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FINANCIAL MANAGEMENT PRACTICES OF SMALL-SCALE GOLD MINES IN VIRGINIA CENTRAL, ODZI, MUTARE, ZIMBABWE

BY

WALTER CHIGWADA

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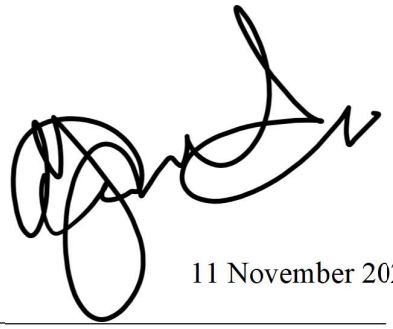
Abstract

Small-scale gold mining is of significant economic importance to Zimbabwe, accounting for 60% of gold production, creating much-needed employment, enhancing rural development, generating crucial export earnings, and supporting an array of livelihoods along the value chain. The sector often lacks formalization and is dogged by cross-sectional challenges affecting the small-scale gold miners' ability to implement robust financial management practices. This case study investigated the financial management and record-keeping practices of small-scale gold miners in the Virginia Central area of Odzi, Mutare, Zimbabwe. The study was guided by stakeholder and institutional theories to help gain a better understanding of the miners' interactions, actions, norms, and behaviors in the field of financial management. The study employed a mixed-methods convergent parallel design approach with quantitative research from 28 Ministry of Mines and Mining Development -registered small-scale gold miners who were the survey respondents, supported by qualitative thematic analysis based on 18 key informant participants. Rudimentary financial management practices coupled with poor cash-based record keeping and the mixing of personal and business expenses were identified. The limited records maintained aligned more towards monitoring of incoming cash revenue, with limited tracking of expenses or operating costs. The study also revealed that payments for gold deliveries received by miners in cash from Fidelity Gold Refiners, the sole legal gold buyer, impeded financial accountability, encouraged underhanded dealings, including gold smuggling, and compromised a digital money trail that could facilitate bank reconciliations. This important financial management practice of bank reconciliations was identified as not being practiced by close to three-quarters of respondents. Levels of financial literacy of the miners were generally low, and the majority of the miners were identified to have failed to go beyond high school in formal education. Suspicion of formal financial institutions led to reliance on informal loans, with distrust evidently rooted in the country's deep-seated historical hyperinflation and currency problems. Distrust of government agencies such as ZIMRA and EMA was also prevalent as miners felt their title to the claims could be threatened by such agencies passing information to more connected miners, thus compromising their long-term planning. The study findings highlighted a lack of financial accountability and compromised access to finance. An understanding of the benefits of formalization and sound financial management practices was evident amongst the miners, yet conscious efforts to avoid prudent financial management practices were evident. The study brought to the fore the need for interventions to ensure financial management best practices in the small-scale gold miner's sector. Recommendations also encouraged review of policies to support formalization of the sector, as well as a relook at regulations with a view of amending the status quo of the same rules and regulations governing both the informal small-scale and established, formal large-scale gold mining sectors. Financial literacy training is also required in the sector to enhance understanding of financial management practices, and the distrust of financial institutions and government agencies needs to be addressed.

Keywords: Financial Management, Small-Scale Gold Mining, Financial Literacy, Stakeholder Theory, Institutional Theory

Declaration Page

I declare that this dissertation is my original work except where sources have been cited and acknowledged. The work has never been submitted, nor will it ever be submitted to another university for the award of a degree



WALTER CHIGWADA 11 November 2025

Student's full name Students' signature (Date)

CP Korera

Main Supervisor's Full Name Main Supervisor's Signature (Date)

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Dedication

I dedicate the research to my daughter, Vanessa TawanaNyasha. Always remember, we do all we can to get the job done. We then hold our heads up high, knowing full well we left few stones unturned, beyond which we acknowledge our limitations and leave all else to the powers that be!

List of Acronyms and Abbreviations

AU	Africa University
ASGM/ASSGM	Artisanal and small-scale gold mining
CSR	Corporate social responsibility
EMA	Environmental Management Agency
FGR	Fidelity Gold Refiners
IBM	International Business Machines
RBZ	Reserve Bank of Zimbabwe
SME	Small and micro enterprises
SPSS	Statistical Package for Social Sciences
UNIDO	United Nations Industrial Development Organization
ZIMRA	Zimbabwe Revenue Authority
ZMF	Zimbabwe Miners Federation

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CHAPTER 1 INTRODUCTION

1.1 Introduction

The artisanal and small-scale mining (ASM) sector in Zimbabwe is an important economic sector promoting growth (Mkodzongi, 2023). Such growth within the small-scale gold mining sector, leads to a boom in businesses mushrooming around and in support of the sector.

The sector continues to thrive with according to The Zimbabwe Mining Federation (ZMF) their membership now being over 1.5 million who contribute, on average, 60% of the annual gold deliveries to Fidelity Gold Refinery (FGR), the nation's sole gold buyer. (ZMF, 2024a)

Small to medium scale mining has huge potential to contribute greatly to sustainable livelihoods and rural development (Singo, 2023)

The gold mining sector is of great importance to the Zimbabwean economy, and the sector has seen a huge influx of investors in ASSGM (Mapuranga, 2020).

However, the problem of lack of transparency and accountability in the sector has been made worse by the Zimbabwe Mining Revenue Transparency Initiative being in limbo since 2013 (Mapuranga, 2024)

This research looks into the financial management and accounting practices of small-scale gold mines, with a view to providing recommendations for improvements.

1.2 Background of the study

Financial management includes summarizing, reporting, and analyzing financial transactions of a business

Prior research indicates that the expansion of most small enterprises is hindered by financial illiteracy and high levels of informality, posing significant challenges to their performance and long-term sustainability (Taruvinga & Sakarombe, 2023).

Khadim and Choudhury (2024) argue that maintaining accurate records enables businesses to monitor cash flows, manage income and expenditure, and prepare financial statements, with that study continuing to highlight that financial management is essential for fostering access to credit, attracting investors, and ensuring compliance with regulatory requirements.

Many ASGM operations rely on cash transactions with Fidelity, the government gold buyer, paying small-scale miners in cash, and informal lending is also mainly in cash, which hinders their ability to build financial histories or meet the documentation requirements of formal financial institutions (PlanetGOLD, 2020).

The study is important as it will highlight challenges to a critical sector of the economy, as artisanal and small-scale gold mining (ASGM) accounts for more than fifty percent of national gold production, contributing to sustainable livelihoods and boosting economic development in Zimbabwe (Singo, 2023).

1.3 Statement of the problem

Record keeping is an essential part of any business operation, but it is particularly critical for small enterprises (Khadim & Choudhury, 2024). The study goes on to argue that these businesses typically have limited resources and rely heavily on accurate financial information to make informed decisions

In the context of Zimbabwe's gold mining, the Reserve Bank of Zimbabwe noted the sector is not always properly formalized, leading to the possibility of inadequate financial management and record-keeping practices (Khadim & Choudhury, 2024). This informality creates a significant knowledge gap. There is limited literature examining the costs, profitability, and economic and financial features of the sector (Laing, Mudd, & Mohr, 2022). Furthermore, research-based knowledge is scarce on the adoption level of management accounting practices among SMEs, including small-scale miners in Zimbabwe (Dlamini & Schutte, 2021).

Small-scale gold mining is essential to the Zimbabwean economy, contributing to employment, rural development, export earnings, and the livelihoods of many businesses and individuals relying on the sector. Financial management practices of small-scale gold miners are, however, deemed to often be inadequate, thus stifling investment in the sector and reducing profitability. Miners are not always financially literate; hence, this potentially negatively affects financial management practices. This study aims to investigate the financial management practices of small-scale gold miners with a view to understanding challenges they face and recommending improvements.

1.4 Research Objectives

1. To assess the financial management practices of registered small-scale gold mining operations in Odzi
2. To identify impediments to financial management practices of small-scale Odzi gold miners
3. To determine the potential benefits that formalized financial management practices can bring about.

1.5 Research Questions

1. Do small scale miners maintain financial management and accounting records and produce financial management reports?
2. What challenges are being encountered by small-scale gold miners in performing financial management practices?
3. What benefits do small-scale gold miners get from maintaining financial management records and from producing financial reports

1.6 Assumptions of the study

Prior research suggests the financial management practices of small-scale gold miners are poor with incomplete, poorly structured or non-existent accounting records leading to inefficient use of financial information thus resulting in a lack of

formalised structured financial management systems (Matsiwira, Mabvure & Sifile, 2022b) with that study further arguing small-scale Zimbabwean gold miners often lack basic financial skills, have low financial literacy, hence hindering their ability to manage cash flow, savings, and investment decisions effectively. This absence of formal management and accounting makes it difficult to track mine performance or assess profitability. Hunter (2018) found small-scale miners' operations and ASM operations are largely informal and struggling to comply with legal and financial regulations, which report further finding lack of differentiation between ASM and large-scale mining in legislation, making compliance difficult, further discouraging formal record keeping.

The findings in prior research of poor financial management, low financial literacy, compromised budgeting, inconsistent cashflow management and compromised ability to make investment decisions led the researcher to consider the below as reasonable assumptions

- Miner's lack of basic financial knowledge as found by Matsiwira et al (2022b) led to the assumption of compromised financial management practices such as poor budgeting, limited savings, and low levels of financial investments.
- The informal financial management practices of small-scale miners as found in the prior studies such as by Taruvinga & Sakarombe (2023) led to the assumption of a lack of properly structured financial accounting and limited use of financial management software or tools.
- Small-scale miners have limited access to formal finance due to the prevalence of poor record-keeping practices, leading to miners being considered by financial institutions as a high-risk sector hence, this study

assumed there was a low uptake of formal reliance on informal lending or the miners reinvesting their earnings (PlanetGold, 2020).

- Prior research indicates that the same regulatory framework applies to both small- and large-scale miners in Zimbabwe, contributing to a perception among small-scale operators that licensing and compliance requirements are overly complex and not tailored to their scale of operations. This has led to the assumption in this study that regulatory misalignment discourages formalization and structured financial management practices among small-scale miners (Mapuranga, 2024).

Gold mining in Zimbabwe has been fraught with smuggling away from government-registered buyers, with an estimated 50 per cent of ASGM gold production thought to be lost to smuggling. (Al Jazeera Investigations, 2023).

To hide black market dealings, understatement of production figures occurs, with networks of dormant companies, fake invoices, and bribed officials being used (Al Jazeera Investigations, 2023; Mawowa, 2013).

The magnitude of smuggling renders official production figures on whatever scale a massive understatement, posing a threat to the accuracy of financial management and accounting data (Al Jazeera Investigations, 2023).

The researcher, thus working on the assumption production figures may be undervalued took mitigatory measures to encourage miners to release accurate information. Respondents remained anonymous. All research data received was reviewed in strict confidence. The researcher took painstaking efforts to make the respondents feel comfortable and at ease in an effort to guarantee the receipt of more accurate data. Participants were encouraged to respond with integrity and honesty.

1.7 Significance of the Study

This research is significant for several stakeholders:

For Policymakers: The findings can inform the development of targeted support programs by the Ministry of Mines and Mining Development, the Reserve Bank of Zimbabwe, Environmental Management Agency, Rural District Councils, and tax authorities (ZIMRA) to promote formalization and financial literacy.

Policymakers often rely on assumptions that feed into key policies. Such studies provide concrete data on the financial literacy levels, challenges to access to finance and perceived benefits or barriers to formalization among small-scale gold miners. This evidence is crucial for designing policies that are practical, implementable, and address the root causes of informality. Policies that target such areas as gold smuggling, illicit trade, and money laundering can be better implemented (Al Jazeera Investigations, 2023; ESAAMLG, 2022; PlanetGold, 2024)

For Small-Scale Miners: The study will highlight best practices and the tangible benefits of adopting formal financial management, potentially leading to improved profitability and sustainability. This view is supported by PlanetGold (2020), which emphasizes that access to formal finance and structured financial practices enhances transparency and investment readiness. Similarly, Makungu, Kauangal, and Nuhu (2024) argued that financial literacy and structured record-keeping are critical for unlocking funding and improving operational efficiency. The study also highlighted which aspects in financial management and financial accounting miners could seek training on. The study also details benefits of financial literacy and its effects on the possible performance of the small-scale gold miners. The study also brings to the

fore challenges faced by their peers, allowing mitigation efforts. Basing on such studies barriers to the formalization of small-scale gold miners can be discussed, and investigations into mitigatory routes conducted.

For Financial Institutions: The study provides insights into the financial behaviour and needs of small-scale miners, enabling the design of appropriate financial products and services for this underserved market. The study adds to literature than can help identify financial products that miners can make use of, allowing financial institutions tailor-made solutions that have a background from such research within the sector, eliminating guesswork. The causes of distrust between small-scale miners and banking institutions, as supported PlanetGold (2020) were identified and can be mitigated.

For Academia: The study contributes to the limited body of literature on the financial management practices within the ASM sector in Zimbabwe, providing an empirical basis for future research.

ZMF (2020) revealed that most Artisanal and Small-Scale Miners operate without any financial track of their mine performance, typically lacking bank accounts (Matsiwira, 2022a).

Zimbabwe's informal sector stands as a significant source of employment for approximately six million individuals, making a substantial contribution of US$7.4 billion to the economy; however, despite this economic impact, there is a noticeable absence of evidence suggesting that the funds generated within the informal sector are integrated into the formal banking system (Taruvinga & Sakarombe, 2023).

Small-scale gold mining is important to the Zimbabwean economy, contributing 60% of the annual gold deliveries to Fidelity Gold Refinery (FGR), the nation's sole gold buyer (Jambaya, 2025).

Improved financial management and accounting practises will help the sector with attracting investors and improving the image of the sector since ASGM has a largely negative public perception from many lenders and investors and the major barrier to offering financing to ASGM being the reputational risk of the sector, and risks associated with environmental, social, and governance (ESG) impacts (PlanetGold, 2020).

According to Mining Zimbabwe issue 69 of 2023, the mining sector employs over 53,663 people in the large-scale mining industry, and more than 500,000 in the small-scale and artisanal sectors. (Mapuranga, 2023).

The study is also important as financial management can be an important tool to assist in promoting formalization of the sector, accountability, and transparency, with Chikwanha (2023), highlighting a drive by national miners' associations to spearhead formalization efforts.

1.8 Delimitation of the Study

The research focused mainly on the study of small-scale miners whose mining operations are in Odzi of Mutare Rural District of Zimbabwe with an emphasis on those mines lying in and around Mutanda range of mountains. The Mutanda Range is located in Odzi communal lands, approximately 44 km north-west of the city of Mutare,

Eastern Zimbabwe. It forms part of the Mutare–Odzi gold belt, which stretches from Penhalonga Valley down to Save River. The Mutare–Odzi belt is an important gold mining area with combined historical production and estimated reserves of 128 tons of gold (Chipangura, 2018; Forster, Koenemann & Knittel, 1996).

