Assessing the scope and nature of corporate social responsibility within the Zimbabwe gold mining sector

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PREFACE

A reminder to the reader of the following

- This thesis is presented in the article format in accordance to the policies of the North-West University's Faculty of Economic and Management Sciences' Work Well Research Unit, consisted out of 3 research articles.

- Regulation E.9.3 requires that, for an article format PhD thesis, the Faculty of Economic and Management Sciences, the thesis should consist of at least three (3) publishable articles, with the minimum requirement of proof that at least one (1) article has been submitted to a Department of Higher Education and Training (DHET) accredited peer-reviewed journal.

- Each of the individual articles complies with the writing style requirements (i.e., the specific abstract, spelling, grammar and referencing requirements) of the specific journal to which the relevant article has been, or is going to be submitted, for publishing.

- The author requirements and related documentation specific to each journal are included in appendices at the end of the thesis.

- In line with the policy of the PhD Program in the North-West University Business School, the editorial style and the references for the rest of the thesis use the Harvard Style format prescribed by the NWU Referencing Guide (2020).

ABSTRACT

The study aims to assess the scope and nature of corporate social responsibility as practised by the gold mining sector in Zimbabwe. In addition, the study aims to determine which of the five governance systems (namely local private limited companies, government-owned companies, companies listed on the Zimbabwe Stock Exchange, multinational companies with parent companies abroad but not listed, and companies listed on the foreign stock exchanges) leads the industry in corporate social responsibility. The mining industry was selected because of its importance to Zimbabwe as a pillar after the agricultural industry collapsed because of fast-tracking the country's land reform program.

The study used the theory of the firm and its three perspectives which are the shareholder, stakeholder and societal, as lenses to investigate the extent to which mining companies practice corporate social responsibility that is friendly to the physical environment, business ethics and socially responsible human resources management using the large-scale gold mining sector of Zimbabwe. The study used a mixed-methods methodology and a case study descriptive research design. There were four key research components: (1) In-depth interviews with representatives of eight known organisations working with the gold mining sector selected based on direct involvement with issues about the study objectives, (2) A population-based knowledge, attitudes and practices survey of employees of selected gold mining companies, (3) Additional In-depth interviews were held with other stakeholders and key informants based on the emergent issues that required further explanation, and (4) Post data collection formal seminar.

The target population was large-scale gold mining companies, the sample of members of the Chamber of Mines in Zimbabwe and the Mine Industry Pension Fund. Data were collected using a survey tool administered to employees, managers, leaders of workers' unions of mine companies. In-depth personal interviews with different key informants from relevant stakeholder groups were conducted. Non-parametric tests, specifically the Kruskal–Wallis test, were used to test the differences among the data responses from the named governance structures. The statistical analysis results indicate that the mining companies listed on foreign stock exchanges and the Zimbabwe Stock Exchange have the highest and second-highest corporate social responsibility indices signifying better performance. In addition, the results indicate that although they differ in degree of performance, all gold mining companies practise corporate social responsibility.

Keywords: Corporate social responsibility, CSR, triple-bottom-line, stakeholder theory, corporate environmental responsibility, business ethics, socially responsible human resources management, gold mining

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LIST OF ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
BSC	Balanced Score Card
CAPI	Computer Assisted Personal Interviews
CEO	Chief Executive Officer
CSEntry	Census Survey Entry
CSPro	Census Survey Processing System
CSR:	Corporate social responsibility
ESAP	Economic Structural Adjustment Program
EMA	Environmental Management Agency
GRI:	Global Reporting Initiative
HIV	Human Immunodeficiency Virus
ICMM:	International Council on Mining and Metals
MIPF	Mine Industry Pension Fund
NVIVO	Statistical & Qualitative Data Analysis Software
SADC	Southern Africa Development Community
UNCTAD	United Nations Conference for Trade and Development

TABLE OF CONTENTS

PREFACE ii
ABSTRACT iii
ACKNOWLEDGEMENTS v
LIST OF ABBREVIATIONS AND ACRONYMS vi
LIST OF FIGURES xi
LIST OF TABLES xii

CHAPTER 1

1.1 Introduction 1
1.2 Theoretical Framework 2
1.3 Background 5
1.4 Problem Statement 7
1.5 Justification Of The Study 7
1.6 Research Questions And Objectives 8
1.7 Research Hypothesis 10
1.8 Scope Of The Study 10
1.9 Limitations Of The Study 10
1.10 Methodological Overview 11
1.11 Contribution Of The Study 13
1.12 Proposed Layout Of The Study 14

CHAPTER 2

2 Introduction 17
2.1 Research Conceptual Framework 17
2.2 Research Methodology 18
2.3 Research Tools For Data Collection 24

CHAPTER 3

3 Introduction 37
3.1 Mining In General 37
3.2 Mining In Africa 40
3.3 Mining In Zimbabwe 41
3.4 Historical Developments In The Legal And Economic Context Of Csr In The Mining Sector In Zimbabwe 44

3.5 Legislative And Policy Considerations 47
3.6 Legislation Guiding Environmental Management 48
3.7 Business Ethics Practices 52
3.8 Human Capital Management Regulations 56
3.9 Summary Of The Chapter 58

CHAPTER 4

4 Introduction 59
4.2 Theoretical Perspective Of The Drivers Of Csr 61
4.3 What Is Corporate Social Responsibility? 69
4.4 Drivers Of Corporate Social Responsibility 72
4.5 Determining The Scope And Nature Of Corporate Social Responsibility 74
4.6 Measuring Corporates' Csr Performance 77

CHAPTER 5

5 Introduction 85
5.1 Conceptual And Theoretical Framework 86
5.2 Research Method 89
5.3 The Institutional And Legal Framework Of The Mining Sector 91
5.4 Findings 94
5.5 Discussion 99
5.6 Conclusions And Recommendations 101
5.7 References 103

CHAPTER 6

6 Introduction 108
6.2 Literature Review 110
6.3 Research Design 113
6.4 Computing Subjective Measures 114
6.5 Data Analysis And Discussion 117
6.6 Research Results 118
6.7 Discussions 129
6.8 Conclusion 132
6.9 References 133

CHAPTER 7

7 Introduction 141

7.1 The Shareholder Perspective 143

7.2 Stakeholder Perspective 143

7.3 Societal Perspective 144

7.4 Study Design 147

7.5 Computing Subjective Measures 149

7.6 Computing Objective Measures For Evaluating Fair Funds Administration 151

7.7 Results 152

7.8 Corporates' Performance In Promoting Local Economy Using Objective Measures. 155

7.9 Corporates' Performance In Promoting Local Economy Using Composite Indices 157

7.10 Corporates' Performance In Fair Funds Administration Using Objective Measures. 160

7.11 Corporates' Performance In Fair Funds Administration Using Composite Indices 162

7.12 Corporates' Performance In Practising Business Ethics Using Composite Index 162

7.13 Discussions 163

7.14 Conclusion 166

7.15 References 167

CHAPTER 8

8 Introduction And Problem Statement 174

8.1 Literature Review 175

8.2 Research Methodology 180

8.3 Data Collection Method 183

8.4 Data Analysis And Discussion 184

8.5 Ethical Considerations 186

8.6 Empirical Investigation 187

8.7 Discussions 196

8.8 Conclusion 199

8.9 References 200

CHAPTER 9

9 Introduction 206

9.1 Methodological Reflections 206

9.2 Summary Of Findings 208

9.3 Summary Findings, Emerging Conclusions And Theoretical Reflections 209

9.4 Socially Responsible Human Resources Management 218

9.5 Corporate Social Responsibility Performance By Gold Mining Sector 221
9.6 Proposed Framework 223
9.7 Limitations Of The Study 225
9.8 Contribution Of The Study 225
9.9 Conclusions And Discussion On Way Forward 226

APPENDICES

10.1 Appendix 1: Questionnaire 239
10.2 Appendix 2: Data Analysis Plan 248
10.3 Appendix 3: Interview Guides For Key Informants 251
10.4 Appendix 4: Informed Consent Form For Both Interviews And Questionnaire 259
10.5 Appendix 5 Aosis Publishing House Style For Authors 261
10.6 Appendix 5: Article 1 Notice Of Submission And Journal Guide Lines 273
10.7 Appendix 5b: Author Guidelines For South African Journal Of Economic And Management Sciences (Sajems) 276
10.8 Appendix 6 Notice Of Sumission And Author Guidelines, Article 2 280
10.9 Appendix 6b Author Guidelines For Journal Of Economic And Financial Sciences 283
10.10 Appendix 7 Notice Of Submission And Author Guidelines For Article 3 286
10.11 Appendix 7b Author Guidelines For African Evaluation Journal 289
10.12 Appendix 8 Article Notice Of Acceptance For Article 4 293
10.13 Appendix 8b Author Guidelines For Sa Journal Of Human Resource Management 295
10.14 Appendix 9 Language letter 297

LIST OF FIGURES

Figure 1:1 Tripple Bottom Line 2

Figure 1:2: Theoretical frame of reference 3

Figure 1.3: Thesis layout..... 14

Figure 5:1: Conceptual framework for understanding determinants of Corporate Social Responsibility Source: (Own compilation) 87

Figure 7:1: The conceptual framework used in this paper..... 146

Figure 8:1: Critical aspects assessed in the socially responsible human resources management 179

Figure 9:2 Corporate social responsibility performance by type of company 222

Figure 9:3 Proposed framework..... 224

LIST OF TABLES

Table 1:1: Distribution of gold mines by ownership type 6

Table 5:1 Nature and Scope of CSR practices among the cases 96

Table 6:1: The predicting the corporate environmental performance 112

Table 6:2: Objective measures in resource use 120

Table 6:3: Employees' perceptions of the level of effort to: reduce contaminants (C), reduce waste dumps (WD), restore soil (S) and prevent environmental accidents (EA) 123

Table 6:4 Objective measures of the companies' performance in fair fund administration 126

Table 6:5 Overall stewardship of the environment by the mining companies 129

Table 7:1: Corporate governance systems and predicted performance 144

Table 7:2 Employee perceptions on quantity of services subcontracted to locals SSL, raw materials acquired from locals (ML) and workers employed from local community (CW) 153

Table 7:3: Objective measures in supporting local economies 156

Table 7:4 Employeess' perceptions of companies' fair funds administration 159

Table 7:5: Objective measures of the companies' performance in fair fund administration 161

Table 7:6: Overall ethics index 163

Table 8:1: Corporate governance systems and predicted performance 178

Table 8:2: Employee perceptions on security level (SL), training capacity (TC) and collective bargaining (CB) 187

Table 8:3: Employee corporation relations 190

Table 8:4: Social protection 195

Table 8:5 Composite indices for socially responsible human resources management 197

Table 9:1: Corporate performance in business ethics 216

Table 9:3: Corporates performance in human resources management 219

Table 9:4: Corporate social responsibility grand index 221

1. CHAPTER ONE: INTRODUCTION AND STATEMENT OF THE PROBLEM

1.1 INTRODUCTION

Chapter one introduces and provides a background to the study. The chapter presents the research problem, aims, objectives, and the research questions on which the thesis is premised. It also outlines the scope and nature of the study.

Corporate Social Responsibility (CSR) is becoming a permanent feature of corporate governance and organisational strategies worldwide because corporate leaders know that organisations expect much more than just products. The high degree of global awareness of sustainability issues and CSR requires organisations to include CSR practices and principles in their business strategies (Visser, 2016). Scholars define CSR as situations where the firm goes beyond compliance with the law and engages in actions that appear to further some social good beyond the firm's interest (Freeman and Dmytriyev, 2017). The triple-bottom-line approach (also called the triple P's: Profit, People, and Planet) best describes this kind of attention.

The triple bottom line approach initially proposed by Elkington (1997) is an accounting framework presented in Figure 1 that suggests that companies should pay attention to all three dimensions of the key corporate social responsibility concepts. The dimensions are economic viability (profit), environmental protection (planet), and social responsibility (people). Historically, the classical view was that a business' primary responsibility was to make money and increase shareholder value (Friedman, 1970). Within the classical theory, the monetary indicators measured corporate financial performance. The economic dimension has metrics like profit return on capital employed and earnings before tax, showing how the organisation performs Carneiro-da-Cunha, Hourneaux & Corrêa, 2016). However, this classical approach to business has to make additional responsibilities, especially when it comes to the mining industry.

The mining corporates should also support environmental integrity. During their operations, the mining company should maintain environmental sustainability (planet dimension). This dimension focuses on measuring the extent of rational exploitation of natural resources, clean extraction technologies, mine closure and recovery programs. Maintaining environmental

integrity includes efficient energy, raw materials and water consumption usage, and air pollution reduction. The last dimension of the triple bottom line is people or social responsibility. Over the last decade, there has been a shift towards a broader view of corporate social responsibility to include the local communities and other stakeholders (Liang & Renneboog, 2017).

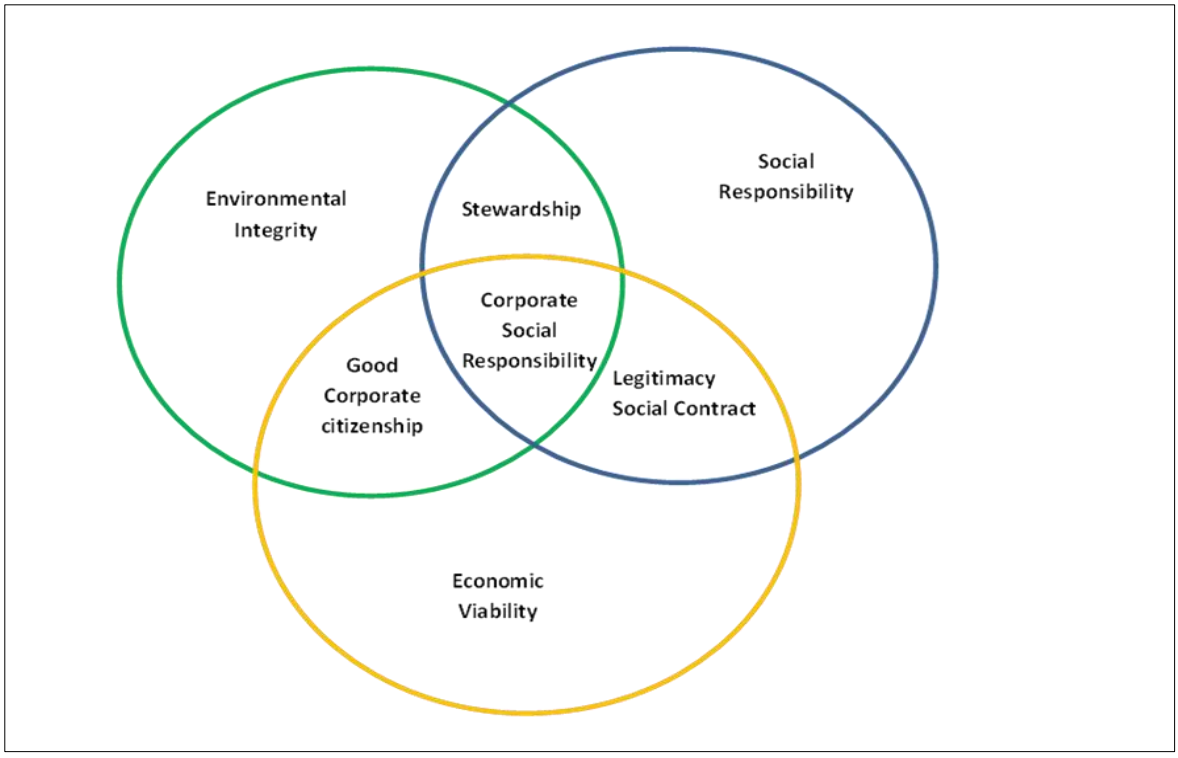


Figure 1:1 Tripple Bottom Line

(Source: Own compilation)

This study seeks to establish the nature and scope of corporate social responsibility within Zimbabwe's gold mining sector. The study's elements of corporate social responsibility of interest include investment in community outreach, employee relations, creation and maintenance of employment, environmental stewardship, and financial performance.

1.2 THEORETICAL FRAMEWORK

The literature identifies four key theoretical domains that determine the nature and scope of corporate social responsibility shown in Figure 1. These are instrumental, political, ethical, and integrative theories (Garriga & Melé 2004).

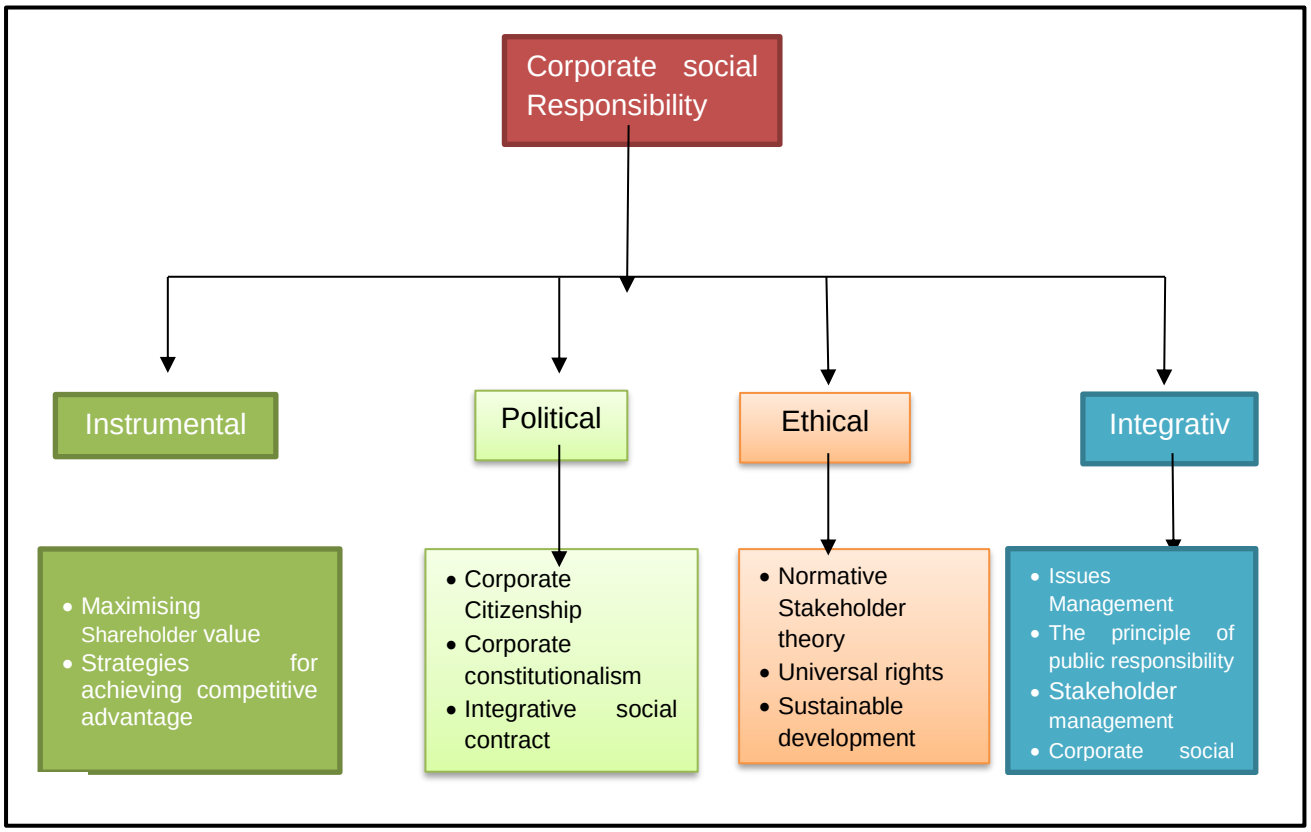


Figure 1:2: Theoretical frame of reference

(Source: Own Compilation)

The instrumental theory emphasises that the role of a company is to maximise shareholder value, and therefore, the right decisions are profitable. The instrumental theory is supported by Milton Friedman's classical view of corporate social responsibility states that a company's sole responsibility is to make a profit for the owners. According to Hahn et al. (2018), instrumental corporate responsibility is compatible with responsible moral behaviour. According to Bansal et al., 2015, implementing good labour practices, providing decent work health and safety, and environmental issues should be practised as long as they enhance its corporate's competitive advantage.

The political theory of corporate social responsibility argues that responsible companies operate within a more or less proper functioning political framework of rules and regulations defined by

the government (Lin, Ho & Sambasivan, 2019). The authors argue that companies preserve their legitimacy by operating within a regulatory framework of a political sphere. In this case, national laws set the minimum standards of business' responsibility to society. However, according to Liang and Renneboog (2017), the scope of the legal system is, in some cases, incomplete, and the surveillance system may be ineffective. This leaves companies to use their discretion concerning the scope and nature of corporate social responsibility. According to Liang and Renneboog (2017), globalisation has brought in a call for a new view of the role of business in society and its contribution to social development.

The ethical theory of corporate social responsibility is rooted in relationships between the corporate and stakeholders (Freeman & Dmytriyev, 2017). The primary theoretical approach guiding a corporation's implementation of CSR is the stakeholder theory. According to Freeman (1984), Freeman & Dmytriyev (2017), stakeholder theory advances the view that corporates have to cater for the interests of both shareholders and others who may be affected by corporate actions, including employees, customers, partners, suppliers, creditors, government and the public at large. According to Frynas and Yamahaki (2016), normative theories emphasise normative corporative social responsibility, which suggests that corporates need to consider human beings' needs in their decision making.

An integrative theory of corporate social responsibility argues that the corporate's role in society is to maximise profit within a given legal framework and ethical customs of the country (Garriga & Melle, 2004). According to Nikolova & Arsić (2017), integrative approaches focus on issue management. The corporates identify, evaluate, and respond to those social and political issues that may significantly impact their operations. It also involves the principle of public responsibility. According to Lin, Ho and Sambasivan (2019), the corporate procures supplies, engages employees, human resources advancement, and adheres to performance standards with the public domain.

Shareholders are motivated by profit; governments and the host communities are motivated by maintaining environmental integrity. The international community and the host communities are motivated by the promotion of community involvement and empowerment. Therefore, it is

imperative for enterprises to efficiently manage their impacts on the economic, social, and environmental aspects (Winkler, Deller & Marcouiller, 2015). As there is no prescribed CSR strategy, different corporations define their approach to corporate social responsibility. The choice has to balance the theoretical drivers presented in this section. This study seeks to determine the nature and scope of corporate social responsibility within the gold mining companies under different corporate governance systems in light of the choice dilemma.

1.3 BACKGROUND

In mining, companies must integrate environmental, economic and social aspects through all mineral production phases from exploration through construction, operation and mine-site closure.

1.3.1 The economic importance of the gold mining sector

The key significance of the mining sector in Zimbabwe is fivefold. Currently, from 2017, it remains the key driver of economic revival. i) The industry contributes more than 60% of national exports; ii) and contributes more than 10% to Gross Domestic Product; iii) the mining sector's contribution to fiscal revenue is 13%; iv) is responsible for more than 50% of Foreign Direct Investment. v) It is on record for creating more than 45000 jobs. According to Zimbabwe Statistical Office, Government of Zimbabwe (2017), the multiplier effect is that every miner has five dependents. The sector's contribution compares favourably with experiences within the Southern Africa Development Community region (Chamber Of Mines Zimbabwe, 2017). The multiplier effect is even more prominent when the sector is envisaged in a more excellent economy. In 2016, the industry experienced negative growth; the economy also did the same. For 2017, the sector was expected to grow by 1% (Government of Zimbabwe, 2017).

Zimbabwe has forty-plus mineral endowments. More than 90% of the value of mineral output came from five key minerals in 2016: gold, platinum, diamond, palladium and nickel (Chamber of Mines Zimbabwe, 2017). Gold accounted for 47% of mineral exports in 2016 and employed more than 25% of formal employment in the mining industry, while over 300 000 are artisanal gold miners.

1.3.2 The structure of the gold mining sector

The population for the study consists of those gold mines that are members of the chamber of mines and the Mines Industry Pension funds. Table 1.1 shows the distribution of mines according to the categories participating in the study. The governance systems of the participant mining companies are; local private limited companies, companies listed on the Zimbabwe Stock Exchange, companies listed on foreign stock exchanges, government-owned mining companies and multinational companies with headquarters abroad but not listed.

Table 1:1: Distribution of gold mines by ownership type

Type of mine	**Number**	**Percentage of total**
Government-owned companies	3	9
Multinational companies not listed with headquarters abroad	12	34
Local Private Limited companies	8	23
Companies listed on the Zimbabwe Stock Exchange	7	20
Companies listed on foreign stock exchanges	5	14.
Total	35	100

Source: (Own compilation)

As briefly described in the next section, these mining companies do their operations within a legal framework regulating their activities.

1.3.3 The legal framework governing the gold mining sector

Mining is regulated in terms of the Mines and Minerals Act (Chapter 21:05). This act outlines the general regulations, management and safety, health and sanitation and mines and mineral custom milling plants. In addition, there are seventeen or more pieces of legislation that affect mining in Zimbabwe, and these will be dealt with in full in the legal framework and context chapter 3.

1.4 PROBLEM STATEMENT

Mining activities are associated with many environmental impacts, including consumption of resources, generation of waste, which put pressure on the environment, risks of pollution and risks, industrial accidents, and communities close to the mining operation. Unless mining companies plough some of the profit back to support community development and create a safe environment for people and their livestock, members of the host community will become poorer as the mining companies get richer and richer. Sound corporate social responsibility is one way of bridging the gap between the poor and the mining companies. However, this role is purely voluntary. The decision to assume it is guided by only the business desire to engage in social roles and not mandated by economic reason not required by law, and not even generally expected by business in an ethical sense. What companies do in practice towards corporate social responsibility is at their discretion. The government that is supposed to ensure that companies are responsible corporate citizens is short-staffed and poorly funded and lacks the expertise to mount an effective surveillance system. This study seeks to establish the nature and scope of corporate social responsibility practised by gold mining companies in Zimbabwe. It also seeks to establish which corporate governance system is more corporate responsible than the other.

1.5 JUSTIFICATION OF THE STUDY

Corporate social responsibility is a relatively new area of study in Zimbabwe in general and within the mining sector in particular. Most studies on CSR undertaken in Zimbabwe tend to take a narrow focus and hence fail to provide a comprehensive picture of corporate motivations of CRS's scope and nature within the mining sector. Kakava, Mbizi and Manyeruke (2013) and Msweli & Wushe (2014) study CSR within the mining sector. One thing common to their studies is that they focus on community development and view corporate social responsibility as a company's strategy to enhance its corporate image. However, the studies do not consider the nature of CSR as a balance between and among interplay of government policy imperatives, society expectations and demands with regards to the nature of CSR and corporate's mandate.

The methodological approaches that most researchers on CSR in Zimbabwe use are not suited to provide a comprehensive understanding of the driving forces that shape corporate social responsibility. Makanyeza, Chitambara and Kakava, (2018) used structural equation modelling

to test the influence of chosen dimensions of corporate social responsibility on firm performance in Zimbabwe. These studies' common characteristic is that they are narrow in focus and fail to take a holistic view of CSR as encompassing the environment, society, and the corporate as posited in the triple bottom line and stakeholder approaches.

The debate on CSR's role in enhancing financial performance is continuing and remains unresolved (Makanyeza et al., 2018). However, this debate has not been taken into contexts where the macroeconomic environment of that country threatens the corporation's profitability and socio-political environment that provide guidelines for CSR. The CSR debate is yet to be repeated in the backdrop where the government demands corporations to alleviate poverty among the surrounding communities. The environmental regulatory body is underfunded and under-resourced to mount an effective enforcement system effectively. The most critical research question this study seeks to establish is: how the mining sector of Zimbabwe balances between and among conflicting demands to be profitable and socially and environmentally responsible in an economic, socio-political environment prevailing in Zimbabwe.

Although there are positive corporate social responsibility indicators as evidenced by charitable activities and some disclosure, there are still significant gaps in these studies. Although there are well-researched and argued works on CSR from the USA and Europe and, to a small extent, Asia, none of these can best guide Zimbabwean mining organisations on crafting their CSR. Therefore, this study of CSR in Zimbabwe's mining industry will contribute to the scientific body of knowledge by entering a new context into the debate.

1.6 RESEARCH QUESTIONS AND OBJECTIVES

1.6.1 Research Aim

This study investigates the extent to which mining companies practice corporate social responsibility that is responsive to the physical, social and economic environment in the gold mining sector of Zimbabwe.

1.6.2 Research Questions

In this study, the research seeks to answer the following research question:

To what extent do companies categorised by different corporate governance systems among local private limited companies, companies listed on the Zimbabwe Stock Exchange, companies listed on foreign stock exchanges, government-owned mining companies and multinational companies with headquarters abroad but unlisted perform in corporate social responsibility that focuses on the following aspects:

a. Environmental protection
b. Business ethics
c. Socially responsible human resources management

1.6.3 Research objectives

1.6.3.1 Primary objective

The primary objective is to assess the nature and scope of corporate social responsibility among Zimbabwe's mining companies using the gold mining sector.

1.6.3.2 Secondary objectives and specific research questions

1) To establish historical context regarding the legal, regulatory and institutional environment of the mining industry in Zimbabwe.
   - What are the key policy and legislation promoting corporate social responsibility?
2) To investigate the level of the mining sector's responsibilities to environmental sustainability
   - To what extent are the gold mining companies in the mining sector rationally using resources (water, energy and materials) during exploitation?
   - To what extent are the mining companies ensuring the maintenance of environmental quality (reducing emissions, reducing mine waste dumps, and reclamation of land?)
3) To investigate the level of the mining sector's responsibilities to the promotion of ethical and stakeholder issues.
   - To what extent are the mining companies promoting local economies, such as giving supply contracts to locals and employment of local people?

