factors:** Age (+1.2538), age squared (-0.0133), residence duration (-0.0411) influence behaviour.
- **Parliamentary engagement:** Parliament shows positive effect on behaviour (+2.2676).

Evaluation of legislative attitudes reveals:

- **Residence duration:** Positively influences "not knowledgeable" category (+0.0562).

- **Education:** Negatively affects "not inclusive" perception (-1.1347).
- **Gender:** Females show 1.1282 units higher multinomial logit for "highly inclusive" category.

Evaluation Finding 19: Stakeholder knowledge of and attitudes toward legislative frameworks vary significantly, with critical oversight institutions demonstrating knowledge gaps that limit their effectiveness.

4.7 Summary Evaluation Scorecard

Evaluation Dimension	Performance Rating	Key Deficiencies
Constitutional Alignment	Poor	Constitutional provisions not implemented
Legislative Adequacy	Poor	Outdated Act, limited transparency, weak enforcement
Regulatory Coordination	Failing	Fragmentation, overlapping mandates, conflicts
Policy Stability	Poor	Frequent changes, regulatory uncertainty
Corruption Control	Failing	Pervasive corruption across value chain
Political Independence	Failing	Political interference, elite capture
Security Sector Governance	Failing	Dual roles, conflicts of interest, impunity
Rule of Law	Poor	Weak enforcement, limited judicial effectiveness
Licensing Transparency	Poor	Non-competitive allocation, limited disclosure
Production Monitoring	Failing	Underreporting, smuggling, limited capacity
Environmental Governance	Poor	Weak enforcement, degradation, limited compliance
Community Benefits	Poor	Limited engagement, inadequate benefit-sharing
Revenue Collection	Failing	Capacity constraints, underreporting, tax avoidance
Revenue Transparency	Failing	Non-adoption of EITI, limited public information
Revenue Allocation	Poor	Limited community benefit, weak sub-national sharing

Evaluation Dimension	Performance Rating	Key Deficiencies
Stakeholder Knowledge	Moderate	Significant variation, oversight institutions weak

Overall Evaluation: Zimbabwe's MRG framework in the PGMs sector performs poorly against international benchmarks, with failing ratings in multiple critical dimensions. The evaluation confirms the RGI failing score (29/100) and identifies specific governance gaps requiring urgent reform.

V. DISCUSSION

5.1 Comparative Performance Assessment

Comparing Zimbabwe's MRG performance with regional and international benchmarks reveals significant gaps. Against Botswana's high-performance model, Zimbabwe demonstrates weaknesses across all governance dimensions: legal frameworks (fragmented vs. coherent), institutional capacity (weak vs. strong), transparency (limited vs. extensive), revenue management (leakage-prone vs. effective), and community benefits (minimal vs. significant).

Against South Africa's moderate performance, Zimbabwe shows more severe governance deficits, particularly in policy stability, regulatory coherence, and community engagement. South Africa's challenges with local content implementation and community benefits offer lessons for Zimbabwe, highlighting the need for realistic targets and capacity building alongside regulatory requirements.

The DRC comparison reveals parallel challenges: legal reform without effective implementation, persistent corruption, and limited developmental impact despite mineral wealth. Both countries demonstrate that formal institutional reform is insufficient without addressing underlying political economy dynamics, enforcement capacity, and accountability mechanisms.

5.2 Governance Gap Analysis

The evaluation identifies critical governance gaps requiring priority attention:

Gap 1: Constitutional-Legal Implementation Gap: Strong constitutional provisions promoting transparency, accountability, and equity remain unimplemented, creating a fundamental legitimacy deficit. Closing this gap requires not only legal reform but political commitment to constitutional implementation.

Gap 2: Institutional Coherence Gap: Regulatory fragmentation across multiple agencies with overlapping mandates creates inefficiencies, conflicts, and governance gaps. Consolidation and coordination mechanisms are urgently needed.

Gap 3: Capacity-Responsibility Gap: Regulatory bodies lack adequate human, financial, and technological resources to fulfill their mandates, creating arbitrage opportunities. Capacity building must accompany institutional reform.