The study defined "financial management practices" to encompass the following core elements relevant to small scale gold miners:

- **Revenue Management:** Sources of income, frequency of gold sales, pricing decisions, and methods of receiving payments.
- **Expenditure Control:** Identification and tracking of operational costs (e.g., fuel, equipment maintenance, tools, labour wages), personal expenses, and community contributions.
- **Record-Keeping:** The existence and nature of any formal or informal records pertaining to income, expenses, and assets.
- **Savings and Investment:** Strategies for saving money (formal vs. informal), and common forms of investment (e.g., tools, land, livestock, small businesses).
- **Debt Management:** Sources of credit (e.g., informal lenders, gold buyers, family), interest rates, repayment strategies, and challenges associated with debt.
- **Budgeting:** The extent to which miners plan and allocate their financial resources. The definition of "small-scale gold miners" will refer to individuals or small syndicates (typically 2-20 members) primarily using rudimentary tools and semi-mechanized equipment (e.g.,

hammer mills, small compressors) for gold extraction and processing, operating with relatively low capital investment, and directly involved in the physical mining process.

Justification: This conceptual delimitation ensures a focused examination of financial practices pertinent to the operational realities and financial literacy levels of SSGMs. By clearly defining "financial management practices" and "small-scale gold miner," the study maintains relevance and avoids scope creep into broader socio-economic or purely technical mining issues

The choice of mining research around Odzi Mutare was due to the high prevalence of organized small-scale mines stretching along the Mutanda range of mountains. Although ASM in Zimbabwe is often associated with illegality, violence, and environmental destruction, the activities of *makorokozas* working at Mutanda Range were found to be clearly organized and to follow defined social patterns and chains of operations (Chipangura, 2018).

The study was concentrated mostly to the identification of financial management practices, financial accounting practices, and financial record keeping of registered small-scale gold miners, and the researcher will be confining the study to the years 2024 and 2025. Registration of small-scale mine for this study meant that the gold miner held a valid claim certificate issued by the Ministry of Mines and Mining Development.

- **Inclusions:** The study will primarily employ a mixed-methods research approach, combining quantitative and qualitative methodologies.
    - **Quantitative:** A structured survey questionnaire will be administered to a larger sample of miners to gather data on the prevalence and

frequency of specific financial practices, income levels, expenditure patterns, and perceived challenges.

    - **Qualitative:** Semi-structured interviews with key informants (experienced miners, mining syndicate leaders, Ministry officials) and focus group discussions with groups of miners will be conducted to explore underlying reasons, perceptions, challenges, and unwritten rules governing financial management.

- **Exclusions:** Experimental research designs, longitudinal studies tracking financial practices over several years, ethnographic studies requiring prolonged immersion beyond the data collection period, or purely secondary data analysis without primary data collection will not be part of this study.

Justification: A mixed-methods approach is best suited to capture both the breadth and depth of a complex phenomenon like financial management in an informal sector. Quantitative data provides statistical insights into patterns, while qualitative data offers rich contextual understanding and explains *why* certain practices exist. This triangulation enhances the credibility and completeness of the findings. The exclusion of certain methods is based on resource constraints, the time-bound nature of the study, and the primary research questions which may not necessitate such approaches.

1.8.1 Implications of Delimitation

The delimitations outlined above have several implications for the study:

- **Enhanced Depth:** By focusing on specific geographical areas and a tightly defined set of financial practices, the study can achieve greater depth and detail in its analysis, providing nuanced insights into the subject matter.
- **Manageability:** The defined boundaries make the research project feasible within typical academic timeframes and resource allocations, reducing the risk of being overwhelmed by the vastness of the ASM sector.
- **Focus on Practical Relevance:** By concentrating on operational financial management practices, the study aims to produce findings that are directly relevant for policy formulation, financial literacy programs, and capacity building initiatives targeted at SSGMs in Zimbabwe.

Thus, this research is a case study focused specifically on small-scale gold miners operating in the Odzi area of Mutare, Zimbabwe. It does not seek to generalize its findings to the entire Zimbabwean mining sector but aims to provide a deep, contextualized understanding of the phenomena within this specific location. The study explores practices related to record-keeping, budgeting, and financial reporting.

1.9 Limitations of the Study

Not all small-scale mining operations have the capacity to build proper accounting office's let alone employ qualified accounting staff (Muzondo, 2023). The researcher remained cognisant that this could have led to financial records and reports possibly being maintained haphazardly or the accounting records not being as accurate, perhaps even lacking double-entry recording (Muzondo, 2023).

The advantage of the mixed methods approach employed included a comprehensive understanding of the research problem, validation of data through triangulation, flexibility and adaptability during the research process, thus yielding rich and contextualized data, whilst providing both depth and breadth to the study and enhancing interpretation of findings (Oranga, Matere & Njurai, 2025). Key informants provided valuable insights from which the system used by the mines under study could be better understood and documented.

Since small-scale mining operations differ in their size, in their management financial literacy levels as well as their geographical locations and mining methods employed leading to potential differences in how financial records are kept and reported (RBZ,2020).

Such differences only make it more difficult to collect and compare research data. This was mitigated by the design of prior detailed methodologies of how mining entities would be grouped for proper comparison of data collected.

CHAPTER 2 LITERATURE REVIEW

2.1 Introduction

The research was guided by theories and principles relevant to financial management practices in the small-scale gold mining sector.

In Zimbabwe, all companies are required to keep proper books of accounts in compliance with Section 140 of the Companies Act (Chapter 24:03) with ZMF (2020) arguing that non-existent or poor financial management is one of the internal business problems that continue to confront ASGM sector due to lack of proper management in handling business finance to fulfil financial goals of the mines (Matsiwira, 2022).

Financial management is the strategic planning, organizing, directing, and controlling of financial undertakings in an organization. For SMEs, effective financial management is a determinant of survival and growth (Aremu & Adeyemi, 2011). Key practices include working capital management, budgeting, financial reporting, and investment appraisal. However, research consistently shows that SMEs, particularly in developing economies, exhibit weak financial management practices (Mbroh & Assah, 2015). A primary reason is the lack of separation between the owner and the business, leading to the combining of personal and business funds. Furthermore, many SME owners lack the requisite financial literacy to implement and maintain formal accounting systems as argued Dlamini & Schutte (2021) with Bakashaba, Musiita and Nabachwa (2024) finding financial literacy being positively and significantly related to access to digital finance and also finding such digital finance being positively and significantly correlated to small business performance and in the same study it was

found financial literacy had a stronger influence on business performance than did digital finance,

2.2 Theoretical Framework

2.2.1 Stakeholder Theory

Stakeholder theory can be defined as a theory that (i) encourages organizations to acknowledge and consider their stakeholders, which exist internally or externally to the organization, (ii) promotes understanding and managing stakeholder needs, wants, and demands, and thus (iii) represents a holistic and responsible framework that goes beyond the focus of shareholders in decision-making processes, which, in turn, (iv) enables organizations to be strategic, maximize their value creation, and safeguard their long-term success and sustainability(Mahajan, Sharma & Singh, 2023).

Stakeholder theory also suggests that firms are responsible for delivering benefits to all their stakeholders rather than only to shareholders and customers as presented stakeholdertheory.org, (2018) and further suggesting that adopting robust financial management is not just an internal efficiency tool but a strategic necessity for managing these relationships, building trust, and ensuring the long-term license to operate.

2.2.2 Institutional Theory

This social theory usually refers to a broad group of perspectives that interpret the relationship between institutions and human behaviour (Ncube, Nyoni & Nyoni, 2019).

Institutional theory has been extensively used in accounting literature to study management accounting change. This theory suggests that organizations conform to well-known rules as well as norms of governing institutions to get support and be perceived as legitimate (Olubukola, Tafadzwa, Obert, & Kudzanai, 2021). The theory is often used to explain the adoption and spread of formal organizational structures, including written policies, standard practices, and new forms of organization (David, Tolbert, & Boghossian, 2019).

2.3 Relevance of the theoretical framework

2.3.1 Stakeholder Theory relevance to the study

As the country modernizes the mining administration system, it is important to recognize and address the needs and aspirations of the stakeholders as argued by Dembetembe (2024), whose study goes on to explain that these stakeholders include mining companies, artisanal and small-scale miners, farmers, landowners, miners families, civil society, communities affected by mining, various Government departments and other key stakeholders with interest or affected in any way by mining. The study will look at intertwining relationships and sometimes conflicting needs of

different stakeholders and how they affect the financial management practises or shape the challenges faced by the miners.

Wadesango and Wadesango (2016) argue that the relevance of financial statements depends on the intended use of the financial statements, and general reporting needs to take every stakeholder's requirement into account.

2.3.1.1 Small-scale miners as stakeholders

Small-scale gold miners' interests revolve around their survival and the livelihoods of their families, as argued by Singo et al (2022), who further states the miners, being central to the local economy, are focused and have an interest in providing maximum income and creating employment. Small-scale miners are the central primary stakeholders to the gold supply chain, but often lack influence over gold pricing mechanisms as supported Childs (2008), arguing further that their livelihoods are vulnerable to price volatility and exploitative market structures, so the small-scale miners have an interest in ensuring fair prices for the gold they produce. The small-scale miner stakeholder group also has an interest in accessing resources (tools, explosives) due to limited access, as highlighted in a study detailing their challenges, which included small-scale miners operating with rudimentary tools such as picks, shovels, and wheelbarrows (Chipangura, 2018).

This primary stakeholder group also has interests of their employees and management teams as presented by Singo et al (2022), with that study further arguing they have an added interest in securing their family livelihoods and family needs.

The financial management practices of the small-scale gold miners' stakeholders' group are often driven by immediate needs, survival, and risk aversion.

2.3.1.2 Mining Communities as stakeholders

They are often the custodians of land and resources, as argued Ncube et al (2019), further highlighting that traditional leaders and chiefs play a leading role in community governance and land use decisions, and the study goes on to identify that Local Residents are directly affected by mining-related health issues, land degradation, and water pollution. Local communities, traditional leaders, and other stakeholders must be consulted during the Environmental Impact Assessment process and in the development of environmental management plans as regulated by Environmental Management Act [Chapter 20:27], thus being recognized as important stakeholders, and this is important as it affords this key stakeholder group a say in environmental protection and mitigation of negative effects. Hap-hazard mining threatens their livelihoods, such as leaving shafts everywhere that their cattle fall into, water tables are affected, farming land disappears to become mining areas, amongst other challenges. In a study by Machoko (2016), traditional leaders were identified to play a key role in upholding "Chisi", often using customary authority to enforce compliance, and the paper goes on to further find that other stakeholders are directly affected, with some expressing tension between economic needs and cultural obligations.

2.3.1.3 Government Agencies as stakeholders

These include Ministry of Mines and Mining Development, Environmental Management Agency, Zimbabwe Revenue Authority, Councils and municipalities

The interests of the government agencies stakeholder group lie in revenue collection from miners (taxes, royalties, licenses, permits) with as argued by Taruvinga and Sakarombe (2023) many small enterprises operating informally and not maintaining proper financial records, making it difficult for government agencies to track and collect revenue effectively.

The study by Ncube et al (2019) highlights that Ministry of Mines and Mining Development oversees licensing and regulation of mining activities hence government stakeholder agencies also have an interest in formalization of the sector with many miners working outside formal licensing frameworks, which restricts their ability to access government or donor-supported equipment schemes as argued by Chipangura (2018) whose study goes on to highlight the difficulties faced in acquiring even key requirements such as explosives which are tightly regulated under Zimbabwean law, and only licensed stakeholders can legally obtain them

Government agencies' power is derived from legal authority, licensing, and enforcement capabilities, and as argued by Singo et al (2022), the study goes on to further recommend involving miners in stakeholder dialogues to improve safety, environmental practices, and financial management, all in an effort to help promote sustainable resource management and spearhead economic development.

The understanding of these governmental stakeholders' interests helps interpret the financial management practices of small-scale gold miners.

2.3.1.4 Gold Buyers and Smelters as stakeholders (Formal and Informal)

These actors are crucial intermediaries. Their interests include securing a consistent supply of gold at competitive prices. Their financial practices can influence the revenue received by miners, through payment terms, deductions, and pricing strategies. The study by Ncube et al (2019) found that many small-scale miners operate outside formal regulatory frameworks, suggesting that gold buyers may also engage in unregulated or undocumented purchases, which further suggests compromised financial management practices.

2.3.1.5 Financial Institutions (Banks, Microfinance) as stakeholders

Although access to financial institutions is often limited for small-scale gold miners, they represent potential financiers. It is postulated that the artisanal and small scale gold mining sector produces some 10% of the world's mined gold as highlighted World Bank (2013) thus highlighting the importance of the mining sector cannot be underrated with PlanetGold (2020) finding that artisanal and small-scale gold mining supports 10–20 million miners globally and generates $38–46 billion annually yet the publication goes on to further state despite its scale, most miners lack access to formal finance, relying on costly informal loans with Chipangura (2018) arguing the absence of banking support hinders formalization and perpetuates poverty-driven mining practices.

The interests of this important stakeholder group to the mining sector are in profitability, risk assessment, and loan repayment, whilst providing significant influence through the stakeholder's ability to provide or withhold capital.

2.3.1.6 Civil groups, non-governmental bodies (NGO's, International bodies, and Donors)

Civil society groups, NGOs, and international donors are primarily interested in promoting transparency, sustainability, human rights, and inclusive development within the small-scale mining (SSM) sector, and their involvement is often aimed at mitigating risks while unlocking the sector's potential for poverty reduction and economic empowerment (PlanetGold, 2020: Makungu et al, 2024).

Financial literacy is a foundational tool for stakeholder empowerment, as argued by Andarsari and Ningtyas (2019), with that study going on to advocate for inclusive financial education programs involving NGOs, government agencies, and local leaders.

In a study by Ncube et al (2019) findings were that hospitals and nurses witnessed rising cases of mining-related diseases such as malaria, TB, and respiratory conditions, increasing miners' costs, taking them away from mining and all possibly affecting their financial management practices.

This stakeholder group has also been known to have an interest in environmental interventions, such as providing alternatives to mercury use, poverty alleviation, research, improving living conditions, and promoting responsible mining, all of which have a bearing on the financial management practices of the miners.

Typically, such organizations recognize the important economical need of small-scale gold mining for the livelihoods of many communities, whilst also raising awareness and ensuring mitigations are put in place to help ensure environmental protection as well as mitigations for adverse social outcomes of small-scale gold mining.

2.3.1.7 Summary to relevance of stakeholder theory

Stakeholder theory helped the study in bringing about an understanding of complex, intertwined interests of many parties (often conflicting interests) whilst allowing for an analysis of the power dynamics at play. Conflicts that are prevalent in the sector can be identified so that mitigatory measures can be put in place. The realisation of broader effects on many stakeholders can help shape policies that ensure all parties' interests are taken into account.

2.3.2 Relevance of institutional theory to the study

Organizations do not operate in a vacuum, they must deal with a multitude of external influences, key institutions or government departments that frequently interact with small scale gold miners including the Ministry of Mines and Mining Development, the Rural District Council, Fidelity Gold Refiners, Environmental Management Agency, Forestry Commission, the Zimbabwe Republic Police through the Criminal Investigation Department, Zimbabwe Revenue Authority, the Zimbabwe National Water Authority, the National Social Security Authority, and the Ministry of Health (Dembetembe, 2024).