- To what extent are the mining companies supporting local initiatives with donations and other social projects?

4) To investigate the level of the mining sector's responsibilities to the promotion of human safety and development.
    - To what extend do mining companies promote the safety of workers through security levels, training capacity and collective bargaining.
    - To what extent do mining companies promote social protection schemes for their employees through retirement plans, medical assurance schemes and conflict resolution?

1.7 RESEARCH ASSUMPTION

One of the central determinants of the nature and scope of the corporate social responsibility is the governance systems of the firm when placed within specific legal and regulatory environments

1.8 SCOPE OF THE STUDY

The study recognises that CSR issues are many and varied, and to consider them all would be impossible. For this reason, the study will focus only on CSR in Zimbabwe's mining industry, focusing only on how CSR is embedded in the mining organisations' management systems of the gold mining sector of the industry as determined by the legal and regulatory context. The study will focus on the gold mining sector.

1.9 LIMITATIONS OF THE STUDY

- Ideally, a study of the nature and scope of CSR should take place over a more extended period. Involvement in only three to six months is a short time to gauge the extent of the CSR practices. The limitation is that CSR practices are dynamic, and their implementation may not yield immediately visible results to constitute nature and scope. Should the study be stretched over a more extended period, the effects of CSR management systems could increase considerably?

- The study population is relatively small, and the gold mining sector has many players. Still, the population consists only of large scale mine houses which could be too small a sample to give valid and reliable statistical results. Hence qualitative research will be used to augment the quantitative research.

1.10 METHODOLOGICAL OVERVIEW

1.10.1 Phase 1: Literature Review

The literature review is a continuous process during the study. However, three overlapping uses of literature were used to guide the development of this study's arguments. This literature included but was not limited to the literature on economies with significant mining sectors, Government of Zimbabwe publications, and Zimbabwe media newspaper articles and other archival materials. Literature The literature review was also used as a scoping strategy to get a more detailed understanding of the macro-economic legal, and institutional environment in which the Zimbabwe mining sector operates. A longitudinal review of different policy regimes of Zimbabwe was also undertaken to understand the development of corporate social responsibility over time. The following grey literature was reviewed:

- Acts of parliament and statutory instruments
- Workshop and conference proceedings on mining and CSR

The literature review was also used during the theoretical development and refinement stage. The focus was on journal articles published in accredited journals. An in-depth review of the literature on CSR within the mining sector was done using:

- SAGE Publications
- Science direct publications
- EbscoHost Academic Search Premier Business Source
- Elsevier: International journals
- Emerald: international journals
- Institutional repositories Boloka
- Internet: Google Scholar

At this phase of the literature review, the focus was on understanding the general debate around corporate social responsibility issues, the different methodologies used in the studies, and the operational definitions of CSR adopted. A critical analysis of the results and conclusions was undertaken to assess how they fit within the Zimbabwean context and identify gaps in knowledge.

At the analytical stage, literature review, particularly from journal articles, was revised to assess how the results compare with those from other studies. Where results differed, explanations were sought from literature or other sources such as key informants.

1.10.2 Ethical considerations

Permission to undertake this research was granted through the Ministry of Mines and Minerals Development of Zimbabwe. The North-West University also gave its ethical clearance. Meetings with mining companies' administrators were made possible in workshops arranged for them by one of the key stakeholders. Socio-economic data and employment records are very important to assess the performance of mining houses. However, researchers admitted that collecting such data is always a challenge largely because companies do not give such information easily, especially if they have all the reasons to believe that such information will be made public. Several measures were undertaken to ensure confidentiality. Firstly, any identifying information, the names of the company and respondents, were not recorded. This approach served two purposes, and it was being done for confidentiality purposes and to reduce the chances of being given biased information.

Secondly, the respondents were assured that all the data would be presented as grouped data and would only be used for the PhD research, and no other person was going to have access to the raw data. With the assured anonymity and confidentiality, respondents were free to give honest and complete information, and all participants were required to provide informed consent.

1.11 CONTRIBUTION OF THE STUDY

There is growing interest in CSR in Zimbabwe. Empirical evidence of the practice in Zimbabwe has added to the growing literature on developing countries participation in CSR.

- To theory, it is general knowledge that companies worldwide have begun to talk the language of CSR. This research established the extent to which companies walk the talk and practise CSR in Zimbabwe using the mining industry as a case study. There is a wide range of theories that have been used to investigate CSR practices. Still, in Zimbabwe, the theory of the firm focusing on stakeholder theory in conjunction with the balanced scorecard has not been used as a lens with which to study CSR practices. This means the study added to the theoretical lenses, which can apply to the Zimbabwean context.
- To policy, Zimbabwe has operated for four decades without an adequately documented mining policy that would guide the development of legislation, regulating programs and projects in the sector (Kanyenze, 2011). Corporate social responsibility could be one of the key programs to be embedded in the policy framework; therefore, academic research on CSR could be helpful to policymakers. The current mining policy regime has not been revisited and possibly dates back to the onset of the colonial era in 1890 (Chamber of Mines Zimbabwe, 2017). The research can open a social dialogue platform as the focused group discussions held within the mining communities in the study will open a thread of communication. The research can be used as a policy gap analysis.
- To research and development, the end of the study offers an evaluation of the extent of local practices of CSR in the Zimbabwean context. Possible limitations of our analysis are discussed, and implications for further research have been established.

1.12 PROPOSED LAYOUT OF THE STUDY

The study will be organised around eight chapters' interrelated chapters whose elements are briefly summarised in Figure 1.3 below.

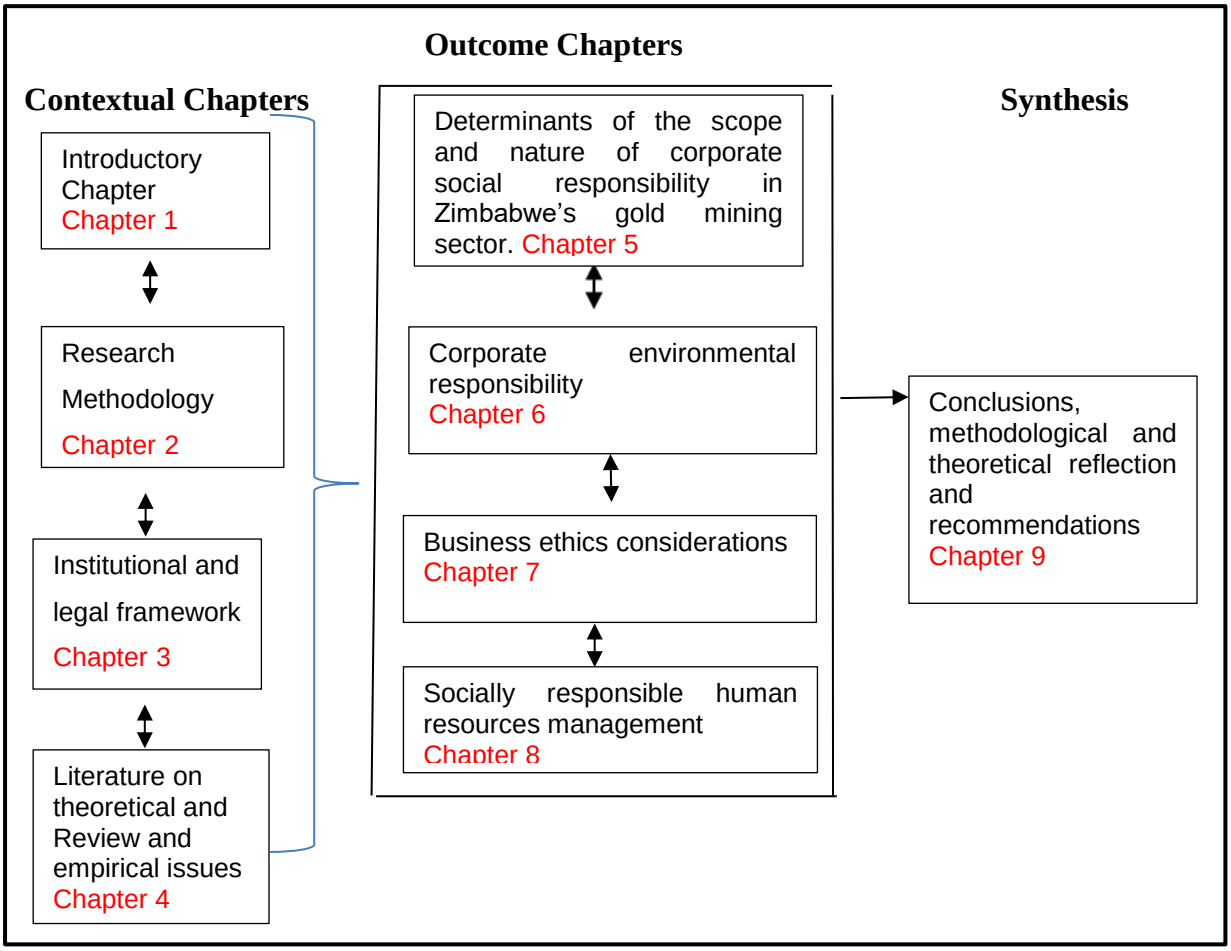


Figure 1:3: Thesis layout

(Source: own compilation)

Chapter 1: Research background

The chapter introduces and provides a background to the study. The chapter presents the research problem, aim, objectives, and research questions on which the thesis is a premise. A brief rationale for carrying this study was also outlined. In addition, the chapter includes a discussion of the theoretical framework guiding the overall thesis. Lastly, the chapter provided a chapter-by-chapter synopsis of the entire thesis.

Chapter 2: Research methods and methodology

This chapter lays out the methodological matters dealing with the methodological and data collection processes that informed the whole thesis. The chapter also discusses the research philosophy informing the thesis, noting that this study uses a combination of both positivist and interpretivist paradigms. More importantly, the chapter discusses data collection strategies adopted. It discusses the range of methods, including questionnaire administration, participant observation, key informant and in-depth interviews, and secondary data sources. Chapter two discussed the strengths and weaknesses inherent in each of the strategies as applied in the research. The critical ethical principles, such as informed consent, anonymity and confidentiality, are also discussed in this chapter.

Chapter 3: Context of the mining sector

The chapter offers an overview of the research context, characterising the environs and recounting the history of the gold mining industry to shed light on the antecedents to CSR regulatory environment sufficiently. The chapter also touched on the economic and political epochs and shaped the CSR practised in Zimbabwe's mining sector.

Chapter 4: Literature review

This chapter reviews related literature. The themes under which literature was reviewed were derived from the objectives and research questions of the thesis. The chapter systematically presents theoretical and empirical discussions as guided by the study's objectives, and knowledge gaps were identified in the process. The chapter broadly reviewed the literature on the nature and scope of corporate social responsibility, the different approaches to measuring corporate social responsibility (including the triple-bottom-line and the balanced scorecard), and the literature on mining corporate social responsibility in the gold mining sector in Zimbabwe.

Chapter 5: Article 1, Determinants of the scope and nature of corporate social responsibility, a case study of the gold mining sector In Zimbabwe.

In this chapter, the thesis establishes that different determinants drive corporate social responsibility activities. The chapter shows the driving forces for the nature and scope of CSR, as practised by mines under each of the three different governance structures (namely the

government-owned, a multinational company with headquarters abroad, and a multinational company listed on a foreign stock exchange).

Chapter 6: Article 2, Mining companies' performance on environmental stewardship

In this chapter, the thesis explores the corporate environmental responsibilities of the gold mining sector in Zimbabwe. This article assesses the environmental performance in environmental integrity and sound management, the corporates' efficient use of energy usage, raw materials and water consumption, and the corporate's rational resource exploitation (including clean extractive technologies, recovery programmes, and energy management).

Chapter 7: Article 3, Mining companies' performance business ethics issues

This chapter considers what a socially responsible corporation is expected to take into account ethical issues. Such matters included assessing the promotion of local economies by sourcing materials and services from local enterprises, hiring local community workers, and administering fair funds through social projects enhancements and donations.

Chapter 8: Article 4, An assessment of the scope and nature of socially responsible human resources management in the gold mining sector in Zimbabwe.

This chapter assesses mining companies' performance on socially responsible human resources management. The researcher evaluates how mining companies consider the welfare of their human resources, particularly their learning and growth. Key issues include the provision of training, the health of their employees, good relationship between management and employees and respect for people.

Chapter 9: Summary, Discussion, Theoretical Issues and Policy Directions

This final chapter provides objective by objective summaries of the significant findings of the comprehensive study. It also draws theoretical and methodological conclusions from an analysis of corporate social responsibility in Zimbabwe's gold mining sector. The chapter further makes business management relevant recommendations. In the final analysis, the chapter identifies areas warranting further research, including land reclamation and soil restoration on decommissioning a mine, be it in the gold mining sector or any other mining sector.

2. CHAPTER TWO: RESEARCH METHODS AND METHODOLOGY

2 INTRODUCTION

This chapter presents both research methodology and data collection techniques to address the objectives outlined in Chapter 1. The Chapter also presents sampling procedures, techniques for checking the quality of the data, and methods for data analysis. This chapter is organised around three sections. The first section of the chapter discusses the conceptual framework and the research methodology used in this study. The second section describes the data collection techniques used. Lastly, the chapter discusses the problems encountered in undertaking this research.

2.1 RESEARCH CONCEPTUAL FRAMEWORK

The general thrust of this thesis is to assess how different corporate governance systems influence the nature and scope of corporate responsibility. Figure 2.1 shows the conceptual framework.

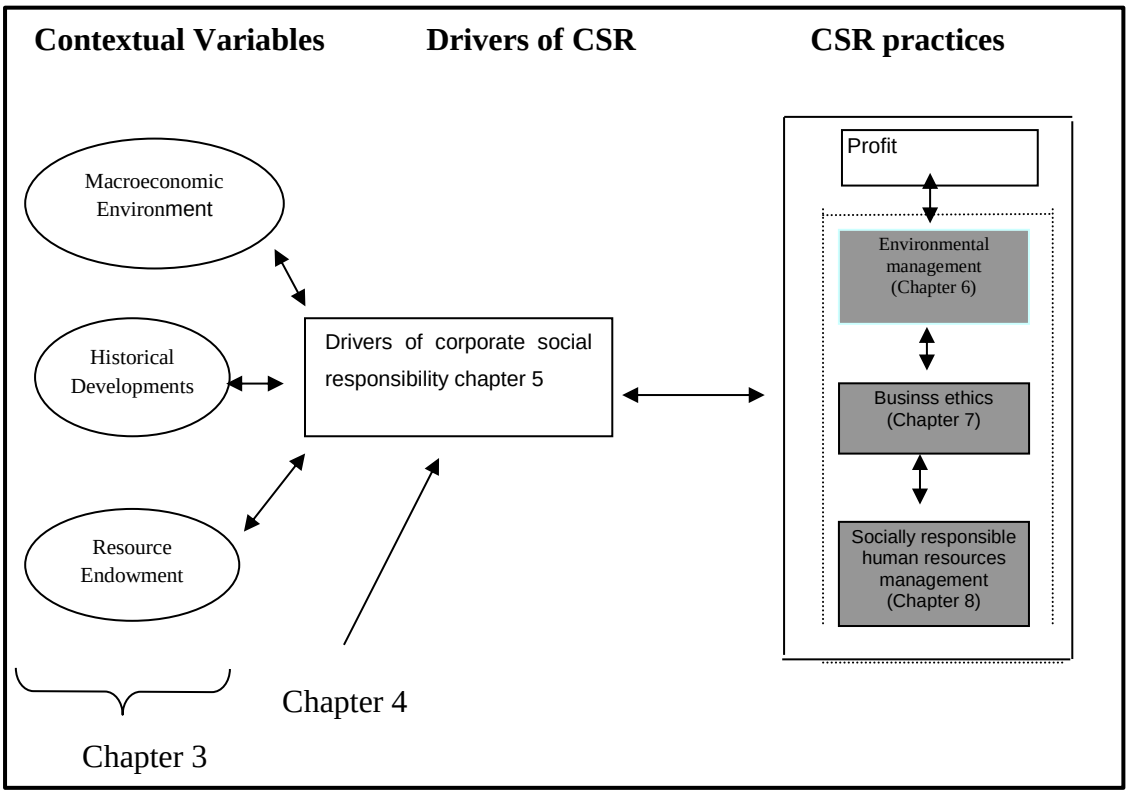


Figure 2.1: Research Conceptual Framework

The conceptual framework of the study involves three components shown in Figure 2.1. These are (a) the contextual variables included historical development in the gold mining sector and legal framework, (b) the key theoretical and empirical drivers of corporate social responsibility; and (c) the CSR practices focusing on environmental equity, business ethics and the adoption of socially responsible human resources management practices. The profitability of the different mining sectors was outside the scope of this thesis. Each of these three components experiences unique internal dynamics and is influenced by the other components' behaviour.

2.2 RESEARCH METHODOLOGY

According to Rahi (2017), the methodology is used in two different senses. The first and most commonly used refers to the philosophy and logic of the research process. This includes the assumptions and values on which research is based and the criteria used to interpret and draw conclusions from data. The second and less frequently used definition of methodology refers to the study of methods in much the same way as economics is the study of the allocation of scarce resources. This research adopted the first definition.

This Chapter presents the research methodology and data collection techniques used for addressing the objectives outlined in Chapter One. For this study, methodology outlines the general research strategy and specifies the way in how this research was undertaken and, identifies the methods used in it. The methods described in the methodology section explain the means and modes of data collection, giving the specific formulas used for calculating the required CSR indices. The sampling procedures, techniques for checking the quality of the data, including methods for data analysis, are also presented here.

2.2.1 Research Philosophy

Scholars classify research paradigms into two distinct categories. The first category is the positivist or the quantitative paradigm, which uses deductive reasoning. Positivists adopt scientific methods and systematic knowledge generation processes with the help of quantification to enhance precision in describing parameters and their relationships (Rahi, (2017). The positivist approach is concerned with uncovering truth and presenting it empirically

(Rahi, (2017)). In most cases, a researcher using this philosophy develops a hypothesis first then collects data to test it. It emphasizes numerical analyses. Post positivism assumptions hold a deterministic philosophy. According to this view, causes determine effects or outcomes. The knowledge that develops from using the post-positivist lens is based on observation and measurement of the objective reality like in natural sciences. Proponents of the positivist approach assert that it is possible to develop numeric measures of observations and study the behaviour of individuals (Martelli and Greener, 2018).

The second paradigm is the phenomenological, or interpretivist, which is qualitative by nature. It uses inductive reasoning. The phenomenological paradigm seeks to arrive at a possible explanation for the data collected. It attempts to derive constructs from the field by an in-depth examination of the phenomenon of interest. (Martelli and Greener, 2018) suggest that interpretivist paradigm assumes that knowledge and meaning are derived from acts of interpretation. Therefore, the author concluded that there is no objective knowledge independent of thinking or human reasoning. Therefore, the approach is premised upon an assumption that the interpretive researcher has full access to reality (whether given or socially constructed) through social constructions such as language, consciousness, and shared meanings (Rahi, 2017).

Interpretive paradigm uses observation and interpretation as some of its core research tools. Therefore, through observation, information about events on CSR in the gold mines is to be collected. Interpretation involves finding the meaning of that information by drawing inferences or by judging the match between the information and some abstract pattern (Chih-Pei, & Chang, 2017). or through the meanings that people assign to them. This method is concerned with experiences like human judgment, perceptions, and actions. It helps the researcher appreciate and describe social reality from the different subjective perspectives of the participants in the study. The researcher also gets to understand the symbolic meanings underlying subjective experiences. Researchers should use phenomenological inquiry to eliminate any preconceived assumptions and personal biases. The goal is to rely as much as possible on the participants' views of the situation being studied (Chih-Pei & Chang, 2017).

In this study, the researcher acknowledges that no single approach is intrinsically better than the other. This study used a combination of the two paradigms to improve the quality of the interpretation of the results. The research approach included elements of both positivist and interpretivist. The research used a survey questionnaire, one of the main tools of positivist paradigm, to produce findings that can be generalised across the gold mining entities of Zimbabwe. The researcher also used the interpretivist tools such as key informants to explain emerging trends from quantitative research. Interpretive approaches give the researcher greater scope to ask questions such as 'why' and 'how' particular trends emerge (Martelli & Greener, 2018).

The study accepts the proposition of Chih-Pei and Chang (2017) when they assert that the purpose of the interpretive approach in social research science is to understand the context and the process whereby certain aspects influence certain aspects and are also influenced by the context.

2.2.2 Research Approach

As the research philosophy embodies the use of the strengths of the post positivists and the interpretivist, this calls for mixed methods. This involves combining or integrating qualitative and quantitative research and data in a research study. Quantitative research is useful for answering questions to who, how many, how much, and the relationship between and among variables (for example, nature and scope of CSR). However, quantitative research does not lend itself to answering why and how questions. This study, therefore, used quantitative and qualitative research methods to provide for the most informative, complete, balanced and useful research results.

2.2.3 Sequencing of quantitative and qualitative research methods

The study used sequential explanatory design, as shown in Figure 2.2

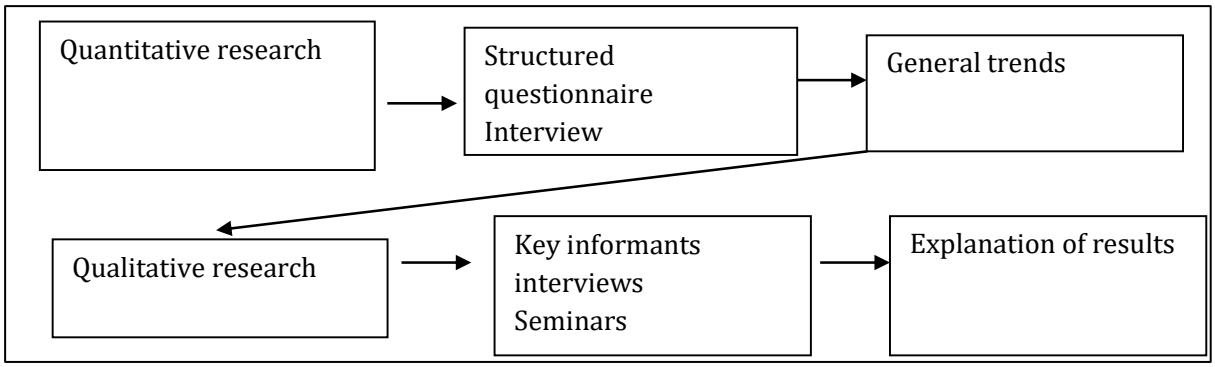


Figure 2.2: The sequencing of the quantitative and qualitative data collection process (Source: own compilation)

The quantitative aspect of the research involved administering a closed-ended questionnaire to employees of the gold mining companies. When quantitative data was collected, preliminary findings for each objective were analysed and presented in a formal seminar. Stakeholders, people from different backgrounds with an interest in mining development (local government departments, non-governmental organisations, staff from the Chamber of Mines and Mining Industry Pension Fund and academics) were invited. The seminar was used to seek explanations for the emerging trends and also provided a forum where data was validated. Knowledgeable key informants were used to determine the reasons behind inconsistencies and contradictions.

2.2.4 Research design

Chih-Pei and Chang (2017) suggest that researchers must ask themselves concerning the knowledge claims and the theoretical perspectives they bring to any research. They aimed to establish the strategies they intend to use in their study, informing their methods and collecting and analysing information. This means that researchers are aware of any bias they may inevitably bring to the research investigation, how affected the choice of approach to be utilised, and the tools used to collect the data. Chih-Pei and Chang (2017) suggest that research designs are different types of inquiry, and this study used the case study descriptive research design. As Piekkari and Welch (2018) have suggested, the case study design helps to present the data on the mining industry situations and provide better insights into the complex behaviours of the mining companies. The study also works with multiple cases, as the results of numerous case studies are considered more persuasive, and the overall study is more robust (Piekkari & Welch, 2018).

Relying on multiple case studies helped to evaluate CSR strategies employed by companies by recognising patterns of relationships among constructs within and across cases and their underlying (logical) arguments (Baskarada, 2014 in Gustafsson, 2017. By comparing multiple cases, the researcher provides the literature with important influences obtained through contrasts and similarities. This implies that the evidence obtained through a descriptive multiple case study is strong and can be considered reliable (Vannoni, 2015) in Gustafsson, 2017. Additional benefits with a multiple case study approach include enabling the researcher to analyse the data within and across the different categories among government-owned, locally owned, locally listed and internationally listed mining companies. By studying multiple cases, the researcher can understand the similarities and differences between the cases and thence provide the literature with valuable influences from the differences and similarities (Gustafsson, 2017).

This study adopts a combination of five views as a research typology: exploratory-descriptive-explanatory-interpretive-evaluative research typology. The exploratory-descriptive-explanatory-interpretive-evaluative typology was employed, and the strength of this approach is that it starts from the limited background knowledge of the study and develops a detailed understanding of the phenomenon under investigation and ends up interpreting and evaluating the results giving room for the researcher's judgement and contribution. Figure 2.3 shows the sequencing of the different research approaches.

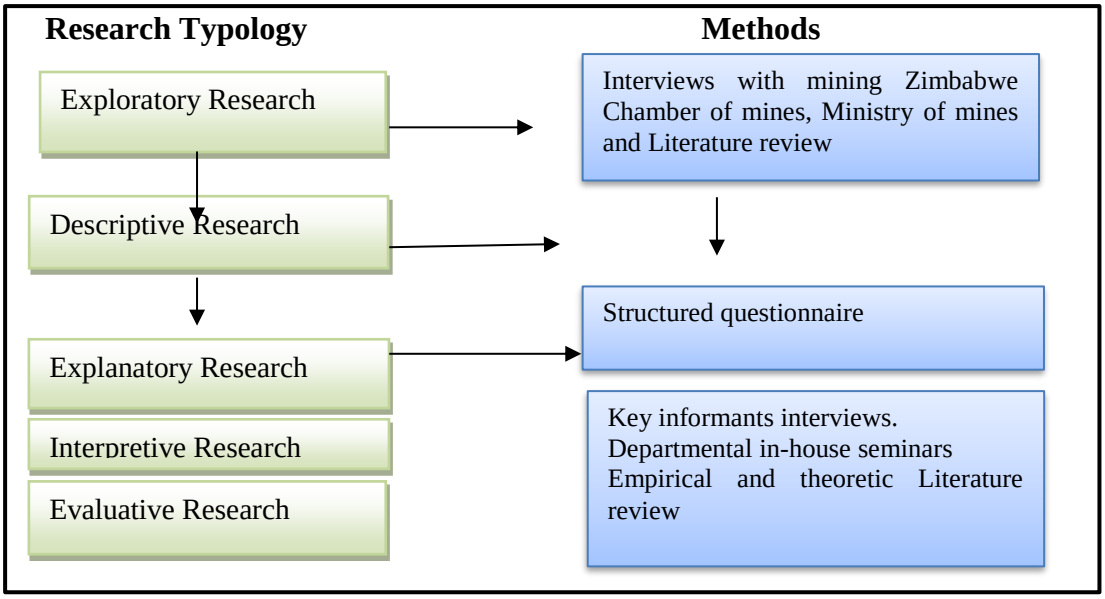


Figure 2.3: Research Typology

Source: Own compilation

2.2.4.1 Exploratory Stage

The exploratory stage set to explore any data or phenomenon were used as points of reference. Interviews with the selected stakeholders were carried out. At this stage, the literature on gold mines was reviewed. Such literature included newspaper cuttings, Acts of parliament, and articles on Zimbabwe gold mining. The purpose of the research was to determine the type of data needed and identify key stakeholders for further key informant interviews in the explanation stage of the research process.

2.2.4.2 Descriptive stage

While aware of Yin's caution against taking the exploratory, descriptive, explanatory stages in research as they are considered to have a hierarchical relationship, in this study, the stages were developed in a logical sequence. After establishing the research sites and data requirements, the descriptive stage sought to provide a quantitative description of the phenomenon. The main objective of this stage was to establish the points of the phenomenon around which

generalisations were formed. The descriptive stage emphasized quantitative measurements, and hence the researcher used a questionnaire to collect the data.

2.2.4.3 Explanatory stage

The explanatory stage examined the data closely to explain the phenomena in the data (Almalki, 2016). Key phrases were highlighted to establish the companies' definitions of CSR and capture recurring thoughts. At this stage, the researcher sought explanations for emerging trends, convergences, and divergences in performances attributable to attributes such as the size of the company and/or governance systems, whether state-owned, multinational unlisted or listed companies and local private limited companies. At this stage, the researcher used interviews with knowledgeable key informants and validated research findings in an in-house seminar where results were presented.

2.2.4.4 Interpretive stage

In this stage, the researcher interpreted the data by developing conceptual categories, supporting or challenging assumptions.

2.2.4.5 Evaluative stage

In this stage, the researcher added her judgement to the phenomena found in the data.

2.3 RESEARCH TOOLS FOR DATA COLLECTION

2.3.1 Establishing the context of CSR in Zimbabwe

The researcher reviewed the local legislations, government policies, and conference proceedings to establish the historical overview and the current context of the mining industry's legal, regulatory, and institutional environment in Zimbabwe. This literature also included but was not limited to the literature on economies with significant mining sectors, Government of Zimbabwe publications, and Zimbabwe media newspaper articles, Acts and statutory instruments and conference proceedings and other archival materials. The study also undertook a longitudinal review of the different selected companies' different policy regimes to understand the development of corporate social responsibility over time.

