

An Analysis Of The Contribution Of Environmental Social And Governace (ESG) Implementation On The Financial Performance Of Kansanshi Mine

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Abstract

This study investigated the contribution of Environmental, Social, and Governance (ESG) practices to the financial performance of Kansanshi Mine, employing an explanatory sequential research design within a mixed-methods approach. Quantitative data were collected from 355 respondents and analysed using SPSS, while qualitative data from structured interviews were used to enrich and contextualized the statistical findings. Inferential statistical analysis, particularly Pearson correlation, was used to determine the strength and direction of relationships between ESG components and financial performance, while thematic analysis provided explanatory insights into the observed relationships. The results revealed statistically significant positive relationships between all ESG dimensions and financial performance. Environmental compliance demonstrated a moderate positive correlation with financial performance ($r = 0.452, p < 0.01$), suggesting that adherence to environmental regulations enhances operational efficiency, reduces regulatory risks, and supports long-term sustainability. Corporate social responsibility (CSR) showed a moderately strong positive relationship with financial performance ($r = 0.580, p < 0.01$), indicating that social investments such as community engagement and employee welfare improve stakeholder trust, productivity, and corporate reputation. Corporate governance exhibited the strongest positive correlation with financial performance ($r = 0.743, p < 0.01$), highlighting the critical role of transparency, accountability, ethical leadership, and regulatory compliance in driving financial success. Qualitative findings reinforced the statistical results, revealing that ESG practices improve community relations, enhance corporate reputation, strengthen investor confidence, and promote operational stability. However, participants also noted that ESG implementation involves significant financial and resource costs, particularly in the short term, which may pose challenges for management. Overall, the study concludes that ESG integration is a key driver of sustainable financial performance and long-term value creation at Kansanshi Mine. It is therefore recommended that management strengthen ESG integration into core strategic planning by prioritizing governance systems, expanding social investment programmes, and embedding environmental sustainability into operational decision-making. In addition, the mine should adopt cost-efficient ESG implementation strategies to balance short-term financial pressures with long-term sustainability objectives.

Keywords: Environmental Social and Governace (ESG); Financial Performance; Mining Sector.

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I. Introduction

This chapter outlines the background and rationale for the study, emphasizing the growing importance of ESG practices in the mining industry. It explores how these practices intersect with financial performance indicators such as profitability, operational efficiency, and risk management. The chapter also provides an overview of the study's objectives, research questions, and the significance of examining ESG's role in mining operations, especially in Africa. Furthermore, it highlights the existing research gap in the relationship between ESG and financial performance within the mining sector, particularly in Zambia contexts, and sets the stage for further exploration into how these factors influence Kansanshi Mine's operations.

II. Background

Environmental, Social, and Governance (ESG) factors have become critical considerations for businesses worldwide, influencing not only ethical practices but also long-term financial success. The integration of ESG principles into business strategies is increasingly recognized as a key driver of corporate sustainability, risk management, and overall financial performance. ESG refers to three central factors that assess the sustainability and societal impact of a company:

Environmental, Social and Governance

Environmental, Social, and Governance (ESG) factors have emerged as essential elements in the evaluation of corporate performance, particularly with growing concerns about sustainability, ethics, and responsible management.

Environmental factors involve a company's efforts to minimize its ecological footprint and ensure sustainable use of natural resources. These practices include energy conservation, waste reduction, carbon footprint mitigation, and resource conservation (Kotsantonis et al., 2016). Companies that actively manage these environmental impacts not only comply with regulations but also contribute to the preservation of the environment, ensuring long-term sustainability in their operations (Sullivan & Mackenzie, 2020). For mining companies like Kansanshi Mine, environmental management is particularly important due to the high resource consumption and environmental degradation associated with mining operations (Lund, 2016). The mining industry is one of the largest contributors to air and water pollution, deforestation, and biodiversity loss (Hancock, 2017). As such, companies in this sector are under increasing pressure to adopt ESG practices to minimize negative environmental impacts.

Social factors pertain to how a company manages its relationships with various stakeholders, including employees, suppliers, customers, and the communities in which it operates. This aspect of ESG focuses on labor rights, workplace diversity, community engagement, employee health and safety, and human rights (Tencati & Zsolnai, 2021). The mining industry, often operating in remote or underserved areas, faces heightened scrutiny over its impact on local communities, particularly regarding land use, displacement, and working conditions (Dube & Sibiya, 2019). For Kansanshi Mine, maintaining positive relationships with local communities and ensuring employee welfare is critical not only for regulatory compliance but also for maintaining a social license to operate (Gibson, 2015). Social responsibility is increasingly seen as a driver of profitability, as consumers and investors alike prioritize companies that demonstrate ethical behavior and social commitment (Carroll & Shabana, 2010).

Governance encompasses the systems and processes through which companies are directed and controlled. This includes the company's leadership structure, the ethical conduct of business, transparency, and compliance with regulations (Fombrun, 2016). Strong governance ensures that companies are run responsibly, with checks and balances in place to prevent corruption, mismanagement, and unethical practices (Booth, 2020). For mining companies, good governance is crucial for attracting investors, managing risks, and maintaining the integrity of their operations (Wilson, 2020). Regulatory compliance, such as adherence to labor laws and environmental standards, is also central to governance practices in the mining industry, where violations can lead to legal penalties and reputational damage.

The mining sector, which is inherently resource-dependent and environmentally intensive, faces significant pressure to integrate ESG principles into its operations. Mining operations often contribute to substantial environmental degradation, including soil erosion, habitat destruction, and the pollution of water bodies, which can negatively affect local ecosystems and communities (Dube & Sibiya, 2019). These issues are exacerbated by the fact that mining projects often operate in fragile regions, where they can disrupt local economies and social systems. ESG considerations, therefore, become critical for minimizing risks and ensuring sustainable growth in the mining sector (Zingales, 2015).