Gap 4: Transparency-Accountability Gap: Limited disclosure of contracts, revenues, and licensing information prevents effective oversight by parliament, civil society, and

citizens. Transparency reforms including EITI adoption are essential.

Gap 5: Enforcement-Compliance Gap: Weak enforcement of existing laws and regulations allows non-compliance to persist with limited consequences. Strengthening enforcement capacity and imposing meaningful penalties are required.

Gap 6: Benefit-Sharing Gap: Communities receive limited benefits from mining activities, creating social tensions and legitimacy deficits. Institutionalised benefit-sharing mechanisms are needed.

Gap 7: Knowledge-Participation Gap: Stakeholder knowledge of governance issues varies significantly, with critical oversight institutions demonstrating knowledge gaps. Capacity building and information access are essential for effective participation.

5.3 Implications for Sectoral Development

The governance deficits identified have profound implications for PGMs sector development:

Revenue Implications: Estimated losses of US\$1.2–1.9 billion annually represent resources that could finance critical infrastructure, health, education, and poverty reduction programs. Stemming these leakages could transform fiscal space and development capacity.

Investment Implications: Policy inconsistency, regulatory fragmentation, and corruption undermine investor confidence, limiting foreign direct investment in exploration and development. Improved governance could attract investment, expand production, and generate additional revenues.

Community Implications: Continued community exclusion and limited benefit-sharing perpetuate social tensions and undermine the social licence to operate. Enhanced community engagement and benefit-sharing could reduce conflict and ensure mining contributes to local development.

Environmental Implications: Inadequate environmental enforcement imposes long-term costs on communities and ecosystems, with pollution and degradation affecting livelihoods and health. Strengthened environmental governance could ensure sustainable extraction and post-mining land use.

Macroeconomic Implications: Resource dependence without effective governance perpetuates the resource curse, with mineral wealth failing to drive broad-based development. Improved governance could transform resources into a foundation for sustainable growth and structural transformation.

5.4 Theoretical Implications

The evaluation findings contribute to theoretical understandings of resource governance:

Resource Curse Theory: The findings provide empirical support for resource curse explanations, demonstrating how governance failures mediate the relationship between resource

wealth and development outcomes. Zimbabwe's experience confirms that resource abundance without effective governance leads to economic underperformance and social costs (Sachs and Warner, 2021).

Institutional Theory: The evaluation validates institutional theory's emphasis on both formal and informal constraints (North, 2018; Scott, 2021). Formal institutions (laws, regulations) are undermined by informal practices (corruption, patronage, political interference), demonstrating that governance improvement requires attention to underlying power dynamics and incentive structures.

Political Settlements Theory: The findings illustrate how power configurations shape governance outcomes (Khan, 2010; Levy, 2014). Zimbabwe's dominant party settlement, with extensive executive control and limited accountability, creates conditions where elite interests in resource extraction override broader developmental objectives.

Stakeholder Theory: The evaluation demonstrates consequences of stakeholder exclusion, with marginalised communities and civil society unable to exercise effective oversight. Stakeholder theory's emphasis on inclusive governance is validated by findings that exclusion perpetuates governance failures (Freeman, 1994).

Rent-Seeking Theory: The findings document extensive rent-seeking behaviours including opaque license allocation, underreporting, transfer pricing, and smuggling. Rent-seeking theory's predictions about resource wealth concentration and economic distortion are confirmed (Krueger, 1974; Deacon, 2017).

5.5 Evaluation Limitations

This evaluation has several limitations requiring acknowledgment:

Data Limitations: The evaluation relies on available data, which may not capture all governance dimensions. Some sensitive information (e.g., specific corruption cases, security sector arrangements) may not be accessible.

Stakeholder Representation: Despite stratified sampling, some stakeholder groups may be underrepresented, potentially affecting evaluation comprehensiveness.

Temporal Limitations: The evaluation provides a snapshot at a particular moment, while governance dynamics evolve over time. Longitudinal evaluation would provide additional insights.

Benchmark Applicability: International benchmarks may not fully account for Zimbabwe's specific historical, political, and economic context. Contextual adaptation of evaluation criteria is necessary.