Understanding these institutional theory influences can help small-scale mining enterprises align their financial management procedures with industry best practices.

Institutional theory links organisational practices, including corporate social responsibility (CSR) practices and other financial management practices, to the values and norms of a society in which an organisation operates. This connection ultimately drives an organisation to a necessity to maintain, gain, and regain its legitimacy (Suchman, 1995).

Institutional theory thus focuses on how social structures and institutions shape the way small-scale gold miners run their enterprises, helping to bring about an understanding of the "why" financial management practices and financial accounting practices are carried out in a given manner.

2.3.2.1 Regulatory Institutions.

Formal laws governing small scale gold miners are important institutional theory forces and these encompass regulations around issues such as eligibility for mining claims ownership, application fees, penalties etc as provisioned in the Mines and Minerals Act [Chapter 21:05], The act also clarifies that license holders in line with best practise financial management are required to maintain accurate records of production and financial dealings.

Tax regulations can also shape the financial management practices of small-scale gold miners with the Revenue Authority Act [Chapter 23:11] highlighting important considerations to their financial management behaviours including aspects of mining Royalties, Customs and excise duties, Income tax and Capital gains tax with Section

34F(10) authorizing ZIMRA officers to enter mining locations (excluding dwellings) to Inspect operations and mineral treatment processes as well as take samples of soil, rocks, ores, and tailings, examine books, maps, and drilling logs, assess royalty and tax liabilities and all these have potential effects on financial management of the miners with the act going further to permit ZIMRA to further enforce through attachment and auction of property for unpaid taxes, lead in Imputed liability orders against individuals who use corporate structures to avoid mining-related tax obligations, enforce Search warrants for premises suspected of harbouring undeclared mining income or assets

The Environmental Management Act [Chapter 20:27] is also in a position to put regulatory pressures on small-scale gold miners, with the act stipulating requirements that can influence financial management practices of miners, such as environmental management regulations, Environmental Impact Assessments, pollution, and waste management

Labour act [Chapter 28:01] regulates payments of wages and salaries in the mining sector, and the act also outlines the collective bargaining agreement procedures. Local Authorities, as presented in a study by Ncube et al (2019), highlighted that they are expected to manage water and land resources under acts like the Rural District Councils Act and the Water Act.

Considerations on licenses and permits, such as for gold ore movement from mining sites to milling sites, pregnant gold carbon movement permits from processing plants to elution plants, gold metal movement from elution plants or smelting plants to Fidelity Gold Refiners, setup requirements for custom milling, cyanidation plants, etc, all have the potential to influence financial management practices of the miners.

The regulatory concerns highlight that small-scale miners' financial management practices are not driven by only general financial management considerations, but by influences from regulatory institutions requirements. Being caught failing to meet regulatory concerns as stated in the Mines and Minerals Act [[Chapter 21:05]] and provisioned in the Revenue Authority Act [Chapter 23:11] can lead to heavy fines, confiscation of produced gold, cancellation of gold claim certificates, raiding of mining premises for investigations, closure of processing or milling plants, attachment of assets, criminal prosecution or a combination.

2.3.2.2 Normative institutional concerns

Community recognised customs, traditional and normal practices can affect miners' financial management practices (World Bank, 2024). Traditional obligations might take precedence over formal accounting procedures. Customary law and traditional laws do come into play, affecting gold mining and, in turn, financial management practices. Sacred mountains may be forbidden to the miner as suggested Chipangura (2018). Traditional ceremonies may need to be followed as gold is widely believed to come as a gift from the ancestors. Holy non-working days known as "chisi" may need to be observed with Machoko (2016) arguing that enforcing Chisi through traditional leadership may conflict with individual rights, especially for those who do not subscribe to African Traditional Religion Machoko (2016) further emphasizes that "Chisi" promotes environmental sustainability, mental health, and community bonding. In light of such studies, normative institutional pressures need to be analysed as they can impact the financial management practices of the miners.

Social expectations can override prudent financial management practices. For example, community projects e.g., a community borehole, may have to take precedence over business-related budgeting with community repercussions to non-compliance, possibly putting the whole mining venture at risk of being closed down.

Pressure to conform or act in a given manner can be put on small-scale miners and can possibly come from different norms or expectations on the small-scale gold miners; hence, the miners need to recognize them, and in the context of institutional theory, it is important to investigate their influences on financial management practices.

2.3.2.3 Cognitive Institutional Theory.

Cognitive institutions refer to the extent to which systems and culture are imposed on, or adopted by, individuals and organizations (Munir, 2002).

What is generally accepted as "Fair": Factors that can impact financial management practices include what is considered "Fair gold price" with Hilson (2008) finding middlemen dominate the supply chain, offering miners below-market prices in exchange for loans and equipment with the study going onto further find that in Africa, governments (not Western retailers) are the main buyers of artisanal gold, using it as a source of foreign exchange. This institutional arrangement undermines the fair-trade model, which assumes that miners can sell directly to ethical international buyers and any corresponding influence on financial management practices of miners is important to analyse (Sibanda, 2021).

Factors like the level of trust held with financial institutions affect financial management practices with Phiri (2015) finding public confidence in Zimbabwe's

banking sector was significantly low. Also possibly affecting financial management practices are the level of trust with such as Zimbabwe Republic Police Gold Squad and minerals sections, Environmental management agency and other governmental agencies.

Certain behaviours are so ingrained and rarely questioned, for instance, always operating only in cash, with Matsiwira (2022a) suggesting reliance on cash stems from the absence of accessible, affordable, and inclusive financial services. Other behaviours taken for granted include a widespread belief they all mostly living a rags to riches existence with little to no thought of failure, but a belief that gold will be struck sooner or later (The Herald, 2016). Revenue is unpredictable, and when gold is found, it's often spent quickly—reflecting a high-risk, high-reward mindset rather than long-term financial planning (Chipangura, 2018). Cognitive institutions often shape informal interpretations of how to act, and they are typically based on past experiences as opposed to standard market forces

2.3.2.4 Summary on the significance of institutional theory to the study

Institutional theory is thus important in understanding the financial management practices of small-scale gold miners as it can help explain why any given financial management practices amongst small-scale gold miners or habits persist regardless of possibly clearly being inefficient. Institutional theory helps explain why financial institutions continue to avoid the small-scale gold mining sector despite its economic potential—due to entrenched perceptions of risk and informality." (Makungu et al, 2024).

Institutional theory is thus relevant for understanding the financial management practices of small-scale gold mines in Zimbabwe.

2.4 Conceptual Framework

The section presents the relationships between key concepts and variables connecting theories and assumptions to help guide the research structure.

2.4.1 From Contextual to Conceptual Framework

The conceptual framework of this study was developed after an analysis of the lived experiences of small-scale gold miners in Odzi, Mutare. Key contextual considerations, as supported from prior research, such as PlanetGold (2020), of the sector having mostly cash-driven transactions, practising informal financial management, and distrusting formal institutions such as banks, ZIMRA, EMA, whilst lacking formalization, were identified. The research was then able to uncover consistent patterns in how miners manage their finances and such insights provided the basis for an identification of the key themes and variables shaping the financial management behaviours in the sector. The resultant conceptual framework connected financial literacy, record-keeping, institutional trust, and access to finance in a structured way. This approach ensured the analysis was based on lived experiences of the miners as well as being guided by sound theoretical principles around stakeholder and institutional theory that underpinned the study.

2.4.2 Conceptual Framework

Key concepts from the contextual lived realities of small-scale gold mining operations in Odzi, Mutare, were identified to create the conceptual framework for this study. Budgeting, record-keeping, investment, debt management, and financial reporting were identified as some of the core components of financial management practices. These practices are influenced by interconnected factors coming from both theoretical foundations around stakeholder and institutional theory as well as empirical observations.

Financial literacy is conceptualized as a foundational variable influencing miners' ability to engage in structured financial behaviour. Miners with higher financial literacy are more likely to maintain accurate records, plan budgets, and understand the benefits of formalization.

Record-keeping practices, in turn, serve as a mediating construct—linking financial literacy to access to finance and investment readiness. The presence or absence of structured records determines whether miners can demonstrate creditworthiness and operational transparency.

Institutional trust plays a critical mediating role in the framework. Miners' confidence in banks, government agencies, and regulatory bodies affects their willingness to formalize operations and engage with formal financial systems. The study found that distrust—often rooted in past experiences of financial loss or policy inconsistency—undermines efforts to adopt best practices in financial management.

The **regulatory environment** is treated as a moderating variable. Uniform regulations applied to both large-scale and small-scale miners create compliance

burdens that discourage formalization. The lack of tailored policies for ASM operations contributes to informality and weak financial discipline. This regulatory misalignment affects how other variables interact, particularly institutional trust and record-keeping.

Finally, the framework acknowledges the influence of **cash-based transactions**, which dominate the ASM sector. These transactions, while practical, undermine financial accountability and limit the creation of a digital financial trail. They negatively impact record-keeping and reduce the likelihood of successful engagement with formal financial institutions.

Figure 1 below illustrates that independent variables such as financial literacy and cash-based transactions, influence the core construct of the study, financial management practices, whilst the regulatory environment and trust of institutions such as ZIMRA, EMA, banks etc act as mediating variables.

Enhanced financial management practices, in turn, lead to positive outcomes, including access to finance, investment readiness, compliance with regulations, and improved business sustainability.

Figure 1 summarizes the conceptual framework diagrammatically

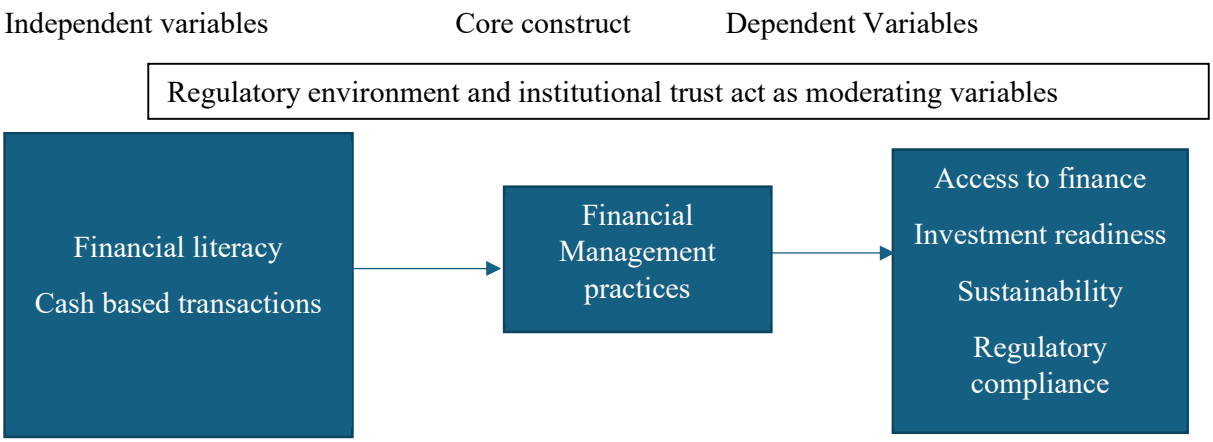

Figure 1. Conceptual framework

Note. The conceptual framework is grounded in two complementary theoretical perspectives: Institutional Theory and Stakeholder Theory.

The conceptual framework is grounded in two complementary theoretical perspectives: **Institutional Theory** and **Stakeholder Theory**. Institutional Theory helps explain the informal financial behaviors observed among small-scale gold miners in Odzi, particularly their distrust of formal institutions such as banks, ZIMRA, and EMA, and their reliance on cash-based transactions. These behaviors reflect a response to weak institutional legitimacy and regulatory misalignment. Stakeholder Theory, on the other hand, frames miners as aspirational economic actors seeking legitimacy, growth, and access to formal financial systems. This perspective supports the inclusion of access to finance and investment readiness as a key outcome or dependent variable, and positions financial literacy as the independent variable for stakeholder engagement. Together, these theories underpin the relationships modelled in the framework and ensure that the analysis is both empirically and theoretically grounded.

2.4.2.1 Institutional Theory as an Explanatory Lens

Institutional theory explains political and social outcomes by referencing higher-order structures—such as norms, rules, and organizational systems—that shape behaviours at lower levels. It avoids individual-level explanations and instead emphasizes how institutions constrain or constitute political action (Amenta & Ramsey, 2009)

Coercive Pressures: These stem from formal and informal pressures exerted by other organizations upon which they are dependent and by the cultural expectations of society. In the context of small-scale gold mining in Odzi Mutare, this is manifested as a fear of formalization such as argued by Ncube et al (2019) that due to the fear of being taxed heavily, artisanal gold miners and millers shun the registration process and risk making a profit at the cost of being arrested. Millers and buyers rarely report transactions, and many operate outside the formal system, undermining transparency (Hunter, 2018). Miners are reluctant to keep transparent records for fear that this information could be used against them by regulatory bodies like the Zimbabwe Revenue Authority (ZIMRA) for taxation or the Environmental Management Agency (EMA) for levying fines. This fear creates a powerful disincentive for formal accounting.

Normative Pressures: These derive from professionalization and social expectations. For the miners, the dominant norm is informal "notebook" accounting.

This practice is perpetuated because "it's how we've always done it" and how their peers operate. This creates a cultural inertia that resists the adoption of more formal, complex systems. The deep-seated historical distrust of formal financial institutions in Zimbabwe as found by Dzomira (2015) and, as mentioned by participants of this study, is a powerful normative force emanating from the history of Zimbabwe, having generally been characterized by hyperinflation, high unemployment, informalization, deindustrialization, brain drain, and food and public health crises. This critical situation persists, with unemployment at 90 per cent and inflation reaching 175 per cent as of June 2022 (Gwande 2023).

Mimetic Pressures: These result from organizations modelling themselves on other similar, successful organizations in response to uncertainty. In this context, miners are more likely to copy the informal survival strategies of their peers than the opaque formal practices of large corporations (Dlamini & Schutte, 2021).

The government's policy of USD cash payments by Fidelity Gold Refinery—while intended to boost formal deliveries—acts as a powerful institutional signal that reinforces informality and undermines financial accountability. This is reflected in broader sectoral analyses that highlight how cash-based transactions hinder recordkeeping and bankability (PlanetGold, 2020; ESAAMLG, 2022; Makungu et al., 2024).

2.4.2.2 Stakeholder Theory and the Aspiration for Growth

Stakeholder Theory suggests and stresses the interconnected relationships between a business and its customers, suppliers, employees, investors, communities, the

government and others who have a stake in the organization (stakeholdertheory.org, 2018), Each stakeholder has expectations and demands with a key demand from powerful financial stakeholders like banks and investors is credible, standardized financial management information.

The miners in this study intuitively understand this. Their aspiration for growth, external financing, and better planning is an implicit recognition of the need to engage with these stakeholders. However, their current practices create a communication breakdown. They cannot "speak the language of financial statements," which effectively marginalizes them and locks them out of the resources these stakeholders could provide. This disconnect directly feeds the cycle of undercapitalization described by Hilson & McQuilken, (2014), where lack of formal records prevents access to capital, which in turn prevents the investment needed to grow and formalize.