Interviews were held with key informants from Environmental Management Agent, Ministry of Mines and Mineral development, the Mining Industry Pension Fund, Rural District Councils where the mining operations are being carried out, community leaders. These were used to characterise the nature of the community and mining sector relationship in the broad context of CSR framework. These were interviewed on the developments, opportunities, and challenges in the mining sector.

2.3.2 Establishing the performance of the mining sector

To investigate the scope and nature of corporate social responsibility built into mining companies' key organisational systems, the researcher reviewed companies' level annual reports and other information available on the public domain, mission statements, and vision. The researcher reviewed companies' documents, including reviews of cost accounting reports and board meeting minutes on management strategies.

There are guidelines for CSR to be followed in different countries. Different bodies proposed these guidelines as systems for CSR measurement. The various bodies have different CSR indicators, such as the Dow Jones Sustainability Index, Global reporting initiative, and Financial Times Stock Exchange-Russell Group. Their purposes are to highlight companies that score highly in measures of corporate social responsibility. This means there is no uniform list of criteria or CSR indicators. However, Vintro and Comajuncosa (2010) created an operative and simplified CSR performance chart and established a set of criteria for environmental management, ethics and human capital indicators, called CSR criteria.

2.3.2.1 CSR criteria for mining

The criteria for measuring corporate social responsibility in this study is adapted from Vintro and Comanjuncosa's (2010) criteria for mining. The selected criteria are summarised below.

A. Environmental management

- **Resource use** refers to rational resource exploitation assessed through energy and water consumption and clean extraction technologies as evaluated from gold search technologies and raw materials used for gold recovery.

- **Environmental quality** features mine closure and recovery programs as reflected in waste dump management and soil restoration practices.
- Emergency management as seen in prevention of environmental accidents

B. Business Ethics

- **Promotion of local community economy is** reflected in the way organisations source services, materials and workers from the local businesses and community.
- **Fair funds administration** is assessed in how the company supports social projects and donations given to the local community.

C. Socially responsible human resources management

- **Employee corporation relations:** assessing security levels for workers as reflected in accidents and injuries, the provision of training for human resources and the effectiveness of collective bargaining.
- **Presence of social protection** is prevalent in the provision of retirement plans and medical assurance plans. The occurrence of a violent conflictive like a demonstration or strike situation signifies challenges in social protection.

This research adopts and adapts the proposed CSR performance chart and uses Vintro and Comajuncosa (2010)'s three-level model composed of a set of CSR indicators at one level and a global index at the second level together with the associated algorithms for the calculation. Level 1 has the chosen indicators or categories which are mainly related to the defined CSR criteria. Levels 2 and 3 contain factors and sub-factors. For all items evaluated, each receives a score which happens to be the result of the algorithm calculation. The factors and sub-factors are given predetermined weights. The calculated total score for each category would be the combination of these data from whence indices were obtained.

The operationalisation of the triple bottom line and balanced scorecard concepts in CSR always poses challenges of measuring them. In line with the modified balanced scorecard was used for CSR performance measurement. To address the measurement, challenge a set of criteria

reflective of these concepts or indicators which can be converted into measurable variables was developed using Vintro and Comajuncosa (2010)'s set criteria as detailed above, and a questionnaire was developed for the collection of quantitative data. The survey instrument was also used to capture and present a quantitative description of employees of gold mining companies' trends, attitudes, or opinions. The structure of the questionnaire was as follows:

1. **SECTION A** of the questionnaire explained the tool's purpose and gave general instructions on completing the questionnaire and identifying information.
2. **SECTION B** contained details of the company and the relationship between mining companies and respondents
3. **SECTION C** Level of CSR organisation
4. **SECTION D** Likert scale on the mines opinion on how they are performing for the stakeholder involvement.
5. **SECTION E** consisted of data for calculating environmental management issues
6. **SECTION F** consisted of data for calculating ethical issues Analytical Framework
7. **SECTION G** consisted of data for calculating socially responsible human resources management
8. **SECTION H** consisted of data for calculating objective measures for environmental management and ethics issues
9. **SECTION J** consisted of data for calculating objective measures for socially responsible human resources management

The data analysis framework for the quantitative data is presented in the figure below**.**

2.3.3 Data analysis model

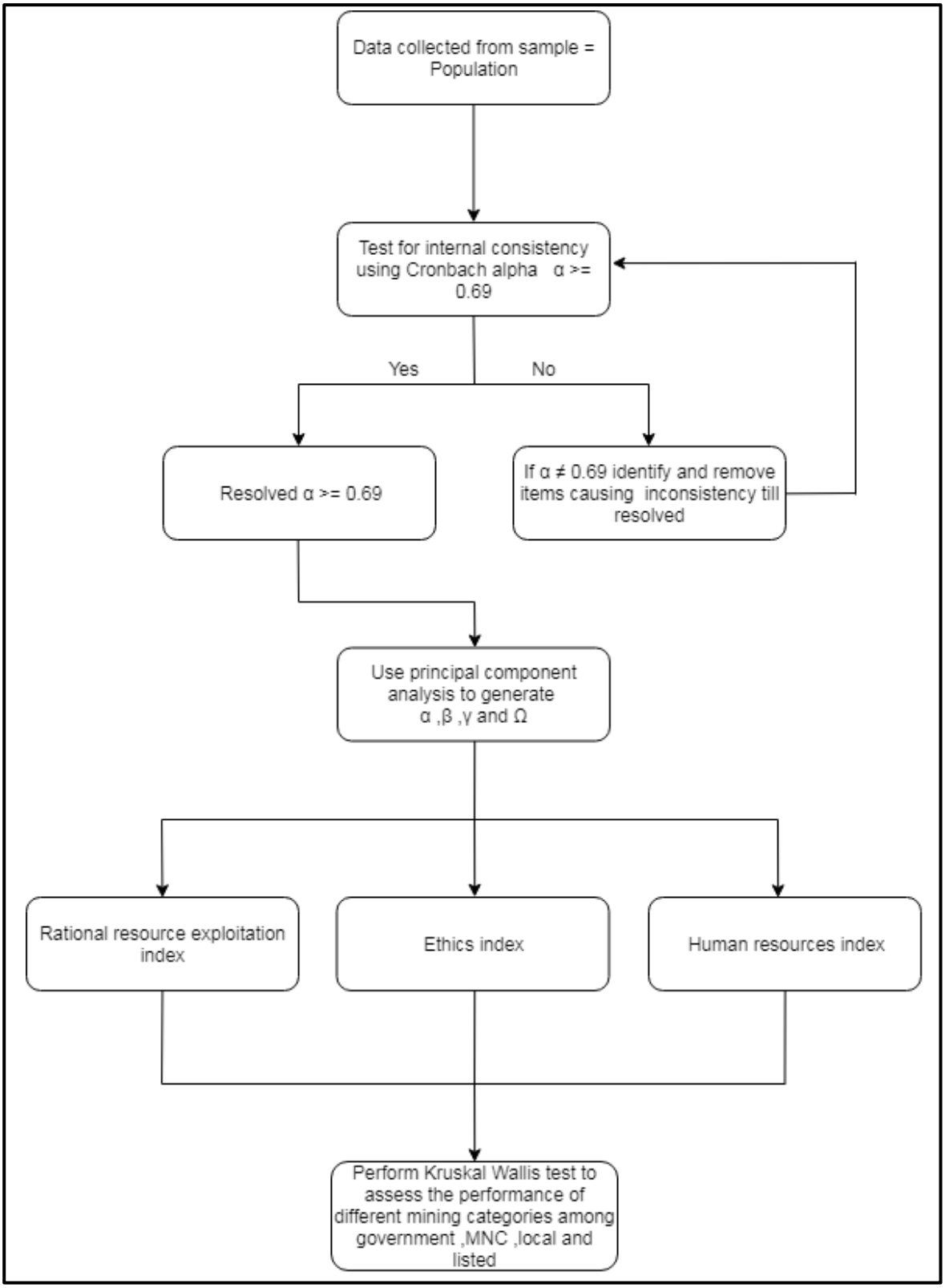


Figure 2.4: Data analysis framework

A questionnaire was used to collect the corporate's opinion on how they are performing in each of the CSR performance indicators and the key variables used to compute CSR indicators. The questionnaire asked respondents what they perceived to be the performance of the mining company to determine the perceived outcomes of corporate social responsibility practices on the environment and the ethical issues and human resource development. The works informed the computation of CSR performance indices of Vintro and Comajuncosa (2010). The questionnaire was administered with variables that were used to calculate the different indices, promotion of local community economies, fair funds administration, job security and dignity, human resources learning and growth and social protection. Below are Tables containing the algorithms and formulas that were used to calculate the mining sector's performance on; environmental management, mining sector ethics issues and human resources indices as adapted from Vintro and Comanjuncosa (2010).

2.3.3.1 Mining sector and environmental management issues

One of the fundamental pillars of corporate social responsibility is respect for environmental integrity and sound management. Key issues under this pillar of CSR include the management of natural resources (for example, raw materials, water and energy) and reducing environmental damage (that is, reducing waste and pollution emissions). This concentrated on measuring the extent of rational exploitation of natural resources under what is referred to as resource use. This focused on using clean extraction technologies and other important aspects pertinent to CSR like environmental recovery programs and the mine company's disaster and emergency management preparedness.

2.3.4 The mining sector and environmental management

Below are the tables of formulas and algorithms used for calculating the various CSR indices

Table 2.1: Resource Use

Water consumption (WC) $$WC = 1 - \frac{litres\ of\ water\ consumed\ over\ \ the\ last\ 12\ months}{Top\ reference\ value}$$
Energy Consumption (E) $$E = 1 - \frac{Joules\ of\ energy\ consumed\ over\ \ last\ 12\ months}{Top\ reference\ value}$$
Primary Material consumed (M) $$M = 1 - \frac{Ton\ of\ primary\ material\ used\ over\ the\ last\ 12\ months}{Top\ reference\ value}$$
$RU = \alpha_1 W + \beta_1 E + \gamma_1 M$

(Source: Adapted from Vintro and Comanjuncosa 2010)

Table 2.2: Environmental Quality

Reduction in contaminants (C) $$C = 1 - \frac{contaminant\ emissions\ concentration}{contaminant\ emission\ from\ last\ period}$$
Reduction in waste dumps (WD) $$WD = 1 - \frac{tons\ of\ mine\ waste\ dumps}{tons\ of\ mine\ waste\ dump\ from\ last\ period}$$
Percentage of restored soil (S) $$(S) = 1 - \frac{total\ square\ of\ restored\ soil}{total\ square\ of\ mines - degraded\ soil\ (closed\ mines}$$
Reduction of environmental accidents (EA) $$EA = 1 - \frac{No.of\ accidents\ over\ \ last\ 12\ months}{No.of\ accidents\ from\ pervious\ 12\ months}$$
$EQ = \alpha_2 C + \beta_2\ WD + \gamma_2 S + \Omega_2 EA$

(Source: Adapted from Vintro and Comanjuncosa 2010)

Environmental Management index (EM) would be the sum of RU and EQ.

EM = RU + EQ

These indices were computed and compared across different mines under different management and governance systems. Reasons to explain the differences were sought in the literature and from relevant key informants who included managers community leaders and Non-Governmental organisations as need arose.

2.3.4.1 The mining sector and ethics issues

A socially responsible corporation is also expected to take into account ethical issues. Such issues include promoting local community economies and social work, fair funds administration, job creation, security, and dignity. The formulas below show how the ethics indicators were computed.

Table 2.3: Promotion of local economies

Services subcontracted with locals (SSL) $SSL = 1 - \frac{monetary\ units\ paid\ for\ services\ subcontracted\ with\ locals}{monetary\ units\ paid\ for\ services\ subcontracted}$
Primary Material acquired from locals (ML) $ML = 1 - \frac{monetary\ units\ paid\ for\ primary\ materials\ offered\ by\ locals}{monetary\ units\ paid\ for\ primary\ materials}$
Local Community workers (CW) $(CW) = 1 - \frac{number\ of\ local\ community\ workers}{total\ number\ of\ workers}$
$LE = \alpha_3 SSL + \beta_3 ML + \gamma_3 CW$

(Source: Adapted from Vintro and Comanjuncosa 2010)

Table 2.4: Fair funds administration

Social Projects enhancements (SPE) $SPE = 1 - \frac{benefits\ (monetary\ units) invested\ in\ social\ projects}{annual\ results\ without\ deducting\ investments\ in\ socil\ projects}$
Donations (D) $D = 1 - \frac{Monitary\ units\ donated\ to\ NGO}{Annual\ results\ (without\ deducting\ social\ investments)}$
$FFA = \alpha_4 SPE + \beta_4 D$

(Source: Adapted from Vintro and Comanjuncosa 2010)

Ethics index would be the sum of LE and FFA; Ethics = LE + FFA

2.3.4.2 Mining sector and socially responsible human resources management

The following formulas were used to compute indices for measuring how the mining corporations are performing in human resources issues. Below are the formulas for calculating human resource management indices.

Table 2.5: Employee - corporation relations

Security Level (SL) $SL = 1 - \frac{Number\ of\ accidents}{Number\ of\ workers}$
Training and Capacity (TC) $TC = \frac{Real\ average\ training\ hours\ per\ worker}{average\ training\ hours\ planned\ per\ worker}$
Collective Bargaining (CB) $CB = \frac{Number\ of\ worker\ receiving\ collective\ bargaining}{Total\ number\ of\ workers}$
$ECR = \alpha_5 SL + \beta_5 TC + \gamma_5 CB$

(Source: Adapted from Vintro and Comanjuncosa 2010)

Table2,6: Social protection

Retirement Plans (RP) supported by the corporation $RP = \frac{number\ of\ workers\ receiving\ retirement\ plans}{Total\ number\ of\ workers}$
Medical assurance (MA) supported by the corporation $MA = \frac{number\ of\ workers\ receiving\ medical\ plans}{Total\ number\ of\ workers}$
Violent or Conflictive Situations (VC) $VC = 1 - \frac{No.of\ violent\ incidents}{total\ number\ of\ workers}$
$SP = \alpha_6 RP + \beta_6\ MA + \gamma_6 VC$

(Source: Adapted from Vintro and Comanjuncosa 2010)

The grand socially responsible human resource management Index = ECR + SP

Again, the computed indices were compared across different mines and mines under different management and governance systems. Reasons for the differences were sought in literature and from key informants.

2.3.5 Analytical framework and data analysis

2.3.5.1 Qualitative data from key informants and literature review

Information from the literature review and key informants was organised and analysed using Nvivo version 11. Qualitative data for the study were collected through semi-structured interviews. The semi-structured nature of the interview is appropriate to the study since it allowed for the flexibility of picking up on interviewees' responses and probing to gain deeper insights into issues emergent from the quantitative results.

2.3.5.2 Analysis and presentation of quantitative data

Analysis of survey data was in two parts. Data generated from the use of the Likert scale was used for two purposes. Firstly, it was used to generate a mean score of the corporate's self-assessment of their performance in the key CSR indicators. Secondly, the data was used to generate weights α, β, and γ

The computed indicators and the mean score from the Likert scale were compared across the different company categories local private limited, listed on the Zimbabwe stock exchange, listed on the foreign stock exchanges, government-owned and multinational companies unlisted. A non-parametric test (particularly the Kruskal Wallis test) was used to establish any statistical differences between the different companies in terms of CSR performance. A comparative analysis of the Environmental Management Index, Ethics Index, Socially Responsible Human Resources Management Index, and the Global CSR Index was calculated across the different company categories. A global index for CSR was calculated and established the CSR performance index. The results of each of these three pillars of CSR are presented in three separate articles making up three analytical chapters.

2.3.6 Sampling frame and sampling strategy

Sampling frame refers to the frame from where a sample of the target population would be drawn for this research. These would be large scale gold mining companies in Zimbabwe. Taherdoost (2016) described a sample frame as a list of all units that make up the population from which the research sample was selected. There are different types of sampling methods in research. Judgment sampling Defines a process whereby the researcher uses their judgment to select a group of units to be included in the sample. Judgmental sampling is also referred to as purposive sampling since it involves a particular purpose. This type of sampling technique is convenient and cost-effective. This research used this sampling technique

2.3.7 Selection of mining companies

In Zimbabwe, 35 gold mining companies are registered with the chamber of mines and the Mining Industry Pension Fund members. In this study, the researcher endeavoured to interview the whole population, and the final number of interviewed companies largely depended on the availability of key people in the company.

2.3.8 Selection of key informants

Purposive sampling was used to select key informants. Care was taken to ensure the participation of a wide range of people to elicit divergent views and opinions on specific issues. Key

informants were selected based on their knowledge of the specific history of events and company practices. For each set of key informants, a checklist of questions was prepared to guide the discussion.

2.3.9 Ensuring reliability and validity

A number of measures were used to ensure the reliability and validity of the data obtained from the primary sources. Martelli and Greener (2018) defined validity as the extent to which a concept is measured accurately in a quantitative study.

2.3.9.1 Reliability test

A questionnaire was tested in a pilot study to gauge its usability and assess the validity and reliability of the data. Cronbach's alpha test was used to test the reliability of measure the internal consistency of the questionnaire. Results of this analysis are in the research finding Chapters.

2.3.9.2 Reducing non-sampling errors

Computer-Assisted Personal Interview (CAPI) was used where possible to capture and enter data during the interview process. This digital data collection technique uses CSEntry to collect data for surveys created using Census and Survey Processing System (CSPro) using Android tablets. The software assists in maximizing data processing reliability by restricting data entry errors. The data was then imported into STATA for analysis.

2.3.9.3 Ensuring the validity of qualitative data

All key informant interviews were audio-recorded with the permission of the interviewee. Next, the audio files were downloaded onto a password-protected computer and transcribed verbatim. A research assistant helped to translate the interviews into English. All of the transcriptions were double-checked by the researcher to ensure that transcription was performed uniformly. Any inconsistencies found were reconciled to finalise the transcription. Notes were taken during the interviews or discussions, and they were also audio-recorded where possible. Transcriptions were done immediately afterwards by both the facilitator and the note-taker, incorporating both the notes and quotes from the recording into the final transcript. Participants' names and other

potentially identifying participants characteristics mentioned during the interviews were not transcribed. The transcriptions and recordings were stored in a password-protected computer. Data analysis and coding will be done using NVIVO 11 (qualitative data management and handling software). During report-writing, thematic findings were illustrated using verbatim quotes.

2.3.9.4 Use of triangulations

The researcher also used triangulation, where evidence is examined from different sources of data. The initial descriptions were taken back to the participants to determine whether the participants felt that the results were accurate. Further validation was done through bias clarification. In this, the study explained any bias that was brought to the study by the

3. CHAPTER THREE: AN OVERVIEW OF ZIMBABWE'S GOLD MINING SECTOR AND THE CONTEXT OF THE STUDY.

3 INTRODUCTION

The chapter aims to give an overview of the historical development of the mining industry and outline the key policy and legislation promoting corporate social responsibility in the gold mining sector in Zimbabwe. The Chapter is organised around four sections. Section 1 gives a global overview of the mining industry. Section 2 describes gold mining in Africa and the Southern Africa Development Community (SADC) region where Zimbabwe is situated. Section 3 gives an overview of the gold mining sector in Zimbabwe. Section 4 outlines the development of the legal environment shaping environmental, ethical, and human capital management practices in the country's gold mining sector.

3.1 MINING IN GENERAL

Mining is an ancient industry that has fostered economic development since the evolutions of humankind in the Bronze and Iron Ages (ICMM, 2017). In contemporary society, the critical need for mining and metals across all societies is undisputed and mining in today's world is also a potentially powerful engine of development. It is important to foster sustainable development based on a solid understanding of the role of mining and evidence of what works (ICMM 2017). However, commercial mining and host countries' economic and social development are complex and often contentious. Global mining companies are large and influential institutions whose investments can generate significant economic benefits and disruptive economic, social and environmental impacts (ICMM, 2017). Mining activities in all stages impact the natural environment and society's socioeconomic and cultural aspects (Ghorbani & Kuan, 2017).

The global reporting initiative (GRI) and the International Council for minerals and metals issued sector-specific guidelines for sustainability reporting in the mining sector. The Mining and Metals sector is diverse and can contain companies of all sizes, including large multi-national or vertically-integrated enterprises. Irrespective of their size or business models, players

in the industry face challenges in relating to sustainability issues hence need to report on these challenges through the Sector Disclosures and improve their approaches (GRI-ICMM 2017). These Sector Disclosures deal with the aspects of sustainable development that characterise the Mining and Metals sector. The main contextual issues include the (1) control, use, and management of land, (2) the contribution to the national economic and social development community and stakeholder engagement, (3) labour relations, (4) environmental management, and (5) relationships with artisanal and small-scale mining. These make up the main focus of this research.

Mining and minerals beneficiation are some of the most damaging of all human activities globally. Large quantities of waste are produced during this activity, particularly in gold mining, where over 99% of extracted ore is released as waste to the environment (Fashola Ngole-Jeme & Babalola, 2016). About 27 billion metric tonnes of overburden and minerals are taken from the earth’s crust annually, and it is estimated that the mining industry uses about 10% of energy (Mapira, 2017). Furthermore, exploitation of low-grade minerals causes damage to the environment compared to high-grade ores (Mapira, 2017). Mining is vital to economies worldwide, with evidence that the mining and metals industry makes its most significant contribution in the world's most impoverished regions (ICMM, 2017). Figure 3.1 shows world mining production in the past three decades.

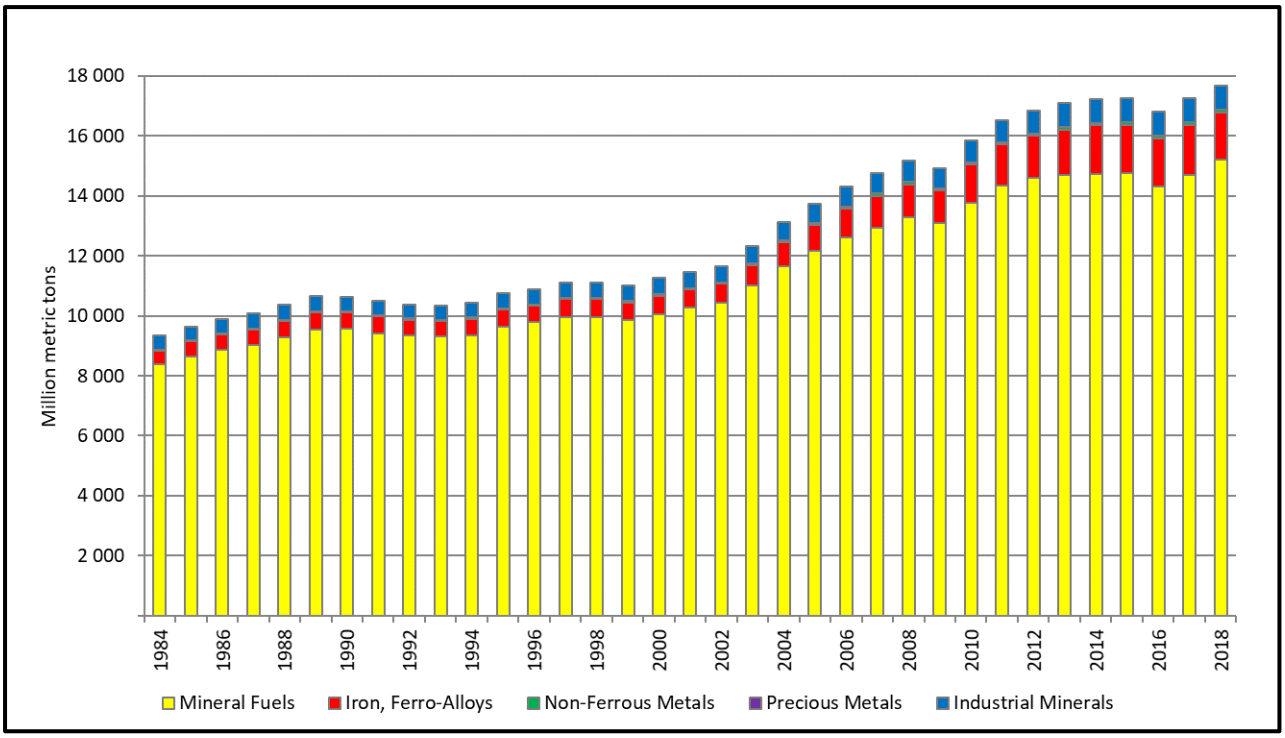


Figure 3. 1: World mining production 1984 - 2018

(Source: Reichl *et al*., 2018)

The mining industry has the potential to spur growth and development. It is both possible and essential to strengthen the contribution of mining to economic and social development. Of the 35 countries most dependent on mining, all but Australia and South Korea are developing countries. Of the top 70, 63 are low-income countries that stand to expand their national economies through the investment, exports, taxes and employment associated with mining (ICMM, 2017). The five BRICS (Brazil, Russia, India, China, South Africa) currently have the most significant share of world production value (Ericsson and Löf, 2017). Uzbekistan and Turkey are rising the production value rankings to join emerging countries such as Chile, Indonesia and Mexico. Figure 3.2 shows world mining production by continent from 1984 to 2018.

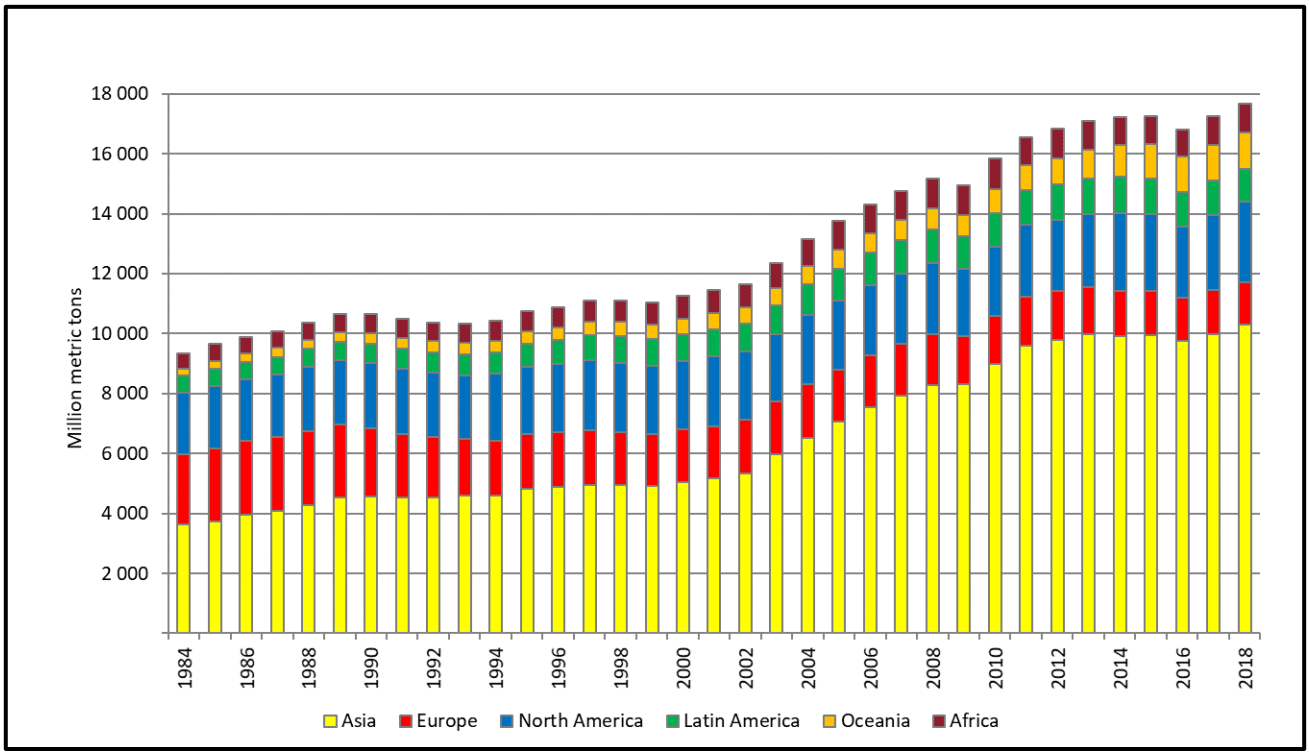


Figure 3.2: World mining production 1984 - 2018 by continents (Source: Reichl *et al.*, 2018)

Figure 3.2 shows that Asia and North America have the highest mineral production. Mining brings growth to national economies through foreign direct investment when foreign corporations invest in mining and metals operations; and exports of the mining products. Mining can account for 60-90 per cent of foreign direct investment in low- and middle-income countries and 30-60 per cent of total exports (Ericsson and Löf, 2017). Taxes and other fiscal revenues from mining typically bring in only 3-20 per cent of a government's total revenues in low-income countries. However, some very low-income countries rely heavily on mining for fiscal revenues, DR Congo and Guinea around 25 and 23 per cent, respectively. Botswana, a middle-income country, draws 44 per cent of its revenues from mining.