VI. CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

This evaluation of mineral resources governance in Zimbabwe's platinum group metals sector reveals severe governance deficits across all assessed dimensions. The legislative and legal institutional environment is characterised by constitutional-legal misalignment, outdated legislation, regulatory fragmentation, and policy instability. The operating environment suffers from pervasive corruption, political interference, security

sector conflicts of interest, and weak rule of law. Value derivation is compromised by non-transparent licensing, inadequate production monitoring, weak environmental governance, and limited community benefits. Revenue management is undermined by collection inefficiencies, limited transparency, inequitable allocation, and stakeholder knowledge gaps.

The evaluation confirms and extends the Resource Governance Index failing score (29/100), identifying specific governance gaps requiring priority attention. Estimated revenue leakages of US\$1.2–1.9 billion annually and cumulative losses of US\$32 billion over two decades represent resources that could have transformed Zimbabwe's economy and reduced poverty affecting over 7 million citizens.

The findings demonstrate that governance failures are not merely technical but deeply embedded in political economy dynamics including elite capture, patronage networks, and power asymmetries. Addressing these failures requires comprehensive reform addressing legal frameworks, institutional capacity, transparency mechanisms, accountability systems, and political commitment.

6.2 Recommendations

Based on the evaluation findings, the following recommendations are proposed for strengthening MRG in Zimbabwe's PGMs sector:

Recommendation 1: Constitutional and Legal Reform

- Align mining legislation with constitutional provisions promoting transparency, accountability, and equitable resource distribution.
- Expedite completion of Mines and Minerals Act amendment with inclusive stakeholder consultation.
- Harmonise all sectoral legislation (environmental, water, forestry) with mining law to reduce regulatory conflicts.
- Strengthen provisions for public disclosure of contracts, beneficial ownership, and revenue flows.

Recommendation 2: Regulatory Consolidation and Coordination

- Establish a centralised digital platform for inter-agency information sharing and joint decision-making.
- Clarify and streamline institutional mandates to reduce overlaps and conflicts.
- Consider consolidation of regulatory functions to reduce duplication and enhance efficiency.
- Strengthen inter-agency coordination mechanisms with clear protocols and accountability.

Recommendation 3: Institutional Capacity Building

- Adequately resource regulatory institutions (MMMD, EMA, ZIMRA) with human, financial, and technological resources.
- Provide targeted training in mining law, environmental regulation, and financial crime investigation.
- Invest in digital infrastructure for real-time monitoring of mining activities and revenue flows.
- Strengthen judicial capacity for effective enforcement of mining laws and contracts.

Recommendation 4: Transparency and Accountability Enhancement

- Join and implement Extractive Industries Transparency Initiative (EITI) standards.
- Mandate public disclosure of mining contracts, licenses, and beneficial ownership.
- Establish open data portals for production statistics, revenue flows, and compliance information.
- Strengthen parliamentary oversight through capacity building and reduced party discipline constraints.
- Protect whistleblowers and support civil society monitoring.

Recommendation 5: Addressing Security Sector Involvement

- Clarify separation between security sector regulatory functions and economic participation.
- Ensure security entities engaged in mining are subject to same regulatory oversight as private companies.
- Investigate and address conflicts of interest arising from dual roles.
- Establish transparent arrangements for any legitimate security sector economic participation.

Recommendation 6: Community Engagement and Benefit-Sharing

- Institutionalise community participation in decision-making through multi-stakeholder platforms.
- Strengthen Community Share Ownership Trusts with transparent governance and reporting requirements.
- Shift from voluntary CSR to mandated community development agreements with clear benefit-sharing provisions.
- Ensure local procurement and employment targets are enforced with monitoring and penalties for non-compliance.
- Implement constitutional provisions for sub-national revenue sharing.

Recommendation 7: Environmental Governance Strengthening

- Adequately resource EMA for effective enforcement of environmental regulations.
- Mandate and enforce environmental impact assessments for all mining projects with public disclosure.
- Require mine rehabilitation plans with financial guarantees adequate to cover restoration costs.
- Strengthen monitoring of compliance with water, air, and land quality standards.
- Establish environmental liability regime holding companies accountable for remediation.