Kansanshi Mine, located in Zambia and one of Africa's largest copper mines, is a key example of a mining operation that has made significant strides in incorporating ESG practices into its operations. Owned by First Quantum Minerals, the mine has implemented various measures to reduce its environmental footprint, improve social engagement, and enhance governance practices (First Quantum Minerals, 2022). The mine has faced several challenges, including resource depletion, environmental concerns, and conflicts with local communities, which have necessitated the adoption of comprehensive ESG initiatives (Zambian Mining Magazine, 2023). By integrating these practices, Kansanshi aims not only to address these challenges but also to enhance its financial performance through improved operational efficiency and risk management (Norton Rose Fulbright, 2019).

The growing importance of ESG factors in corporate strategy has prompted greater attention from investors, regulators, and other stakeholders regarding how these practices affect financial performance. Research suggests that companies that implement robust ESG strategies often outperform their peers in terms of long-term financial returns, risk mitigation, and overall business stability (Friede et al., 2015). For Kansanshi Mine, understanding the financial impact of ESG practices is crucial for guiding future investments and ensuring sustainable profitability. By examining the relationship between ESG implementation and financial outcomes, this study seeks to provide valuable insights into the role of responsible practices in the mining industry's financial success.

Despite growing interest in ESG across various sectors, there is a lack of research focused specifically on the mining industry, particularly in Africa. The mining sector's unique challenges, including resource extraction, environmental sustainability, and community relations, create a compelling case for studying the

impact of ESG practices on financial performance in this context (Asare et al., 2020). This research aims to fill this gap by analyzing how the adoption of ESG factors at Kansanshi Mine influences its financial performance, including profitability, operational efficiency, and risk management.

In an era marked by climate change concerns, rising social inequalities, and increasing calls for corporate accountability, the findings of this study will be important for mining companies in Africa and beyond. As global stakeholders continue to push for more sustainable and ethical business practices, understanding how ESG integration can enhance financial outcomes will help guide future strategies in the mining sector. The insights derived from Kansanshi Mine's experience will inform the development of best practices for ESG implementation in other mining operations worldwide, contributing to both environmental preservation and economic prosperity (Bebbington & Larrinaga, 2014).

III. Statement Of The Problem

The implementation of ESGs by companies creates better world for both people and the planet. This implies that companies are not only focused on generating profits but also on being responsible and sustainable in their operations. By considering the impact of their actions on the environment, their employees and society, companies can help to address important global issues such as climate change, social inequality and corruption.

Environmental problems and sustainability have continued to increase in the past decade. Reports reveal that in 2006 the total amount of municipal solid generated globally reached 2.02 billion tones, representing a 7% annual increase since 2003 (Global Waste Management Market Report 2007). Many businesses have been reported to practice environmental and social responsibilities only when they anticipate profit maximization (Soto-acosta & Cismaru, 2016). Several studies in developing countries including Zambia have demonstrated that corporations have also caused environment and social challenges such as environmental degradation, exhaustion of natural resources, poverty, diseases, poor infrastructure, unemployment and emission of dangerous gases (Choongo et al., 2016).

Despite the numerous benefits of implementing ESGs such as, energy efficiency, waste management, reduced carbon emissions, enhanced social and economic justice, responsible and sustainable investment, currently in Zambia there is no legal requirements that compel companies, organizations and institutions to consider and integrate ESG factors when making investments. Various pieces of legislation may relate to one or more components of ESG but there is no particular single law that regulates ESG as a concept. The Environmental Management Act, No. 12 of 2011 provides that certain activities require environmental impact assessments before they can be implemented. These include activities like mining, construction, power generation, etc. In the mining sector, the Mines Act provides that mining companies are required to promote the environment and human health in carrying out mining operations. And companies listed on the Lusaka Stock Exchange (LuSE) are required to meet sustainability reporting and disclosure obligations under the LuSE Listing Rules. However, these disclosure obligations are not mandatory. It is with these assertions that, the study will analyze the contribution of the implementation of ESGs on a mining company's financial performance.

Kansanshi Mine, one of the largest copper mines in Africa, owned by First Quantum Minerals, has made notable efforts to integrate ESG practices into its operations. These efforts include addressing environmental concerns, improving community relations, ensuring employee welfare, and enhancing governance structures. However, the financial contribution of these ESG initiatives remains unclear. While it is widely believed that responsible business practices can lead to better long-term financial outcomes, the specific relationship between ESG implementation and financial performance in the mining sector has not been fully explored, especially in Zambia, where mining is a key economic driver.

The problem this study addresses is the lack of empirical evidence on the input of ESG practices on the financial performance of Kansanshi Mine. This research seeks to examine whether the mine's on-going integration of environmental, social, and governance considerations have resulted in measurable improvements in profitability, operational efficiency, and risk management. By analysing this relationship, the study aims to provide insights into how ESG adoption can drive financial performance in the mining sector and contribute to the broader discourse on sustainable mining practices in Zambia.

IV. Research Objectives

- i.To examine the contribution of the implementation of environmental protection policy on the financial performance of Kansanshi Mining Public Limited Company.
- ii.To evaluate the implementation of social policy and practice on the financial performance of Kansanshi Mining Public Limited Company.
- iii.To analyse Kansanshi Mine's accountability, disclosure and ethical conduct policies' contribution on Financial Performance.

Rationale Of The Study

The increasing global focus on sustainability and responsible business practices has highlighted the importance of Environmental, Social, and Governance (ESG) factors in shaping the future of industries worldwide, especially the mining sector. As mining operations have significant environmental and social impacts, they face growing scrutiny from governments, investors, local communities, and environmental organizations. These pressures, coupled with stricter regulatory frameworks and the demand for ethical corporate behaviour, necessitate the adoption of ESG practices by mining companies.

Kansanshi Mine, located in Zambia, is one of the largest copper mines in Africa and plays a crucial role in the Zambian economy. The mine, owned by First Quantum Minerals, has integrated ESG initiatives into its operations to address the environmental impact of its activities, improve its social relations with local communities, and enhance its governance practices. However, despite these efforts, the financial implications of these ESG initiatives have not been fully explored. There is a gap in the existing literature regarding the relationship between the implementation of ESG practices and financial performance in the mining sector, particularly in the African context.