2.5 Summary

The literature review section detailed an analysis of existing research on financial management practices among small-scale gold miners, highlighting the need for a comprehensive understanding of them, their challenges, and shortcomings. In Zimbabwe, the imperative to make sound financial decisions is non-negotiable for small businesses, yet their lack of knowledge often results in frequent business closures due to financial mismanagement during their initial stages (Taruvinga & Sakarombe, 2023).

Theories underpinned by stakeholder and institutional theory affecting small-scale gold mining from different fields, such as economic, social, behavioural, strategic management, and business ethics, are also analysed.

Notwithstanding the significance of financial management practices in the gold mining sector, the ASSGM sector is dominated by small entities (including mining operators and exporters) that generally lack formalized management and governance structures, and do not have demonstrable financial track records, often due to a lack of financial accounting and management capacity (Matsiwira, 2022a).

The literature review section also presented the conceptual framework detailing the impact of identified independent variables, such as financial literacy, on financial management practices and the outcome.

Hypothesized relationships included that higher financial literacy positively influences the levels of financial management, quality of record-keeping and financial reporting leading to positive outcomes like more sustainable mining enterprises or improved business performance.

A review of existing literature reveals that small-scale gold miners face numerous challenges in maintaining accurate financial records, with a clear lack of adequate financing options (Matsiwira, 2022a).

CHAPTER 3 RESEARCH METHODOLOGY

3.1 Introduction

This study adopted a mixed-methods approach, as this method allows researchers to validate their findings, verify if the results observed using both methods are complementary, and explain any unexpected results obtained from one method to be cross-checked using the other method. utilizing a convergent parallel design (Sreekumar, 2023). This design allowed for the concurrent collection of quantitative and qualitative data, facilitating a more holistic understanding by comparing and contrasting the statistical findings with the rich, contextual narratives of the participants.

The study was conducted in the gold-rich region of Odzi Forster et al (1996) in Mutare, Zimbabwe. A sample of 28 small-scale gold miners participated in a quantitative survey administered via a structured questionnaire. The questionnaire gathered demographics, record-keeping habits, cash flow management practices, and perceived constraints. Additionally, in-depth, semi-structured interviews were conducted with 18 participants, including mine owners, managers, and key informants, to explore the underlying reasons, attitudes, and experiences related to financial management.

Quantitative data was analysed using descriptive statistics (frequencies, percentages) in SPSS. A chi-square test was performed to test for independence between financial literacy and the extent of record-keeping. Qualitative data from the interviews were transcribed and subjected to thematic analysis to identify recurring themes and

patterns related to the research objectives. Ethical considerations, including informed consent and participant anonymity, were strictly observed throughout the research process

3.2 The Research Design

This study employed a mixed-methods case study design due to the nature of the problem statement. The case study approach was chosen for its ability to provide an in-depth understanding of complex issues in a real-life context (Yin, 2014). A mixed methods approach was used, with prior research by Matsiwira (2022) having successfully carried out similar mixed methods research. A convergent parallel design was employed. The study involved collecting and analysing both quantitative and qualitative data at the same time. This allowed for triangulation, where the quantitative data provided a broad overview of practices and relationships, while the qualitative data offered deep, contextualized insights into the "why" and "how" behind those practices Oranga et al (2025) and the study further supports the qualitative component adopted of a phenomenological approach, seeking to understand the lived experiences and perceptions of the miners regarding financial management.

A survey questionnaire was circulated whilst other key informants underwent a more qualitative interviewing process

3.3 Population and sampling

3.3.1 Population

As investigated in a face-to-face interview with a Ministry of Mines and Mining Development Mutare office employee the study area was determined to have a population of 500 small scale gold miners with the participant advising, “The number of registered small scale gold mines around Mutare are 500 in the Odzi area, 450 in Penhalonga, 309 in Nyanga and 123 in Headlands, Rusape” (R. Mbuwayesango, personal communication, May 19, 2025).

3.3.2 Sampling

In a bid to save on time required to complete the research and due to the difficulties faced in accessibility of participants as a result of the remote nature of a large number of gold mining claims earmarked for the study as well as the very bad state of roads due to previous heavy rains and inconsistent road maintenance as personally witnessed by the researcher in the research planning stages led to the sample for quantitative research being initially purposively selected to be a total of 30 registered small scale gold mining operations located in the Odzi Mutare area from which a total of 28 responded to the survey questionnaire. The sample for qualitative research consisted of an additional purposively previously selected sample of 30 key informants, from whom 18 participated giving response rates of 93% and 60% respectively and these

response rates being over 50% were considered by the researcher as acceptable for the research to continue and such decision is supported by Edwards (2025), Taherdoost and Madanchian (n.d) and OutGrow (2025) in their recommendations, with Edwards (2025) further highlighting other researchers were recommending the 40% benchmark they had set be reduced further.

3.4 Data Collection Instruments

The data collection instruments employed were a survey questionnaire and face-to-face interviews with key informants.

3.4.1 Face-to-Face interviews

Face-to-face interviews with 18 key informants had the advantage of affording the interviewer a chance to build rapport whilst gathering deep, insightful phenomenological qualitative data (Oranga et al, 2025: Hecker & Kalpokas, n,d;).

Face-to-face interviews also allowed the interviewer to pick up non-verbal communication and allow further probing where necessary.

They also allowed visual aids in the interview process when required for clarity.

3.4.2 Survey questionnaires

A survey questionnaire specifically designed for the research is attached in the appendix section and was distributed to 30 potential respondents chosen from the population using purposive sampling, from which 28 responded.

The survey questionnaire contained closed-ended questions for easier quantitative analysis saving on data gathering costs (Matsiwira et al, 2022b). The questionnaire was more suited for reaching a wider audience, whilst fostering a starting point for standardization of responses.

3.5 Pilot Study

A pilot study tested the feasibility of methods and procedures to be used in the larger-scale studies that the researcher later conducted (Teresi, Yu, Stewart et Hays, 2021). The pilot run afforded the interviewer a chance to test the feasibility of the Odzi study and highlighted areas requiring changes. also testing the methodology, including the chosen sampling method so that changes, if necessary, could be made before the main research began. The pilot run, which was a much smaller survey, also tested overall how practical the study was whilst affording a chance to make necessary changes before the main research kicks in. It involved 10 participants, 5 being the sample for the pilot quantitative study. Another 5 participants were the sample for the qualitative pilot study.

The 10 pilot study participants were purposively selected from small-scale gold miners located in Penhalonga, which lies to the east of where the main research was conducted.

3.6 Data Collection Procedure

3.6.1 Face to face interview data collection procedure

Miners were contacted, and an interview meeting date booked for the face-to-face interviews to be conducted with the 18 participants.

Interview recordings were transcribed verbatim. The transcripts were then analysed using thematic analysis, following the steps outlined by Braun and Clarke (2006): (1) familiarization with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report.

3.6.2 Questionnaire data collection

The 28 small-scale gold mines that responded had the questionnaires sent to them either electronically using email, WhatsApp, or other digital means acceptable to both the miner and the researcher. Where a digital copy could not be sent, a hard copy was delivered to the miner using a hired motorbike. The completed form was returned to the researcher by the same means and multiple follow-ups were conducted to raise the response rate.

3.7 Analysis and organization of data

3.7.1 Data Organization

3.7.1.1 Data categorization

The source of data was from 28 survey questionnaire respondents and 18 key informant face-to-face interview participants. The Miners were categorized by their firm size, which was derived from the number of employees they had as detailed in Table 1. The following categories were used to categorize mining firms. Category SM1 represented the largest of the gold miners with employees over 20, SM2 category with 16 to 19 employees, SM3 category with 10 to 15 employees, SM4 category with 6 to 9 employees, whilst SM5 represented the smallest of the mining firms with 5 and below employees as shown in table 1 below.

Table 1: Categories mine size grouping by number of employees

Number of employees	Category
Over 20	SM1
16 to 19	SM2
10 to 15	SM3
6 to 9	SM4
5 and below	SM5

3.7.1.2 Storage of data

Data collected from participants was captured in an Excel sheet, allowing a store of data as per research findings. A backup copy of the data was put on a flash drive and stored in a money safe.

The data was imported and analysed using IBM SPSS statistical software as well as Microsoft Excel.

3.7.2 Data Analysis

Once the data was collected it was checked and any errors were corrected. Analysis of the data to derive patterns and results was conducted.

The collected survey data was coded and analysed using the Statistical Package for the Social Sciences (SPSS). Analysis included. Descriptive Statistics: Frequencies, percentages, means, and standard deviations were used to summarize the data and profile the respondents and such an approach was in line with previous studies like as conducted by (Matsiwira et al, 2022b).

Thematic analysis was used for analysis of qualitative data collected from interviews and open-ended survey interview questions as carried out with 18 key informants.

Closed-ended data collected from questionnaires were analysed and the results of quantitative surveys were transformed into numbers, stats, graphs, and charts (Thakur & Corvette, 2021).

As a first step in data analysis, a response rate analysis helped determine how effective the research exercise was. Other analysis methods included a normality test on age of gold mines and analysis of demographic findings to try find any traits or trends. Descriptive analysis on the data relating to the age of the mines was looked into. The mean and medians of the mine ages detailed how the data deviates from the mean using the standard deviation. Chi-Square test of independence to analyse relationships between the dependent (level of financial management practises) and independent variable (Level of financial literacy) were conducted, the Chi-Square Test of independence being a powerful tool for detecting associations between categorical variables as argued by Zibran (n.d) who goes on to state that it may be sensitive to small samples and may need corrections with Yates' correction or Fischer's Exact Test.

3.8 Quantitative analysis

Quantitative Data analysis method is focused on the "what" question. It is used to describe the current status or circumstance of the factor being studied, researchers using this method do not generally begin with a hypothesis, rather, they develop one after collecting the data. (Grand Canyon University, 2021).

Quantitative research is essential for studying financial management practices among small-scale gold miners in Odzi Mutare because it enables precise measurement of financial behaviors, identifies patterns across miner populations, and supports evidence-based policy and funding models. Recent studies that support this view include Matsiwira (2022a) whose study was also a mixed methods approach with a strong quantitative component using surveys and random sampling of 306 participants,

and the Quantitative data helped assess the effectiveness of funding sources like RBZ and financial institutions, revealing poor access and its impact on productivity. Another study that justifies the current studies approach is the report by Hunter (2018) in which Quantitative analysis highlighted how lack of financial inclusion and formal banking access affects miners' sustainability.

The collected survey data was coded and analysed using the Statistical Package for the Social Sciences (SPSS). Analysis included: Frequencies, chi square independence tests, percentages, means, and standard deviations were used to summarize the data and profile the respondents.

3.9 Qualitative analysis

The planet gold Zimbabwe initiative which focuses on formalization, financial inclusion, and mercury-free technology adoption for our miners does research that combines financial tracking (quantitative) with stakeholder interviews and field observations (qualitative) (Ministry of Mines and Mining Development, 2025). This justifies that mixed methods helped assess both the scale of informal financial flows and the barriers miners face in accessing formal banking. This helps justify the use of both quantitative and qualitative research for this study. Another recent study Matsiwira (2022a) also supports this mixed methods approach in the small-scale gold mining sectors.

3.9.1 Case study Research approach

Since the research is targeted at the Odzi Mutare gold mining community, a bounded community, a case study approach is a good fit. Face to face interviews will support this case study approach with the plan they will lead to collection of data that is rich with insights into the small-scale gold miners' financial practises and challenges.

A case study approach is supported by similar studies prior research including Matsiwira et al (2022b) which took a case study approach with the study focusing specifically on Zimbabwe's ASM sector, treating it as a bounded context for exploring financing challenges and opportunities.

The case study approach in the study will seek to delve into variables around access to funding, financial literacy levels, formalization levels and government support levels

3.9.2 Phenomenological Research Approach

To better understand the Odzi gold mining community, a phenomenological research approach supported the main case study approach, which ensured the researcher gained a more detailed understanding of the small-scale gold miners lived realities in relation to financial management practices.

The phenomenological approach employed open-ended interviews to delve deep into and capture the essence of the financial management experiences from the small-scale gold miners' perspectives, highlighting how miners interpret and navigate financial uncertainty (Oranga et al, 2025).

3.9.3 Key Informant Research Approach

Also, in support of the case study approach the researcher identified key informants such as community leaders, gold buyers and mining officials to help provide richer insights as they normally would deal with an array of small-scale gold miners in the Odzi Mutare area. Hunter (2018) used a similar key informant approach with key informant interviews providing critical insights into financial flows, regulatory dynamics, and informal practices in Zimbabwe's artisanal and small-scale gold mining (ASGM) sector. Mining syndicates or those running or supporting gold mining syndicates were identified for the study as they are also in the key informant category.

3.10 Ethical Considerations

The study adhered to strict ethical guidelines. All participants were informed about the purpose of the research and assured of their anonymity and the confidentiality of their responses. Informed consent was obtained in writing before each survey or interview. Participation was entirely voluntary, and participants could withdraw at any time.

3.10.1 Informed consent

The miners participating in the research were made fully aware of what their participation meant and any risks the research could bring. This was very important,

especially for small-scale miners, as they were not all aware of possible research implications.

Ensuring full informed consent meant presenting the study in Shona (Oxford Research Support, 2021).

3.10.2 Confidentiality and anonymity

Since the research will delve into financial matters, the strictest levels of confidentiality and anonymity were maintained.

The crucial principle of confidentiality entailed an obligation on the part of the researcher to ensure that any use of information obtained from or shared by human subjects respected their *dignity* and *autonomy* (Bos, 2020). The researcher ensured all data did not contain any names of participants.

3.10.3 Respect for local communities

All cultural norms in the research area were observed. The researcher observed areas that communities see as sacred. Efforts were made to identify in advance all considerations the researcher needed to know prior to starting the tasks any cultural norm could influence.

3.10.4 Transparency in reports

The research observed transparency in communicating findings, clearly detailing all limitations, and the researcher established a clear and transparent relationship and interaction with all the participants during the different phases of research. (Mirza et al, 2023).

The element of bias was minimised, and the researcher attempted honest, reliable, and credible communication (Bhandhari, 2024).

Data transparency embodies openness, accessibility, and accountability. It encompasses a willingness to reveal not only the results of research but also the methodologies, data sources, and analysis techniques that underpin those results (Kibuacha, 2023).

CHAPTER 4 DATA PRESENTATION, ANALYSIS, AND INTERPRETATION

4.1 Introduction

This chapter delves into how findings are presented, analysed, and the interpretation of findings.

4.2 Data Presentation and Analysis

4.2.1 Response Rate

30 survey questionnaires were targeted at a purposively selected sample of small-scale gold miners in the study area, from which 28 responses were received. The response rate of 93% was considered high and acceptable for analysis of results to continue, with the high response rate showing that the interventions by the researcher, such as the follow-ups conducted on the purposively selected miners for their feedback, had paid off. The acceptability of the response rate was supported by prior analysis of responses by Outgrow (2025) that recommended response rates of above 30% whilst Edwards (2025) also highlighted response rates above 20% are acceptable.

Focused interviews were conducted with 18 key informants out of a planned 30, yielding an acceptable response rate of 60% again above the 30% recommendation (Edwards, 2025).