Recommendation 8: Revenue Management Reform

- Implement Integrated Revenue Integrity Framework combining transparency, institutional capacity, and technology.
- Establish sovereign wealth fund for intergenerational equity with transparent governance.
- Strengthen transfer pricing enforcement through enhanced capacity and international cooperation.
- Enhance coordination between ZIMRA, RBZ, and other revenue agencies.
- Implement digital systems for real-time royalty calculation and payment.

Recommendation 9: Technology-Enabled Governance

- Adopt blockchain technology for immutable recording of mineral endowments, mining titles, and supply chains.
- Implement digital platforms for license applications, tracking, and public disclosure.
- Utilise remote sensing and GIS for environmental monitoring and compliance verification.
- Establish integrated data systems connecting regulatory agencies for coordinated oversight.
- Ensure cyber security protection for digital governance systems.

Recommendation 10: Gender and Inclusion Mainstreaming

- Develop and implement gender policy for mining sector with specific targets and monitoring.
- Ensure women's participation in decision-making structures at all levels.
- Address barriers to women's access to mining opportunities, financing, and benefits.
- Collect and report sex-disaggregated data on mining employment, benefits, and participation.

Recommendation 11: Knowledge and Information Access

- Enhance public access to geological data, production statistics, and revenue information.
- Utilise multiple information channels (radio, community meetings, digital platforms) to reach diverse stakeholders.
- Support civic education on mining governance, citizen rights, and accountability mechanisms.
- Strengthen academic and research capacity on mining governance issues.
- Establish knowledge-sharing platforms connecting stakeholders for collaborative learning.

Recommendation 12: Political Commitment and Leadership

- Secure high-level political commitment to governance reform through presidential leadership.
- Establish clear performance benchmarks and accountability mechanisms for reform implementation.
- Protect reform processes from political interference and elite capture.
- Build coalitions of reform supporters across government, industry, civil society, and international partners.

6.3 Implementation Priorities

Given resource constraints and political complexities, implementation should be phased with priority actions:

Immediate Priorities (0-12 months):

- Launch Mines and Minerals Act amendment process with inclusive consultation
- Establish inter-agency coordination mechanism for regulatory harmonisation
- Commit to EITI adoption and begin implementation preparations
- Enhance transparency through publication of existing licensing and revenue information
- Strengthen whistleblower protection mechanisms

Short-Term Priorities (1-3 years):

- Complete legislative reforms and align subsidiary legislation

- Implement institutional capacity building programs
- Establish digital platforms for license management and revenue collection
- Develop and implement community engagement and benefit-sharing frameworks
- Strengthen environmental monitoring and enforcement capacity

Medium-Term Priorities (3-5 years):

- Consolidate regulatory institutions for enhanced efficiency
- Implement blockchain-based governance systems
- Establish sovereign wealth fund with transparent governance
- Achieve EITI compliant status
- Evaluate reform impact and adjust strategies accordingly

6.4 Areas for Further Research

This evaluation identifies several areas requiring further research:

1. **Security Sector Governance:** Deeper analysis of security sector involvement in mining, including ownership structures, partnership arrangements, and implications for regulatory enforcement.
2. **Political Economy of Reform:** Analysis of political conditions under which governance reforms are possible, including elite incentives, coalition building, and windows of opportunity.
3. **Technology and Governance:** Assessment of blockchain and other digital technologies' effectiveness in enhancing transparency and reducing corruption in different contexts.
4. **Benefit-Sharing Mechanisms:** Comparative analysis of different benefit-sharing models to identify effective approaches for community development.
5. **Gender and Mining:** Deeper analysis of gender dimensions of mining governance, including barriers to women's participation and strategies for inclusion.
6. **Artisanal and Small-Scale Mining:** Governance challenges and opportunities in ASM, including formalisation pathways and community engagement.
7. **Environmental Governance:** Analysis of environmental compliance determinants and effective enforcement mechanisms in mining contexts.
8. **Longitudinal Evaluation:** Tracking governance performance over time to assess reform impact and identify emerging challenges.

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