Scope Of The Study

The study area for this research will be confined to the mineworkers and, administration. Respondents will be selected irrespective of gender or social status but limited to age. The age group that will be eligible to be respondents will be 18 and above.

V. Literature Review

This empirical literature review adopts a funnel approach, starting with a global perspective on the impact of Environmental, Social, and Governance (ESG) practices on financial performance, then narrowing down to the national level (Zambia), with a specific focus on Kansanshi Mine. The review examines previous studies on ESG implementation, its effects on financial outcomes, and the unique context of mining in Zambia.

Global perspective on ESG and financial performance

Across the global business landscape, research has shown a growing interest in understanding how ESG practices influence corporate financial performance. Numerous studies suggest a positive relationship between strong ESG practices and superior financial outcomes, highlighting the potential of ESG as a driver of long-term value creation.

ESG and Corporate Performance

A study by Friede et al. (2015) conducted a meta-analysis of over 2000 studies on ESG and financial performance, concluding that there is a generally positive correlation between the adoption of ESG practices and corporate financial performance. They found that companies with strong ESG practices tend to outperform their peers in terms of profitability and risk-adjusted returns. The environmental aspect was linked to cost savings through energy efficiency and waste reduction, while governance and social practices helped improve brand value and consumer loyalty.

Environmental Impact and Profitability

According to Eccles et al. (2014), companies that proactively address environmental concerns, such as reducing carbon emissions and adopting sustainable resource management practices, experience improved operational efficiency and lower operational costs. In contrast, those ignoring environmental concerns may face higher regulatory risks, fines, and reputational damage, all of which negatively impact their financial outcomes.

Social Factors and Financial Resilience

Orlitzky et al. (2003) reviewed studies on the social aspects of ESG, focusing on labor rights, community relations, and customer engagement. They found that companies with strong social performance were better equipped to build long-term relationships with stakeholders, which enhanced their brand loyalty and financial stability. A positive social reputation also contributed to reduced operational disruptions, especially in communities affected by mining or industrial activities.

Governance and Financial Performance

Gompers et al. (2003) and Kempf & Osthoff (2007) found that companies with robust governance structures tend to have better financial performance. These companies are typically more transparent, make better strategic decisions, and have lower risks of corruption or financial mismanagement, all contributing to higher profitability.

These global studies provide a foundational understanding of how ESG factors affect corporate financial performance and offer evidence that strong ESG practices can enhance profitability, operational efficiency, and risk management.

ESG in the Mining Sector

The mining industry is particularly vulnerable to environmental, social, and governance risks. Mining companies are often located in ecologically sensitive areas, and their operations can result in significant environmental degradation. Furthermore, mining companies frequently face challenges related to local community relations, labour rights, and governance. As such, the integration of ESG practices in the mining sector has become increasingly important.

Environmental Impact of Mining

Mining operations are often associated with large-scale environmental damage, including deforestation, water pollution, and carbon emissions. Sharma (2000) argues that the adoption of effective environmental management systems can help mitigate such impacts while simultaneously improving financial performance by reducing the costs associated with regulatory compliance and environmental damage. The relationship between environmental practices and profitability in mining has been documented in studies like Bansal & Roth (2000), which suggest that environmentally responsible mining companies tend to have better access to capital and lower operational risks.

Social Impacts and Community Relations: Kemp & Owen (2013) discuss the social challenges faced by mining companies, especially in developing countries. Mining operations often conflict with local communities over issues such as land rights, compensation, and employment practices. Companies that invest in community engagement, ensure labour rights, and address social issues like healthcare and education can enhance their reputation, foster goodwill, and reduce the risk of social unrest. Lacy et al. (2013) find that social performance is linked to long-term financial success in mining, as companies that maintain strong community relations tend to avoid costly disruptions and reputational damage.

Governance in Mining

Strong governance practices are crucial for mining companies, especially in countries with weak regulatory frameworks. Studies by Jenkins & Yakovleva (2006) have shown that poor governance in the mining sector leads to inefficiencies, corruption, and legal challenges, all of which can severely damage financial performance. Effective governance, on the other hand, helps mitigate these risks and provides a foundation for sustainable growth. Heath & Norman (2004) further suggest that good governance in the mining sector also boosts investor confidence, thus improving access to capital and enhancing profitability.

Continental Perspective (Africa)

In Africa, the adoption of Environmental, Social, and Governance (ESG) practices in the mining sector has become a critical factor for ensuring sustainable growth and mitigating the various risks associated with mining operations. The mining industry, which is a major contributor to many African economies, is also a significant source of environmental and social challenges. This review examines the empirical literature on the relationship between ESG implementation and financial performance in Africa, focusing on the mining sector, with particular attention to Zambia, where Kansanshi Mine operates.

Global Trends in ESG and Mining: A Broader African Context

Globally, the mining industry has faced increasing scrutiny due to its environmental and social impacts. In Africa, where mining is a central part of the economy, this scrutiny is particularly pronounced due to the industry's potential to both harm and benefit local communities, ecosystems, and national economies. The global perspective on ESG adoption in mining highlights the relationship between responsible mining practices and long-term financial performance.

Environmental Practices and Sustainability

The environmental impact of mining, such as pollution, deforestation, and resource depletion, is a central issue in African mining. Frynas (2009) argues that mining companies that adopt effective environmental management systems (EMS) experience reduced costs related to regulatory fines, environmental remediation, and operational disruptions. In South Africa, Van der Poll (2011) found that mining companies that invest in sustainable environmental practices such as waste reduction, water management, and emissions control tend to benefit from long-term operational efficiency and profitability. These companies also have better access to capital, as investors increasingly prefer companies with strong environmental records.