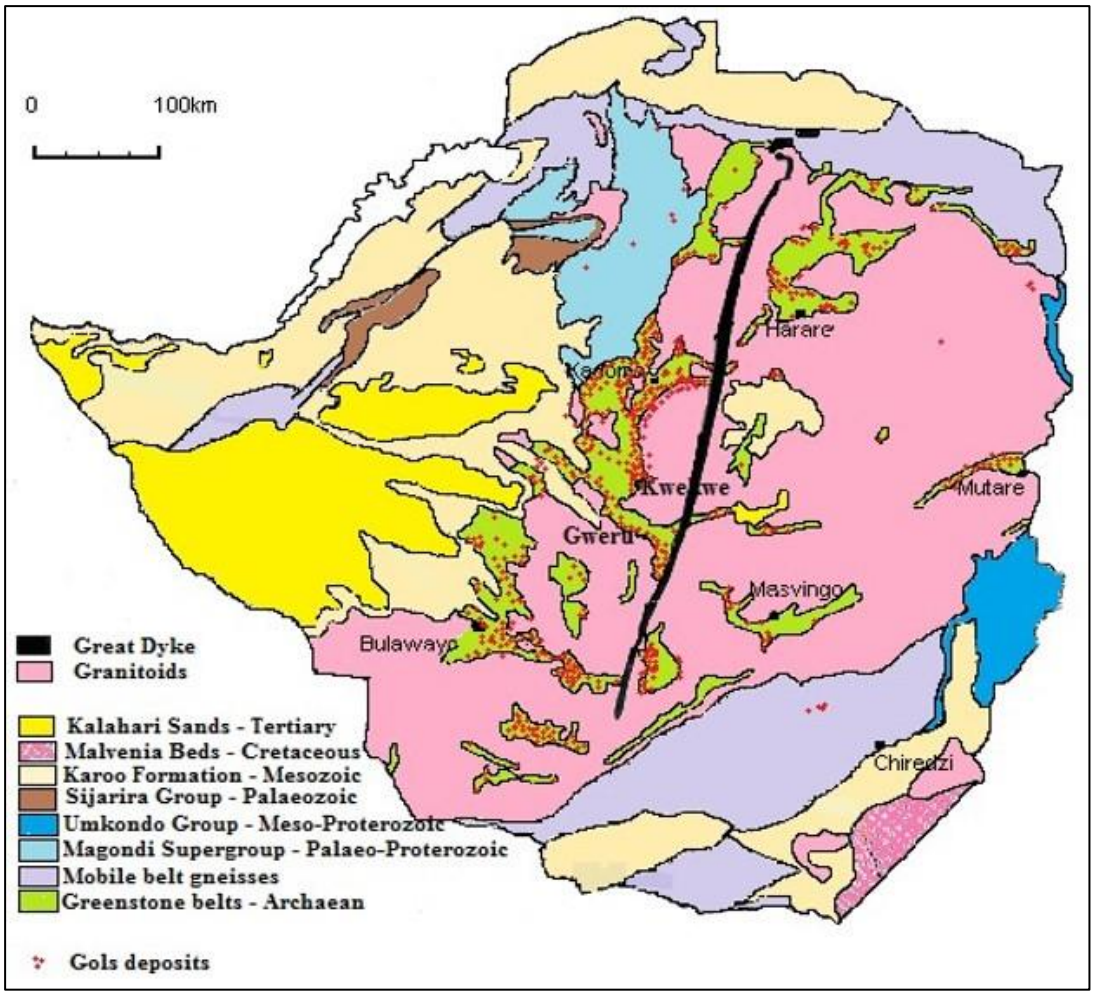
3.2 MINING IN AFRICA

African countries account for 20 per cent of the global gold production of 2500 million metric tons. South Africa is the largest mineral producer. Other major producers include Ghana, Guinea, Mali and Tanzania. Overall, about 20 African countries produce at least one ton per annum. A global commodities boom has seen gold mining become a central economic sector in many African countries (Lanzano, 2018).

A ranking for all 214 countries shows that among the top 50 countries, about14 countries are low-income and 17 countries lower-middle-income as classified by the World Bank. There are four higher-middle-income countries (Botswana, Suriname, Mongolia, and Namibia) among the 50 countries recording the highest overall mineral dependence levels (Roe & Dodd, 2017). There are some 35 relatively low-income countries where extractive activity is of very great significance. The most important countries in terms of production (both US$ value and shares of total world production) are almost all high-income countries (notably Australia, Chile, Russia, the USA, and Canada) or higher-middle-income countries (notably Brazil, China, and South Africa). A few lower-income countries, such as Mauritania, Guyana, Guinea, and Zimbabwe, have high production levels relative to their GDP levels. However, their absolute levels of production are small relative to those of the more prosperous economies. By contrast, the list of the most significant countries in export contribution (mineral exports as a percentage of total exports) is dominated by low- or lower-middle-income countries (Roe & Dodd, 2017). Southern Africa is highly endowed with diverse minerals and metals, including vast amounts of diamonds, platinum, coal, gold, asbestos, iron, nickel, chrome and other varied kinds of minerals (UNCTAD, 2015).

3.3 MINING IN ZIMBABWE

Zimbabwe is endowed with vast mineral deposits, both discovered and undiscovered. Of these minerals, 60 are known minerals, and 40 are exploited commercially. As noted by the Ministry of Mines and Mining Development, about 60 per cent of the country's land surface comprises ancient mineral-bearing rocks. Figure 3 shows the mineral endowment distribution in Zimbabwe.



Map 3.1: Map of Zimbabwe showing gold deposits

The map shows a diversified mineral resource base with prominent geological features, widespread greenstone belts (also known as gold belts) and the famous Great Dyke. The country has large mineral potential characterised by about 60 economic minerals whose commercial profitability has been evident from its mining activities. The Great Dyke is a layered igneous complex that extends north-south for approximately 550 km. The Great Dyke is host to the world's biggest high-grade chromite deposits, the world's second-largest resource of the platinum group of metals and significant reserves of copper and nickel (Government of Zimbabwe 2018). The major minerals contributing to the country's economy are shown in Figure 3.3 and their percentage contribution.

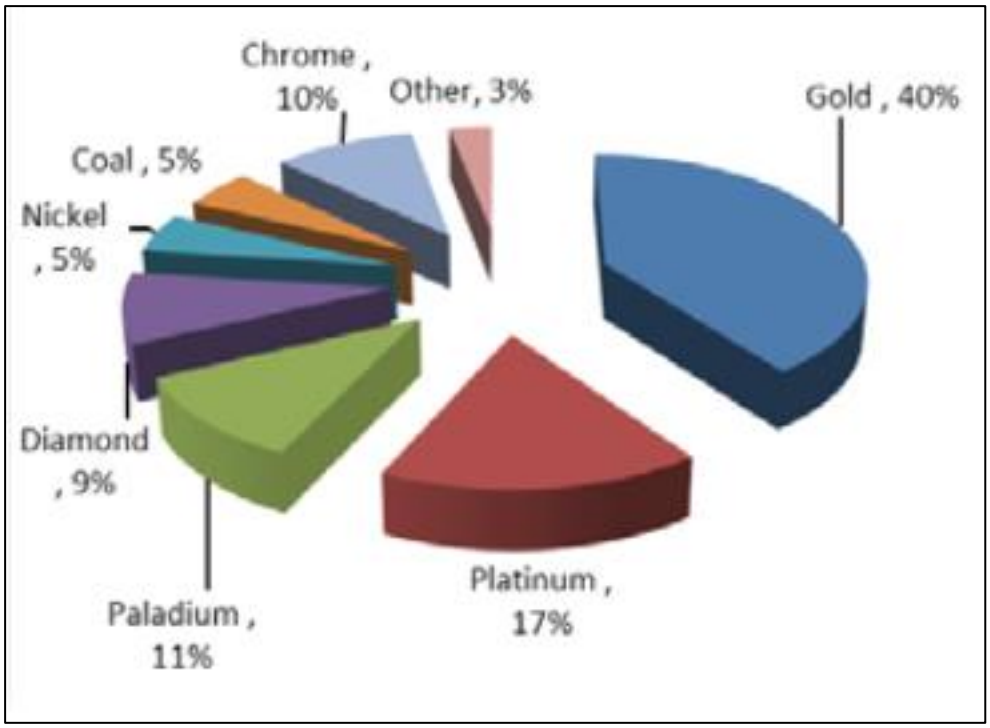
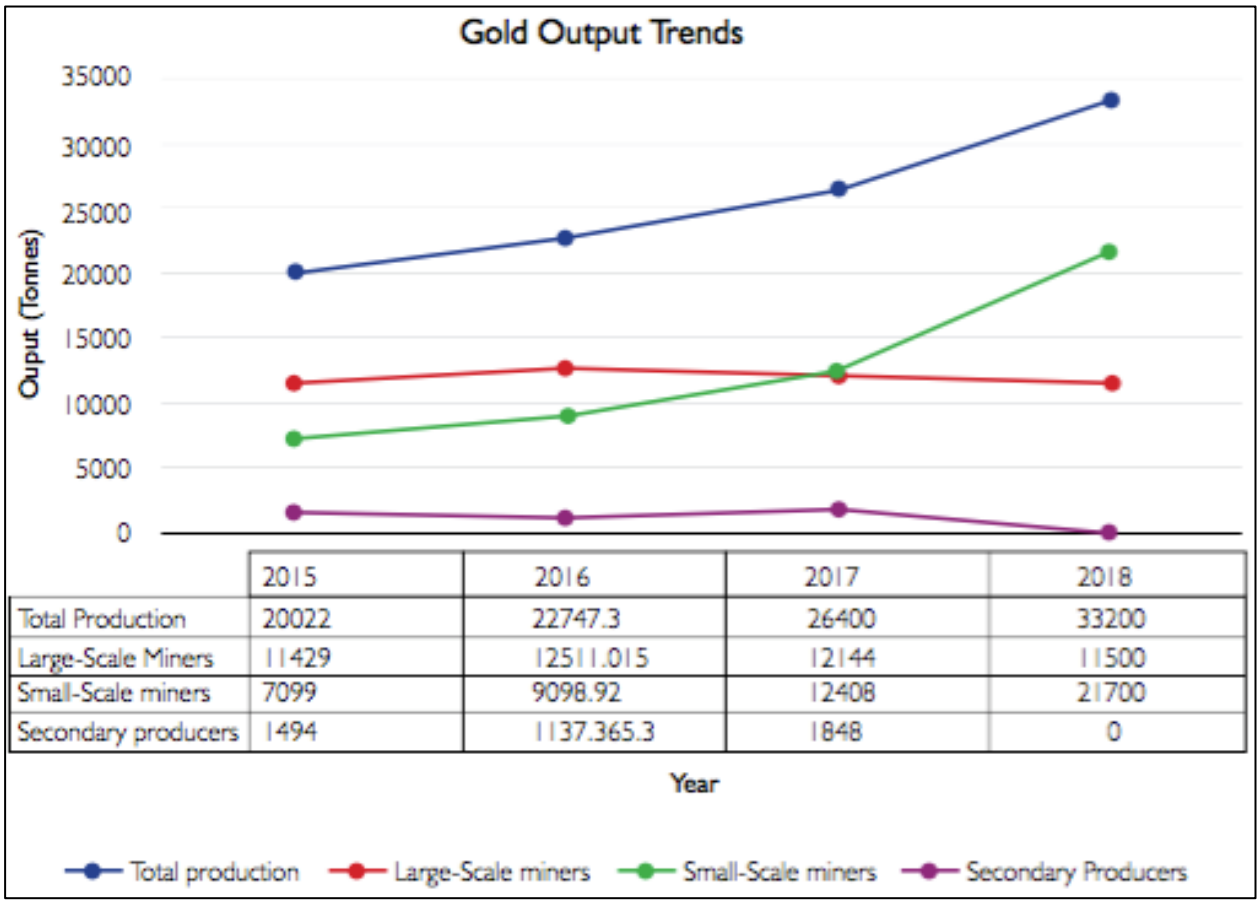


Figure 3.3: Mineral percentage contribution to country's income

(Source: Chamber of Mines 2017)

As indicated in Figure 4, gold has the highest contribution at 40%. There are more than 4 000 known gold deposits, and the country remains under-explored to discover new deposits and realise the full potential of known deposits. About 90% of gold deposits in Zimbabwe are found in the greenstone belts, and these are very rich and comparable to leading gold-producing countries like Australia, South Africa, and Canada. Other gold deposits occur in the Limpopo Mobile Belt south of the country, and alluvial gold deposits are found in most rivers (Government of Zimbabwe 2018). Figure 3.4 shows the gold output trends for four years since 2015 in Zimbabwe.

Figure 3.4 shows the gold output trends for four years since 2015 in Zimbabwe.



	2015	2016	2017	2018
Total Production	20022	22747.3	26400	33200
Large-Scale Miners	11429	12511.015	12144	11500
Small-Scale miners	7099	9098.92	12408	21700
Secondary producers	1494	1137.365.3	1848	0

Figure3.4: Gold Output Trends 2015 - 2018

(Source Chamber of Mines 2017)

The mining sector accounts for more than 25% of the country's GDP and approximately 50% of its exports, making it the main anchor of the economy (Government of Zimbabwe, 2018).

3.4 HISTORICAL DEVELOPMENTS IN THE LEGAL AND ECONOMIC CONTEXT OF CSR IN THE MINING SECTOR IN ZIMBABWE

Since independence, the mining sector has gone through several political and economic contexts, which have had a considerable bearing on defining how the mining companies relate to hosting communities and the environment. The governance of the mining sector has gone through several

changes in political and macroeconomic contexts. Each governance approach corresponded to a dominant economic development policy of a particular epoch.

The first decade of independent Zimbabwe, 1980 to 1990, was when government policies were designed to rebuild the sector affected by war. The government introduced a Growth with Equity in the first two years of independence. New mining companies such as Hartley platinum, Freda Rebecca and Delta Gold emerged (Kanyenze, Kondo, Chitambara & Martens, 2011). However, the period was bedevilled by foreign currency shortages, affecting production since most capital goods needed in the mines were imported. In the 1980s, Zimbabwe had been an excellent performer in Africa in providing social services and the reconstruction and development of its public infrastructure. During this period, the social and economic developments were guided by socialistic ideology. This saw the emergence of labour unions and the government providing most social services such as schools and health facilities even within the mining areas. Mining companies were expected to generate foreign currency, which was in short supply. This promoted an environment where CSR was voluntary and fewer expectations in this regard placed on the corporations.

From 1991 to 1996, during the Economic Structural Adjustment Program (ESAP), the mining industry benefitted from fiscal and monetary reforms and export promotion and trade liberalisation (Government of Zimbabwe 1990). Zimbabwe's Economic Structural Adjustment Programme (ESAP), launched in 1990, aimed to usher in an era of modernised, competitive, export-led industrialisation (Edson, & Gideon, 2021). The emphasis of ESAP was on profit specifically cutting down on public expenditure and stimulating private sector growth. During this period, the mining sector realised good profit margins (Chitimira, 2019). However, this was at the expense of social suffering in retrenchments and little concern for the environment. For the first time, the government left corporates to be socially responsible for their employees and community (Kanyenze et al., 2011).

The ESAP was succeeded in 1997 by Zimbabwe Program for Economic and Social Transformation, which was meant to correct the unexpected suffering resulting from ESAP. This was after realising the social dimension of development was neglected under ESAP. Under this

new program, the mining sector's good performance became short-lived because by 1998, mine closures had begun, and by 2001, about forty large scale mines had closed or been placed on maintenance (Government of Zimbabwe 2002). The worst affected were employees, for there were no schemes to protect them, and their employers could not afford retrenchment packages. The mine employees' predicament is the protection as the infamous mine closures saw workers, mainly from Malawian, being repatriated with no pension or retrenchment package.

In Zimbabwean extractives sector is a very resilient sector of the economy. Since the fast-track land resettlement of 2000, Zimbabwe's economy has gone through highly challenging phases that include the global impact on minerals prices, distortions, and asymmetries in the global resources market that have threatened the viability of the mining sector (Murombo, 2021). However, the extractives sector has remained one of the major contributors to the Gross Domestic Product (Government of Zimbabwe 2018, Chamber of Mines, 2018).

The 2000/2001 farm invasions also impacted the mining industry as there was capital flight. Geological surveys, together with explorations, were suspended (Kanyenze et al., 2011). With the runaway inflation that followed, the production of most minerals declined, and this trend continued unabated through 2008. Kanyenze et al. (2011) assert that when multi-currency use was introduced, the situation changed for the better on the mining front because mining companies began to trade in United States Dollars. However, in 2009 Zimbabwe's government introduced a bill in parliament that sought to combine nationalisation and relinquishment of shares requiring up to 51% equity in mining companies; 25 % was non-contributory (Kanyenze et al., 2011). It was hoped that the government would then redistribute income from the mining sector to the rest of the Zimbabwean populace by providing services and subsidising other key sectors such as agriculture.

The bill was viewed as draconian by investors, and they negotiated for more involvement with stakeholders. The bill was withdrawn. The chamber of mines has since put forward proposals with a strong CSR thrust targeting broad base empowerment, whereby mines commit to investing continually in community and infrastructure projects (Kanyenze *et al.,* 2011). The main argument is that not all people in the community can afford to buy shares in the companies. Still,

suppose the company empowers the community through projects and infrastructure. In that case, the host communities stand to benefit more than just pushing for indigenisation which may leave the host community still impoverished. The Mines and Minerals Act has still not been amended, and a bill is in the works.

3.5 LEGISLATIVE AND POLICY CONSIDERATIONS

Several sections in the legislation guided all the mining activities and corporate social responsibility practices. Vintro and Comanjuncosa (2010) gave a list of indicators that can be used to evaluate CSR performance in the mining sector. This study uses three of the primary set. Firstly, Environmental Management for assessing corporate environmental responsibility of which the performance indicators are Resource Use which measures energy usage, water usage and primary raw materials usage. Another performance indicator for Environmental Management is Environmental Quality. Performance indicators for Environmental Quality assessed in this study are waste dump management, reduction in contaminants, reduction in environmental accidents, and soil restoration practices.

Secondly, the study assesses mining companies' performance in Business Ethics. The performance indicators for business ethics are promotion of local economies. The indicators are mining companies' practices in procurement of primary raw materials, subcontracting local businesses to provide services, and employing workers from the local community. Another indicator for assessing business ethics practices is Fair Funds Administration. The assessed indicators are donations made to the local community and special projects enhancement.

Lastly, the study assesses the mining companies' performance in socially responsible human resources management. The set criteria adapted from Vintro and Comanjuncosa (2010) involve assessing employee corporation relations, which evaluate security level practices, training capacity levels and collective bargaining practices. The other indicator is Social Protection which assesses retirement plans, medical assurance provision and the occurrence of any violent conflictive situation. Mining is a highly regulated industry, and even besides voluntary CSR activities, the government enacted legislation to ensure companies are also socially and

environmentally responsible. Zimbabwe is unique because it has that drive to exert political pressure on corporations legally; this is referred to as indigenisation and wealth redistribution.

3.6 LEGISLATION GUIDING ENVIRONMENTAL MANAGEMENT

In this section, the relevant Zimbabwean legislation has been reviewed as this provides the environmental legislative framework within which the mining operation has to operate. In Zimbabwe is the Mines and Minerals Act 21:05 principally regulates mining law. Mines and Minerals Act (Chapter 21:05). The 1996 Mines and Minerals Act aims to consolidate all laws relating to mines and minerals in Zimbabwe. Issues covered by the Act include; the acquisition and registration of mining rights, prospecting and pegging, pegging of underground extensions, issuing of mining leases, rights of claim holders and landowners, abandonment and forfeiture, royalties and the acquisition of land by holders of mining leases.

The Environmental and Management Act (EMA) 2002 (20:27), through which mining is administered, has several mandates for mining projects. The Act requires that the planning, implementation, and development options are environmentally sound and sustainable. A new mining project is expected to assess an environmental impact, and existing mining projects produce an environmental management plan annually. It also makes it mandatory that any environmental consequences are adequately addressed and mitigated in the project design. EMA provides guidelines for the sustainable management of natural resources, protecting the environment, and preventing pollution and environmental degradation.

3.6.1 Legal framework guiding natural resource use

3.6.1.1 Water

The Water Act (Chapter 20:22) governs the optimum development and utilisation of water resources in Zimbabwe. It makes it an offence for anyone to discharge effluent in a watercourse unless permitted and certain standards complied with. Part VI, Section 35, subsection (1) also empowers the Minister to limit the quantity of water abstracted for primary purposes by any person or class of persons within an area from any source of public water to ensure equitable distribution and use of public water. It is, therefore, necessary for the mining companies to inform Zimbabwe Water Authority to be granted water abstraction rights. Since the proposed

venture may need to draw borehole or river water, it will increase water demand and affect water quality in nearby watercourses. Operations must be in accordance with the conditions set in this Act. Part X, section 92, subsections 1 (a) and (b) deal with water pollution control and clearly states that it is an offence to pollute water. Thus, whatever waste comes from the operations should be judiciously managed and meet the quality standards before disposal in septic tanks.

None of the Act's provisions affects the mines' rights as conferred by the Mines and Minerals Act regarding either the use of water for "primary purposes" or the use of stormwater or groundwater. Section 36 specifies that a person wishing to use public water for mining purposes is required to apply such a right with the Mining Commissioner of the appropriate mining district. This application then proceeds to the Water Court, which can either accede or refuse the application. Section 92 of the Act contains legislation against any water pollution; this legislation is reinforced by the Water (Effluent and Wastewater Standards) Regulations of 2000. It specifies water quality standards that must be met by effluent or wastewater resulting from any purpose and is disposed into any public water body, whether directly or by seepage. The regulations specify maximum permissible concentrations of chemical constituents by Catchment Area.

3.6.1.2 Energy

The Electricity Act Chapter 13:05 regulates the provision of energy for mining activities. The Act provides the Zimbabwe Electricity Supply Authority with the responsibility for the generation, transmission, distribution or supply of electricity to regulate energy use.

3.6.1.3 Raw materials

Raw materials used mainly in the beneficiation of gold are hazardous, and some Acts regulations guide the use of these in mining. The Hazardous Substances Act (Chapter 15:05) makes provision for substances, which may endanger humans or animals' health to be declared hazardous. The Act, amongst others, regulates the importing, manufacturing, selling, possession, storing and conveying of hazardous substances. The disposal of hazardous substances is not referred to, specifically in this Act. However, the Hazardous Substances and Articles (Waste Management) Regulations, March 2000, are made following the Hazardous Substances and Articles Act, Chapter 15:05, section 38. The Regulations stipulate for the prevention and

reduction of hazardous wastes. The Act concerns itself with various areas of waste management, including collection, treatment, recycling, transportation, and the disposal of hazardous wastes. The first Schedule (section 2) contains a list of wastes classified as hazardous.

Part II, section 3, provides the preparation of waste management plans to be prepared by all hazardous waste generators (including local authorities specified in section 2). The plan shall consist of, generally, the adoptions of environmentally sound management of hazardous wastes and requires maintaining an inventory of the waste management situation specifying the quantity of hazardous wastes product; and the components of such hazardous waste. The management plan must have specific goals for adopting clean production methods and reducing hazardous waste quantities and pollution discharges. It must promote recycling of wastes wherever practicable, in an environmentally safe form and manner and safe disposal of the wastes which can neither be prevented nor recycled. Part III, section 5 of the regulations, provides local authorities to designate suitable sites within its areas of jurisdiction for the location of facilities to manage hazardous wastes. Mining companies wishing to operate a hazardous waste site will need a license to do so.

3.6.2 Environmental quality

The Environmental Management Act (20:27) provides for the sustainable management of natural resources, protection of the environment, and prevention of pollution and environmental degradation. The First Schedule of the Act offers categories of projects that require an Environmental Impact Assessment. The Environmental Management Act provides for the sustainable management of natural resources, protection of the environment, and prevention of pollution and environmental degradation.

3.6.2.1 Waste dumps management

The Parks and Wildlife Act (Chapter 20: 14) 1996 Revised Edition, Part II of this Act outlines the purposes of the Parks and Wildlife Management Authority to preserve and protect the natural landscape and scenery therein. The Authority also preserves and protects wildlife and plants and the natural ecological stability of wildlife and plant communities therein for the public's enjoyment, education, and inspiration. In this respect, the Area Manager of National Parks will,

whenever necessary, check if the project is conforming to legal requirements and specifications. Issues of environmental protection were very peripheral before 2000. Mining companies had to contend with several pieces of legislation protecting certain environmental resources. The Parks and Wildlife Act (Chapter 20:14) of 1996 (Revised Edition) gives Parks and Wildlife the mandate to (a) preserve and protect the natural landscape and scenery therein, and (b) to preserve and protect wildlife and plants and the natural ecological stability of wildlife and plant communities if the mining operations are within Parks area. To this end, mining in National Parks is prohibited.

3.6.2.2 Reduction in contaminants

The Environmental Management Act (EMA) (20:27) was promulgated in 2002 after the repeal of the Natural Resources Act (Chapter 20:13), the Atmospheric Pollution Prevention Act (Chapter 20:03), the Hazardous Substances and Particles Act (Chapter 15:05), and the Noxious Weeds Act (Chapter 19:07) all govern the handling of contaminants in mining.

Part IX, Section 57, of the Environmental Management Act makes it an offence to discharge any toxic, noxious or obstructing matters or other pollutants into the aquatic environment. The proponent of any industrial undertaking is required to install an appropriate effluent treatment plant before they are discharged into the environment, under Part IX, Section 59, subsection (I) of the Act. Part IX, Section 96 makes it mandatory for persons engaged in operations that may affect the environment to produce environmental management plans. It is an offence, under Part IX Section 123, subsection (1a and 1b), for any person to permit or cause to be placed any invasive alien species or the seed of such in any watercourse or any road or land. The Atmospheric Pollution Prevention Act (Chapter 20:03) (Section 28) requires a miner who is situated in a dust control area or one who intends to close down a mine (so declared by the Minister of Health) to give 31 days' notice to the Chief Officer of Health. In turn, this officer may serve a written notice on the miner requiring him to adopt measures to prevent dust originating from the mine. This will only have relevance if the area is declared a dust control zone.

3.6.2.3 Soil restoration practices

Section 269 of the Mines and Minerals Act guides the behaviour of mining companies towards soil restoration and waste dump practices. The section provides for all open surface workings to be filled in before abandoning a mining site. The section stipulates that the manner of the enclosure is prescribed by regulation and must be of a standard that a mining inspector approves. Therefore, it can be construed to mean that the concern here appears to be solely that of ensuring the safety of persons or animals. As a result, the section seems not to extend the restoration of workings in any ecological sense, particularly the re-vegetation of the site to its original and unspoiled state. This brief summary of the Mines and Minerals Act (Chapter 21:05) shows that the Act is very powerful and currently overrides most if not all other pieces of legislation. This inherent power of the Act can create problems and loopholes regarding environmental management in mining areas.

3.7 BUSINESS ETHICS PRACTICES

Regarding corporate community interface, Flammer and Kacperczyk (2015) mention that legislation that permits a stakeholder orientation rather than a strict shareholder orientation is important in corporate social responsibility. In Zimbabwe, regulations and policies promote good relationships with and enhance the local communities' economic capacities of which the mines are part. Zimbabwe passed legislation guiding local CSR in Zimbabwe's mineral resources sector to give a framework for structured support from mining companies to affected communities. The principal legislation is the Indigenisation and Economic Empowerment Act Chapter 14:33. This part of the legislation thrusts CSR outcomes such as the employment of indigenous Zimbabweans participating in economic activities, directing procurement of goods and services from local businesses, enterprise development, and equity management. Economic Empowerment law sought to, among other things, empower communities to benefit from mining operations being carried with their areas.

3.7.1 Promotion of local economy

According to Vintro and Commanjuncosa (20101), sourcing raw materials, labour, and other services are one of the practices that constitute good business ethics. There is legislation to guide these practices.

Part II section (3) subsections f and g (f) of the Indigenisation and Economic Act, 2007, says

'----all Government departments, statutory bodies and local authorities and all companies shall procure at least fifty per centum of their goods and services required to be procured in terms of the Procurement Act [Chapter 22:15] from businesses in which a controlling interest is held by indigenous Zimbabweans;

(g) where goods and services are procured in terms of the Procurement Act [Chapter 22:14] from businesses in which a controlling interest is not held by indigenous Zimbabweans, any subcontracting required to be done by the supplier shall be done to the prescribed extent in favour of businesses in which a controlling interest is held by indigenous Zimbabweans.' (Government of Zimbabwe, 2010).

The Indigenisation and Economic Empowerment Act further requires a community share ownership trust for every rural district. The community share ownership trusts were launched mainly as a tool by which enterprises are utilising natural resources plough back to the communities they are working. Community Share Ownership Trusts have been launched since 2010 following the provisions of the indigenisation law requirements. The mining industry, together with the government, has taken a stakeholder view of CSR. The community share ownership scheme can be viewed as some structured corporate social responsibility. They are a mechanism for the mining sector that exploits mineral resources while causing permanent alteration of the landscape in some cases, environmental damage to plough back to the community. Section 14 of the Indigenisation and Economic Empowerment (General) Regulations Statutory Instrument 21 of 2010 states that the revenue realised from the community share ownership scheme will be used for community projects such as hospitals, schools, and irrigation schemes, among others to uplift the lives of communities (Government of Zimbabwe, 2010).

While CSR is voluntary in principle in Zimbabwe, there are Acts of Parliament enacted to address the problems of poverty and underdevelopment in Zimbabwe. The government came up with the empowerment policy to enact the Indigenization and Economic Empowerment Act (Chapter 14:33) of 2007. This Act requires that all foreign-owned companies cede 51% of their equity to locals and remain 49%. This policy was seen as the best way to ensure that most Zimbabweans participate in the mainstream economy. The government sought to achieve the empowerment effort by enabling the communities to acquire equity in the businesses operating within their communities through CSTOS. These CSOTS were established through Section 14(b) of Statutory Instrument 21 of 2010. Every District with natural resources being exploited should have a Community Share Ownership Trust. The Statutory Instrument outlined the implementation structures of these trusts.