Table 2 below shows the response rates of the study

Table 2: Response rate analysis

METHOD	ACTUAL TARGET	RESPONSES	RESPONSE RATE %
Questionnaires	30	28	93
Focused interviews	30	18	60

4.2.2 Demographic Details

4.2.2.1 Data Categorization findings by number of employees

The 28 survey respondents were categorized by firm size as shown in Table 3 with 64.3% of the mines being considered very small and employing less than 10 employees

Table 3: Frequency of Respondents by Firm Size category

Number of mines per mine size category

		Frequency	Percent (%)	No of employees	Cumulative Percent %
Category	SM1	2	7.1	Over 20	7.1
	SM2	3	10.7	16 to 19	17.9
	SM3	5	17.9	10 to 15	35.7
	SM4	10	35.7	6 t0 9	71.4
	SM5	8	28.6	Less than 5	100.0
	Total	28	100.0		

4.2.2.2 Analysis of the age of mining operations

The average age of the responding mines is 6.50 years, while the median age is 5.00 years. The standard deviation is a moderate spread of years around the mean of 3.697 years, and the variance is 13.667. The age of mines ranges from a minimum of 2 years to a maximum of 13 years, reflecting an 11-year difference between the newest and oldest operations suggesting most small-scale mines are young and as supported in a study by Chipangura (2018) detailing how many large-scale mines were built from smaller operations emphasizing the fact smaller mines after a few years fall away from their initial owners, either being acquired by larger players or dying off.

Firms typically die young with a Cressy (2006) study confirming early death of small enterprises and that study further emphasizing the importance of risk management, financial buffers, and entrepreneurial learning. The skewness value of 0.684 (with a standard error of 0.441) confirmed a positive skew, suggesting the mines were mostly young with only a few older mines and this finding was supported by Mhangara, Tsoeleng and Mapurisa (2020), whose study found the lifespan of small-scale gold mines to be typically 2 to 5 years.

Manyuchi, Mudamburi and Sukdeo (2021) found that financial analysis of small-scale mining organizations revealed high gearing ratios and low equity, suggesting poor capital structure management. This suggests small-scale miners rely more on external debt than internal resources (equity), and this translates to a high risk for the mines due to high debt plus interest repayment considerations. This lack of a stable financial situation typically leads to closure, hence cementing the finding in this

study's analysis, which found small-scale mines typically do not survive long or change hands often with only a few older mines that tended to pull the mean gold mine age up.

Table 4 below shows both the Kolmogorov-Smirnov test (Statistic = 0.197, df = 28, Sig. = 0.007) and the Shapiro-Wilk test (Statistic = 0.858, df = 28, Sig. = 0.001) significant p-values ($p < 0.05$). This indicates that the distribution of "Age of the Mine" significantly deviates from a normal distribution. This non-normality is consistent with the observed positive skew

Table 4: Test of normality on the ages of the gold mines

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Age of the Mine	0.197	28	0.007	0.858	28	0.001
a. Lilliefors Significance Correction						

4.2.2.3 Level of education of respondents

The general level of education of respondents was found to be 10.87% of respondents having a college degree in any field, 23.91% possessed a tertiary college diploma with 32.61% of respondents had completed high school, whilst 32.61% did not manage to complete high school. Low levels of education are common among small-scale miners, which contribute to unsafe working conditions, limited

awareness of health risks, and challenges in formalizing the sector (Mhangara et al, 2020).

According to the Ministry of Mines and Mining Development (2025) many miners have primary or secondary education, but few possess tertiary qualifications.

4.2.2.4 Financial literacy levels of respondents

The respondents were also asked about their financial management and accounting literacy levels, with 92.66% admitting to poor levels of financial management principles and practices, and a low 7.14% having some literacy. These findings are supported by prior research that paints a picture of a sector where financial literacy is critically lacking, contributing to poverty, informality, and vulnerability, with the study also arguing that addressing this gap is essential for improving access to funding, safety, and long-term sustainability (Matsiwira et al, 2022b).

4.2.3 Financial management practices

4.2.3.1 Record keeping level

Quantitative analysis found 78.6% of respondents stated they had poor or no financial record keeping, with 7.1% stating they kept minimal records, another 7.1% good records, and yet another 7.1% very good records. A similar study by Matsiwira et al (2022b) found that out of 504 miners, the majority (271) used only preliminary records of bookkeeping, which was indicated in that study by 271 (88.6%) of the

participants, and about 7(2.3%) of the participants did not have any books of finance at all.

Ministry of Mines and Mining Development (2025) highlighted that basic records dominate with many small-scale miners only tracking production quantities and sales informally, often using notebooks or verbal accounts, whilst maintaining limited financial documentation of the likes of structured records of expenses, income, or capital investment and finding tax and compliance gaps since lack of documentation hinders engagement with institutions like ZIMRA and access to formal financial services.

Thematic analysis of the study supported the quantitative findings.

4.2.3.2 Types of records maintained

To help answer the first research question, respondents were asked about their record-keeping habits.

Gold Sales revenue records: Quantitative findings highlighted virtually all respondents kept track of gold sales revenue, with no respondents (0%) stating they rarely or did not, 10.7% stating sometimes, and 89.3% stating always or often.

Daily operating costs records: Only 39.3% of respondents regularly track daily operating costs with 46.4% sometimes tracking daily operating costs. 14.3% of respondents advised that they did not keep track of daily expenses.

Asset Register tracking records: A mere 14.3% of respondents maintained an asset register with 25% sometimes having the asset register and a high 60.7% never having had it.

Bank Reconciliations: A high 71.4% rarely or never do bank reconciliations with 17.9% sometimes and a low 10.7% often doing bank reconciliations.

Major equipment costs were tracked by 78.6% of respondents, with 14.3% sometimes tracking and 7.1% never keeping track of major equipment costs. Major equipment acquisition is typically done rarely due to the high capital outlay required, as argued by ZMF (2020), the sector sees limited access to affordable equipment and finance.

Payroll records: 57.1% of respondents kept payroll records, 28.6% stating sometimes and 14.4% never tracking payroll wages and salaries records.

A similar study Matsiwira et al (2022b) found only a small fraction of miners maintain financial records.

The thematic analysis of the study responses supported these quantitative findings.

4.2.3.3 Cashflow management practices

The miners all reported receiving their proceeds from the gold sales in cash upon delivery, regardless of where or how the gold was sold. 56.52% of respondents highlighted that they began spending their income upon receipt, and a further 30.43% highlighted that they only receive their remaining share after debtors and sponsors have received theirs.

21.42% of respondents practiced cash flow management to track inflows and forecast or plan for future expenses. Whilst a high number of respondents, 60.71% admitted to poor or non-existent cash flow management practices. 17.86% of respondents practiced some cash flow management practices, typically biased towards periods of high cash inflows from sales. Similar studies found 19.9% out of 504 respondents produced cash flow statements (Matsiwira et al, 2022b).

4.2.3.4 Relationship between financial management literacy and level of record keeping

Null Hypothesis (H0): There is no statistically significant association between the level of financial literacy and the level of record-keeping among small-scale gold miners in Odzi, Mutare.

Alternative Hypothesis (H1): There is a statistically significant association between the level of financial literacy and the level of record-keeping among small-scale gold miners in Odzi, Mutare.

Chi-Square test of independence.

7 cells (87.5%) had expected counts less than 5, with a minimum expected count of 0.14. This goes against assumptions for reliable interpretation of the Pearson Chi-Square and Likelihood Ratio tests' asymptotic p-values. Therefore, Fisher's Exact Test was the appropriate test to interpret this dataset. The Fisher's Exact Test gave an exact significance (2-sided) value of .389. With a predetermined significance level (α) of 0.05, comparing the p-value (.389) to α (.05) reveals that $p > \alpha$. Based on the analysis using Fisher's Exact Test, the results indicate that there is no statistically

significant association between these two variables (p = .389). Consequently, the null hypothesis H (0), which states that there is no association, cannot be rejected. This finding was counterintuitive and inconsistent with various findings of prior researchers, such as Andarsari and Ningtyas (2019), whose findings were that financial literacy had a significant effect on financial management practices, Nyamute and Maine (2011) whose findings were financially literate individuals (e.g., bankers, accountants) showed stronger savings habits, better debt control, and more consistent budgeting practices than those without formal financial education and a study by Bagalkoti (2022) finding financial literacy significantly influenced budgeting, saving, investing, and debt management with that study also finding this reduced financial stress and improved overall financial well-being. Similarly, a study by Lusardi and Messy (2023) found that financial literacy promotes the use of basic financial instruments, improves financial inclusion, and enhances financial decision-making. This inconsistency with prior research called for a deeper understanding, with further clarity being sought in the thematic analysis.

4.2.3.5 Theme 3: Acknowledging the Untapped Potential.

This theme explores the perceived benefits of formal financial management. Despite the many challenges, miners were aware of the opportunities they were missing.

"Accounts dzakakosha , ndai ndinadzo ndaitoendesa ku bhangi, ndiri kutoda compressor hombe yacho. Ikozvino hakuendeke nekuti handina ."

["If I had proper books, I could go to a bank and ask for a loan to buy a better compressor. Right now, they will just laugh at me. They want to see papers, proof."] (Participant 1, September 2025)

« Zvaigona kuti batsira ne kuronga . Ndinotodawo kupihwa working capital ndisapererwe ne diziri, ne zvimwe pakati pe pocket ine mari. Ndai taive nema repoti ezve mari tairongeka ".

["It would help with planning. Sometimes we run out of fuel or other needs in the middle of a rich area because we didn't budget properly. If we had financial reports, we would be so organised."] (Participant 9, Personal Communication, September 2025)

This demonstrates a latent demand for better practices, driven by the desire for access to capital and improved operational efficiency. Miners are typically aware **Banks and formal institutions require audited records**, geological surveys, and legal documentation to assess creditworthiness—requirements most miners cannot meet due to poor record keeping.

4.2.4 Qualitative Analysis findings

Key informant interviews of 18 participants yielded 3 interconnected themes presented below after thematic analysis

4.2.4.1 Theme 1: The Ad-Hoc Nature of Current Practices

This theme addresses *how* miners manage their finances. The dominant practice is informal and memory-based, often recorded in notebooks without a formal structure.

"There are books where what goes to Fidelity Gold Refiners is written and what goes to fuel and explosives. The rest are out of pocket with little to no records kept." (Participant 7, Personal Communication, September 2025)

"Financial Reports? No, we don't have except revenue and the share given to other players . I sponsor and normally get paid first before the miner ".(Participant 2, Personal communication, September 2025)

4.2.4.2 Theme 2: A Wall of Impediments

This theme identifies the challenges miners face, addressing the second research question. the following were raised

- **Lack of Knowledge and Skills:** This was the most cited barrier with a respondent stating.

"We are miners, not accountants. I never went to school for this. Someone once mentioned QuickBooks and Pastel, but where do I even start?" (Participant 11, Personal Communication, September 2025)

- **Cost and Complexity:** The perceived cost of software and hiring a bookkeeper was prohibitive for many as highlighted

" Bookkeepers wanting salary would be needed. Also, that software is expensive, I once worked for a mining company and they spent millions of rands on a system called Syspro, and you need computers and training. Setups were involving and now that I have my own mine for now need to concentrate on raising money and buy assets" (Participant 16, Personal Communication, September 2025)

- **Distrust of Formal Systems:**

Suspicion and lack of faith or trust in banks was a prevalent theme. This was due to Zimbabwe's history involving hyperinflation and currency woes. It highlights institutional pressures from the past affecting current behaviors.

Suspicion of government agencies like ZIMRA, and EMA was present

"The more records you keep, the more tax ZIMRA can ask from you. Financial reports provide EMA with additional ammunition to calculate a higher fine for you. Also, high sales one time at Fidelity Gold Refiners means more royalties deducted, and Fidelity Gold Refiners records can give the politically connected ammunition to want to grab your mine. It is better to keep things simple with minimal evidence." (Participant 4, Personal Communication, September 2025)

["We have seen it before. You put your money in the bank, and tomorrow the government says it's no longer USD but now useless bond notes. The bank charges you for keeping your own money. It is safer to buy assets or build at your rural home. At least you can see your money in the asset."] (Participant 18, Personal Communication, September 2025)

- **Peer Pressure and wasteful spending:**

The visibility of success is a powerful driver of financial *decisions.*

"In this life, makorokozas have to show are succeeding. When neighbouring miners find gold and buy a Toyota Hilux, the pressure is now on those around. If money in the bank where no one can see it, perception is failure. So, when money comes, first stop is for a car also. It is our way of reporting. " (Participant 5, Personal Communication, September 2025)

This reflects a clear bandwagon effect of mimicking those perceived as successful. The car is not just a vehicle; it is a "report" to the community stakeholder group, a tangible symbol of success in a highly uncertain environment. This normative behaviour crowds out more prudent investments. Findings by Dube (2022) highlighted that the most prosperous and organised small-scale miners had evolved into rural entrepreneurs running a variety of small businesses, including grocers, butchers, pubs, and grinding mills, making them the envy of their communities and hence providing a source of envy fuelling peer pressures as found in the wall of impediments theme. Chipangura (2018) found impulsive spending, including on status symbols, informal reinvestments and on unplanned immediate consumption.

- **Stakeholder Influence:** The informal gold buyer emerged as a highly influential stakeholder.

*"The informal buyer comes to the mine site. He pays in US dollars, cash, on the spot. No questions, no paperwork. To sell to Fidelity Gold Refiners, you must travel to Mutare, sometimes with angry creditors in tow, saying you left the informal buyers and made them travel, makorokoza face paperwork, royalties, sometimes cash has run out and you have to go back and return after few days, For the miner akagarwa bumper [has creditors, workers etc waiting] cash now, the choice is easy."] (*Participant 13, Personal Communication, September 2025)

"These guys don't think about next year. They think about today. 'Do I have enough to pay my team so they don't leave? Can I pay the supplier for diesel to run the pump tomorrow? Is there enough to send home to my family?' Profit is what is left after the chaos, if anything." (Participant 17, Personal Communication, September 2025). This aligns perfectly with Stakeholder Theory. The pressure from workers, suppliers, and family takes precedence over long-term investment or savings, forcing miners into a cycle of short-term financial management.

This shows how stakeholder convenience and incentive structures powerfully shape financial practices. informal buyer's model encourages cash transactions, discourages record-keeping, and keeps the entire ecosystem outside the formal financial system, thus presenting a challenge to financial management practices.

- **Cash hinders formalization.**

*"Cash is good, but it comes with its problems. Selling day is always marred by fights, with creditors, with workers, at the bar, at the main house, at the small house. If miners could get money in the bank, with limited bank charges plus links to Ecocash, it would be a huge step to properly do all these things you're asking about. Cash once received can only be spent and budgeting after receipt is normally futile. Also heard big mines not eligible taking advantage and sending messengers to Fidelity Gold Refiners pretending to be small scale miners to access quick cash. Cash creates problems and corruption everywhere" (*Participant 3, Personal Communication, September 2025)

As argued by multiple studies, such as PlanetGold (2020), ESAAMLG (2022), and Makungu et al (2024) that Fidelity Gold Refiners' spot cash payments on gold delivery, which were meant to discourage the black market, also fuel the chaos,

discouraging accountability, and fostering a breeding ground for back-door activities. This thematic finding, as also presented in a study by Agyapong, Agyapong, and Frimpong (2022), supports that access to digital financial services (like mobile banking and online payments) enhances operational efficiency

4.2.5 Challenges faced in financial management

35.7% of quantitative study respondents cited knowledge as the biggest constraint to their carrying out financial management best practices. 32.1% of respondents felt it was a waste of money to invest in financial management practices, whilst 10.7% and 14.3% cited time and technology or software-related constraints.