Social Aspects and Community Relations

In Africa, mining companies are often located in rural and marginalized areas, leading to potential social conflicts over land rights, employment practices, and environmental degradation. Kempf & Osthoff (2007) emphasize that mining companies with strong community engagement and social responsibility programs are better able to manage the social risks inherent in mining activities. Studies such as Harrison & Lutz (2015) in Ghana show that mining companies that prioritize local community development such as building schools, providing healthcare, and creating jobs tend to experience fewer disruptions and maintain a stable social license to operate. These companies often have better financial performance as they face fewer social protests, work stoppages, and legal challenges.

Governance and Risk Management

Governance is a critical issue in Africa's mining sector, where corruption, weak regulatory frameworks, and lack of transparency are prevalent. Studies by Jenkins & Yakovleva (2006) indicate that strong governance practices such as adherence to ethical business standards, anti-corruption measures, and transparency are associated with improved financial outcomes in African mining companies. In particular, Lacy et al. (2013) argues that companies that implement robust governance structures are better equipped to manage risks related to regulatory compliance, labour disputes, and environmental liabilities, leading to enhanced financial performance.

ESG Implementation and Financial Performance in African Mining Companies

Empirical studies conducted in Africa on the relationship between ESG implementation and financial performance in the mining sector indicate that there is a growing recognition of the financial benefits of sustainable practices. However, the adoption and implementation of ESG practices vary significantly across the continent, depending on the country, the company's resources, and the specific challenges faced by each operation.

Ghana's Gold Mining Sector: Ghana is another significant mining country in Africa, and studies of its gold mining sector suggest a similar relationship between ESG practices and financial performance. Morduch & Schneider (2017) found that mining companies in Ghana that invested in community development, particularly in education and healthcare, saw a positive correlation between these investments and their financial performance. The findings suggest that addressing local social issues helped to secure a social license to operate, reduce the risk of conflict, and build a more stable operational environment. Similarly, Yakovleva (2007) argues that companies that proactively address environmental degradation, such as land reclamation and water management, avoid legal liabilities and fines, which can improve their bottom line.

The Role of Governance in African Mining: Effective governance is particularly crucial for African mining companies operating in regions where corruption and weak enforcement of regulations are common. Shivdasani & Zenou (2016) explored how governance structures in African mining companies influence financial performance. They concluded that companies with transparent reporting, strong internal controls, and adherence to international standards have a better ability to attract foreign investment and manage operational risks. This is particularly true for companies operating in countries like Zambia, where governance challenges such as political instability and corruption can directly impact business outcomes.

Regional Perspective (Southern Africa)

South Africa, one of the continent's largest mining economies, has been at the forefront of integrating ESG principles into the mining industry. A study by Tshikovhi et al. (2014) explored the effect of corporate social responsibility (CSR) in South African mining companies and found that socially responsible firms were more likely to gain access to new markets and improve investor relations, leading to improved financial performance. South Africa's regulatory environment, which includes strict environmental laws and social responsibility frameworks, has forced many mining companies to adopt ESG practices. As a result, mining companies like AngloGold Ashanti and Harmony Gold have seen improvements in their operational efficiency and profitability by addressing environmental and social concerns.

The Context of Zambia's Mining Industry And ESG

Zambia is one of Africa's largest producers of copper, and mining is a key sector of its economy. However, the industry faces challenges related to environmental degradation, labor rights, and governance, which make ESG implementation particularly important for Zambian mining companies.

Environmental Challenges in Zambia's Mining Sector: Zambia's mining industry has faced significant environmental challenges, including soil erosion, deforestation, and water pollution due to mining activities. Sichinga et al. (2011) highlight the importance of environmental regulation and sustainable mining practices in Zambia. With increased international attention on sustainability, Zambian mining companies like Kansanshi Mine are increasingly adopting environmental management systems to address these concerns and reduce their environmental impact.

VI. Conceptual framework

The conceptual framework provides a clear understanding of the study's independent and dependent variables.

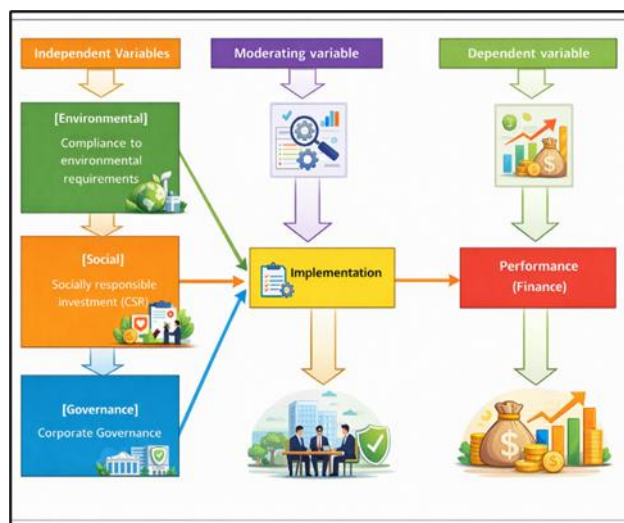


Figure 1: Conceptual framework

Source: Author

VII. Research Methodology

Research philosophy

For this study, the research philosophy that was adopted was pragmatism. Pragmatism focused on practical solutions to research problems and emphasized the importance of using methods that best addressed the research objectives rather than strictly adhering to a single philosophical tradition. This philosophy allowed the researcher to draw on both objective and subjective viewpoints in order to gain a comprehensive understanding of the phenomenon under investigation. Pragmatism supported the integration of both quantitative and qualitative data, thereby enabling a more flexible and problem-oriented approach to research (Saunders et al., 2019). Furthermore, it recognized that knowledge is constructed through experience and interaction with real-world situations, making it particularly suitable for studies that aim to evaluate organizational practices such as Environmental, Social, and Governance (ESG) and their impact on financial performance (Creswell & Plano Clark, 2018).

Research Design

This research employed an explanatory sequential design, which was considered appropriate for examining the relationship between the implementation of Environmental, Social, and Governance (ESG) practices and the financial performance of Kansanshi Mine. The explanatory sequential design involved the initial collection and analysis of quantitative data, followed by qualitative data collection to further explain and elaborate on the quantitative findings. This design enabled the researcher to first identify patterns, relationships, and trends through statistical analysis and then gain deeper insights through qualitative exploration (Creswell & Plano Clark, 2018).