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According to SI 21 of 2010 of the IEE Act (General) Regulations, the definition of a community shall be residents of a Rural District Council established in terms of the Rural District Councils Act [Chapter 29:13]. The Community Share Ownership Trust Membership to range from 7 to 15 members including the listed;

- Chief – (Chairperson) rotational where there is more than one chief in the district.
- Other Chiefs in District.
- District Head of the Ministry of Youth Development, Indigenization and Empowerment.
- District Administrator.
- Council Chairperson – (Vice Chairperson).
- CEO of RDC Ex- Officio (Secretary).
- Representative(s) of qualifying business(s) drawn from senior management level of the business.
- Representative of women.
- Representative of the youth.
- Representative of the disabled.
- A lawyer.
- An accountant.

- Any other person co-opted by the trust for their expertise and/or special skills from time to time.

The mandate of the Trust, according to the Act, was to prioritise projects and allocate funds for the implementation of the project. The Trust was to Review progress, problems and challenges, and the Trust was to identify projects/programs for implementation. These should be in harmony with the requirements of the local planning authority to protect all financial and other assets of the Trust.

There are, however, various pieces of legislation that affect the Indigenisation program. These include the Public Finance Management Act, Chapter 22:19 and the Finance Act of 2018. The Finance Act of 2018 revised the ownership structure in the mining sector, and 51% of the companies did not comply. This resulted in the shutting down of the Indigenisation and Economic Empowerment Board, spearheading the operationalisation of the Indigenisation and Economic Empowerment Act.

However, companies' non-compliance with these key pieces of the legislature is not an option because there are provisions in the Indigenisation and Economic Empowerment Act, which spell consequences for non-compliance. Part II (5) (2) of The Indigenisation and Economic Empowerment Act (2007) says;
'Subject to this section and section 20, the Minister may issue a written order to the licensing authority of any non-compliant business ordering that the licensing authority concerned declined to renew the licence, registration or other authority to operate of the business concerned, or, where the licence, registration or other authority concerned is granted for an indefinite term, ordering that the licence, registration or other authority concerned be terminated----'

Also, the country's President has responsibilities reserved in granting or withdrawing certain mining rights under certain circumstances.

3.8 HUMAN CAPITAL MANAGEMENT REGULATIONS

There are laws and regulations for promoting and maintaining open and constructive dialogue and good working relationships between employers and employees in Zimbabwe. The Labour Act [Chapter 28:01] is the principal Act governing labour in the mining sector, and the Labour Act covers all mineworkers.

3.8.1 Employee corporation relations

There are Acts for holding mining companies accountable for safety, occupational health and human resources. Several acts apply in the extractive industry for occupational health and safety, namely The Pneumoconiosis Act (Chapter 15;08) and the Mining Management and Safety Regulations (SI 109 of 1990). This statutory instrument outlines the responsibility of the mine manager regarding surface protection, specifications relating to ventilation, gases and dust winding and tramming, raising and lowering of persons and notification of accidents or deaths to the Ministry of Mines. These regulations deal with mine managers and owners' responsibilities concerning surface protection and protection in workplaces.

3.8.2 Training capacity

One of the leading causes of workplace accidents is lack of training – incompetency. It is for this reason that the Mining (Management and Safety) Regulations: SI 109 of 1990 provides that the Mine Manager appoints only “competent persons” (section 7) – (person who has had adequate training). Another legal responsibility of the Mine Manager in terms of Section 9 (j) is not to permit the employment of any “incompetent” or inexperienced workers or workers who did not master the safety training to do dangerous work. This implies that only those who would have received adequate training may be employed. This is an essential component of any accident prevention programme.

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3.8.3 Collective bargaining

Under the Labour Act, The National Employment Council for the Mining Industry was established, which then registered the Collective Bargaining Agreement for the Mine Industry,

which deals with the specific right of mining industry employees. Statutory Instrument 256 of 2020. [CAP. 28:01 Collective Bargaining Agreement:

The following extract in terms of Section 80(1) of the Labour Act [Chapter 28:01] of a collective bargaining agreement entered into by the various parties concerned (namely the Mining Industry, the Minister of Public Service, Labour and Social Welfare) shows that the approved publication of the Collective Bargaining Agreement set out in the Schedule as registered in terms of Section 79 of the Act.

This further agreement made and entered into in accordance with the provisions of the Labour Act [Chapter 28:01], between the Chamber of Mines of Zimbabwe (hereinafter referred to as the employers' organisation), on the one part, and the Associated Mine Workers Union of Zimbabwe (hereinafter referred to as "the trade union"), on the other part, being parties to the National Employment Council for the Mining Industry, to amend the Collective Bargaining Agreement: Mining Industry (General Conditions), 1990, published in Statutory Instrument 152 of 1990 (hereinafter referred to as "the principal agreement''), shall be read as one with the principal agreement. The National Employment Council for the Mining Industry have today, 28th July, 2020, reached an agreement to raise the NEC minimum rates/earnings for the Mining Industry by 110.7143%.

This reflects the structured nature of collective bargaining in the mining industry.

3.8.4 Social protection

Relevant Acts of Parliament covering social assurance in the gold mining sector concisely define protection. The Pension and Provident Fund Act, Insurance Act, and the National Social Security Authority Act are significant. Other Acts direct labour justice, and these include the Mines and Minerals Act [Chapter 21:05].

3.8.5 Retirement plans

There is a National Social Security Authority, which is an agency under the ministry of labour and social welfare in Zimbabwe established to enforce regulations of the Factories and Works Act (20 of 1948), the Labour Act [Chapter 28:01] (Acts 16/1985). (S 2), the National Social Security Authority (Accident Prevention and Workers Compensation Scheme) Notice No. 68 of

1990 and the Labour Relations (HIV and AIDS) regulations S.I.202 of 1998, to provide safe and healthy workplaces National Social Security Authority (NSSA) Act [Chapter 17:04] and Radiation Protection Act [Chapter 15;15]. In addition, The Mining (Management and Safety) Regulations, 1990, contained in Statutory Instrument 109 of 1990 and made in terms of Section 427 of the Mines and Minerals Act, include detailed regulations that apply to all mines.

Compliance with these and other regulations not mentioned in this section for lack of relevance to this study but applicable to the mining sector is important to establish the optimal mix of CSR activities the companies are practising. There is evidence that mining companies are repositioning and redefining their CSR thrusts as a way of averting detrimental legislation. At the same time, they are obliged to be responsible corporate citizens for the community gives the licence to operate. Non-compliance is severely punished and may lead to loss of legal licence to operate.

3.9 SUMMARY OF THE CHAPTER

The chapter outlines the context of the gold mining sector in Zimbabwe. It gives an overview of the socio-economic and legal context summarising the different economic epochs that have helped shape the industry. The chapter presents the general pieces of legislation that govern the administration of mining activities. It also presents the legislation guiding environmental management and human capital management and guides business ethics by prescribing the corporate community interface in the mining sector.

4. CHAPTER 4 LITERATURE REVIEW

4 INTRODUCTION

The study aims to establish the nature and scope of corporate social responsibility practised by corporates under five different governance systems in Zimbabwe's gold mining sector. This chapter seeks to answer the following question: what are the theoretical and empirical explanations for corporate's performance on the different aspects of Corporate Social Responsibility (CSR), namely corporate environmental responsibility, business ethics and socially responsible human resources management? Before answering this question, the chapter provides different understandings of corporate social responsibility and elaborates on the overarching theory used for the study.

This study is guided by the theory of the firm, which encompasses several important economic and business theories necessary to understand the firm's behaviour in pursuit of profit. The firm's theory encompasses several important economic and business aspects necessary to understand the firm's behaviour in pursuit of profit. The theory of the firm has its three different models, namely the classical or shareholder, the stakeholder and the societal perspectives. The persuasion in choosing this view is that the firm view is useful in predicting and explaining the nature and behaviour of the firm given its governance structure and relationship with the market (Lelissa & Kuhil, 2018).

The framework for analysing the firm's CSR performance in this study is the Structure-Conduct-Performance paradigm, originally developed by Edward Mason in the 1930s. The Structure-Conduct-Performance paradigm assumes a causal relationship between market structure, conduct and performance (Lelissa & Kuhil, 2018).

4.1.1 The firm's structure

In this study, structure refers to how the business unit is governed. According to Ashfaq and Rui (2019), corporate governance arrangements, such as ownership structure, play a role in safeguarding the interests of stakeholders during the process of decision making. Given the

country's regulatory environment, this study focuses on ownership structures as the main determinants of the scope and nature of CSR practised in Zimbabwe's gold mining sector. Five such governance structures were participants in this study. The governance structures are private limited companies, companies listed on the Zimbabwe Stock Exchange, companies listed on foreign stock exchanges, government-owned companies, and lastly, multinational companies not listed on any exchange but with parent companies abroad.

The first governance structure is local private limited companies where shareholders can be between 1 and 20 as directed by The Companies and other Business Entities Act (Chapter 24:31). The second type is companies listed on the Zimbabwe Stock Exchange in line with the listing requirements of the Zimbabwe Stock Exchange Limited, which is a licensed securities exchange in terms of the Securities and Exchange Act (24:25). The third type is companies listed on foreign stock exchanges in line with the requirements of the listing country. According to the Zimbabwe Mining Development Corporation Act, the fourth type is the government-owned companies established and managed (Chapter 21:08). Lastly, the fifth type is multinational companies with parent companies outside Zimbabwe. However, their stocks are not traded on any stock exchange. Still, they are private limited companies registered in the home country regulations and The Companies and other Business Entities Act (Chapter 24:31) in Zimbabwe.

4.1.2 The firm's conduct

The firm’s conduct (behaviour) is the corporate social responsibility practice in three selected areas. The selected areas are guided by Vintro and Commanjuncosa’s (2010) CSR performance evaluation in environmental responsibility, business ethics and socially responsible human resources management. The structure-conduct performance paradigm assumes that its governance structure determines the conduct of the firm.

4.1.3 The performance

For this study, the performance refers to how the company implements its corporate social responsibilities in the selected areas of environmental responsibility, business ethics and socially responsible human resources management practices. The company can perform classically by valuing shareholders only. A company can perform in a way that considers other stakeholders

who are affected or affect the company's activities. A company can perform in a manner reflective of being societal by considering other stakeholders and global societal concerns. The structure-conduct performance paradigm assumes that the firm's performance is directed by the firm's conduct, which in turn is also determined by the firm's governance structure. The next section elaborates on the theoretical perspectives of the theory of the firm as drivers of CSR practices.

4.2 THEORETICAL PERSPECTIVE OF THE DRIVERS OF CSR

The theory of the firm was first propounded by Coase in (1937) and developed over the years by both business and economics fields. The theory states that investors are the owners of capital and means of production. The investors called shareholders to employ agents named managers to put together these resources to produce goods and services to be sold at a profit for the benefit of the shareholders (Lelissa & Kuhil, 2018). Figure 4.1 shows the three theoretical perspectives of the theory of the firm that determines the nature and scope of corporate social responsibility in the gold mining sector. These are shareholder or classical, the stakeholder and the societal perspectives.

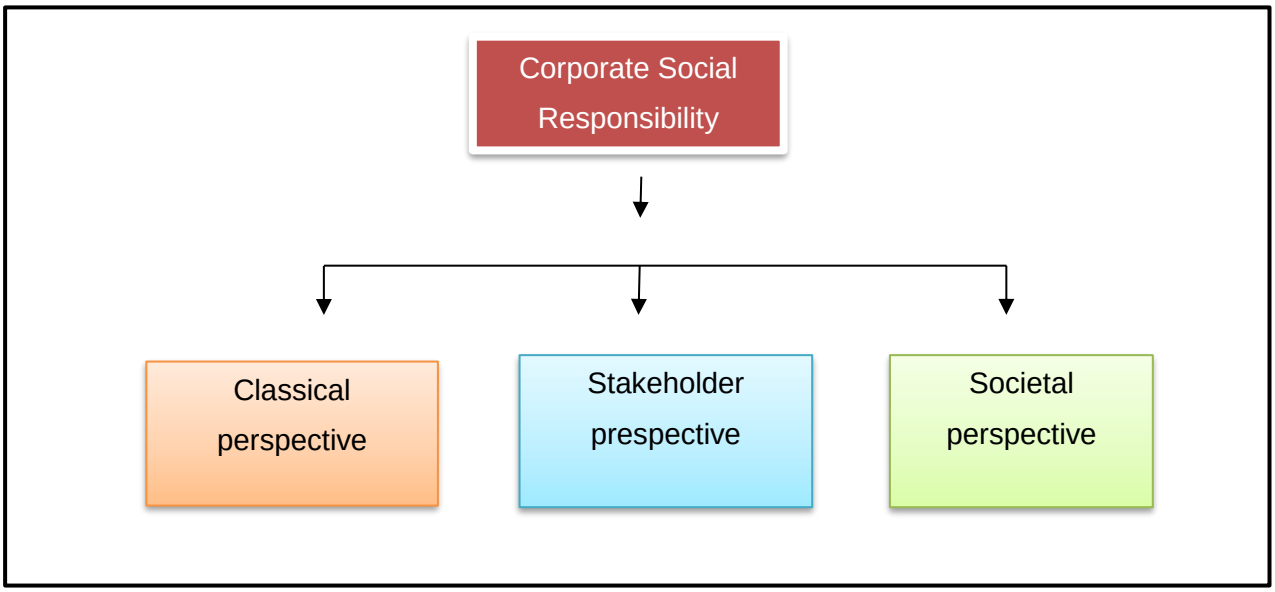

Figure 4.1: Theoretical perspectives of the theory of the firm and corporate social responsibility

4.2.1 Shareholder or classical approach to corporate social responsibility

The Classical View of the firm, also referred to as the shareholder approach as propounded by Friedman (1970), suggests that the firm's major social responsibility maximises profit for the owners. This approach emphasises the shareholder's pursuit of profit maximisation as the company's focal point. This approach places socially responsible activities and initiatives within the domain of governments (Friedman, 1970). The approach, also known as narrow CSR considers the firm as a closed business system whose primary reason for existence is to produce goods and services as efficiently as possible (Walker, 2018). This model emphasizes profits and individual interests, and analysis of corporate responsibilities is made at a micro-economic level.

A manager presides over the firm and acts on behalf of the owners to profit (Walker, 2018). Although corporate law, Companies Act 23:06 Zimbabwe says a company is a legal *persona* and has legal rights, these rights have been used to protect the company owners. The firm is given all rights accorded to a person, and it is regarded as an artificial person. This gives the firm corporate legitimacy, which concentrates on the economic functions of the corporation. A classical firm focuses on profit among the elements of triple bottom line profit, people, and planet (Friedman, 1970). This governance system allows management to be invisible and work behind the scenes or behind the corporate vale with no special mention as long as they live up to the expectations of the firm's owners.

The implications of this are that CSR is a peripheral of organisational goals. The extent to which a company incorporates CSR and exercises social responsibility is mainly determined by the socio-economic, political environment in which the business is being contacted. Various organisations, therefore, have different capacities for CSR. The section below discusses the different organisational governance structures. The focus is on how the different governance structures pre-condition an organisation's attitude, strategies, and outcomes towards CSR. Figure 4.2 illustrates the firm's responsibilities as envisaged initially under the theory of the firm.

Figure 4.2 below reflects the business relations in the classical view of the firm

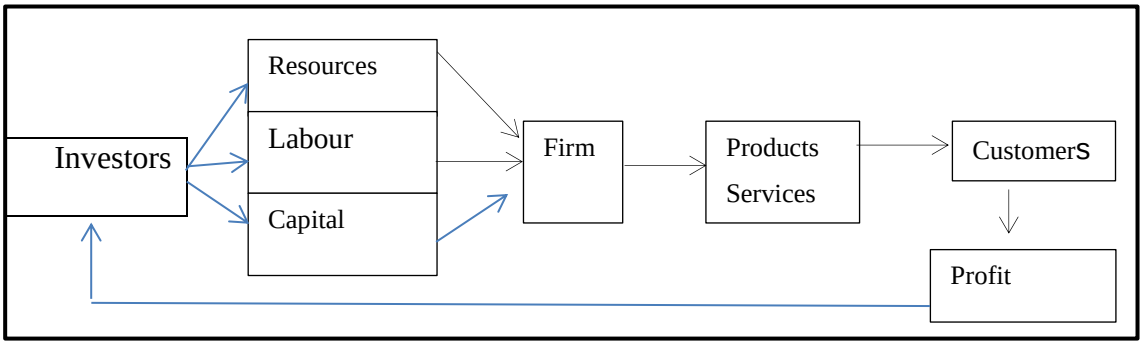

Figure 4.2 Business relations in classical view of the firm

(Source Own compilation)

As represented in Figure 4.2, in the classical view, the firm responds to demand and produces safe products for society. Managers are just employees who the owners of resources or shareholders employ. They have to ensure that the labour transforms the firm's resources into acceptable products for sale at a profit (Schmiel, 2019). The ultimate benefit of capital providers is to create wealth while abiding by society's legal and ethical rules (Friedman, 1970). It is noteworthy that the firm is expected to operate while conforming to the basic rules of society. However, corporate social responsibility is voluntary, and any rules or laws do not guide it. This, therefore, shows that the view has little room for corporate social responsibility.

Under the classical view, the attitude is that socially responsible activities and initiatives are the governments' domain. The major proponent of the classical view of the firm Friedman, (1970) asserts that the only social responsibility the firm has is to employ its resources and earn profit while engaging in free and open competition with neither deception nor fraud. This model emphasises profits, and individual interests and analysis of corporate responsibilities are made at a micro-economic level. Given this model or structure and attitude, a mining company with this governance model is responsible for producing the relevant mineral to earn profit for the investor's benefit. The embedded philosophy is that the corporation is there to serve the interest of the investor. The conduct is seen in the behaviour that focuses on profitability and reflected in the strategies that focus only on investment returns. There is a promotion of exclusive interests of the shareholders, and the law allows it.

4.2.2 The stakeholder approach to corporate social responsibility

According to Freeman (1984), this approach emphasises that business organizations are not only accountable to their shareholders, but they should also consider the contrasting interests of all other stakeholders that can affect or are affected by the achievement of business objectives (Freeman, 1984). He then proposed the stakeholder theory as an appropriate approach for guiding a corporation's implementation of CSR is the stakeholder theory. According to Freeman (1984), stakeholder theory advances the view that organizations must consider, in their decision-making process, the interests of both shareholders and others who may be affected by corporate actions, including employees, customers, partners, suppliers, creditors, government and the public at large.

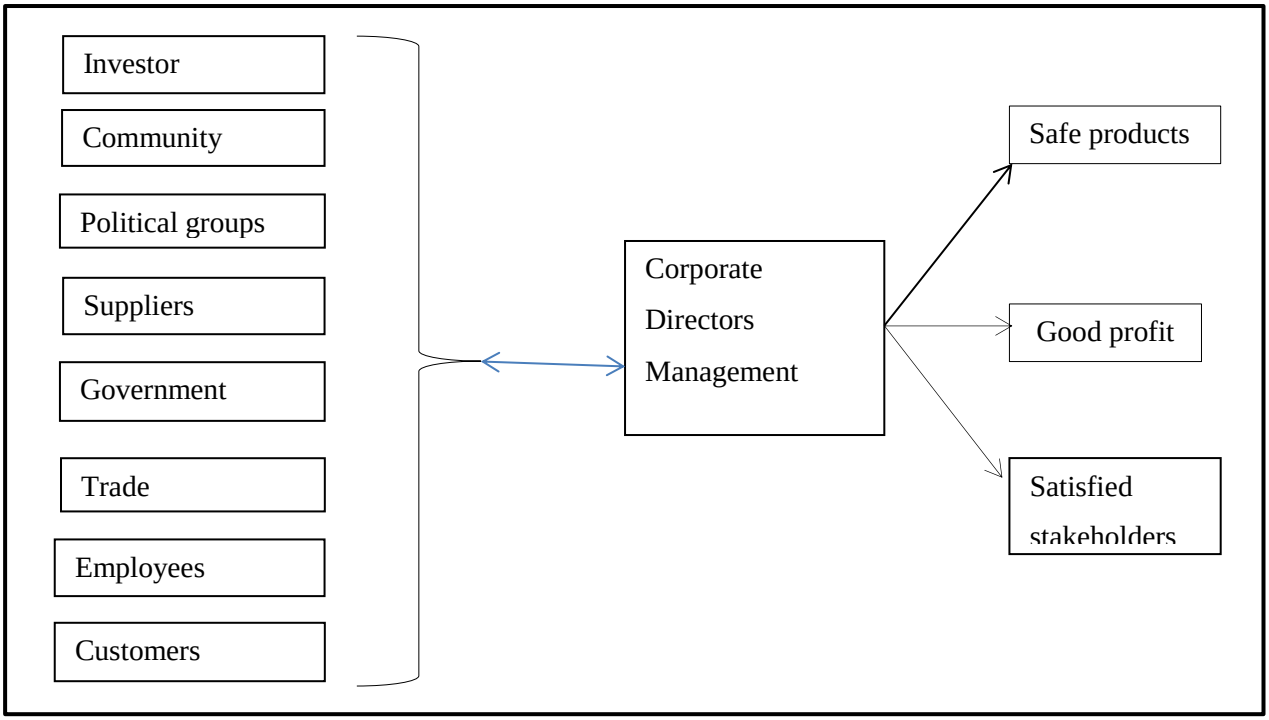

Figure 4.3: Business relations in stakeholder view of the firms (Source own compilation)

As shown in Figure 4.3, there is a dynamic relationship between the firm and the stakeholders. The stakeholder view argues that each stakeholder group has a right not to be treated as a means to some end. Therefore, they must determine the firm's future direction in which they have a stake (Elena and Herrera, 2015). Freeman and Dmytriyev further support this notion (2017),

stating that if the modern corporation is required to treat others as a means to an end. It is imperative that these "others" must agree on and participate (or choose not to participate) in the decisions to be used. These notions make one believe that the attitude of business organisations under the stakeholder governance is shaped by not only the need for management to be accountable to their shareholders but their consideration for the contrasting interests of all other stakeholders that can affect or are affected by the achievement of business objectives (Shnayder, Van Rijnsoever & Hekkert, 2016). Under this governance structure, it is possible for communities to demand socially responsible outcomes, for customers to feedback on the quality of the product, for the shareholder to demand high profit subject to meeting both social and environmental issues.

Friedman says the chief executive officer's role in a corporation is an agent of shareholders (Friedman, 1970). In the stakeholder view, the agency is conceptualised as the volitional character of human actions where human agents can act with conscious intention and as knowledgeable agents who closely monitor the domains of social actions they operate (Shnayder, Van Rijnsoever and Hekkert, 2016). As such, corporate agents monitor their actions and their consequences, the actions of others, and other aspects of the domain of action.

The stakeholder view of the firm upholds the principles of corporate rights and the principle of corporate effects. According to the principle of corporate rights, the corporation and managers may not violate the legitimate rights of the firm's constituents to determine their future (Martin *et al.*, 2017). Implications for management and CSR are that management is the one expected to engender strategies with CSR outcomes. With this aspect in consideration, the study wishes to investigate whether this governance structure can be applied in the Zimbabwean mining context.

Furthermore, the stakeholder view upholds the principle of corporate legitimacy and the stakeholder fiduciary principle. Legitimacy redefines the purpose of the firm in line with the principles of corporate rights and effects. Freeman (2016) redefine the corporation as a system of stakeholder groups, which can be conceptualised as a set of relationships among groups with varied sets of rights, objectives, expectations, and responsibilities

4.2.3 The societal view and its approach towards CSR

The societal view of the firm as identified in the literature is the third approach of CSR identified in the literature. It is similar in basics with the stakeholder theory but with an additional stakeholder: the international community. The approach is the broader view on CSR and builds on the stakeholder view by adding the global community. Kalender and Vayvay (2016) spell out the firm's socio-economic mandate: companies should assume more responsibilities than a mere profit maximisation for their shareholders. The view advocates that corporations should adopt moral and ethical values, which relate to the general public both globally and locally, to guide corporate actions regardless of whether an organisation is required explicitly by law (Bergman, Bergman and Berger, 2017). The societal approach has a basic governance structure similar to that of the stakeholder approach only as pointed out above it pays attention to international requirements towards the society.

The societal approach is based on the view that companies earn their licence to operate from society and hence should be responsible to society as a whole to constructively serve the needs of society (Ding, Ferreira and Wongchoti, 2016). The societal approach corresponds with the firm's socio-economic model, which considers companies should assume more responsibilities than a mere profit maximization for their shareholders. The view emphasizes the relationship between economic reasons and social issues. Under this view, the predicted attitude is that of applying moral responsibility to organisations. As a perspective on corporate social responsibility, this societal approach emphasises the strategic response to changing circumstances and new corporate challenges that require organisations to consider the global community (Heikkurinen and Mäkinen, 2018). There is a focus on enhancing corporate image and corporate legitimacy (Hutchins, Sinha, and Nandan, 2019). The predicted outcome of this view is that businesses efficiently promote social welfare since they exist as a response to a social need and have a privileged financial position in society (Hutchins *et al.,* 2019).

It is well established that a societal view that requires a social licence has been applied and adopted most extensively within the mining industry. The view emerged due to the increasing pressure and scrutiny this industry was coming under due to its environmental impacts and social performance (Moffat, Lacey, Zhang, 2016). From a perspective on corporate social

responsibility, the societal approach has become a strategic response to changing circumstances and new corporate challenges that require organisations to enhance corporate image and corporate legitimacy (Moffat *et al.,* 2016).

The classical view of business, where its responsibility to society is to provide safe products, has been challenged by new arguments that made their appearance in the 1980s: the stakeholder view. Like in the classical view of the firm, the firm is still an artificial person but one with responsibilities towards other stakeholders. The corporate legitimacy in this stakeholder view requires companies to be responsive to those who in society is immediately affected tangibly by corporate decisions and actions (Nielsen & Thomsen, 2018). In this model, the governance structure is such that management executives are stewards and agents of the firm (Martin and Butler, 2017). This conceptualisation is grounded on the ideas drawn from Freeman, (1984)'s stakeholder view of the business. These pioneers of the stakeholder theory define the stakeholders as all these groups that have a stake in or a claim on the firm, including owners, management, suppliers, customers, employees and the local community (Freeman, 2016). Figure 4.4 explains the relationships between the firm and its stakeholders under the societal view.

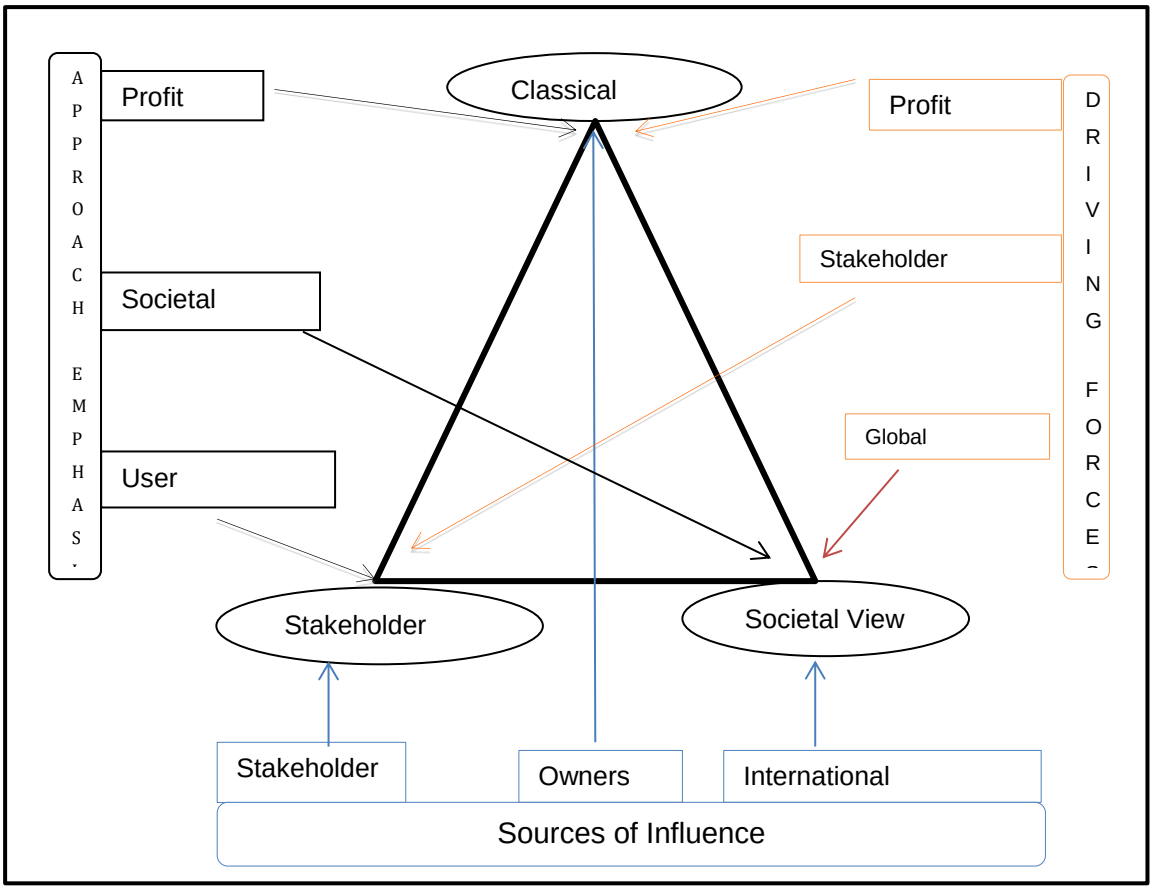

Figure 4.4 : The firm and it relates to stakeholders Source: (Own compilation)

This research seeks to understand how the dictates of classical, stakeholder and societal views shape and influence the nature and scope of corporate social responsibility by the five selected governance structures of mining companies in Zimbabwe. The resultant nature and scope of Corporate Social Responsibility in any corporation is a balance between and among the dictates of the classical, stakeholder and societal approaches to business management. An optimal situation would maximise benefits and minimise social and environmental, and economic costs. Any governance system of the corporation is a set of the configuration of rules, principles and values from the three models that are classical, stakeholder and societal. The five categories participating in the research are: local private limited, companies listed on the Zimbabwe stock exchange, companies listed on foreign stock exchanges, government-owned companies and multinational companies unlisted. Table 4.1 shows the structure and predicted conduct, and subsequent performance given the described structure.