Financial management knowledge, the biggest challenge cited, is critical as it suggests even if accountants were in place, the miners or syndicates who run the operations would be unable to interpret management financial reports such as income statements, cash flow analysis, balance sheets, and so on.

The time for performing financial management is difficult for the miners to allocate since their operations are labour-intensive. 10.7% of the respondents to this current study cited time as the major hindrance with financial literacy and costs involved challenges scoring much higher; however, this bodes the question of whether the miners would practice financial management if the major constraints of knowledge and cost were mitigated. Miners prioritise allocating time to gold production-related tasks as opposed to allocating such time to bookkeeping and accounting (Matsiwira et al, 2022b).

Technology or software cited by 14.3% of respondents, is an important challenge since the small-scale miners operate in remote locations where the researcher found to be riddled with bad roads, non-existent or vandalised power lines, poor telecommunications reception, amongst other infrastructure gaps noted. Few miners know accounting apps or other digital financial record-keeping tools (Muzondo, 2023).

Government regulations cited by the lowest percentage of respondents at 7.1% coupled with qualitative thematic findings of a distrust of government institutions, suggest that government regulations could have much more influence as presented by Ministry of Mines and Mining Development (2025) where one recommendation from miners is that Fidelity should facilitate automatic deductions of mining-related fees at the point of gold sale as this would streamline compliance and reduce the risk of mine forfeitures due to missed payments. Institutional distrust, as detailed in the wall of impediments theme of the thematic analysis of this current study, further supports and suggests that this important stakeholder has much greater influence, which may warrant further investigation.

Table 5 below summarises the findings,

Table 5: Major constraints to practicing financial management

	Frequency	Percent (%)	Valid Percent (%)
Knowledge	10	35.7	35.7
Time	3	10.7	10.7
Technology or software	4	14.3	14.3
Money	9	32.1	32.1
Government regulations	2	7.1	7.1
Total	28	100.0	100.0

The qualitative study identified several challenges, as highlighted under the wall of impediments theme reported earlier.

4.2.6 Chi-Square test of independence discussion and interpretation

The chi-square test of independence conditions to enable the test to give accurate results were not met, and Fisher's exact test had to be used, as supported by Jeong and Lee (2017) whose study stated Fisher's test is ideal when the sample size is small or when conditions for large sample tests have been violated.

Fischer's Test was subsequently carried out, and its findings led the researcher to fail to reject the null hypothesis that stated "there is no statistically significant association between the level of financial literacy and the level of record-keeping among small-scale gold miners in Odzi, Mutare. This failure to reject the null hypothesis was contrary to similar prior studies where Taruvinga and Sakarombe (2023), Bakashaba et al, (2024), as well as Agyapong and Attram (2019)) found a significant positive relationship between financial literacy and Small and Micro enterprises performance. Another study by Andarsari1 and Ningtyas (2019) found that financial literacy had a significant effect on financial management practices.

Hence, contrary to multiple similar studies, this current study with a sample of 28 small-scale gold miners found that a miner's level of financial literacy does not statistically predict or correlate with their level of record-keeping practices. This result, while counterintuitive to the presented general understanding of financial management, called for further analysis.

Several factors could contribute to this non-significant finding:

1. **Small Sample Size:** The study involved a relatively small sample of 28 participants which reduced the statistical power of the study, making it more difficult to detect a true association even if one exists in the larger population. The assumption violations for Pearson's Chi-Square due to low expected cell counts are a direct consequence of this small sample (Jeong & Lee, 2017).
2. **Nature of the Variables and Measurement:** While financial literacy is generally considered a precursor to good financial practices as argued in previous studies such as study by Andarsari and Ningtyas (2019), that found financial literacy having a positive influence on financial management behaviours the qualitative themes in this study went further to highlight miners are aware (financial management literate enough to be aware) of potential benefits. However, they also observe financial management, with distrust as the thematic analysis highlighted. This suggests conscious effort by the miners in their day-to-day efforts on financial management to ensure their basic financial literacy does not automatically translate into rigorous record-keeping within that environment. The qualitative analysis findings detailed that miners felt accurate record keeping exposed them to risks from government agencies and corrupt people who could take their mines.
3. **Age of the mines and challenging operating space:** The small-scale gold miners operate in a challenging and informal space and typically mines do not last many years. The central feature in chikorokoza is the use of rudimentary tools as opposed to large machinery used in Large Scale Mining (LSM). Small-scale mining activities are typically characterized by high labour intensity, mobility, and the exploitation of marginal, near-surface deposits that are often

depleted within a few years. As Chipangura (2018) notes, the exhaustion of these shallow resources frequently results in the collapse of such ventures due to the limited reach of small-scale miners, thus setting the stage for a change of hands of the mine supporting the current mine age findings. Furthermore, Chipangura highlights that large-scale operations—such as Redwing Mine, located within the Odzi Gold Belt—were strategically established atop ancient indigenous mining sites, highlighting constant change of ownership and underscoring the historical continuity of gold extraction in the region. This interpretation is supported by the quantitative analysis of the age of the mines under the current study, which saw a mean age of 6.5 years and a median of 5.0 years. The relatively large difference between mean and median suggested a positive skew, which was supported by the normality tests conducted. Positive skew means a large number of mines that have just started operations, with a few older mines still operating (pulling the mean up). Such a finding is consistent with challenging operating environments where older mines are closing and new startups are always emerging, as evidenced in Hunter (2018), which found Zimbabwe's small-scale gold mining sector as unstable, volatile, and fragmented, with frequent mine closures and new informal operations emerging in response to economic pressures and gold price fluctuations. The study Hunter (2018) goes further to also note the proliferation of new syndicates and cooperatives, especially in areas where older mines have been abandoned or exhausted.

The qualitative data also found mentions of mines being taken away again, supporting the findings of an unstable operating environment.

4. **Contextual factors**: - The decision-making regarding record-keeping is influenced more by immediate operational needs, a lack of appropriate tools/systems, security concerns, plus stakeholder and institutional influences highlighted in the qualitative findings of the 3 themes. The lack of security of tenor finding, which was supported by studies such as Chipangura (2018), found makorokozas are often criminalized and excluded from mining claims, leading to territorial disputes and clashes with larger-scale mining security. Hence, miners' level of financial knowledge does not translate to improved financial record-keeping as typically they are interested in getting as much out the mine as possible in anticipation of losing the mine at any point in time. Miners were found to rely on memory, informal verbal agreements, and other simplified non-written methods of tracking (Chikodzi & Chuma, 2021).
5. **Motivation and Perceived Value:** Miners understood that to reap the benefits of proper financial planning an effective financial management included budgeting practices, the assessment of the importance of purchases made and prioritization of needs. Andarsari1 and Ningtyas (2019) argued that without adequate knowledge, entrepreneurs or smaller enterprises are more likely to be trapped in debts at high interest. The finding of this study that informal buyers and sponsors were acting as middlemen between small-scale miners and other stronger buyers corroborates the latter argument. Those with knowledge and ability in managing their finances well will show good financial behaviour, such as investing and/or saving, and an increased use of financial institutions, but they do not all prioritize it, as many do not perceive an immediate or tangible benefit (Chipangura, 2018). It must be noted that miners primarily dealt in cash transactions and did not seek formal loans with Matsiwira (2022a)

finding poor funding from RBZ and financial institutions was a major constraint on gold productivity and that study also highlighted most miners rely on internal funding (personal savings, owner capital) and external informal models (tribute systems, joint ventures, cooperatives, partnerships). For the Odzi miners, pursuit of formal loans means traveling to Mutare where transportation is hard to get, and where you are required to keep returning for know your customer (KYC) documentation. Informal buyers and sponsors who are less stringent in their requirements are always available at their sites, offering informal support yet discouraging formalization.

6. **Other constraints:** Lack of know-how in financial management practices was cited by 35.7% of respondents as the major challenge to financial management. For financial management to be effective, it was argued that it must include budgeting, assessing the importance of purchase and prioritizing needs (FinCart, 2023; ReadyRatios, n.d). Other challenges besides knowledge of financial management practices accounted for a total of 64.3% of the respondents. This 64.3% suggests that even if all the miners were trained in financial management, hindrances to financial management would still prevail due to Time constraints (10.7%), technology or Software constraints (14.3%), Cost constraints (32.1%) and government regulatory constraints (7.1%). This suggests that improving financial literacy alone will not lead to increased or improved financial management practices on the part of Odzi gold miners, but rather a more holistic approach also delving into other listed constraints, would be required.

4.3 Discussion and Interpretation

4.3.1.1 Inadequate Financial Management

The studied sample largely neglects financial management. With 78.6% of quantitative study respondents reporting poor or no financial records kept. The finding indicates that while basic revenue and major expense tracking are common, comprehensive record-keeping is not. The records that are maintained suggest a focus on cash flow (money in, big money out) rather than comprehensive financial accounting. Theme one of the qualitative thematic analyses corroborated the quantitative data finding, showing a focus on cash flow over accrual accounting and a lack of formal financial reporting for decision-making. These findings are in line with prior research such as in a study by Matsiwira et al (2022b) where that study found 88.6% of miners use only primary records (e.g., expense books), which are informal and basic, typically tracking mostly gold income with only some miners keeping records on major daily expenses like food and fuel, the qualitative interview of that study also went on to support the quantitative finding by highlighting rudimentary expense books as common in the sector because they are easy to maintain with that study further finding they were attracted to such expense books as miners normally did not have to hire other personnel to help them. An interviewed Ministry of Mines and Mining Development official in the study by Matsiwira et al (2022b) further noted that most miners are not aware of the importance of the books of accounts, so they are not interested in maintaining them.

The qualitative themes under the wall of impediments theme of this current study went on to further highlight distrust of formal institutions (such as EMA, responsible for environmental protection and ZIMRA, the tax revenue collection authority), leading to conscious efforts not to perform financial management practices on the part of some of the miners.

The poor or inadequate financial management practice finding is a symptom of the informal nature of the small-scale gold mining sector. From a stakeholder theory perspective, which calls for the miners to create value for all stakeholders stakeholdertheory.org (2018), the finding suggests that government institutions, as key stakeholders, are marginalised, leading to compromised government revenue as well as stifled growth and sustainability of the miners' operations.

Such inadequate financial management practices as identified amongst the small-scale gold miners lead to increased risk of their operations failing, which supports a quantitative finding of this study that found the prevalence of young starting up mining operations in the sector under study. Poor financial management practices also mean limited access to formal lending and reduced ability to attract investment, hence further adding to the risk of the mines folding in their early years. This finding highlights why it makes it nearly impossible to track profitability, plan for future investments, or access formal credit (Matsiwira et al, 2022b).

4.3.1.2 Selective Financial Tracking

The analysis of the quantitative data reveals a clear pattern of selective financial tracking, heavily oriented toward immediate cash flow management rather than all-

encompassing, accrual-based accounting. Gold Sales Revenue was tracked "Always/Often" by a high 89.3% of respondents. Revenue is often handled in cash, with miners selling gold immediately after milling to avoid holding physical gold, which is seen as risky (Hunter, 2018). The finding indicates prioritization of cash Inflow. This finding was reinforced by the thematic analysis with theme 1, “The ad hoc nature of current practices,” detailing the concentration of efforts on receiving revenue as opposed to documenting of its expenditure, as summed up by participant 7. Theme 2 Wall of impediments also supported this finding, with peer pressure to “keep up with the Joneses” highlighting impulsive spending sometimes to keep up with status quo.

Major Equipment Costs were recorded by (78.6% Always/Often) of responders. Thus, highlighting an expected low frequency of capital expenditure and high value outlay typical of mining equipment. These costs are often tied to either loan agreements, joint ventures where major equipment cost is shared, lease agreements, hire purchase, or revolving fund agreements, as noted by Matsiwira et al (2022b) and ZMF (2020), hence such assets are considered long-term major investments that may require referring back to documentation now and then. This finding is supported by the qualitative thematic analysis that details distrust of banks and other institutions, leading to small-scale gold miners investing in tangible physical assets they could see, avoiding savings in bank accounts due to fear of policy shifts. However, while the major equipment initial cost was widely maintained, this finding also highlights poor financial management as despite years of use the miners still perceive the value as at initial cost, this view is supported by a further quantitative finding of the study where only 14.3% maintained an asset register with details such as depreciation percentages and schedules as well as calculations of net book values. In the qualitative thematic

analysis, participant 18 summed it up, stating that value was seen in assets, that is, the initial cost, the depreciation over the years is not seen.

A neglect of operational detail was seen due to Employee Wages showing moderate tracking (57.1% Always/Often), as well as from the tracking of Daily Operating Costs which was low at 39.3% of respondents who advised regularly monitoring these costs, with a large number of participants (46.4%) tracking them only "Sometimes." A clear blind spot is the failure to consistently track daily costs (such as fuel, consumables, small repairs, etc.) making accurate profitability analysis impossible for the miners.

4.3.1.3 Deficiency in Comprehensive Accounting and Governance

Another critical insight derived from findings on the types of records kept section is the near-total absence of practices associated with clear, organized, and long-term asset management.

Asset Management**:** Only 14.3% of miners regularly maintain an Asset Register. This widespread neglect (60.7% rarely/never) means that the majority of small-scale miners possess an inaccurate or non-existent record of their fixed assets, with no depreciation schedules, and net book values which compromise the miners' ability to secure financing let alone manage capital replacement cycles or produce/analyse their balance sheets.

Internal Control**:** One of the most concerning findings was the lack of Bank Reconciliation, with 71.4% of respondents reporting this practice as "Rarely/Never." Bank reconciliation is fundamental to internal control as supported Morris (2021), hence a lack thereof supports the view that small-scale gold miners prefer

unaccounted financial spending, which finding was also supported in the qualitative thematic analysis that highlighted the peer pressure and wasteful spending, as well as stakeholder influence under the wall of impediments theme where Fidelity Gold Refiners was also accused of hindering bank reconciliations by paying cash in the thematic analysis (PlanetGold, 2020).

4.3.1.4 High formalization costs

Table 5 above shows that perceived costs of formalization were a huge constraint to financial management practices, as highlighted by 32.1% of the respondents, and this was the second biggest challenge cited by the miners after financial literacy, which was cited by 35.7 % of the respondents. Good financial management requires the miners to break away from informal operations and pursue formalization however such pursuits are made cumbersome by the fact that applicants have to deal with various stakeholder government institutions, such as the Ministry of Mines and Mining Development, the Zimbabwe Republic Police, the Environmental Management Agency (EMA), the Zimbabwe National Water Authority (ZINWA) and local government as presented by Masinga (2020), for authorization before permits can be issued hence many applicants and artisanal miners resent such bureaucracies and what they say are unaffordable costs involved with many of them contending that they can't cover the costs, the bureaucracy taking up their working time (Gwande, 2023).