The use of this design enhanced the validity of the study by allowing triangulation of results and provided a more detailed understanding of how ESG practices influenced financial outcomes. Additionally, it facilitated the inclusion of a relatively large sample size during the quantitative phase while also allowing for in-depth engagement with selected participants during the qualitative phase.

Research Approach

The study was investigated using a mixed-methods approach, which combined both quantitative and qualitative methodologies. This approach enabled the researcher to collect numerical data that could be statistically analyzed, as well as descriptive data that provided deeper insights into participants' experiences and perceptions. The mixed-methods design was particularly useful in examining the impact of ESG practices on financial performance, as it allowed for both measurement and interpretation of complex organizational dynamics.

By integrating quantitative results with qualitative findings, the study achieved a more comprehensive and nuanced understanding of the research problem. The quantitative component provided measurable evidence of relationships between variables, while the qualitative component offered contextual explanations and interpretations of those relationships. This combination enhanced the reliability, validity, and overall robustness of the findings (Donald, Lucy & Chris, 2010; Creswell, 2014).

Furthermore, the mixed-methods approach allowed for methodological triangulation, which strengthened the credibility of the results by cross-verifying findings from different data sources.

Population

In research, a population refers to the complete group of individuals, objects, or items that share common characteristics and from which a sample is drawn for study (Donald, Lucy & Chris, 2010). In this study, the population consisted of mine workers and administrative staff at Kansanshi Mining PLC.

Kansanshi Mining PLC was recognized as one of the largest copper mining and processing operations globally, with an annual average production of approximately 245,000 tons of recovered metal over the past decade. The mine was also identified as the largest copper mine in Africa and had an estimated remaining operational life of 24 years as of January 2021. The total number of employees at Kansanshi Mining PLC was approximately 3,145, including both operational and administrative personnel (Kansanshi, 2020).

This population was considered appropriate for the study because employees at different levels of the organization possessed relevant knowledge and experience regarding the implementation of ESG practices and their potential impact on financial performance.

Sample Size

A sample refers to a subset of the population that is selected to represent the characteristics of the entire population (Donald, Lucy & Chris, 2010). In this study, the sample size for quantitative data was determined using the Taro Yamane (1967) formula, which is commonly used for calculating sample sizes in large populations.

The formula is expressed as:

n = Sample size

N = Target population

e = Margin of error

$$\text{Sample size } (n) = \frac{N}{1+N(e)^2} = \frac{3,145}{1+3,145(0.05)^2} = \mathbf{355 \text{ respondents}}$$

The sample size used for qualitative data was 20 respondents by means of data saturation determination.

Sampling technique

The researcher employed both random sampling and convenience sampling techniques to select respondents among workers at Kansanshi Mining PLC, in line with the mixed-methods approach adopted in the study. Random sampling was used during the quantitative phase to ensure that each member of the population had an equal chance of being selected. This method enhanced the representativeness of the sample and reduced selection bias, thereby improving the generalizability of the findings (Creswell, 2004).

Through random selection of participants from the employee base and relevant stakeholders, the study obtained a broad and unbiased perspective on the implementation of ESG practices and their impact on financial performance. This approach strengthened the validity and reliability of the results by ensuring that the sample accurately reflected the characteristics of the population.

In addition, convenience sampling was utilized during the qualitative phase of the study. This technique involved selecting participants based on their accessibility and willingness to participate. It enabled the researcher to gather in-depth insights from individuals who were readily available and knowledgeable about ESG practices within the organization. Although convenience sampling is not fully representative, it was appropriate for qualitative inquiry where depth of information was prioritized over generalization (Creswell, 2014). The combination of both sampling techniques ensured that the study achieved both breadth and depth in data collection.

Data Collection Instruments

Research instruments refer to tools that are used to collect data for analysis (Donald, Lucy & Chris, 2010). In this study, data were collected using questionnaires, structured interviews consisting of both closed-ended and open-ended questions, and a computer for data recording and processing.

The questionnaire was used to collect quantitative data from a larger number of respondents in a structured and efficient manner. Structured interviews, on the other hand, were employed to obtain qualitative data by allowing respondents to elaborate on their experiences and perceptions regarding ESG practices at Kansanshi Mine. The use of both instruments enhanced the comprehensiveness of the data collected.

The study adopted these instruments because they were time-efficient, cost-effective, and capable of generating both numerical and descriptive data. Furthermore, the study employed triangulation, which involved the use of multiple data sources and methods to enhance the credibility and depth of the findings. Triangulation enabled the researcher to cross-validate results and provided a more holistic understanding of how ESG practices

influenced financial performance, stakeholder relationships, and organizational sustainability (Creswell, 2014). This approach strengthened the robustness and reliability of the study's conclusions.

Validity

Validity refers to the extent to which a research instrument measures what it is intended to measure (Donald, Lucy & Chris, 2010). In this study, potential threats to validity included participant bias, researcher bias, and reluctance of respondents to provide accurate information.

To minimize these threats, the researcher adhered to standard research procedures and ethical guidelines throughout the data collection process. The instruments were carefully designed based on insights obtained from the literature review to ensure relevance and clarity. Additionally, the researcher ensured that questions were neutral and unbiased in order to reduce the likelihood of influencing participants' responses. These measures enhanced both the internal and external validity of the study.

Reliability

Reliability refers to the degree of consistency with which a research instrument measures a variable and the extent to which the results can be replicated under similar conditions (Donald, Lucy & Chris, 2010). In this study, reliability was ensured through pre-testing (pilot testing) of the research instruments prior to the main data collection.

The pre-test enabled the researcher to identify and correct ambiguities, inconsistencies, and errors in the questionnaire and interview guide. Furthermore, reliability was assessed using internal consistency measures, which examined the extent to which items within the instrument produced similar results. These steps ensured that the instruments produced stable and consistent data, thereby enhancing the credibility of the findings.