Table4.1: Theory of the firm and predicted performance

Structure	Predicted conduct	Predicted performance	Category predicted to conform to the paradigm
Classical model	Shareholders invest capital and resources Managers are stewards of resources Manager's duty is to make labour transform resources into acceptable products Obey laws (Hemingway, 2017).	Produced products must be sold at a profit then distributed to shareholders the owners of capital Socially responsible activities and initiatives are the domain of governments. Therefore, poor environmental, business ethics and socially responsible human resources performance	Local private limited Government-owned Multinational companies with parent company abroad but not listed
Stakeholder model	Shareholders invest capital and resources Managers are stewards and agents of the company responsible for transforming resources through labour into acceptable products. Strategically involve other stakeholders. (Freeman, 1984, Hetze 2016, Chaffee, 2017 Richter & Dow 2017).	Sell goods at a profit Manage the people the planet and the profit. Predicted good environmental, business ethics and socially responsible human resources performance.	Listed on the Zimbabwe stock exchange
Societal model	The same as for stakeholder Additionally, pay attention to global needs for other stakeholders and the environment Clarke & Crane, 2018; Van Tulder *et al.*, 2016	Sell products at a profit as sanctioned by stakeholders even those outside the country predicted excellent environmental, business ethics and socially responsible human resources performance	Listed on the foreign stock exchange

Source (own compilation)

4.3 WHAT IS CORPORATE SOCIAL RESPONSIBILITY?

There seems to be no consensus in the literature on the definition of corporate social responsibility. Therefore, different scholars say corporate social responsibility has multiple interpretations and terminologies (Xia, Olanipekun, Chen, Xie and Liu 2018). Corporate social responsibility as a term came into widespread use around the early 1970s, even though some

corporates were implementing different aspects of social responsibility for over two centuries (ISO 26000: 2010).

Corporate social responsibility as a notion has been around for close to one hundred and fifty years (Bhaduri and Selarka, 2016, Farcane and Bureana, 2015), and the focus was mostly on local communities. Over the last two decades, there has been a shift towards a broader view of corporate social responsibility to include the environment, the local communities and other stakeholders (Loate, Padia and Maroun, 2015, Bhaduri and Selarka 2016). According to Pätäri, Arminen, Tuppura and Jantunen, 2016 corporate social responsibility is a concept whereby companies integrate social and environmental concerns in their business operations and voluntarily interact with their stakeholders.

Corporate social responsibility has become one of the main challenges for companies worldwide (Preuss and Glavas, 2016). According to Coşkun Arslan and Kısacık (2017), the main idea behind CSR is the triple bottom line, as expounded by Elkington (1997). Therefore, the idea calls for companies to harmonize economically viable, socially responsible, and environmentally sound (Abro, Khurshid, and Aamir, 2016). Corporate social responsibility refers to transparent business practices based on ethical values, compliance with legal requirements, and respect for people, communities and the environment. (See Figure 4.5.)

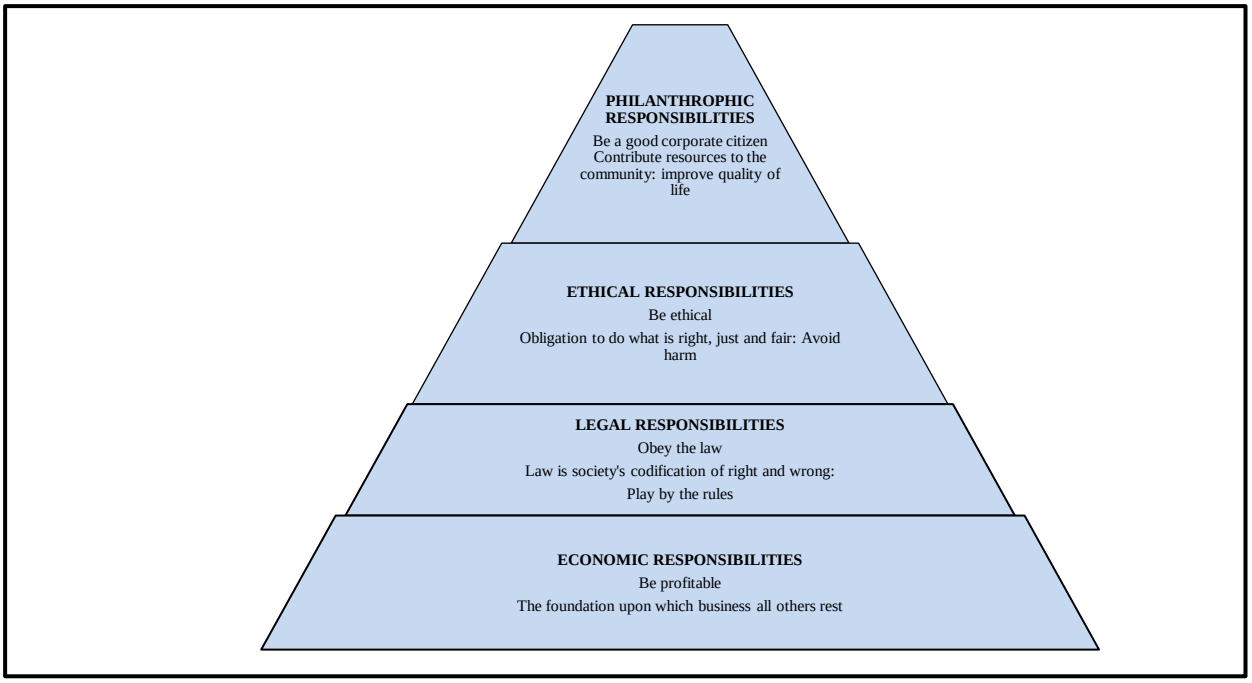

Figure 4.5: Pyramid of corporate social responsibility

Source (Carroll 1991)

The pyramid of CSR shows four types of responsibilities that constitute total corporate social responsibility. These are economic (make a profit), legal (obey the law), ethical (be ethical), and philanthropic (be a good corporate citizen). However, like many other scholars, Carroll does not provide guidelines for addressing questions such as how much ethical, how much philanthropic; or when is a corporate being socially responsible?

According to Bani-Khalid and Ahmed (2017), CSR evolved over 150 years ago as the American government corrected big capitalist corporates' behaviour. Since then, corporate social responsibility has become a field known to bring those charged with corporations, governments, non-governmental organisations and researchers together. It is a backbone and anchor that engenders the impetus to regard specific contexts with the view to identify, apply and monitor sustainable development (Commission et al., n.d.). Corporate social responsibility's strength lies in the fact that it is more than philanthropy and reporting. It is also the strategic interventions that benefit both the corporation and society, promoting a rights-based approach and a developmental

angle to companies CSR commitments (Loate, Padia, and Maroun, 2015). Corporate Social Responsibility addresses all aspects of society, corporates' existence and profitability and the environment. Sustainability of resources and attention to society improves lives, and this sums up sustainable development.

4.4 DRIVERS OF CORPORATE SOCIAL RESPONSIBILITY

Corporate social responsibility generally implies more self-control than external coercion and should be understood as an equilibrium between corporate economic and social performances. The literature identifies three reasons that compel companies to practice corporate social responsibility. Firstly, companies practice corporate social responsibility for a pragmatic or rational reason because they want to do it (Wang et al., 2016). Within reasoning, companies assume increased responsibilities and take an active part in social projects to enhance corporate image and induce companies a competitive advantage and reflect a win-win situation improving profits in the long term (Wang et al., 2016).

Secondly, companies assume CSR for the deontological reason because companies feel obliged to do it. It is assumed that businesses have a moral duty regarding the society and the community environment they operate in (Berliner and Prakash, 2015). Companies exist to satisfy a certain range of social needs, which is why they should act correctly and responsibly. The arguments are that society sanctions promote and legitimise corporates to function, use scarce resources, and provide an environment for businesses to profit. Therefore, it is logical for society to expect businesses to be good corporate citizens, obeying society's laws and refraining from activities with negative social impacts such as pollution, discrimination, and exposing workers to hazardous working conditions.

Thirdly, companies assume corporate social responsibility because they yield to social pressure or are made to do it (Berliner and Prakash, 2015). Society rejects companies that do not prove responsible behaviour and have specific expectations regarding corporate involvement in social issues. The above discussions suggest that companies practice social responsibility for three reasons. These are (a) they want to, (b) they feel obliged to, and (c) they are made to. The next section provides the various drivers of why corporates practice corporate social responsibility.

4.4.1 Corporate social responsibility because corporates want to

Wang et al. (2016) suggest a voluntarism discourse with its roots in the stakeholder approach to that considers CSR as a way in which corporates exceed the minimum obligations to stakeholders specified through regulations and corporate governance. Corporate social responsibility is a voluntary mechanism that would integrate environmental concerns and social issues into the corporate's operations above the entity's legal responsibilities. The key theme in this discourse is the voluntary and discretionary nature of CSR, and it is based on the notion that there is a legal requirement that corporates must serve public interests (Park, Song, Choe, and Baik, 2015). The notion of corporate social responsibility also expects businesses to contribute to the community's financial and human resources and improve the quality of life (Ansari and Reinecke, 2016). However, this role is purely voluntary. The decision to assume it is guided by only the business desire to engage in social roles and neither mandated by economic reason nor required by law and not even generally expected by business in an ethical sense.

4.4.2 Corporate Social Responsibility because corporates are obliged to

From a sociological point of view, corporates should practice corporate social responsibility (Heikkurinen & Mäkinen, 2018). Their arguments are based on the notion that society sanctions, promotes and legitimates corporates to function, uses scarce resources, and provides an environment for businesses to profit. Therefore, it is logical for society to expect a business to be a good corporate citizen, obeying society's laws and refraining from activities with negative social impacts such as pollution, discrimination and exposing workers to hazardous working conditions. French philosopher Jean-Jacques Rousseau termed a social contract whereby the business and society are mutually advantageous. The discourse holds that corporates are obliged to act for social good without specifying how that should be done. This is left to the interpretation and discretion of the corporate managers and chief executive officers.

4.4.3 Corporate social responsibility because corporates are made to

Mining is always associated with high levels of environmental and social impacts (Ranängen and Lindman, 2018). Mining activities are related to many environmental impacts, including consumption of resources, generation of waste that put pressure on the environment, risks of

pollution and risks, industrial accidents, and communities close to the mining operation (Carvalho, 2017). Therefore, it is important to establish how corporates balance their goal of economic performances and the demand for a clean environment and address the community's expectations. In Zimbabwe, the Environmental Management Agency assists in managing the environment, particularly regulating and monitoring the collection, disposal, treatment and recycling of waste, and regulating and monitoring the discharge or emission of any pollutant or hazardous substance into the environment (Government of Zimbabwe, 2007). The agency also regulates, monitors, reviews, and approves environmental impact assessments (Government of Zimbabwe, 2007). Where there is a need for devolution of responsibilities, Environmental Management Agency makes model by-laws then establishes measures for the management of the environment within the local authorities' jurisdiction. The agency exercises oversight over mining activities for the protection and management of the environment. Therefore, the agency also has hazardous substances permits to issue gold mining companies (Government of Zimbabwe, 2007).

It is normal for mining industries to have a formal written code of ethics and environmental policies, social responsibility and practices and environmental disclosure (Ranängen & Lindman, 2018). Some scholars suggest that some corporates can use CSR to distract the public from ethical questions posed by their core operations (Leung, & Snell, 2017). Some scholars have asserted that some corporates use CSR as strategies to divert attention away from the negative social and environmental impact on people and their surroundings. The current context of Zimbabwe offers this researcher a rare opportunity to test this assertion. This research, therefore, wants to check which mining companies do because they are expected to do.

4.5 DETERMINING THE SCOPE AND NATURE OF CORPORATE SOCIAL RESPONSIBILITY

Although the theoretical perspectives are presented in chronological order of appearance, starting with the classical through stakeholder to societal, this does not reflect a progression in use and adoption by managerial practitioners and even researchers. The choice of any company’s CSR strategy involves making a trade-off between and among the dictates of the three theoretical perspectives. As shown in Figure 4.4, each of the three perspectives has different power sources,

supported by various driving forces and emphasis. The classical perspective focuses on the interest of the stakeholder, and the driving force is profit maximisation. The stakeholder perspective focuses on pleasing the stakeholders, and the fundamental driving forces are the stakeholders' interests. The societal perspective is influenced mainly by global interest to consider societal needs in business management.

4.5.1 Corporate social responsibility in the context of the gold mining sector

In mining, business management must integrate environmental, economic, and social aspects through all phases of mineral production from exploration through construction, operation, and mine-site closure due to the high environmental impacts (Lawrence & Moritz, 2019).

4.5.1.1 During exploration

The companies must assess impacts and put measures to mitigate the negative ones and share the benefits. There is usually some level of perturbation in the community (Lawrence and Moritz, 2019). If there is a need for resettlement of any locals, a proper plan, which involves negotiations with the community and stakeholders, must be in place (Siddiqui & Lahiri-Dutt, 2015). Then plans to resettle are made to make room for the mining project. If the resource is in a remote area, then plans to put in place infrastructure are made.

4.5.1.2 Operation

In many cases, mines are in areas where there is a lack of development. These are mostly in areas away from urban centres where the government cannot provide infrastructure development resources. Given that the state may deliberately retreat from tasks that are exclusive government responsibilities (Scherer, Rasche & Palazzo, 2016), this can involve the construction of roads and railway links and other social infrastructures like schools, hospitals and houses. In this regard, Ansari and Reinecke (2016) note that local and regional authorities may expect the mining company to bear all responsibility in infrastructure development. If the company does too little, this may cause dissatisfaction from stakeholders, including financiers, and the company becomes disadvantaged. Inevitably, with the creation of this new community, there is a perturbation of the traditional lifestyles and structures while introducing new consumption

patterns and population migration to this new community. Laws govern these issues in every country, especially mining.

Elimination of accidents and incidents is always crucial in mining setup. International standards like Occupational Health and Safety Management Systems – Guidelines for implementing the OHSAS 18001 and local regulatory bodies urge companies to prevent accidents proactively. In Zimbabwe the EMA monitors and controls noise, vibration and radiation, and the integrity of land, air and water quality. Through Environmental Management Agency, the Zimbabwean government oversees land rehabilitation where degradation has occurred and the preservation of *flora* and *fauna*.

Mines are bound to have a significant adverse effect on the local ecosystem (Laing *et al.*, 2019). On the other hand, large mines tend to be operated by major mining firms, becoming increasingly cognizant of environmental effects due to pressures from regulatory agencies and non-governmental organizations (Alan, 2017, Laing *et al.*, 2019). Specifically, standards for reclamation of mines would need to be more stringent, given the potential impact on the ecosystem (Gajigo & Dhaou, 2015). There are pressures on the environment, including gravel or dust access roads, mine dumps from the ores and disposal of wastes and residues. There are indirect impacts on the biodiversity of the surrounding areas caused by mining activities and the inevitable creation of dumps. There is pollution risk, specifically air-borne pollution resulting from haulage trucks, and milling activities raise dust, affecting mine staff and the surrounding community. Contaminated dust settles on flora, and secondary pollution results when the dust is washed away into ground or surface water sources causing negative downstream effects on agriculture and fisheries (Loate, Padia & Maroun, 2015). Greenhouse gas emissions are also present which sometimes depending on mineral may when they get in contact with oxygen or water oxidize forming acid which affects the waters of the area and have ripple effects on the flora fauna and agriculture. The community is always exposed to the risk of industrial accidents.

4.5.1.3 During closure

There is no backfilling for the mines during operation, and this ought to be done after the operations. The corporate policies should address these issues, ideally at the licensing stage.

There should be documented plans, which show how the company intends to deal with the legacy, which the operation and milling will inevitably leave (GRI-ICMM, 2017). The policy should also show how the residues will be treated and how the land and area will be returned to use after decommissioning. There is a need to show the long-term care and maintenance after the operations and milling activities have ceased. Therefore, a schedule showing the financial responsibilities arising from that and how these activities will be funded must be shown. These measures would be more effective if regulations requiring these and possibly requirements for bonds and securities held by the government if the operations are fully-fledged, and the company pulls out the care and maintenance activities are fully functional covered.

4.6 MEASURING CORPORATES' CSR PERFORMANCE

Traditionally organisations account for only those items that can be reduced to monetary value. It has been a challenge to convert environmental practices and business ethics performance into financial values, and more complex when assessment is extended to the sphere of social performance (Mansour, 2017). Companies can define sustainability differently; therefore, indicators and systems set up to measure CSR will also vary. Figure 4.6 shows the performance measurement framework.

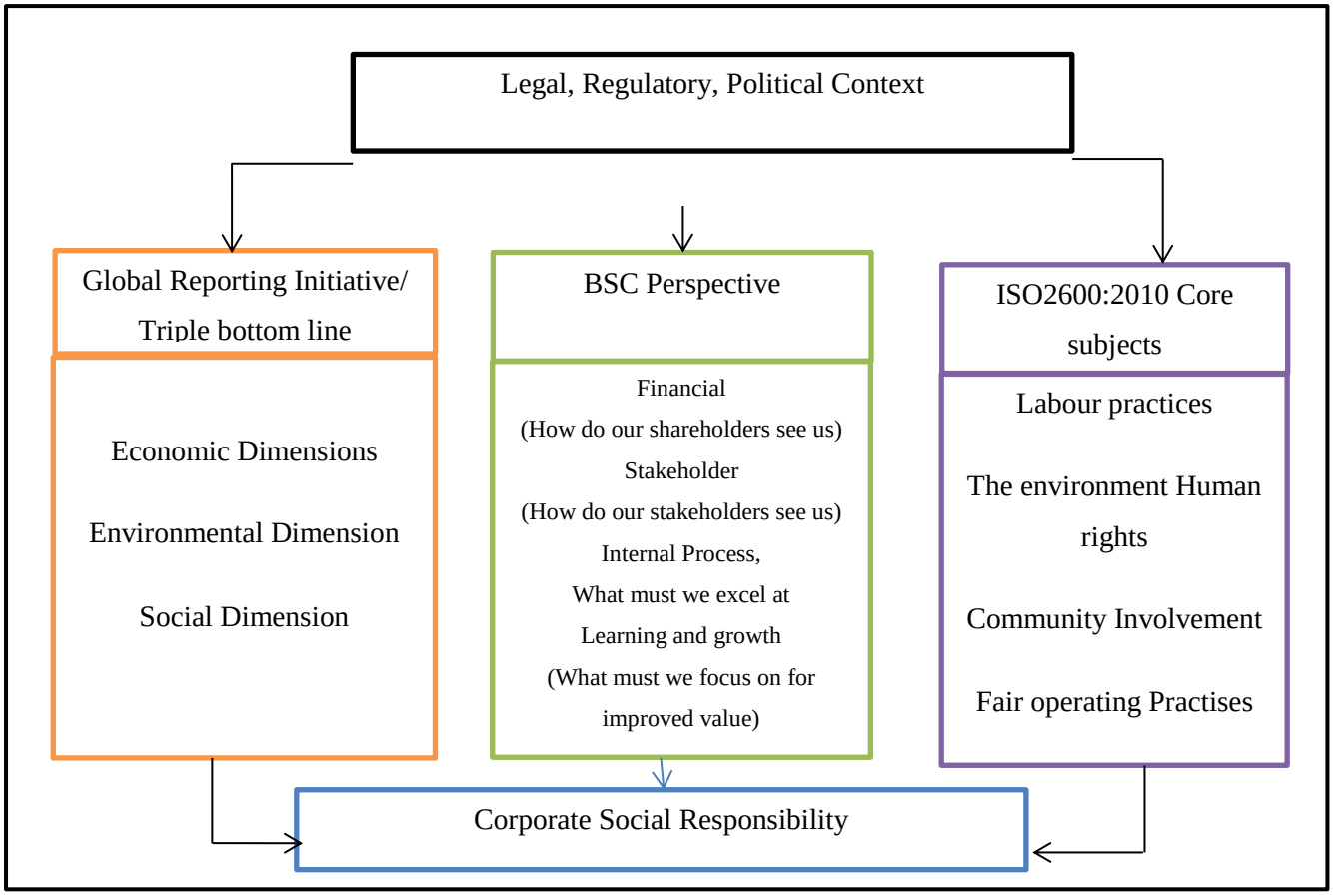

Figure 4.6: Framework for measuring corporates' CSR performance

Source: (Own compilation)

4.6.1 Global Reporting Initiative and the Triple bottom line

In recent years, corporates are increasingly receiving calls to move towards a broader view of corporate social responsibility to include the environment, the local communities and other stakeholders (Abro, Khurshid, and Aamir 2016). As a result, corporate social responsibility is now viewed as a concept whereby companies integrate social and environmental concerns in their business operations and voluntarily interact with their stakeholders (Xia et al., 2018). The main idea behind this concept of CSR is the triple bottom line referring to profit, people and planet where companies harmonize their efforts to be economically viable, socially responsible and environmentally sound. Elkington (1997), the original proponent of the triple-bottom-line concept, defined it as a way of reporting that provides information about an organisation's economic, environmental and social performance. The idea of reporting against these three bottom lines is tied directly to the concept of CSR. Triple bottom line reporting, when

implemented well, provides information that enables other stakeholders to assess the responsibility of the corporate's operations. According to Mitra (2019), responsible corporates must be financially secure (as reflected through such measures such as profitability), environmentally friendly (it must minimize, if not eliminate its negative environmental impacts), and responsive to society's demands (act in ways which conform with societal expectations social contract and legitimacy).

Mining companies often implement corporate social responsibility (CSR) projects in an ad-hoc manner based on short-term budgetary pressures. Environmental initiatives are often treated as separate from other CSR programmes and operational improvement initiatives (Laing, Taschini, and Palmer 2016). Understanding how the integration of these elements together into a holistic strategy for achieving the TBL could help mining firms achieve all elements whilst improving profitability (Laing *et al.*, 2019).

People in the triple bottom line include employees and locals. Since CSR has become a global social norm, employees, tend to judge their organization by its CSR behaviours. A corporate's successful engagement in CSR is well accepted by employees and stronger employee identification with the organization (Shen and Benson, 2016). In human resources, socially responsible human resource management is defined as corporate social responsibility (CSR) directed at employees, underpinning the successful implementation of CSR (Shen and Benson, 2016). In other words, intrinsic CSR practices are described as practices perceived as sincere. Organizations engage in these practices because they care increases a corporate's competitiveness, and ultimately its long-term survival (Manroop, 2015; Story and Neves, 2015). The acts of benevolence show an ethical climate that is important to secure employee commitment and loyalty and ensures employees exhibit ethically responsible behaviours that will ultimately translate into a competitive advantage (Manroop, 2015). Hence, when a corporation invests in a charity, employees believe that they care for their cause. This becomes directly related to the corporate's moral aspect, in which stakeholders trust the 'benevolent' character of the corporate (Story and Neves, 2015). In some instances, CSR practices maybe not be directly oriented toward employees. Still, they may be connected with employees' and society's values, beliefs, and morals. Employees may, as a result, feel the need to reciprocate positively in

response to the corporate's valued CSR practice, and the community views the organization as a good corporate citizen. Story and Neves (2015) go on to say that employees trust that their organization invests in CSR activities to be in good repute, minimise risks and create good to stakeholders without necessarily expecting anything in return.

In exploring CSR in the mining industry, Vintro and Comanjuncosa (2010) proposed a set of criteria for sustainability, ethics and human capital. They offer a CSR performance chart which is composed of 31 indicators and a global index. This can be used as an internal measure for companies of CSR continuous improvement. For this research, organisational performance and organisational performance will be based on a combination of triple bottom line dimensions, balanced scorecard perspectives, and some of ISO 26000:2010 indicators on the activities and strategies found in the literature that reflect the presence of attention to corporate social responsibility.

4.6.2 The Balanced Scorecard

The balanced scorecard has been used as a performance measurement system and a strategic control system, whose framework, when used, translates organisations' strategic goals into rational measures together with feasible actions (Tsalis et al., 2015). According to Kaplan and Norton (1996)'s model, feedback on the internal business processes and the external outcomes of those actions can be done using the balanced scorecard approach since the balanced scorecard can be used as a tool to find the most strategic performance and results. The balanced scorecard approach based on sustainable development parameters can be used to evaluate the sustainable performance of mining companies. A way of overcoming challenges in performance measurement can be mitigated through the use of a modified balanced scorecard (Mansour, 2017). Figure 4.7 shows the Balanced Scorecard framework.

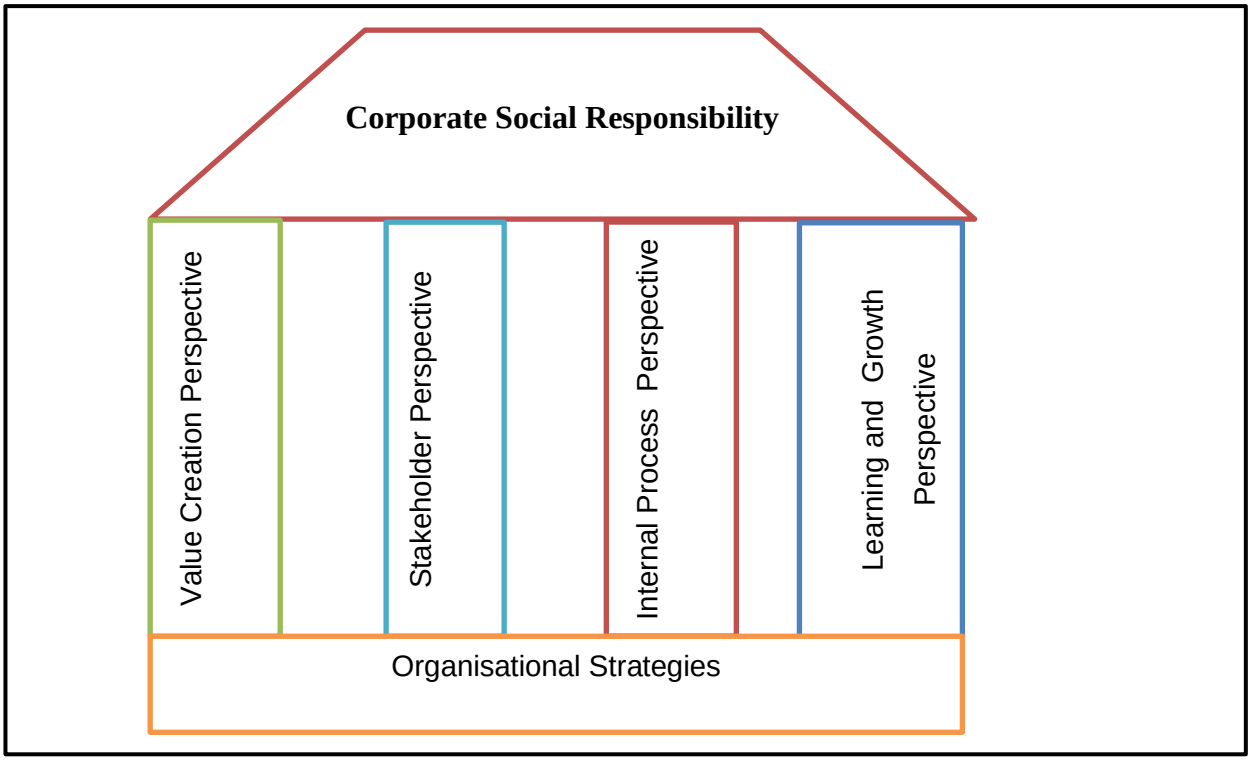

Figure4.7: Balanced Score Card Framework (Source: Own compilation

In a quest for an integrated performance measurement system that incorporates and pays attention to the principles of Triple Bottom Line, a modified balanced scorecard approach can be used in general corporate strategic management (Kaplan & Norton, 1996). The result of this endeavour would be a modified balanced scorecard. The original balanced scorecard technique ignored environmental and social aspects, which are essential pillars of sustainable businesses. As a result, a sustainability balanced scorecard has been suggested and adopted by many researchers and managers. Kalender and Vayvay, (2016) propose the sustainability balanced scorecard with a fifth perspective consisting of social and environmental performance indicators referred to as sustainability. The sustainability perspective highlights the importance of the triple-bottom-line by measuring social, economic and ecological responsibility as a corporate goal. The balanced scorecard has the potential to integrate environmental and social aspects into the general management system. The balanced scorecard is not a tool for formulating strategies but helps describe existing strategies consistently to enhance their successful execution (Kalender and Vayvay, 2016). More literature (Tsalis, Nikolaou, Grigoroudis and Tsagarakis,

2015, Hansen and Schaltegger, 2016, Aly and Mansour, 2017) also confirm that modifications to the original balanced scorecard which, consider environmental, social and ethical issues are often referred to as sustainability balanced scorecard. They note that social and ecological issues have tremendously gained increasing strategic relevance for businesses for various reasons in recent years. These include facts that they often represent risks in the form of negative press coverage or consumer boycotts; or may present opportunities in the form of noticeable positive effects on employee morale and corporate reputation (Hansen and Schaltegger, 2016). Recognition of social and environmental aspects has spurred their systematic measurement, and a modified balanced scorecard framework offers that.