The qualitative findings in theme 2, a wall of impediments, went on to further highlight the small-scale miners' awareness of further costs relating to bookkeepers, accountants, as well as technology and software needs.

Thus, both the quantitative and qualitative findings in this study bon. The sector operates with limited capital hence perceiving licensing fees, taxes, new software, professional accounting staff etc more a threat to the livelihood of themselves and their mining operations hence leading them to a prioritization of generating income whilst typically shelving most other considerations. This further supports the finding of this study of their selective financial tracking, where mostly records on gold sales were kept at the expense of other key financial records.

4.4 Summary

These small-scale miners use a cash-oriented system that mainly targets mine survival, avoiding detailed financial accountability practices. The high rate of lack of bank reconciliations and asset registers highlights some of the major weaknesses of the systems used, with Chikodzi and Chuma (2021) arguing that non-existence or poor financial management is one of the internal business challenges that are faced by artisanal and small-scale miners in which they lack proper management of handling business finance to fulfil financial goals of the mine.

The formal banking system is generally not seen as a facilitator of wealth with Matsiwira (2022a) finding a Weak association between government support and gold productivity, and the study goes on to further highlight that funding from the Ministry of Mines Industrial Loan Fund (MILF), RBZ, and Fidelity Printers and

Refineries (FPR) is limited by stringent eligibility requirements. Thus, banks are seen as a potential threat to wealth due to bad historical perspectives, leading miners to prefer tangible, non-financial assets.

The findings collectively support the interpretation offered that the small-scale miners operate with a clear focus on cash flow (money in, big money out) rather than comprehensive financial accounting with little to no formal bookkeeping or accounting systems in the mining syndicates as noted by Chipangura (2018) with that study further highlighting that financial decisions are made collectively or by senior members, based on experience and trust rather than data.

The findings highlight that miners' challenges to financial management include know-how and cost. Miners also found it a challenge to put in time for financial management practices due to the insecure, volatile environment they operated under.

The findings also highlighted the hinderance brought about to formalization and sound financial management by the cash payments as made to miners by Fidelity. It was found cash receipts made it more difficult for key financial management practices such as budgeting and bank reconciliations to be practiced.

Miners were found to tend to spend earnings on immediate consumption, status symbols, or informal reinvestment, rather than saving or structured reinvestment as noted by Chipangura (2018) further highlighting impulsive spending as also evidenced in the thematic analysis of this study, as summarised by Participant 5 where if one miner managed to get a car, the other miners around him felt pressure.

CHAPTER 5: SUMMARY CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the study findings and discusses them in relation to the research objectives

5.2 Discussion

In relation to **Objective 1 (assess current practices)**, the findings from both the survey and interviews converge and paint a clear picture. Financial management was rudimentary, largely cash-based, and focused on tracking major inflows, typically from Fidelity Gold Refiners (gold sales) and major outflows (major inputs like fuel and wages, major assets). The assessment of current practices also highlighted low financial literacy and further supported recommendations from previous studies such as Meressa (2023) that argued enhancing financial literacy among entrepreneurs can improve access to credit and overall business resilience.

Regarding **Objective 2 (identify impediments)**, the qualitative data provide a rich, phenomenological understanding of the barriers. As summed up by participant 3 in the qualitative analysis, the policy for small-scale miners of cash payments no questions asked emerged both as an impediment by discouraging financial accountability or transparency, and a benefit by encouraging inflows into

government coffers (Planetgold, 2024). A study by Frimpong et al (2022) found digital finance led to positive improvements in operational efficiencies.

The "wall of impediments" theme is built from practical issues (cost, lack of skills) and socio-institutional factors (distrust of formal institutions, peer pressure). This finding strongly resonates with Institutional Theory. The miners' reluctance to keep formal records due to fear of ZIMRA, EMA, Fidelity Gold Refiners etc is a direct response to coercive institutional pressure. Furthermore, their continuation of informal "notebook" accounting, because "it's how we've always done it," is evidence of powerful informal norms resisting formalization. The chi-square analysis result of independence between financial literacy and the extent of record keeping further supports that miners may perform the bare minimum required but are otherwise not driven or lack the desire to produce deep, meaningful financial management practices.

Finally, concerning **Objective 3 (determine potential benefits)**, there is a clear aspirational acknowledgment among the small-scale gold miners. They understand that formal records are the gateway to external financing and better internal controls or planning, as articulated by Participants 1 and 9. This directly links to Stakeholder Theory. Miners recognize that to engage effectively with powerful stakeholders like banks and investors, they need to speak their language—the language of financial statements. The current inability to speak the financial language required by key stakeholders who can support the growth of the mines marginalizes them, keeping them out of opportunities that can assist them in developing sustainably, whilst creating the cycle of undercapitalization described by Hilson and McQuilken (2014), thus hindering access to potential benefits of sound financial management practices.

5.3 Conclusion

The study was limited in scale with 28 quantitative respondents and 18 qualitative participants. This mixed methods study, of small-scale gold miners in Odzi Mutare found that financial management practices need great improvement, yet for that to be achieved, more than simply enhancing financial literacy was identified to being necessary. The history of financial losses to Zimbabweans, as articulated by key informants like participant 4 of the qualitative study brought to the fore deep-rooted institutional distrust and suspicion, highlighting complex institutional pressures that are prevalent in the sector. These pressures need to be investigated further; institutional theories may need even more analysis. Miners were also found to recognize that their route to sustainable growth was through dropping informal norms and providing the financial reports to more formal stakeholders that can better support their growth for mutual gain as per stakeholder theory. The policy to enhance deliveries through no questions asked payment of cash by Fidelity Gold Refiners was identified as a possible impediment to accountability, transparency and fair trade, as it facilitates underhanded dealings as argued by PlanetGold (2020), ESAAMLG (2022), and Makungu et al (2024), some highlighting that those responsible for policies formulation may need to investigate further.

This study concludes that the financial management practices of Odzi small-scale gold miners are predominantly rudimentary, inadequate, cash-based, and revenue-centred. The study also concludes that the major challenges to improved financial management practices are

- the receipt of cash for gold deliveries is hindering the digitization of transactions whilst promoting illicit dealings, and
- the lack of adequate financial literacy amongst the gold miners, hindering the pursuit of sound financial management practices as well as
- the stakeholder and institutional pressures that discourage formalization, encouraging underhand dealings that erode the bottom line of small-scale gold miners' income, leading to a perpetual cycle of undercapitalization.

The study also concludes that the sector can benefit immensely from financial institutions and government agencies should improve formalization and adequate financial management practices be pursued.

5.4 Implications

For these small-scale gold miners to grow sustainably requires an increase in their financial literacy levels through tailored training coupled with interventions to allay fears of losing their mining claims. Literacy increase needs to be tailored with easy-to-use apps or an accounting system. Encouragement or incentivization to practice more all-encompassing financial management, including bank reconciliations, assets registers, operational costs tracking, is also necessary from stakeholders like RBZ, Fidelity Gold Refiners, Ministry of Mines, ZIMRA and EMA. The trend where only 39.3% of respondents tracked daily expenses, and even then, in a rudimentary fashion, is not sustainable for any business. This implication was supported in a study on 293 small business owners' financial literacy influences on business

sustainability by Meressa (2023) where financial literacy significantly contributed positively to the sustainability of small businesses.

However, government agencies need to start by discouraging cash basis accounting, possibly by amending payment methods to involve bank accounts, encouraging formalization (whilst finding means of doing away with informal buyers or sponsors), and providing more security on title to the mining claims to ensure mining operations survive longer (mean age of mines was 6.5 with median way lower at 5), amongst other interventions, are of paramount importance for the sector to see growth.

The findings also bring to the fore implications such as the sector's reliance on cash and its informal operations promote illegal financial activities, resulting in revenue loss for the government. Cash enables covert dealings, including gold smuggling as noted by ESAAMLG (2022) and ZMF (2020), with occasional news outlet headlines highlighting such incidents. For example, a Zimbabwean man was caught with smuggled gold worth USD 730,000 at OR Tambo International Airport in Johannesburg, South Africa. In another case, Zimbabwe Mining Federation President Henrietta Rushwaya was intercepted at Robert Gabriel Mugabe International Airport attempting to smuggle 6.9 kg of gold (Gwande, 2023). These cases represent just a small part of a larger problem, with documentaries and studies revealing that to conceal black market activities, there is often an understatement of production figures, supported by networks of dormant companies, fake invoices, and bribed officials (Al Jazeera Investigations, 2023; Mawowa, 2013).

Miners are being exploited. Informal buyers discourage accountability and make formalization and formal loans seem unattainable, thus trapping the small-scale

miners in debt and reducing their bottom line. Gold barons and unregistered buyers form alliances with sponsors and sometimes international capital to perpetuate the illicit mineral trading and financial flows, as found by Gwande (2023), with that study going further to argue that the state monopoly on gold buying offers prices below the official world price, thus encouraging the black market and hindering formalization. Growth of the sector is thus hindered hence supporting the finding of this current study, where new mines are always starting up as depicted in the analysis of the age of the small-scale mining operations.

Such exploitation at all levels implies perpetual debt, which leads to never-ending conflicts with stakeholders.

Institutional theory tells us coercive and normative pressures are at play, with the findings suggesting that miners may be subject to pressure (coercive) from corrupt officials or the more powerful actors, and normative pressures, i.e., from a general acceptance/tolerance or turning a blind eye to accountability and transparency so as to fuel illicit financial flows. Prior studies, such as Mawowa (2013), support this finding, as that study argued that rather than formalizing the sector, state actors have allowed or even encouraged informal mining to flourish under elite control, undermining transparency and accountability causing the environment to suffer as the miners lack accountability and are in constant fear of their mines either closing down or being taken away (Zvarivadza, 2018).

Positive skew as found on the normality curve on ages of the gold mining operations, suggesting most mines die young and only a very few older mines are pulling the mean age upwards, supports the miners' fears of their mines leaving their hands sooner than expected. This finding can be crucial to potential investors who need to

plan by when to have recouped any investments back by or may want to invest to ensure mines last longer, or to government agencies who possibly may want to implement strategies to help mines survive for longer

5.5 Recommendations

This section presents recommendations to the various stakeholders.

5.5.1 Recommendations for Small-Scale Gold Miners

The small-scale gold mining sector is advised to actively pursue the maintenance of daily all-encompassing records, using simple financial recording tools where necessary, such tools for ease can be via mobile-based software applications developed to track all business transactions (Ministry of Mines and Mining Development, 2025). Digitalization of small-scale gold mining records enhances accessibility to data and ready access to reports derived from such data. Technologically driven, easy-to-use platforms that provide dashboards that can quickly highlight key financial management areas to miners will be of great help in tracking key financial performance and ratios. The digitization of the data is also recommended to help do away with the expense books, which can be easily lost or damaged, whereas digitized data can be backed up to physical data storage media as well as being stored online using cloud services.

The small-scale gold mining sector is also recommended to separate personal and business finances. The rampant practice of mixing personal and business expenses is strongly discouraged, as this only leads to very poor financial management practices, poor financial tracking, and decision-making, as noted by the Ministry of Mines and Mining Development (2025), hence compromising the tracking of business expenses for performance analysis. Formal funding is difficult to secure, especially where no distinction exists between the personal expenses of the mine owner and those of the mining operation.

Financial knowledge to assist in record keeping, financial accounting, and in the production and analysis of management financial reports was found to be grossly lacking as part of the findings of this study; hence the miners are advised to seek financial literacy training as noted ZMF (2024b) highlighting this could be through organizations such as ZMF, Ministry of Mines colleges, through private training, or via online financial management courses.

Partnerships, cooperatives, and joint ventures are encouraged as they allow sharing of risks, enhance bargaining power, pooling of resources, and sharing of duties and ideas. Hence miners are advised to avoid trying to go it alone as it is difficult for small-scale miners to manage or tun all aspects of their operations and also fully handle financial management, whereas when working with others allows for shared responsibilities or segregation of duties as also argued by Matsiwira et al (2022b) whose study further argued that cooperatives, joint ventures, and partnerships may offer more sustainable financial structures, enabling better record keeping and enhancing revenue monitoring.

Small-scale mining operations are recommended to aspire to seek formalization of their operations as this opens up avenues in fostering growth and sustainability. Formalization opens up the mining operations to be in a better position to attract the right investors and allow for access to formal financing (Zvarivadza, 2018).

Applying the institutional and stakeholder theories that underpinned this study, the small-scale miners are advised to understand governmental regulations and abide by them, ensure a digital record of their financial transactions to facilitate liaising with financial institutions for cheaper financial assistance, and understand stakeholder and environmental needs.

5.5.2 Recommendations for stakeholder agencies and institutions.

This study recommends Fidelity Gold Refiners should explore the possibility of alternative payment mechanisms to cash so as to encourage formal banking as also recommended in prior studies (PlanetGold, 2020; ESAAMLG, 2022; Makungu et al., 2024).

ZMF (2020) and ESAAMLG (2022) suggest that alternative payment mechanisms—such as bank transfers or mobile money—could help reduce smuggling and encourage formal banking practices. with that study going further to encourage prompter payments, because when miners face long waits for payment, especially in cash, they are more likely to turn to informal buyers who pay instantly, even if illegally, thus weakening the formal gold trade and reducing national revenue. Such banking can be tailored with links to mobile money for easier access to funds due to the remote nature of gold mining. In line with this, financial institutions are

recommended to explore the provision of tailor-made products that are suited to the small-scale mining sector since the small-scale miners are unfamiliar with the formal finance structures and do not have the formal business and management training that would enable them to make their business case to financial entities (Matsiwira et al, 2022b).

Government agencies are recommended to improve intervention strategies because the sector continues to bleed from illicit dealings, compromising government revenue, as noted by Al Jazeera Investigations (2023) and Mawowa (2013), with that study also highlighting agencies like the Ministry of Mines and Fidelity Printers and Refiners (FPR) have leading roles to play. According to Hunter (2018), government agencies are struggling to monitor production and sales due to limited resources and poor coordination thus, this study further presents the following recommendations:

Firstly, an investigation is called for into the possibility of separating regulations governing small-scale miners from those governing large-scale mines as presented ZMF (2025) with that article further discussing how the miners' body convened a technical workshop to analyse the Mines and Minerals Bill, with a focus on clauses affecting artisanal and small-scale miners, such initiative reflects growing calls to tailor legislation to the distinct realities of small-scale mining.

Implementation of policies that encourage the formalization of artisanal and small-scale mines is recommended, with a similar study by Zvaraidza (2018) arguing that formalization is essential for improving environmental accountability, financial transparency, and access to investment in the ASM sector. Also encouraged is the facilitation of access to financial assistance for key small-scale mining requirements, such as equipment, as highlighted by, Ministry of Mines and Mining Development

(2025), where further emphasis was presented on the need for financial inclusion and support mechanisms to help small-scale miners acquire mercury-free technologies, safety gear, and basic equipment. The tackling of illicit financial flows that prejudice the small-scale miners' bottom line is advised, as supported by ESAAMLG (2022) and Ministry of Mines and Mining Development (2025), highlighting how informal gold trading and smuggling undermine the earnings of legitimate small-scale miners and culminate in putting forward a call for stronger financial oversight, formal market access, and traceability mechanisms.