Ethical Considerations

Ethical considerations were treated as a fundamental component of the research process. The researcher ensured professionalism and respect for human rights in order to protect all participants involved in the study. Measures were taken to ensure that no harm, discomfort, or adverse effects were experienced by respondents during their participation.

Key ethical principles that were upheld included respect for autonomy, informed consent, confidentiality, beneficence, non-maleficence, and justice. Participants were fully informed about the purpose of the study and their voluntary participation was emphasized. They were also assured that their responses would remain confidential and would only be used for academic purposes.

Additionally, the researcher obtained ethical clearance from the University of Zambia prior to the commencement of data collection. This ensured that the study complied with institutional and international ethical standards for conducting research involving human participants.

Data Analysis

Primary data were processed and analyzed using the Statistical Package for Social Sciences (SPSS) version 27 (Creswell, 2012). Quantitative data were analyzed using regression analysis, which was employed to examine the relationship between the implementation of Environmental, Social, and Governance (ESG) practices and the financial performance of Kansanshi Mine.

Regression analysis enabled the researcher to assess the extent to which independent variables (ESG practices) influenced the dependent variable (financial performance indicators such as profitability and operational efficiency). The use of SPSS facilitated the development of statistical models that measured the strength, direction, and significance of these relationships, thereby providing empirical evidence on the impact of ESG practices.

In addition, thematic analysis was used to analyze qualitative data obtained from interviews and open-ended questionnaire responses. This method involved identifying, analyzing, and interpreting recurring patterns or themes within the data. The themes were categorized based on common ideas and perspectives related to environmental, social, and governance practices.

The integration of quantitative and qualitative analysis provided a more comprehensive understanding of the research problem, as qualitative findings were used to explain and support the quantitative results. This combined approach enhanced the depth, validity, and interpretability of the study.

VIII. Results

Demographic information

The study collected gender information from all 355 respondents. The results show that 155 respondents, representing 43.7 percent of the sample, were male. Female respondents accounted for 200 individuals,

representing 56.3 percent of the total. This means that female participants formed a larger proportion of the study sample compared to male participants.

The distribution suggests that the study attracted slightly more participation from females than males. This imbalance may reflect the gender composition of the target population or differences in willingness to participate in survey-based research. The cumulative percentage of 100 percent confirms that every respondent provided information on their gender, ensuring completeness of this demographic variable.

This gender distribution is important because it provides context for understanding the perspectives represented in the study. Where relevant, subsequent analyses may consider whether gender differences influence responses or perceptions related to the study variables.

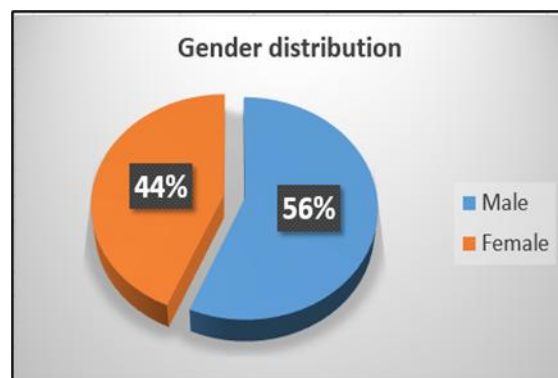


Figure 2: Gender distribution

Challenges relating to the implementation of ESGs

The results reveal a clear pattern in the challenges respondents identified regarding implementation. Out of the 355 participants, the majority indicated that resistance to change was the most significant challenge, accounting for 199 respondents or 56.1 percent of the total sample. This suggests that behavioural and cultural obstacles play a major role in hindering effective implementation processes. Resistance to change may arise from a lack of understanding of new initiatives, fear of uncertainty, or a preference for maintaining established routines.

Regulatory challenges were also noted by a considerable proportion of respondents, representing 17.5 percent (62 respondents). This implies that compliance requirements, policy inconsistencies, or bureaucratic processes may complicate the implementation environment. Similarly, 16.6 percent of respondents (59 individuals) pointed to lack of resources as a challenge. This indicates that financial, human, or technological constraints limit the capacity to implement activities effectively.

A smaller proportion of respondents, 9.9 percent (35 individuals), identified sustainable costs as an implementation challenge. Although this is the least selected option, it still highlights that ongoing expenses associated with maintaining new initiatives can pose difficulties for some organizations.

The cumulative percentage of 100 percent confirms that all respondents provided information on the challenges they encounter during implementation. Overall, the findings suggest that while structural issues such as resources and regulation are important, human-related factors particularly resistance to change are perceived as the most critical barriers to successful implementation

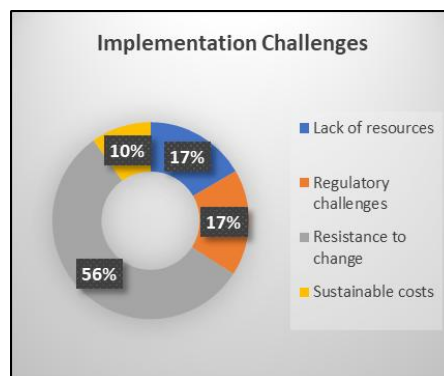


Figure 2: ESGs Implementation challenges faced

Correlation Between Environmental Requirements And Financial Performance

The correlation analysis explored the relationship between compliance with environmental requirements and financial performance. The results indicate a Pearson correlation coefficient of 0.452 between the two variables. This value reflects a moderate positive relationship, suggesting that higher levels of compliance with environmental requirements are associated with improved financial performance. The significance value of 0.000 shows that this correlation is statistically significant at the 0.01 level. This indicates very strong evidence that the observed association is not due to random chance. With both variables having a sample size of 355, the analysis is based on a complete dataset, which strengthens the reliability of the findings.

The positive correlation implies that organizations or operations that adhere more effectively to environmental regulations tend to realize better financial outcomes. This may be attributed to several factors, including reduced risk of penalties and fines, improved operational efficiency, stronger stakeholder confidence, and enhanced corporate reputation. Compliance may also contribute to sustainability in operations, which can support long-term financial stability.