4.6.3 ISO2600:2010 Core subjects

The ISO26000:2010 establishes seven core social responsibility subjects, including organizational governance, community involvement, human rights, labour practices, the environment, fair operating practices, and consumer issues. The core subjects provide very useful guidance that corporations can use to structure their CSR practices. However, ISO 26000:2010 does not guide how the core subjects should be balanced against one another during decision-making processes. It guides the relationship between a firm, its stakeholders and society, on social responsibility issues and an organisation's sphere of influence. The lack of a universally accepted understanding of CSR has given corporates leeway to adopt practices that best suit their corporates' agenda.

4.10. Summary

This chapter set out to review the theoretical aspects regarding CSR and different constructs of corporate social responsibility. The chapter presents the basis of measurement of CSR, which is the structure-conduct-performance paradigm as the determinant of the scope and nature of corporate social responsibility practised in the gold mining sector in Zimbabwe. The chapter shows the organisational theory of the firm and its developmental approaches of classical, stakeholder and societal as affecting the scope and nature of CSR practised in areas of environmental management, business ethics and socially responsible human resources management. Lastly, the chapter presents the measurement of CSR performance as based on a combination of triple bottom line dimensions and modified balanced scorecard perspectives.

5. CHAPTER 5 RESEARCH ARTICLE 1

Title: Determinants of the nature of business ethics practised by the gold mining sector in Zimbabwe

The reader is requested to take note of the following: The article was submitted for peer-review and possible publication in the following Department of Higher Education and Training (DHET) accredited academic journal indexed, peer-reviewed academic journal as follows: Loveness Nyikahadzoi, Ronnie Lotriet, Anet Smit. Determinants of the nature of business ethics practised by the gold mining sector in Zimbabwe, in the South African Journal of Economic and Management Sciences. ISSN: 1015-8812 (PRINT) ISSN: 2222-3436 (ONLINE). https://sajemsjournal.org.za

Submission notification is shown in APPENDIX 5A on page 272. The article was written in line with the journal's submission guidelines, which are included in Appendix 5B on page 275 and AOSIS Publishing, the publishing organisation for the journal reference style guide in Appendix 5 on page 260. The article was researched and written by the first author (Loveness Nyikahadzoi) as the PhD candidate and primary author. At the same time, the co-authors (Ronnie Lotriet and Anet Smit) fulfilled a supervisory function as the PhD project's promoters.

Abstract

Mining has different impacts on the biophysical environment, social environment and economic environment. Therefore are corporate social responsibility practices, which are expected to be put in place voluntarily by the mining companies to mitigate any adverse impacts while at the same time enhancing positive impacts on the triple bottom line. Different determinants drive corporate social responsibility activities. This article sets out to establish the driving forces for the nature and scope of CSR, as practised by mines under three different governance structures: government-owned, a multinational company with headquarters abroad, and an international company listed on a foreign stock exchange. The method used was a review of legislative acts and interviews with key informants knowledgeable about corporate social responsibility practices in the gold mining sector. The study established that government-owned mines had problems complying with corporate social responsibility requirements while the MNC and listed MNC performed better and best, respectively. This can be attributed to the more stringent demands on corporate social responsibility practices and reporting requirements by international listing

Keywords: determinants, corporate social responsibility, triple bottom line, gold mining, stakeholders, stakeholder theory,

5 INTRODUCTION

Corporate Social Responsibility (CSR) is becoming a permanent feature of corporate governance and organisational strategies worldwide because corporate leaders know that organisations expect much more than just products. The high degree of global awareness of sustainability issues and CSR requires organisations to include CSR practices and principles in their business strategies (Visser, 2016). The mining sector in Zimbabwe now accounts for more than 25% of its GDP and approximately 50% of its exports, making it the main anchor of the economy (Government of Zimbabwe, 2018). Therefore, a study on this vital sector and industry can help establish the optimal mix of CSR activities involved in gold mining. Although there are sixteen pieces of the legislature with which the mine houses have to deal, most laws are administrative. The government which, is the stakeholder responsible for creating these pieces of the legislature, is neither coordinated nor resourced enough to enforce compliance. Under the triple bottom line approach (Elkington, 2018), the proponent pushes forward the revolution that for meaningful corporate social responsibility; the regulation paradigm has to shift from hard (where environmental or social compromises are tolerated) to soft (with globalised or societal values). This entails the death of armchair posture in legislation requiring better regulation culture and trustworthiness. A compromised regulator provides perfect conditions for a minerals patronage system benefitting an elite group with access to capital unhindered by proper regulation of environmental effects. For this and other reasons, it is especially important to investigate CSR practices in developing countries because of the pervasive institutional voids that characterise these settings (Kolk, 2016). There are high differences between CSR practised in developed countries and developing countries, which can be attributed to different socio-cultural environments or levels of national economic development (Örtenblad, 2016; Jamali & Karam, 2017).

If not properly regulated, the mining industry can threaten food security downstream effects on agriculture, fisheries, and wildlife. This study assesses the extent to which mining corporates take environmental considerations into account in their operations and whether the regulator, the key stakeholder vested with the oversight role, successfully upholds its constitutional obligations of monitoring and enforcing compliance with environmental laws by mining companies. The debate on CSR's role in enhancing financial performance is continuing and remains unresolved.

However, this debate has not been taken into contexts where the macroeconomic environment of that country threatens the corporation's profitability and the socio-political environment provides guidelines for CSR. The CSR debate is yet to be repeated in the backdrop where the government demands corporations to alleviate poverty among the surrounding communities. The environmental regulatory body is underfunded and under-resourced to mount an effective enforcement system effectively.

Given the above, the following research question was formulated: To what extent has the mining sector of Zimbabwe achieved a balance between and among conflicting demands to be profitable and socially and environmentally responsible in the economic, socio-political and regulatory environment prevailing in the country? Although there are well researched and argued works on CSR from the USA and Europe and, to a small extent, Asia, none of these can best guide how Zimbabwean organisations can craft their CSR. This is because CSR is geographically determined (Chintrakarn et al., 2017, Ding et al., 2019). This study of CSR in Zimbabwe's mining industry contributes to scientific knowledge by bringing new context into the debate.

5.1 CONCEPTUAL AND THEORETICAL FRAMEWORK

Corporate social responsibility generally implies more self-control than external coercion and should be understood as an equilibrium between corporate economic and social performances. International Federation of Accountancy (2017) identifies three critical dimensions of corporate social responsibility. These are economic viability (profit), social responsibility (people) and environmental responsibility (planet). Elkington (2018) refers to the triple bottom line reporting to report on how the organisation is faring regarding the triple Ps: the people, the planet, and the profit. Corporate social responsibility is more visible in the mining sector because of the nature of the mining industry. In mining, companies must integrate environmental, economic and social aspects through all phases of mineral production from exploration through construction, operation and mine-site closure. To strike a balance among the triple bottom lines, four important concepts interplay. These are the context of the mining industry, the drivers of CSR in the industry, and the strategies that mining companies deem relevant to develop the desired CSR impact. Figure 1 shows how the concepts of this study are related. This conceptual framework identifies four sets of factors, each containing several variables that establish general patterns of

incentives and disincentives to engage in some or all aspects of corporate social responsibility. The four sets are the context, the selected drivers of CSR, the strategies used by the mining companies and the impacts.

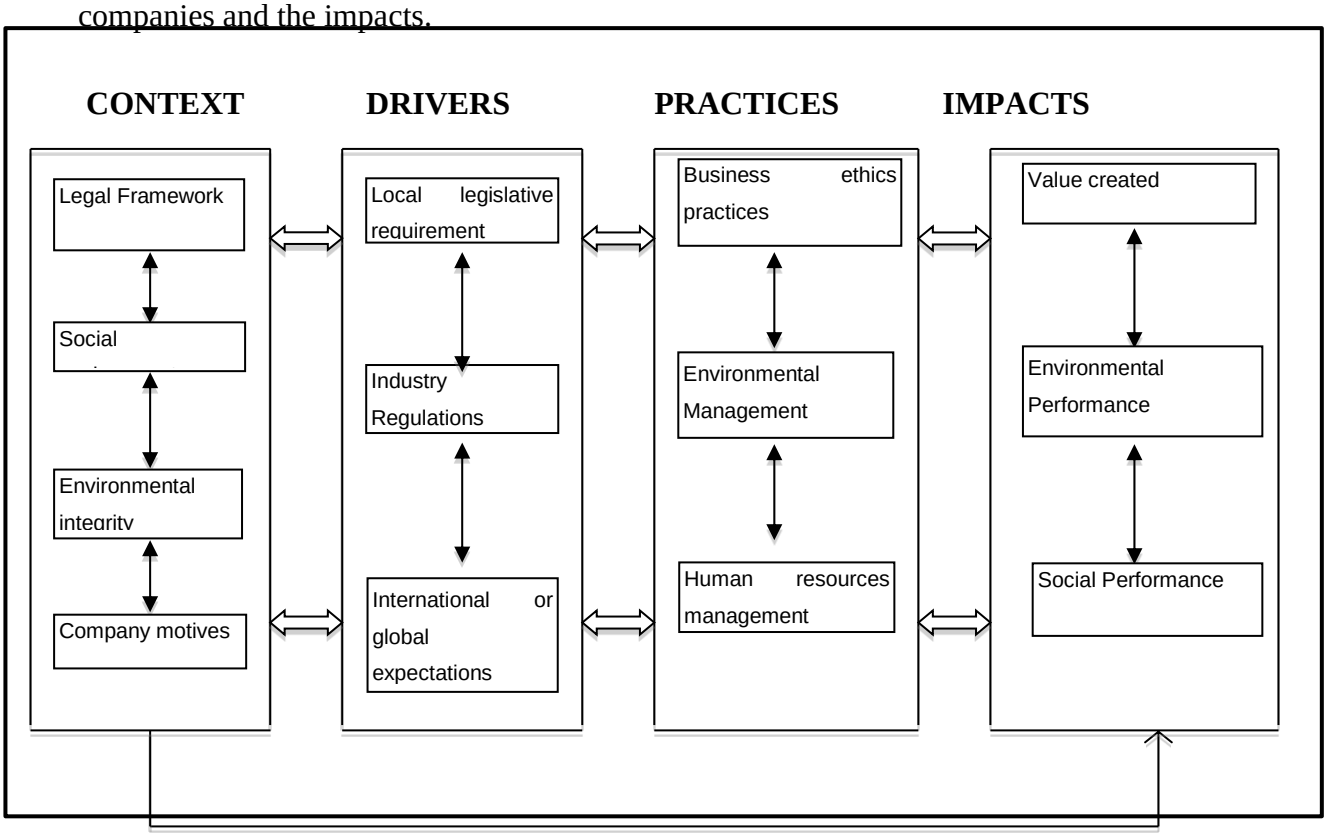

Figure 5:1:

Figure 5.1: Conceptual framework for understanding determinants of Corporate Social Responsibility (Source: Own compilation)

The conceptual framework shows that mining companies act like they do because there are different stakes in play, ranging from biophysical, social, economic, and legal. Given these stakes, the stakeholder theory would be the appropriate lens for investigating CSR's key drivers or determinants.

Shareholders are motivated by profit, governments and the host communities are motivated by maintaining environmental integrity, the international community and the host communities are motivated by promoting community involvement and empowerment. Therefore, it is imperative for enterprises to efficiently manage their impacts on the economic, social, and environmental aspects and report on them and share with stakeholders (Winkler, Deller and Marcouiller, 2015). As there is no prescribed CSR strategy, different corporations define their own approach to corporate social responsibility.

Literature is awash with theories on CSR. Garriga and Melé (2004) distinguish four Groups of CSR theories: instrumental, political, integrative and ethical theories see table below. Instrumental theories, from among the elements of triple bottom line profit, people and planet, focus on the corporation's profit as a mere instrument for wealth creation. Political theories deal with the corporation's social power and its responsibility in the political arena associated with that power. The integrative theories focus on social integration. The theories propose models of corporate legitimacy, which require companies to be responsive to those in society immediately affected in a tangible way by corporate decisions and actions. In this model, the governance structure is such that management executives are stewards and agents of the firm and should consider that business should integrate social demands. The ethical theories focus on ethics; they hold that the relationship between business and society should be embedded within ethical values. Martínez, Fernández and Fernández, (2016) suggest that companies must adapt their social and environmental practices to conform to the formal governing institutions that set the rules, laws, policies or regulations. Frynas and Yamahaki (2016) propose that legitimacy and license to operate emanates from compliance with informal institutions like cultural norms, religious beliefs or professional routines. External social approval determines the survival of the company operations (Jamali *et al.,* 2017). This paper uses mainly stakeholder theory. However, it focuses on influential stakeholders, the government, the shareholders and the communities and the types of isomorphism that shape corporate environmental responsibility (Gallén and Peraita, 2017).

Isomorphism can arise because of the pressure from influential or critical stakeholders (upon whom an organisation is dependent). The government in Zimbabwe is one such stakeholder to

change an organisation's institutional practices (Gallego-Álvarez and Quina-Custodio, 2017). Embedded in the stakeholder theory is the dimension of institutional theory referred to as coercive isomorphism. Isomorphism is a process that forces organisations to homogenise under the same set of environmental conditions. Coercive isomorphism is related to stakeholder theory's managerial perspective, which focuses on influential stakeholders (Fernando, Susith, Lawrence, Stewart, 2014). Coercive isomorphism relates to external factors like government policy, regulations, and other regulatory bodies wielding power to influence organisational practices. The Stakeholder theory is even more appropriate in today's fast-changing business environment since the business world has become ever more turbulent and more interconnected. As such, the boundaries between firms, industries and the lives of people become blurred. A stakeholder approach has more to tell us about both values and value creation (Freeman and McVea, 2018).

Under the stakeholder theory, the organisation is an entity with responsibilities towards other stakeholders. The principle of corporate legitimacy embedded in the stakeholder theory requires companies to be responsive to those who in society is immediately affected tangibly by corporate decisions and actions (Hussain & Moriarty, 2018). Under the stakeholder theory, the governance structure is such that management executives are stewards and agents of the firm (Martin & Butler, 2017). According to Ali *et al*., 2017), in developing countries, government regulations and ownership structure influence CSR; therefore, it was possible to compare CSR activities from the three mines belonging to three different ownership structures, namely a government-owned, multinational company with a parent company abroad but unlisted and a multinational company listed on a foreign stock exchange. The next section establishes the objectives of the article. The paper's objective was to investigate the determinants of the scope and nature of CSR as practised in the gold mining sector in Zimbabwe. Given the legal and regulatory environment, the main question was the key drivers of CSR in the mining industry?

5.2 RESEARCH METHOD

Although it is acknowledged that no single approach is intrinsically better than the other, this study used the interpretivist approach. The main reason why the qualitative approach was adopted is that traditionally, organisations account for only those items that can be reduced to

monetary value. However, it has been a challenge to convert environmental practices and performance into financial values, and more complex when assessment is extended to the sphere of social performance (Mansour, 2017). Another important tool used in qualitative research and employed in this research was Focused Group Discussions. The researcher visited the three selected communities around the mine to conduct some focus group discussions. A series of broad-ranging, informal discussions with community members, both in groups and as individuals, were held. For the focused group discussions conducted, an effort was made to include a diverse range of participants classified based on age and sex. The focus group was purposively selected based on their subject knowledge and their involvement in mining operations. The size of each group was between 6 and 12. A checklist of key questions guided the focused group discussions.

The study worked with multiple cases, as the results of multiple case studies are considered more persuasive, and the overall study is more robust (Gustafsson, 2017). Multiple cases can provide the literature with valuable influences from the differences and similarities (Gustafsson, 2017).

This article used the case study research design to present the data on the mining industry situations and provide insights into the detailed behaviours of the mining companies. Using multiple case study approaches, the researcher analysed the data within and across the different categories among government-owned, unlisted multinational companies and one mining company listed on foreign exchange.

Some 35 gold mines are members of the chamber of mines in Zimbabwe and contributors to the Mine Industry Pension Fund. The authors prepared three in-depth case studies of mining companies that have a distinguished difference like the company's governance and large scale mining companies. The case profiles were prepared based on the information obtained from participant observation, key informant interviews, and focus group discussions with the hosting communities. For this research, the selection of key informants from government and quasi-government departments from Rural Development Councils, Environmental Management Agency, ministry of mines and other relevant stakeholder representatives were interviewed. Purposive sampling was also used to select these key informants. Care was taken to ensure the participation of a wide range of people to elicit divergent views and opinions on specific CSR

issues in question. Key informants were selected based on their knowledge of the specific history of events and places. For each set of key informants, a checklist of questions was prepared to guide the discussion.

Care was taken to reduce extraneous variance which may exist due to firm size by selecting large scale mining companies registered with the Chamber of Mines in Zimbabwe and are members of Mining Industry Pension funds. The research goal is to establish the degree of CSR adoption of large scale mines of similar size that operate under different institutional and regulatory postures in Zimbabwe. Selected mines were those mining gold only but in three categories: state-owned, multinational but not listed and multinational listed on a foreign exchange to increase variation in CSR adoption stances.

5.2.1 Data collection

To establish the current context of the legal, regulatory environment of the mining industry in Zimbabwe, a review of the local legislation, government policies and, conference proceedings were carried out. This literature also included but was not limited to the literature on economies with significant mining sectors, Government of Zimbabwe publications, Zimbabwe media newspaper articles, Acts and statutory instruments, and other archival materials. The research also used key informant interviews.

5.3 THE INSTITUTIONAL AND LEGAL FRAMEWORK OF THE MINING SECTOR

Zimbabwe is endowed with vast mineral resources both local and international companies are currently extracting. Since independence, the mining sector has gone through several changes in political and economic contexts, which have had a significant bearing on defining how the mining companies relate with hosting communities and the environment. The government introduced a Growth with Equity (GWE) in the first two years of independence. The governance of the mining sector has gone through several changes in political and macroeconomic contexts. Each governance approach corresponded to a dominant economic development policy of a particular epoch. The first decade, 1980 to 1990, was when government policies were designed to rebuild the sector affected by war. However, the period was bedevilled by foreign currency shortages, affecting production since most capital goods needed in the mines were imported. During this

era, most of the government-financed social growth and responsibility without jeopardising relative macroeconomic stability. This promoted an environment where CSR was voluntary and fewer expectations in this regard placed on the corporations.

Zimbabwe is a developing country that embarked on the Economic Structural Adjustment Program at the advice of the International Monetary Fund. During the Economic Structural Adjustment Program (1991 to 1996), the mining industry benefitted from fiscal and monetary reforms and export promotion and trade liberalisation (Government of Zimbabwe 1990). Zimbabwe's Economic Structural Adjustment Programme, launched in 1991, aimed to usher in an era of modernised, competitive, export-led industrialisation. The emphasis of ESAP was on profit, explicitly cutting down on public expenditure (Thomson, Kentikelenis and Stubbs, 2017) and stimulating private sector growth. During this period, the mining sector realised good profit margins. However, this was at the expense of social suffering in retrenchments and little concern for the environment (Thomson *et al*., 2017). For the first time, the government left corporates to be socially responsible for their employees and community.

The economic structural adjustment program was succeeded in 1997 by Zimbabwe Program for Economic and Social Transformation, which was meant to correct the unexpected suffering which unfortunately had resulted from the economic structural adjustment program. This was after realising the social dimension of economic development was neglected under the economic structural adjustment program. Under this new program, the good performance in the mining sector became short-lived because by 1998, mine closures had begun, and by 2001 about forty large scale mines had closed or were placed on maintenance (Government of Zimbabwe 2002). The worst affected were employees, for there were no schemes to protect them, and their employers could not afford retrenchment packages. The predicament of the mine employees need protection as the infamous mine closures saw workers mainly of Malawian nationality having passports processed and Tenda buses hired for them. They were repatriated without a pension or retrenchment package.

The 2000/2001 farm invasions also impacted the mining industry as capital flight and suspended geological surveys and explorations (Kanyenze, 2011). With the runaway inflation that followed, the production of most minerals declined, and this trend continued unabated through 2008.

Following a political stalemate from a highly disputed general and presidential election, a Government of National Unity was formed, and the use of multi-currencies with the United States dollar as the base currency was introduced. (Chigumira, 2018) asserts that when multi-currency use was introduced. The situation changed for the better on the mining front because mining companies began to trade in United States Dollars. However, also in 2009, the government of Zimbabwe introduced a bill in parliament that sought to combine nationalisation and relinquishment of shares requiring up to 51% equity in mining companies, of which 25% was non-contributory (Kanyenze et al., 2011). The bill was viewed as draconian by investors, and they negotiated for more involvement with stakeholders.

This bill was soon withdrawn, and since then, the chamber of mines has put forward proposals with a strong CSR thrust to target broad base empowerment whereby the mines commit to investing continually in community and infrastructure projects (Kanyenze et al., 2011). The main argument is that not all people in the community can afford to buy shares in the companies. Still, suppose the company empowers the community through projects and infrastructure. In that case, the host communities benefit more than just pushing for indigenisation, leaving the host community still impoverished. Through the Chamber of Mines Zimbabwe, the mining community, therefore, pushed for Community Share Ownership Trust. The mines and minerals act has still not been amended, and a bill is in the works.

Currently, the Ministry of Mines and Mining Development is responsible for the minerals sector guided by the Mines and Minerals Act (chapter 21:05) in conjunction with the Mining (General) Regulations, 1977 and their amendments. There are sixteen pieces of the legislature with which the mine houses have to deal with. Some of the most prominent acts are, for example, the Environmental Management Act of 2007 (Chapter 20:27), the Explosives Act, the Forest Act, the Public Health Act, and the Suppression of Money Laundering Act, the Parks and Wildlife Act and the Indigenization and Economic Empowerment Act of 2007, Indigenization and Economic Empowerment Regulations (Statutory Instrument 21 of 2010).

Zimbabwe passed legislation guiding local CSR in Zimbabwe's mineral resources sector to give a framework for structured support from mining companies to affected communities. The principal legislation is the Indigenisation and Economic Empowerment (IEE) Act. This

legislation has a thrust on CSR outcomes: employment of indigenous Zimbabweans that participate in economic activities, direct procurement of goods and services from local businesses, enterprise development, and equity management.

The law required that for every rural district there be formed a community share ownership trust. The community share ownership trusts were launched mainly as a tool by which enterprises are utilising natural resources plough back to the communities they are working. The mining industry, together with the government, has taken a stakeholder view of CSR. The community share ownership scheme can be viewed as some structured corporate social responsibility. They are a mechanism for the mining sector that exploits mineral resources while causing permanent alteration of the landscape and, in some cases, environmental damage to plough back to the community. Section 14 of the Indigenisation and Economic Empowerment (General) Regulations Statutory Instrument (no. 21 of 2010) states that the revenue realised from the community share ownership scheme will be used for community projects such as hospitals, schools, and irrigation schemes, among others, to uplift the lives of communities (Government of Zimbabwe, 2010). This study seeks to evaluate compliance with a few selected regulatory and institutional requirements given the country's economic meltdown. This study comes when the sector needs scientific and academic input to formulate practicable CSR policies and programs.

5.4 FINDINGS

Case Study 1: Company A: Government (51%) and foreign Investor (49%) jointly owned

The gold mine started operations in 2005 but became active in 2009. Government is the majority shareholder in joint ownership with a foreign investor. It uses alluvial mining technologies and main operations on a riverbed and its surrounding area. The Company mines to a depth of 20 metres along the river bed. However, depth beyond this is not be regarded as alluvial gold mining. According to the Environmental Management Act, it is not permissible to mine within 30 metres of a watercourse. Still, this mining company extracts gold not only from the river bed but also from an extensive area away from the river bed including the prohibited 30 metres Gazette of June 06 the same year, a statutory instrument 92 of 2014 on the control of alluvial mining that proved a final blow to the hopes of the company to resume operations. The statutory instrument cited the illegality of all alluvial mining operations in the country.

'No person shall, notwithstanding that they have a special grant, conduct alluvial mining activities or prospecting of alluvial deposits without an Environmental Impact Assessments (EIA) report and certificate issued by the Agency in terms of section 100 of the act' reads part of the statutory instrument.

Environmental Management Agency slapped a ban on the mine's activities, and the mine suspended operations. Negotiations are underway to have the ban lifted. The company cites loss of revenue to the government in the form of royalties and other tax heads, loss of employment to locals and revenue to suppliers. Rehabilitation of the mine site has stopped, and the mine says they have cash flow problems.

2. Community – Corporate relationship People who used to farm have been robbed of farmland with no compensation. Their water is polluted, and dust pollution is a perennial problem for them. Locals who used to harvest reeds for reed mats can no longer do that because the riverbed was destroyed. Also, aesthetic scenery and vegetation have been disturbed.

Case Study 2: Company B Listed on foreign Stock Exchange

Company B is listed on a foreign stock exchange. The company mines gold using the shaft mining method. According to the key informant's interview, the company has adopted and implemented the provisions of the Indigenisation plan in full and ceded 10% of its equity to the local Community Share Ownership Trust. The gold mine established a residential and commercial centre. Although the mine was first established more than a century ago, the current owner acquired it at the turn of the 21st century. Although it had some temporary closures during the Economic instability in Zimbabwe reopened with an expansion drive with yields expected to reach around 80,000 ounces per year by 2021 and complied fully with the implementation of a government-mandated Indigenisation plan. The majority of the ownership of the mine is divided among four parties: the National Indigenisation and Economic Empowerment Fund own 16%; Management and Employee Trust for the benefit of the present and future managers and employees of the mine own 10%; some identified indigenous Zimbabweans own 15%, and the local Community Share Ownership Trust owns 10%. The company employs the shaft mining method.

Case Study 3: Company C – Multinational company but not listed

This mine has existed for decades, but it was acquired by current owners headquartered abroad at the turn of the century. Production peaked in 2005 but, due to economic meltdown and hyperinflation in mining activities in Zimbabwe ceased, and the mines were placed on care and maintenance. After dollarisation, mining activities recommenced, and the expansion drive has continued. The mine uses the shaft mining method. The company has ISO14001 Environmental Management Standard certification.

Although the three cases were established in Zimbabwe under the same regulatory framework, they differ in many aspects, as shown in Table 5.1 below.

Table 5:1 Nature and Scope of CSR practices among the cases

CSR practice	**Government Joint Venture, Company B**	**Multinational with headquarters abroad, Company C**	**Listed on foreign stock exchange Company A**
Human resources issues			
Grievance procedure	In place	In place and employees are free to join unions	In place. Employees have a mineworkers union
Skills training and retention	Apprenticeships programs in place	Graduate training programs	Graduate training programs Bursaries for the school of mining and universities
Funding of CSOT	Nil	500000 United States Dollars	1 million United States Dollars
Infrastructure development	Maintenance of gravel road	Tarred local road network.	The tarred local road network
Education	Contribution to local schools development associations	Built a primary school. Operates a bus shuttle to the nearest town for those who prefer to send their children to schools outside the mining community	Built science laboratory fully equipped local High school
Health	No visible contribution	Owns and operates a clinic Doctor visits weekly	Owns and operates a clinic. Employs a medical doctor
Local Community Economic Empowerment			
Compliance of indigenisation policies	Nil	Partial compliance	Full compliance
Buying raw materials from locals	Yes where available	Yes	Yes

Poverty alleviation	Employment of all unskilled labour	All unskilled labour	All unskilled labour
Environmental protection			
Compliance with environmental regulations E.I.A. certificates	Nil suspended	Yes	Yes
Archaeological inspection certificate	Yes	Yes updated	Yes updated
Hazardous substance permit	Renewal pending	Yes renewed	Yes renewed
Tailings storage 3rd part audit	Rehabilitation stopped	Tailings are subjected to third party audits	Tailings are subjected to third party audits
Rehabilitation Procedures	Gulley reclamation but stopped	Partial landscaping	Using the overburden for gravel surfacing of roads
Mine closure plan review	Review pending	In place and reviewed regularly	In place and reviewed regularly

The proposed practices investigated enshrine mainly the regulatory context put in place by the government of Zimbabwe. The companies all mining gold are expected to do so while practising corporate social responsibility. The different companies perform differently in terms of corporate social responsibility. When it comes to human resources issues, all companies show attention to the need for grievance procedures. This reflects attention to the employee stakeholder and the ethical right of employees to belong to associations or groupings. While there are different modes of skills training practices, all companies representing the various categories pay attention to skills training and retention either through apprenticeships or through graduate internships,

The major difference in the people dimension among the companies lies in compliance with the requirements of indigenisation. The economic empowerment act requirement requires that companies give back to the community in which it operates through funding of the community share ownership trusts. The multinational companies, both listed and unlisted, have complied, but the state-owned mine did not fully comply. The government-owned company was exempt from full compliance because of the nature of its ownership structure, where already the government owns 51%. The wording in the act with regards formation of community share ownership trusts was such that it was the responsibility of the rural district council to form the trust of which the mining company may, if it so wishes, fund it. In addition, when it comes to funding education or infrastructural development, the state-owned entity lags behind. While other companies fully support the local communities, the state-owned cannot do that because general government rules and regulations govern procurement procedures for state entities, making it difficult for them to comply with that expectation. Attention to the second dimension of the triple bottom line, the environment, becomes a challenge again for the government jointly owned the mine. Some of the non-compliance issues were so gross that the mine had to be ordered to shut down by the Environmental Management Agency until necessary compliance was implemented. Also, on funding the community share ownership trusts, the mining company owned jointly by the state, and foreign investors ignored the call with no consequences. The reason could be that the company is already jointly owned by the government. The profits cannot be distributed at the local company level but fund the fiscal so that the benefits can be enjoyed by all, not just the mine local communities.