PlanetGold (2025) also encourages more training to miners on the role of key governmental agencies such as ZIMRA, EMA to foster more trust, thus encouraging formalization and sound financial management practices, and also encourages the Ministry of Mines in liaison with the ZMF, to spearhead more training to improve financial literacy, and such training to be preferably in local languages

Another key recommendation is for Fidelity to re-examine cash payments for gold deliveries and investigate the use of other methods that promote digitized money to allow for transaction trails as supported by ZMF (2020), highlighting, as a first step, that the payment to small-scale gold miners could be broken down, with only part paid in cash.

Recommendation is for the stakeholder group to not exercise undue influence on the sector in a bid to create an environment for continued exploitation of the gold mining sector in Zimbabwe with Mawowa (2013) arguing, rather than formalizing the sector, state actors have allowed or even encouraged informal mining to flourish under elite control undermining transparency and accountability with that study further arguing a deliberate bid to weaken institutions, distort resource governance, and perpetuate

corruption thus also marginalizing genuine small-scale miners who lack political connections.

5.5.3 Recommendations for the Zimbabwe Miners Federation (ZMF)

The ZMF is encouraged to take a leading role in improving financial literacy, while developing a user-friendly, standardized basic record-keeping template suitable for the small-scale gold miners, which is possibly linked to mobile apps to make uptake and user training easier (ZMF, 2020)

The ZMF is also encouraged to foster a culture of sound financial management, and a starting point is the active lobbying for the proper formalization of the miners' operations as argued by Zvarivadza (2018) who notes that formalizing ASM operations leads to greater responsibility and accountability among miners and further argues sustainable development in ASM is linked to miners' ability to manage resources efficiently, which includes financial planning and reinvestment. Hence, there is a need for training in financial management, as miners must comply with legal and administrative requirements, including financial documentation.

5.5.4 Recommendations for future research

A larger, more encompassing study is recommended, possibly nationwide, to allow for wider generalization of findings and recommendations for interventions, since this study's limitations included its concentration on a single geographical area of

Odzi Mutare, its small sample sizes of 28 for quantitative research and 18 for qualitative research.

This study included self-reporting of data like financial literacy levels, which may have been subject to bias; hence, future research with well-defined financial literacy measurement matrices to mitigate the self-measurement bias is recommended.

Research on the effects of cash payments by Fidelity for gold deliveries is recommended, as such research can help with insightful findings detailing the effect of cash on the formalization of operations and the perceived role of cash in illicit financial flows

Comparative studies, such as between Zimbabwean gold miners and other countries' miners, such as in South America or in other sub-Saharan African countries, can help unlock where and how interventions and policy changes succeeded in creating more value for the countries

This study found a counterintuitive, non-significant relationship between financial literacy and the financial management practices of the respondents; hence, a larger study to gain more insights into this is also recommended. Such study could possibly include a longitudinal research aspect with some miners receiving financial literacy training, then researching the effect of such training on the financial management practices hence also detailing a cause-and-effect aspect.

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APPENDIX 1: AUREC Approval

"Investing in Africa's future"

AFRICA UNIVERSITY RESEARCH ETHICS COMMITTEE (AUREC)

P.O. Box 1320 Mutare, Zimbabwe, Off Nyanga Road, Old Mutare-Tel (+263-20) 60075/60026/61611 Fax: (+263 20) 61785 Website: www.africau.edu

Ref : AU4018/25

29 September, 2025

WALTER CHIGWADA
C/O Africa University

Box 1320

MUTARE

RE: ***FINANCIAL MANAGEMENT PRACTISES OF SMALL TO MEDIUM SCALE MINES IN VIRGINIA CENTRAL, MUTARE ZIMBABWE***

Thank you for submitting the above-titled proposal to the Africa University Research Ethics Committee for review. Please be advised that AUREC has reviewed and approved your application to conduct the above research.

The approval is based on the following. a) Research proposal

- **APPROVAL NUMBER** AUREC 4018/25

This number should be used on all correspondence, consent forms, and appropriate documents

- **AUREC MEETING DATE** NA
- **APPROVAL DATE** September 29, 2025
- **EXPIRATION DATE** September 29, 2026
- **TYPE OF MEETING**: Expedited
  After the expiration date, this research may only continue upon renewal. A progress report on a standard AUREC form should be submitted a month before the expiration date for renewal purposes.

- **SERIOUS ADVERSE EVENTS** All serious problems concerning subject safety must be reported to AUREC within 3 working days on the standard AUREC form.
- **MODIFICATIONS** Prior AUREC approval is required before implementing any changes in the proposal (including changes in the consent documents)
- **TERMINATION OF STUDY** Upon termination of the study a report has to be submitted to AUREC.

Yours Faithfully

MARY CHINZOU
FOR CHAIRPERSON
AFRICA UNIVERSITY RESEARCH ETHICS COMMITTEE

APPENDIX 2: Questionnaire and Survey instrument

To the respondent

I am a student at Africa University carrying out research entitled **Financial Management of small-scale gold mining a case of Odzi Mutare** in partial fulfilment of a master's degree in business administration. Purpose of the study is to identify possible improvements in the financial management practices of gold miners in the area. Your organization being in the small-scale gold mining field and being registered with the Ministry of Mines would contribute greatly to the research by responding honestly to the questionnaire. **Please do not write any identifying marks as your participation is meant to be anonymous. All information received will be kept confidential. Any concerns can be communicated to me. Thank you for your time and cooperation**

Walter Chigwada chigwadaw@africau.edu

Section 1 General and Demographic Details

1.1 Where is your mine located in Odzi (Only the general area)
_____

1.2 How many years' experience do you have working in Gold Mining
_____

1.3 Please state number of permanent male employees_____ female employees_____

1.4 What is your highest level of education (Please check only a single (1) choice below by ticking or crossing the appropriate box.)

Lower than High School ☐ High School ☐ Diploma ☐ Degree ☐

Section 2 Financial Management

2.1 Do you keep a record of all financial transactions Yes ☐ No ☐

2.2 How do you record financial transactions

N/A ☐ Manually ☐ Spreadsheet ☐ Accounting software ☐

2.3 What is your accounting system? ☐ h basis accrual basis ☐ mixed ☐

2.4 Do you use budgeting and forecasting techniques? Yes ☐ No ☐

2.5 How often do you update your financial records?

Rarely ☐ Daily ☐ Weekly ☐ ☐

Monthly

2.6 What is the biggest challenge of your financial management system?

Costs/Monetary ☐ Time constraints ☐ Lack of knowledge ☐

Software issues ☐ Regulatory compliance ☐

(Select only the most relevant)

2.7 Are you literate in financial management practices? ☐

Some l☐acy Poor to None ☐

2.8 Level of record keeping of your mine? Poor/None ☐ Bare Minimum ☐

Good, or Some room for improvement ☐ Very Good ☐

2.9 Do you keep gold sales revenue records? Yes ☐ Sometimes ☐

Rarely/Never ☐

2.10 Do you keep records on major equipment costs? Yes ☐ Sometimes ☐

Rarely/Never ☐

2.11 Do you keep employee wages/salary records? Yes ☐ Sometimes ☐

Rarely/Never ☐

2.12 Do you keep daily operating costs records? Yes ☐ Sometimes ☐

Rarely/Never ☐

2.13 Do you maintain an asset register? Yes ☐ Sometimes ☐ Rarely/Never ☐

2.14 Do you conduct bank reconciliations? Yes ☐ Sometimes ☐

Rarely/Never ☐

2.15 Rate your cashflow management level. Low/Poor ☐ Medium ☐

High/Good ☐

Section 3 Gold sales and revenue management

3.1 Do you sell gold produced to Fidelity Gold Refiners? Prefer not to say ☐ ☐ ☐

Yes No

3.2 What is your average gold production per month in grams

_____

3.3 What other revenue streams does your organization have

_____

____

3.4 Do you maintain financial records on gold sales revenue? Yes ☐ NO ☐

Prefer not to say ☐

3.5 Do you submit monthly production as required by Ministry of Mines? Yes ☐

No ☐ Prefer ☐

not to say

Section 4 Regulatory and reporting

4.1 How often does your organization produce financial statements?

Never ☐ Rarely ☐ Quarterly ☐ Monthly ☐ Yearly ☐

4.2 Do you submit tax returns to ZIMRA? Yes ☐ No ☐ Prefer not to Say ☐

4. 3 Are you aware of financial regulations affecting your gold mine

Yes ☐ No ☐

4.4 Do you face challenges in complying with financial regulations?

☐ Yes ☐ No

4.5 How would you rate your general

financial literacy? Poor ☐ Fair ☐ Good ☐ ☐

Very good

4.6 Did your organization conduct an environmental impact assessment?

☐

Yes ☐ No

4.7 In this section please state anything you feel would be of benefit to the study

_____

APPENDIX 3: Key Informants Interview Guide

Interview Guide for Odzi Research on financial management practices of small-scale gold miners.

SECTION A: Introduction and Demographics

Notes

- Warm greeting
- Introduction
- Explanation of purpose of study
- Explain confidentiality and anonymity
- Seek consent to continue and to record

1. **Consent and Introduction:**
    - "Thank you for taking the time to speak with me today. My name is Walter Chigwada, I am a student with Africa University studying for a Master's in Business Administration degree. I am doing academic research on Financial Management practices of small-scale gold miners in Odzi Mutare. The aim of this study is to understand how such miners manage finances, what challenges they face, and how formal financial practices do or might help them."
    - "You have been identified as a key informant whose views will contribute immensely. I would like us to try keep our insights and discussions only on those that affect mines around Virginia Central Odzi Mutare where possible and mines who are registered with the Mines Ministry and to the best of your knowledge, employing about 20 people or less. Your insights will be very valuable to this research"
    - "This interview is completely voluntary, and you can choose not to answer any question or stop the interview at any time. All your responses will be kept strictly confidential and anonymous; your name or the name of the operations you talk about will not be used in any report. We will be recording this interview to ensure accuracy, but only for research purposes. Do you have any questions before we begin?"

- "Are you comfortable proceeding with the interview and with it being recorded?" (Note: Clear verbal consent to be sought).

2. **Basic Information:**
    - "Could you please tell me a bit about yourself and your role in the mining operations?" (e.g., owner, manager, sponsor, buyer, community leader, a key partner, Ministry of mines employee, involved in the value chain, etc)
    - "How long have you been involved in small-scale gold mining industry?"
    - "Could you describe the interactions you have with mining operations you deal with? (e.g., scale of your buying, level of your support, number of employees, average monthly gold production/revenue if comfortable sharing)"
    - "What is your general educational background?"

SECTION B: Financial Management and Accounting Records and Reports

(Addressing Research Objective 1: To assess the financial management practices of small-scale mining operations in Zimbabwe and Research Question 1: Do small to medium scale mines maintain financial management and accounting records and produce management financial reports?)

1. "Let's start by talking about how to your knowledge money is managed by the mining operation you familiar with. How is money tracked coming in and going out?"
    - *Probes:* "Is it written anywhere?" "Any specific books or systems?" "Is it mostly in memory?"
2. "What types of financial information is recorded or kept track of?"
    - *Probes:* "Record gold sales?" "How about expenses like fuel, wages, equipment repairs, chemicals?" "Any debts or loans?" "How about personal funds versus business funds?"
3. "To the best of your knowledge How often is this information recorded? Is it daily, weekly, monthly, or only per big transaction?"
4. "Who is responsible for keeping these records ?"

- *Probes:* "Mine owner?" "Does someone else handle it, like a family member or an employee?"

5. "Do you know of any consolidations of this information into any kind of summary or report?"
    - *Probes:* " Summary of income and expenses for a month or a year?" "Calculations of profit or loss?" "Idea of cash flow management?"
6. "To what extent is a separation of personal finances from mining business finances?"
    - *Probes:* "Is it easy or difficult to keep them separate?" "Why is that?"
7. *"Please feel free to share anything else on records kept reports produced"*

SECTION C: Impediments to Financial Management Practices

(Addressing Research Objective 2: To identify impediments to financial management practices of small-scale miners and Research Question 2: What challenges are being encountered by small-scale miners in performing financial management practices?)

1. " What are some of the main difficulties or challenges faced in managing the money and keeping records for the mining operations?"
    - *Probes:* "Are there specific things that make it hard?"
2. "Do you feel miners have enough knowledge or skills in financial management and accounting?"
    - *Probes:* "If not, what areas are most confusing or difficult?" "Have you ever received any training in business or financial management? Have miners received similar training"
3. "Is time a challenge? Does actual mining work take too much time away from record-keeping?"
4. "What about the cost? Is it expensive to implement formal record-keeping systems or hire someone to do it?"
    - *Probes:* "What costs are you thinking of?"
5. "How does the fluctuating price of gold affect financial planning and management?"

- *Probes:* "Is it hard to budget when prices are uncertain?"

6. "Many small-scale miners operate informally. Does this informality affect management of finances or keeping of records?"
    - *Probes:* "Are there concerns about taxes or government regulations when keeping formal records?" "Does it affect choice of where to sell gold?"
7. "What are your experiences with accessing loans or financial services from formal banks or lenders?" “How about experiences of miners you know?”
    - *Probes:* "Do they require specific financial records?" "Is it difficult to meet their requirements?"
8. "Are there any other specific obstacles unique to the Odzi mining environment or the local context that make financial management challenging?"
    - *Probes:* "Security issues?" "Lack of reliable infrastructure (e.g., internet, electricity for computers)?"

SECTION D: Benefits of Formalized Financial Management Practices

(Addressing Research Objective 3: To determine the potential benefits that formalized financial management practices can bring about and Research Question 3: What benefits do small-scale miners get from maintaining financial management records and from producing financial reports?)

1. "Based on your experience, or what you've heard, what do you think are the advantages of maintaining good financial records and producing financial reports for a mining business like yours?"
    - *Probes:* "How could it help?" "How could it help businesses grow?"
2. "Do you believe that having clear financial records and reports could help with the making of better operational decisions, such as deciding what equipment to buy or how to manage labour?"
    - *Probes:* "Any example?"
3. "How do you think formalized financial practices could help in better understanding the true profitability of mining operations?"
    - *Probes:* "Do miners currently know exact profit margin?"

4. "Do you think having proper financial records would make it easier for miners to access loans or funding from banks or other financial institutions?"
5. From your own experience explain your thoughts on the Fidelity Gold Refiners cash payments no questions asked policy.
    - Probes: “How can it be improved? “Does it cause any problems?” “What are its advantages?”
6. "In what ways could better financial management help you reduce risks, such as managing cash flow shortages or dealing with fluctuating gold prices?"

SECTION E: Concluding Remarks

1. "Is there anything else you would like to add about financial management in small-scale gold mining that we haven't discussed whether specific to Odzi or gold mining in general?”
2. "Do you have any questions for me?"
3. *“Please give closing remarks before we conclude”*

Notes

- Researcher can conclude and Express gratitude for time and insights