Although the correlation is moderate rather than strong, it still highlights an important link: environmental compliance appears to contribute meaningfully to financial performance. However, correlation does not imply causation, and further statistical testing or qualitative inquiry would be necessary to understand the direction, mechanisms, and contextual factors that shape this relationship.

The correlation analysis examined the relationship between financial performance and corporate social responsibility (CSR). The results show a Pearson correlation coefficient of 0.580 between the two variables. This indicates a moderately strong positive relationship, meaning that higher levels of CSR are associated with better financial performance among the respondents or within the organization studied.

The significance value ($p = 0.000$) confirms that this relationship is statistically significant at the 0.01 level. This means that there is less than a one percent probability that the observed correlation occurred by chance, providing strong evidence of a meaningful association between the two variables.

The positive direction of the correlation suggests that organizations or units that invest more in CSR activities tend to experience improved financial outcomes. This may be due to several potential mechanisms, such as enhanced reputation, improved stakeholder relationships, increased employee motivation, better compliance with regulations, or reduced operational risks.

Both variables had a sample size of 355, indicating that the findings are based on a complete dataset with no missing cases, which enhances the reliability of the correlation results.

Overall, the findings support the notion that CSR practices are not only beneficial for community and stakeholder welfare but may also contribute to strengthening organizational financial performance. However, while the correlation indicates an association, it does not establish causality, and further analysis would be required to determine the direction and nature of this relationship.

Table 1: Correlation between environmental requirements and financial performance

		Compliance to environmental requirement	Financial Performance
Compliance to environmental requirement	Pearson Correlation	1	.452**
	Sig. (2-tailed)		.000
	N	355	355
Financial Performance	Pearson Correlation	.452**	1
	Sig. (2-tailed)	.000	
	N	355	355

** . Correlation is significant at the 0.01 level (2-tailed).

Correlation between Financial Performance and Social Responsibility

The results indicated a moderate positive relationship between financial performance and social responsibility ($r = 0.580, p < 0.01$). This implied that improvements in social responsibility practices at Kansanshi Mine were associated with increases in financial performance. The correlation coefficient of 0.580 suggested a reasonably strong association, while the p-value (0.000) indicated that the relationship was statistically significant at the 1% level.

This finding suggested that social responsibility initiatives, such as community engagement, employee welfare, and social investment, played an important role in enhancing the financial outcomes of the organization.

Therefore, as the mine strengthened its social responsibility efforts, there was a corresponding improvement in its financial performance.

Table 3: Financial performance and social responsibility

Correlations

		Financial Performance	Social Responsibility
Financial Performance	Pearson Correlation	1	.580**
	Sig. (2-tailed)		.000
	N	355	355
Social Responsibility	Pearson Correlation	.580**	1
	Sig. (2-tailed)	.000	
	N	355	355

** . Correlation is significant at the 0.01 level (2-tailed).

Correlation between Financial Performance and Governance

The findings further revealed a strong positive relationship between financial performance and governance ($r = 0.743$, $p < 0.01$). This indicated that better governance practices were strongly associated with improved financial performance at Kansanshi Mine. The correlation coefficient of 0.743 reflected a high degree of association, and the p-value (0.000) confirmed that the relationship was statistically significant at the 1% level.

This result suggested that effective governance practices, including transparency, accountability, ethical leadership, and regulatory compliance, significantly contributed to enhanced financial performance. It could therefore be inferred that strong governance structures were critical in driving organizational success and financial sustainability.

Table 2: Correlation between financial performance and governance

Correlations

		Financial Performance	Governance
Financial Performance	Pearson Correlation	1	.743**
	Sig. (2-tailed)		.000
	N	355	355
Governance	Pearson Correlation	.743**	1
	Sig. (2-tailed)	.000	
	N	355	355

** . Correlation is significant at the 0.01 level (2-tailed).

IX. Thematic Analysis of Qualitative Findings

The qualitative data collected through structured interviews were analyzed using thematic analysis, which involved identifying, analyzing, and reporting recurring patterns (themes) within the responses. The analysis focused on participants’ perceptions of how Environmental, Social, and Governance (ESG) practices influenced the financial performance of Kansanshi Mine. Several key themes emerged from the data, as presented below, supported by direct quotations from interviewees.

Theme 1: Social Responsibility Enhances Community Relations and Financial Stability

Participants emphasized that social responsibility initiatives, such as community development projects and employee welfare programs, contributed positively to the mine’s reputation and operational stability. These initiatives were perceived to reduce conflicts with local communities and improve productivity, which ultimately influenced financial performance.

One participant stated:

“When the company invests in the community, there are fewer disputes, and operations run smoothly, which helps the company make more profit.”

Another respondent added:

“Employee welfare programs motivate workers, and when workers are motivated, productivity increases, which improves financial performance.”

Theme 2: Strong Governance Promotes Accountability and Financial Performance

Governance emerged as a critical factor influencing financial outcomes. Participants highlighted that transparency, accountability, and adherence to regulations enhanced decision-making and reduced risks within the organization.

A participant noted:

“Good governance ensures that resources are used properly, and this reduces losses and improves profitability.”

Another interviewee explained:

“When management is transparent and accountable, investors and stakeholders have more confidence in the company, which supports financial growth.”

Theme 3: ESG Practices Improve Corporate Reputation

Respondents consistently pointed out that the implementation of ESG practices improved the company’s public image and reputation. This, in turn, attracted investors, strengthened stakeholder relationships, and enhanced long-term financial performance.

One participant remarked:

“Companies that follow ESG practices are respected more, and this can attract more investors and business opportunities.”

Another added:

“A good reputation makes it easier for the company to operate and expand, which has a positive impact on finances.”

Theme 4: Environmental Practices Support Long-Term Sustainability

Participants highlighted the importance of environmental management practices such as waste control, pollution reduction, and sustainable resource use. These practices were seen as essential for ensuring long-term operational sustainability and avoiding regulatory penalties.

One respondent stated:

“Protecting the environment helps the company avoid fines and ensures that operations can continue in the future.”

Another explained:

“Sustainable practices may be costly at first, but they save money in the long run and protect the company’s future.”

Theme 5: ESG Implementation Comes with Cost and Resource Challenges

Despite the benefits, some participants noted that implementing ESG practices required significant financial and human resources. These costs were sometimes viewed as a challenge, especially in the short term.

A participant commented:

“Implementing ESG policies requires a lot of investment, and sometimes the benefits are not immediate.”

Another added:

“There are challenges in balancing the cost of ESG initiatives with the need to maintain profitability.”

Overall, the thematic analysis revealed that ESG practices were perceived to have a positive impact on financial performance, particularly through improved governance, enhanced social responsibility, and strengthened corporate reputation. However, the findings also indicated that the implementation of these practices

involved certain costs and challenges. The qualitative results complemented the quantitative findings by providing deeper insights into how and why ESG practices influenced financial outcomes at Kansanshi Mine.

X. Conclusions And Recommendations

Conclusions

The findings of this study demonstrated that Environmental, Social, and Governance (ESG) practices had a significant and positive influence on the financial performance of Kansanshi Mining PLC. By integrating both quantitative and qualitative evidence, the study established that ESG is not merely a compliance requirement but a strategic framework that enhances organizational efficiency, stakeholder relationships, and long-term profitability. The results therefore confirmed that firms that actively implement ESG practices are more likely to achieve sustainable financial performance compared to those that do not prioritize such initiatives.

With regard to the environmental dimension, the study concluded that environmental compliance and protection policies had a moderate positive effect on financial performance. Environmental practices such as pollution control, waste management, and sustainable resource utilization contributed to improved operational efficiency and reduced exposure to regulatory risks and penalties. These findings supported the argument by Porter and van der Linde (1995) that well-designed environmental practices can stimulate innovation, reduce inefficiencies, and ultimately improve competitiveness and financial outcomes. Although the study acknowledged that environmental initiatives may involve high initial costs, it was evident that the long-term benefits in terms of cost savings, risk mitigation, and sustainability outweighed these short-term financial constraints.

In relation to the social dimension, the study found that corporate social responsibility (CSR) practices had a strong positive impact on financial performance. Social initiatives, including employee welfare programmes, community engagement, and corporate social investments, were shown to enhance employee productivity, strengthen community relations, and minimise operational disruptions. These factors contributed directly to improved organizational performance and profitability. The findings aligned with Margolis and Walsh (2003), who argued that socially responsible firms tend to perform better financially due to improved reputation and stakeholder trust. The study therefore concluded that social responsibility is a critical driver of both operational efficiency and financial success, particularly in industries such as mining where community relations are essential.

Furthermore, the study established that corporate governance had the strongest positive influence on financial performance among the three ESG components. Governance practices such as transparency, accountability, ethical leadership, and effective disclosure mechanisms were found to significantly improve decision-making processes, enhance investor confidence, and ensure efficient utilization of resources. These findings were consistent with Claessens and Yafeh (2012), who emphasized the role of strong governance structures in improving firm performance and reducing agency problems. The study therefore concluded that governance is a fundamental pillar of organizational success and plays a critical role in driving financial sustainability.

Overall, the study concluded that the integration of ESG practices into organizational strategy is essential for achieving sustainable financial performance and long-term value creation. Firms that adopt a holistic approach to ESG are better positioned to manage risks, enhance stakeholder relationships, and maintain competitive advantage. This conclusion is supported by Eccles et al. (2014), who highlighted that companies with strong ESG performance are more likely to achieve superior financial outcomes over time. Consequently, ESG should be viewed not as an optional initiative but as a core strategic priority for organizations seeking long-term growth and sustainability.

Recommendations

Based on the findings of the study, several recommendations are proposed to enhance the effectiveness of Environmental, Social, and Governance (ESG) practices and improve the financial performance of Kansanshi Mining PLC.

Firstly, the study recommends that the company should strengthen environmental compliance by investing in advanced and sustainable technologies. This includes the adoption of modern waste management systems, improved pollution control mechanisms, and resource-efficient production processes. By doing so, the company can minimise environmental degradation, reduce regulatory risks, and lower long-term operational costs. Additionally, management should ensure strict adherence to environmental regulations and regularly monitor environmental performance through audits and reporting systems. Strengthening environmental practices will not only enhance sustainability but also improve operational efficiency and financial outcomes.

Secondly, the study recommends that Kansanshi Mining PLC should enhance its social responsibility initiatives. This can be achieved by expanding community development programmes such as infrastructure development, education support, and healthcare initiatives for surrounding communities. Furthermore, the company should continue to prioritise employee welfare by improving working conditions, offering training and

development opportunities, and ensuring fair compensation. Strengthening social responsibility initiatives will help build trust and goodwill among stakeholders, reduce conflicts with local communities, and improve employee motivation and productivity, all of which contribute to better financial performance.

Thirdly, it is recommended that the company should improve corporate governance practices by promoting transparency, accountability, and ethical leadership. This can be done by strengthening internal control systems, ensuring accurate and timely disclosure of information, and enhancing the effectiveness of the board of directors. The company should also implement clear policies that promote ethical conduct and prevent corruption or mismanagement of resources. Strong governance structures will improve decision-making processes, increase investor confidence, and ensure efficient utilization of organizational resources, thereby enhancing financial performance.

Finally, the study recommends that Kansanshi Mining PLC should integrate ESG practices into its core business strategy. Rather than treating ESG as a separate or compliance-driven function, the company should embed environmental, social, and governance considerations into all aspects of its operations and decision-making processes. This includes setting measurable ESG targets, aligning ESG goals with financial objectives, and continuously monitoring performance. By integrating ESG into the overall strategy, the company can achieve long-term value creation, improve resilience to risks, and maintain a competitive advantage in the mining industry.

In conclusion, the effective implementation of these recommendations will enable Kansanshi Mining PLC to strengthen its ESG performance, enhance stakeholder relationships, and achieve sustainable financial growth.

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