5.5 DISCUSSION

Although there are positive indicators of corporate social responsibility evidenced by charitable activities and some disclosure, there are still significant gaps in these studies. This study assessed that the current corporate social responsibility practices of the mining sector using a stakeholder approach. Since literature purports that corporate social responsibility reflects national-level institutions, less robust institutions engender great firm engagement in corporate social responsibility. High-quality institutions inspire companies to mirror these lofty standards (Brown & Knudsen, 2015). This study added to the much-needed development and research initiatives towards understanding the dynamics of corporate social responsibility within the Zimbabwean

context using mainly the integrative theories, particularly the stakeholder theory. The research collected information from key informants and established that companies in the mining sector must be adaptive and quickly address the regulatory requirements from the key stakeholders. The above cases show that it is imperative for mining companies to comply with legal frameworks, be informed about legal obligations, and periodically review the rules and regulations (ISO 26000, 2010). This includes putting in place a sound corporate social responsibility that ensures the environment is inhabitable by both humans and their livestock. Private firms cannot curtail their pollution to socially optimal levels; therefore, public policy must require them to do so. Hence sustainable mineral commodity production requires appropriate environmental regulations(Tilton et al., 2018). The mining companies must consider the impact of the loss of land and other sources of livelihoods and adequately cater for the loss. It has been noted by Tilton et al. (2018) that Private firms do not curtail their pollution to socially optimal levels unless they are guided by public policy and relevant environmental regulations. The three case studies concur with the finding that there are governance challenges encountered by mining companies from growing government regulations to protect the environment (Giurco et al., 2017).

Multinational companies have developed a culture of relatively sound corporate social responsibility. (Mzembe and Downs, 2014) attributes this to fear of losing their international image. Such companies face several threats that can ruin their reputation, including a global boycott of the commodity (Shankhdhar and Gupta, 2018). The company can be sued in international courts (Ding, Ferreira and Wongchoti. Mining companies listed on the international stock exchange also have a reputation to protect. It is, therefore, prepared to buy to make it right. Companies based in Zimbabwe are not listed on any stock exchange and have no international reputation to defend, tend to overlook essential basics incorporate environmental responsibility. Although Mol, Stadler and Ariño (2017) suggest that it is important to investigate corporate social responsibility practices in developing countries because of the pervasive institutional voids that characterise these settings, however in the mining sector in Zimbabwe, the institutional gaps are minimal.

In contrast, Ali, Frynas and Mahmood, (2017) suggest that corporate social responsibility in developing countries is mainly influenced by external forces or influential stakeholders, in this instance, the government. Efforts by Environmental Management Agency reflect the proper institutional arrangements in Zimbabwe. Although the agency has meagre resources, monitoring the integrity of the environment is commendable. This shows how powerful hosting communities and the government are in demanding that mining companies act responsibly.

5.6 CONCLUSIONS AND RECOMMENDATIONS

The results show that companies with international reputations must protect and have international regulators watching their actions practice good corporate social responsibility. It is also evident that for the minerals sector, governments have an important role to play in monitoring impacts to the environment since mining has adverse environmental impacts. As stated by Tilton et al. (2018), in the mining sector, some externalities occur alongside activities by the firm that create costs to society. Examples of these are environmental degradation and water pollution. The gullies formed during the tenure of the closed company that remain open with no sign of reclamation six years down are evidence of costs to society. These gullies continue to be a danger to people, livestock and wild animals. A lot still needs to be done in terms of policies on land reclamation. Therefore future research can focus on abandoned mines, particularly the restoration of the environment to *status quo ante* and how regulation and policies can be improved to protect society and the environment.

Author contributions

L.N. conceived of the presented idea. L.N. planned the study, developed the theory and performed the analysis. As study leaders, R.L. and A.S. guided the development and layout of the theory and verified the analytical methods. Both R.L. and A.S supervised and approved the findings of this work. All authors discussed the results and contributed to the final manuscript.

ETHICAL CLEARANCE

The Scientific Committee approved the study, whereafter the Ethics Committee of the Faculty of Economic and Management Sciences of the North-West University perused the ethical concerns before they issued the formal ethics certificate numbered NWU-01367-19-A4

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6. CHAPTER 6 RESEARCH ARTICLE 2

Title: Assessing the nature of corporate environmental responsibility in Zimbabwe's gold mining sector

The reader is requested to take note of the following:

The article was submitted for peer-review and possible publication in the following Department of Higher Education and Training (DHET) accredited academic journal indexed, peer-reviewed academic journal as follows:

Loveness Nyikahadzoi, Ronnie Lotriet, Anet Smit. Assessing the nature of corporate environmental responsibility in Zimbabwe's gold mining sector. Journal of Economic and Financial Sciences. ISSN: 1995-7076 (PRINT) ISSN: 2312-2803 (ONLINE).

https://jefjournal.org.za

Submission notification is shown in Appendix 6 on page 279. The article was written in line with the journal's submission guidelines, which are included in Appendix 6B page 282 and AOSIS Publishing, the publishing organisation for the journal reference style guide in Appendix 5 on page 260. The article was researched and written by the first author (Loveness Nyikahadzoi) as the PhD candidate and primary author, while the co-authors (Ronnie Lotriet and Anet Smit) fulfilled a supervisory function as the PhD project's promoters.

Abstract

Orientation: In Zimbabwe, mining is a very significant economic sector but has adverse environmental impacts. **Purpose** This article assessed the environmental responsibility as practised by different mining companies differentiated by governance structure. The article also determined which governance system leads the gold mining sector in the corporate environmental responsibility. **Motivation for the study,** There are significant environmental impacts inherent in gold mining. The structure-conduct-performance paradigm has not been used as an assessment framework in the corporate environmental responsibility in the mining sector in Zimbabwe. **Design, methodology, approach:** The paper used multiple case study design with a population of 35 large-scale gold mining companies that are members of both Chamber of Mines of Zimbabwe and Mine Industry Pension Fund, and 23 participated. The article used a mixed-methods approach using a questionnaire and structured interviews to collect quantitative and qualitative data. The study used Kruskal–Wallis rank test to test the differences in the governance structures' performances. **Findings:** The results show that gold mining companies in Zimbabwe exercise considerable environmental stewardship. Mining companies listed on foreign exchange and local private limited companies exhibit more responsibility than the other companies regarding environmental stewardship. **Implications-Practical/ /Policy:** Introduction of more indicators than resource use and environmental quality can improve environmental management in the gold mining sector in Zimbabwe. **Contribution/Originality/Value of the study:** This study contributes to the burgeoning literature on corporate environmental responsibility by illuminating the possible role of governance structure in corporate social responsibility adoption.

Keywords: gold mining sector, corporate social responsibility, corporate environmental

responsibility, governance structure, shareholder view, stakeholder view, societal view

6 INTRODUCTION

With the advent of increased environmental catastrophes, there are calls for environmental responsibility. The failure of the Brumadinho tailings dam on 25 January 2019 led to the loss of lives and people's livelihoods and damage to the environment (Lumbroso, Davison, Body, & Petkovšek, 2021). Human activities have created enormous pressures on the earth's environment by exploiting natural resources (Laing, Upadhyay, Mohan & Subramanian, 2019, Mani, Gunasekaran & Delgado, 2018). There are significant environmental impacts inherent in gold mining since mining is always associated with high levels of environmental impacts (Ranängen and Lindman, 2018). These environmental impacts include consumption of resources, generation of wastes, risks of pollution and risks, and industrial accidents in communities close to the mining operation (Carvalho, 2017).

Environmental responsibility includes mining companies' voluntary efforts to integrate environmental considerations into their mining operations and activities (Helfaya & Moussa, 2017). Selection and implementation of best practices require planning (Cervantes, Upadhyay & Askari-Nasab, 2018). Corporate environmental responsiveness has a set of initiatives to mitigate a mining company's operations from damaging or degrading the natural environment (Fashola, Ngole-Jeme & Babalola, 2016; Mani, Gunasekaran & Delgado, 2018). The Corporate Environmental Responsibility initiatives can include changes to the company's process and policies such as reducing energy consumption and waste generation, using sustainable resources and implementing an environmental management system (Mani *et al.,* 2018).

Over the last decade, there has been a shift towards a broader view of corporate social responsibility, including the environment (Bhaduri & Selarka 2016). Best practices would be whereby companies voluntarily integrate environmental concerns in their business operations (Szczepankiewicz and Mućko, 2016). According to Mani *et al.* (2018), companies must prioritise environmental consciousness and the well-being of society. Other impacts of mining come through the clearing of vegetation, perturbation of land and disposal of large amounts of waste (Festin *et al.* 2018).

On the positive side, mining drives economic development worldwide (Laing et al., 2019), and in Zimbabwe, it is currently a significant economic sector. It remains the key driver of economic revival in Zimbabwe Chamber of Mines of Zimbabwe, 2017). The sector contributes more than 60% of national exports, and 10% of Zimbabwe's gross domestic product comes from mining, of which gold contributes above 40% (Chamber of Mines of Zimbabwe, 2017).

6.1.1 Research Purpose and objectives

Given the importance of the gold mining sector in Zimbabwe and the environmental challenges associated with it, the purpose of this paper is to assess the corporate environmental responsibility put in place by the large-scale players in the gold mining sector. The paper also determines whether there is any difference in the nature and scope of corporate environmental responsibility across five different large-scale gold mining governance systems. The first governance system is local private limited companies where shareholders can be between 1 and 50 as directed by The Companies and other Business Entities Act (Chapter 24:31). The second type is companies listed on the Zimbabwe Stock Exchange in line with the listing requirements of The Zimbabwe Stock Exchange Limited (ZSE), which is a licensed securities exchange in terms of the Securities and Exchange Act (24:25). The third type is companies listed on foreign stock exchanges in line with the requirements of the listing country. The fourth type is the government-owned established and managed according to the Zimbabwe Mining Development Corporation Act (Chapter 21:08). The fifth type is multinational companies with parent companies abroad not listed, but private companies registered in the home country regulations. The solution to the mode of assessment is to establish through the structure-conduct-performance paradigm whether these governance systems affect the companies' environmental performance, if so, to what extent. Specifically, the paper examines how different companies under different governance systems use water, energy and raw materials and ensure environmental quality through the mine waste dump, soil restoration practices, and environmental accidents prevention. The paper also investigates the extent to which the mining companies maintain environmental integrity in how they reduce contaminants, reduce mine waste dumps through the reclamation of land and soil restoration, and prevent environmental accidents.

6.2 LITERATURE REVIEW

The framework for analysing the companies' corporate environmental responsibility performance in this paper is the structure-conduct-performance paradigm initially developed by Edward Mason in the 1930s. The structure-conduct-performance paradigm assumes a causal relationship between market structure, conduct and performance (Lelissa & Kuhil, 2018, Berry, Gaynor, & Scott Morton, 2019). While reporting on non-financial information has become a trend for large companies to convert social practices and performance into financial values (Chen, Yu & Hu, 2018). It is also challenging and when the assessment is extended to the sphere of environmental management (Mansour, 2017). The structure-conduct-performance paradigm has been used widely in industrial organisation theory (Khan & Hanif, (2019) and has focused on market structure and economic performance (Berry, Gaynor, & Scott Morton, 2019). The structure-conduct-performance framework used in this paper assumes a causal relationship between conduct and structure and corporate social responsibility performance towards the environment. Many researchers have written on corporate social responsibility in Zimbabwe (Nhavira, 2019, Makanyeza, Chitambara, & Kakava, 2018).

In some cases, they measure organisational performance in financial performance (Makanyeza *et al.,* 2018). However, so far, none have used the structure-conduct-performance framework to investigate the nature of environmental responsibility within the gold mining sector in Zimbabwe, where structure refers to the governance of the business unit. The structure-conduct-performance has been criticised for ignoring discretionary conduct of managers, based on the assumption that they are passive in fostering relationships between industry structure and firm conduct and performance. However, this paper innovates and uses three major classifications of organisational governance, shareholder, stakeholder and societal, as the structure, which are likely to define the nature of environmental responsibility. These classifications determine the way the selected governance systems handle environmental responsibility in the gold mining sector. The company's conduct (that is, behaviour) is corporate environmental responsibility practices in resource usage and mine waste management. The performance refers to how the company implements its environmental management systems, whether it is shareholder, valuing shareholders only, stakeholder, considering other stakeholders or societal, considering broader stakeholders with an international flair in its actions.

6.2.1 The Shareholder View

Under the shareholder approach, shareholders are the most important participants because they provide the means of production (O'Connell & Ward, 2020). This approach emphasises the shareholder's pursuit of profit maximisation as its focal point and places socially responsible activities or initiatives within the governments' domain (Teece, 2019, Bhagat & Hubbard, 2020). According to Bhagat and Hubbard (2020), companies should engage in corporate social activities if a more favourable trade-off between profit and social good will result. The shareholder approach seems to imply that the more a corporate is oriented towards profit, the less likely it will be environmentally responsible, as any corporate social responsibility is viewed as an expense (Adegbite et al., 2020; Rashid, 2020). However, Unerman, Bebbington and O'dwyer (2018) posit that firms rarely internalise all socio-environmental costs related to production.

6.2.2 Stakeholder Approach

Freeman (2020), probably in criticism of the classical approach, advanced a stakeholder approach to corporate governance. This approach emphasises that business organisations are not only accountable to their shareholders, but they should also consider the contrasting interests of all other stakeholders that can affect or are affected by the achievement of business objectives (Hetze 2016, Chaffee, 2017, Richter & Dow 2017, Freeman, 2020). This implies that if the stakeholders affected by the mining operation's environmental damage demand corporates to be environmentally responsible.

6.2.3 Societal Approach

The societal approach to corporate social responsibility suggests that because companies earn their licence to operate from society as a whole, they are likely to serve society's needs constructively (Cesar & Jhony, 2020). Therefore, if serving society's needs imply environmental protection, there are very high chances that the corporates guided by the societal philosophy will be environmentally responsible (Lindman, Ranängen & Kauppila, 2020). According to Clarke and Crane (2018), the societal approach to Corporate Environmental Responsibility pays attention to international requirements towards society. The recent calls for environmental protection mean that corporate with international linkages such as companies listed on the

foreign stock exchange are likely to be more environmentally responsible (Van Tulder & Keen, 2018). Given the structure conduct, performance paradigm and the shareholder stakeholder and societal governance perspectives, there are predictions as to the likely corporate environmental responsibility performance by the gold mining sector in Zimbabwe. Table 6.1 shows some predictions given what literature says about the three structures among shareholder, stakeholder and societal perspectives.

Table 6:1: The predicting the corporate environmental performance

Structure	Predicted conduct	Predicted performance	Category likely to conform
Shareholder approach	• Shareholders invest capital and resources • Managers are stewards of resources • Managers duty is to make labour transform resources into acceptable products • Obey laws (Hemingway, 2017).	• Produced products must be sold at a profit, then the profit distributed to shareholders, the owners of capital • Socially responsible activities are the domain of governments. • Therefore, poor environmental performance	• Local private limited • Government-owned • Multinational companies with parent company abroad but not listed
Stakeholder approach	• Shareholders invest capital and resources • Managers are stewards and agents of the company responsible for transforming resources through labour into acceptable products. • Strategically involve other stakeholders. (Freeman, 1984; Hetze 2016; Chaffee, 2017; Richter & Dow 2017)	• Sell goods at a profit • Manage the people, the planet and the profit. • Predicted environmental performance: Good	• Listed on the Zimbabwe Stock Exchange
Societal approach	• The same as for stakeholder • Additionally, pay attention to global needs for other stakeholders and the environment (Clarke & Crane, 2018, Van Tulder, & Keen, N. (2018)	• Sell products at a profit as sanctioned by stakeholders, even those outside the country • Predicted environmental performance: Excellent	• Listed on the foreign stock exchange

In Table 1, the local private limited companies, multinational companies with parent companies abroad but not listed and government-owned companies are predicted to be the shareholder structure because, according to Hemingway (2017), their duty is to the shareholders. Besides,

Dentoni, Pinkse and Lubberink (2020) posit that public businesses are less likely to understand and protect socio-ecological systems as their core mission, unlike non-governmental organisations. The companies listed on the stock exchange conform to the stakeholder structure since Matthews et al. (2019) suggest the companies have other stakeholders to consider. The companies listed on the foreign stock exchanges have a societal structure. They have the international community as the additional stakeholder (Clarke & Crane, 2018), and as suggested by van Tulder et al. (2016), stakeholders across sectors jointly try to address (global) sustainability issues. Therefore, it is predicted that companies listed on a foreign stock exchange are likely to be the best environmental performers.

6.3 RESEARCH DESIGN

The study used the case study design, employing multiple cases in Zimbabwe's large-scale gold mining sector.

6.3.1 Research Approach

The study used a mixed-methods methodology, making use of both quantitative and qualitative philosophical underpinnings.

6.3.2 Method

The study had four key research components: In-depth interviews with representatives of eight known stakeholder organisations working with the gold mining sector were selected based on direct involvement with issues about the study objectives, and population-based knowledge, attitudes, and practices survey of the selected gold mining companies' employees. Additional in-depth interviews were held with other stakeholders and key informants depending on the emergent issues that required further explanation. The target population was gold mines, which were members of both the Chamber of Mines in Zimbabwe and Mine Industry Pension Fund at the time of the study.

6.3.3 Participants

At the time of the research, 35 large-scale gold mining companies were members of both the Chamber of Mines in Zimbabwe and Mines Industry Pension Fund. From these 35 mining companies, 23 agreed to take part representing 66% of the target population. The respondents were employees availed by the participating mining companies to complete the questionnaires and hold interviews. All employees were eligible respondents. However, only those provided by the mining companies willing to participate took part in the research. Under Local private companies, six companies were willing to participate and availed 34 respondents. From companies listed in the Zimbabwe Stock Exchange, 6 companies took part and availed 34 respondents. There were five companies listed in foreign stock exchanges that participated and availed 46 respondents. Government-owned had 2 mining companies that participated and 30 respondents. Multinational companies not listed had 4 participating companies and 32 respondents. Employees from the 23 mining companies were the respondents to the questionnaire. The 206 respondents completed the questionnaires, and all 206 questionnaires were captured since they were administered personally and electronically using Census Survey Processing System. However, only 176 were appropriately completed and subsequently used.

6.3.4 Research Strategy

The study used both subjective measures (employees' perceptions) and objective measures (accounting data) because of the mining industry's nature, where there is a lot of security and secrecy surrounding objective accounting data. The main weaknesses of subjective measures are biases inherent in perceptions (Singh, Darwish, & Potočnik, 2016). The study combined the two types of measures to mitigate weaknesses of objective and subjective measures. Qualitative information was solicited from other stakeholders, including workers union leaders, community leaders, non-governmental organisations working with the mining industry, and representatives from relevant statutory bodies and other institutions working closely with the gold mining sector.

6.4 COMPUTING SUBJECTIVE MEASURES

The companies' environmental responsibility measures are composed of two broad categories: resource use and environmental quality. Resource use sought the employees' perceptions of companies' efficiency in water, energy and raw materials usage. Environmental quality focuses

on the employees' views on practices used to reduce contaminants, waste dumps management, environmental accidents prevention and soil restoration practices.

The questionnaire used a five-point Likert scale that ranged from strongly disagree to strongly agree: 1= strongly disagree; 2= disagree; 3 =neutral; 4= agree; 5= strongly agree;.
A mean score with a cut-off point of 0.5 was then computed using the following formula:

$\left[\frac{\sum_i^n Xi}{n} \right]$ where '*Xi'* are the responses to a given Likert statement by the respondents, and 'n' is the number of statements for each of the corporate environment responsibility indicators. This resulted in three distinct categories, namely, a high level of effort. This resulted in three distinct categories, namely, a high level of effort (3.5 to 5), medium level of effort (2.6 to 3.4) and no effort (1 to 2.5). The three categories were treated as follows: no effort (1), medium level of effort (2) and high level of effort (3) and was used to calculate the values α, β,γ, Ω. These subjective values of α,β,γ, Ω were then combined with objective measures to come up with the CSR indices, as shown in the formulas and algorithms in tables 3 and 4 below. The Kruskal-Wallis H test, a rank-based nonparametric test, was used to determine if there are statistically significant differences in the corporate environmental performance of mining companies' categories.

6.4.1 Objective measures of environmental responsibility

The objective measures made use of economic and accounting data. The algorithms and formulas used to calculate the mining sector's performance on environmental management indices were adapted from Vintró & Comanjuncosa, 2010 and are presented below.

Water consumption (W)

$$W = 1 - \frac{Water\ consumed\ over\ \ the\ last\ 12\ months}{top\ reference\ value}$$

Energy Consumption (E)

$$E = 1 - \frac{Energy\ consumed\ over\ the\ last\ 12\ months}{Top\ reference\ value}$$

Primary Material consumed (M)

$$M = 1 - \frac{Primary\ material\ used\ over\ the\ last\ 12\ months}{top\ reference\ value}$$

An index for Resource Use (RU) would be determined using the following formula:

RU = $\alpha_1 W + \beta_1 E + \gamma_1 M$, where the α_1, $\beta_1$and $\gamma_1$are values based on subjective assessments and W, E and M are objective measures for water, energy and raw materials respectively obtained using the formulas as shown above. The index reflects the level of corporate environmental responsibility effort by the companies towards resource use efficiency. The next aspect is the environmental quality, below are the formulas.

Reduction in contaminants (C)

$$C = 1 - \frac{contaminants\ released\ this\ period}{contaminant\ emission\ from\ last\ period}$$

Reduction in waste dumps (WD)

$$WD = 1 - \frac{tons\ of\ mine\ waste\ dumps\ dumped}{tons\ of\ mine\ waste\ dumped\ from\ last\ period}$$

Percentage of restored soil (S)

$$(S) = 1 - \frac{total\ square\ of\ restored\ soil}{total\ square\ of\ mines - degraded\ soil}$$

Reduction of environmental accidents (EA)

$$EA = 1 - \frac{No.of\ accidents\ over\ the\ last\ 12\ months}{No.of\ accidents\ from\ the\ previous\ 12\ months}$$

The index for Environmental Quality (EQ) would be determined using the following formula: $EQ = \alpha_2 C + \beta_2 WD + \gamma_2 S + \Omega_2 EA$, where α_2, β_2, γ_2 and Ω_2 are calculated values based on subjective measures. The objective measures, of C, WD, S and EA, are reduction in contaminants effort, waste dump management, soil restoration and prevention of environmental accidents, respectively. The environmental management (EM) index would be the sum of resource use (RU) and environmental quality (EQ) indices. This index reflects the overall CSR effort and stewardship of the environment.

6.4.2 Ethical considerations

The Zimbabwe Ministry of Mines and Mineral Development approved the research through a clearance letter, authorising the researcher to contact all government and quasi-government departments. An Institutional Review Board at a large North-western public university in South Africa approved the research. The first author did all interviews then transcribed with the help of a research assistant sworn to confidentiality. All the respondents for both quantitative and qualitative data collection process signed an informed consent form these kept by the first author. Respondents were informed of their right to withdraw from the research process at any moment without providing any reason and that they could request that information which they provided be discarded and be excluded from the analysis.

6.5 DATA ANALYSIS AND DISCUSSION

6.5.1 Measuring internal consistency

Cronbach's coefficient alpha was used to determine the reliability and internal consistency (the extent to which the items in a scale correlate). Cronbach's alpha coefficient demonstrates internal consistency based on average correlation. Internal consistency in measurement refers to whether all aspects of the measurement measure the same thing or concept (Sharma, 2016). The five items' reliability in each of the seven environmental performance measures the same concept. Cronbach's alpha coefficient was calculated to measure the extent to which the items measured the same thing for each element. Sharma's (2016) rule of thumb for the Cronbach's reliability test was then used to interpret the calculated alpha test: the rules say $\alpha > 0.9$ – Excellent; $\alpha > 0.8$ – Good; $\alpha > 0.7$ – Acceptable; $\alpha > 0.6$ – Questionable; $\alpha > 0.5$ – Poor; and <

0.5 – Unacceptable. The test results indicate good internal consistency in the sets of 5 items, each measuring water efficiency 0.854, raw material use efficiency 0.886, reduction in contaminants 0.846, reduction in waste dumps 0.888, soil restoration 0.824. Items measuring energy efficiency had 0.762, and those measuring environmental accidents had 0.716 showing acceptable internal consistency.

6.6 RESEARCH RESULTS

6.6.1 Subjective Measures of Resource Use

Resource Use assessed how different governance systems were efficiently using water, energy and raw materials. Perceptions of the employees are shown using frequencies expressed as a percentage.

Table 6.2: Employee perceptions on efficiency in water use (W), energy usage(E) and raw material usage (M)

Governance Structure-ownership type		% of respondents saying								
		Water Use			Energy Use			Raw Material Use		
		High	Medium	Low	High	Medium	Low	High	Medium	Low
Local Private Limited Company	n	13	8	13	16	8	10	17	7	10
	%	38.24	23.53	38.24	47.06	23.53	29.41	50.00	20.59	29.41
Listed in the Zimbabwe Stock Exchange	n	28	6	0	22	12	0	31	3	0
	%	82.35	17.65	0	64.71	35.29	0	91.18	8.82	0
Listed in foreign stock exchange	n	37	7	2	37	7	2	39	7	0
	%	80.43	15.22	4.35	80.43	15.22	4.35	84.78	15.22	0
Government	n	20	10	0	21	9	0	15	4	11

owned companies	%	66.67	33.33	0	70.00	30	0	50.00	13.33	36.67
Multi Nationals Not listed	n	14	5	13	20	4	8	19	7	6
	%	43.75	15.63	40.63	62.5	12.5	25	59.38	21.88	18.75
Total	n	112	36	28	116	40	20	121	28	27
	%	63.64	20.45	15.91	65.91	22.73	11.36	68.75	15.91	15.34
	Pearson chi2(8) = 50.0799 Pr = 0.0001				Pearson chi2(8) = 33.3779 Pr =0.0001			Pearson chi2(8)= 140.0369 Pr = 0.001		

Use assessed how different governance systems were efficiently using water, energy and raw materials. Perceptions of the employees are shown using frequencies expressed as a percentage.

Employees' perception of energy use

As shown in Table 6.2, the Pearson X^2 has a P value of 0.0001, suggesting that there is enough evidence to suggest an association between company ownership and the perceived efficient use of energy. The employees saying there is high efficiency in energy use are as follows; companies listed on the foreign exchange at 80.43% and government-owned at 70.00. Although high percentages of employees perceive their companies as efficient in energy usage, an executive from the power utility commented on the supply side of energy. He said, *'Power supply is a challenge given the water levels at Kariba and capacity at Hwange thermal power station. The national power utility company cannot supply all the power needed, and we have to exercise load shedding.'* This forces companies, such as the foreign listed companies, which are well resourced, to embark on technologies that are energy efficient. An executive with one of the companies listed on the foreign exchanges said, *'We have raised over 12 million united states dollars for putting up a solar power plant to mitigate against the effects of downtime due to power outages.'* The alternative for grid electricity is diesel-powered generators, but these generators have high carbon emission levels harmful to the environment.

Perception of employees on raw materials use

As shown in Table 2, the Pearson X^2 has a P value of 0.0001, suggesting enough evidence to suggest an association between company ownership and the perceived efficient use of clean extractive technologies. The use of better extractive technologies viewed as high by the employees is reflected as follows: companies listed on the Zimbabwean Stock Exchange at 91.18% of employees, companies listed on foreign stock exchanges at 84.78%. Explaining why there are high percentages of employees from listed companies perceiving their companies as efficient in raw materials usage, one of the executives commented, *'Listing requirements positively impact raw materials usage. However, our main challenge is all companies face a shortage of foreign currency to import the raw materials needed as the Reserve Bank of Zimbabwe allows us retention of 40%. This is not enough because most raw materials are imported.'*

6.6.2 Objective measures of resource use

Based on objective measures, the companies' performance reflects what the mining companies record based on estimates obtained from the company data. In this section, the results come from applying the resource use formulas earlier. Table 6.3 shows the values of water, energy and raw materials computed using formulas. According to Vintró and Comanjuncosa (2010), the rule of thumb is that the higher the figure, the better the performance.

Table 6:3: Objective measures in resource use

Governance Structure	Water Usage	Energy Usage	Raw materials usage	$\alpha_1 W$	$\beta_1 E$	$\gamma_1 M$	Resource use
Local Private Limited	0.2244 (0.3306)	0.0760 (0.0760)	0.1633 (0.0257)	4.2494 (7.3333)	1.2464 (0.81512)	2.7753 (1.1675)	8.2710 (7.7333)
Listed in Zimbabwe Stock Exchange	0.0427 (0.0712)	0.0700 (0.0268)	0.1147 (0.0386)	0.8223 (1.3298)	1.2623 (0.5003)	2.1706 (0.7641)	4.2552 (1.6631)
Listed in Foreign Stock Exchange	0.1464 (0.3029)	0.1018 (0.0700)	0.1250 (0.0370)	2.9426 (6.0735)	1.7944 (1.16401)	2.6307 (0.6762)	7.3678 (6.1369)
Government owned	0.0958 (.01184)	0.0630 (0.0081)	0.1156 (0.0169)	1.8167 (0.4261)	1.1431 (0.1823)	2.4179 (0.3566)	4.6743 (0.6497)
Multinational Companies not listed	0.0792 (0.0306)	0.0488 (0.0255)	0.1434 (0.0678)	1.0368 (0.2140)	0.7774 (0.3795)	1.7144 (1.3874)	4.2321 (1.3483)
Chi-squared	44.7430	14.7460	41.3890	38.5780	26.8390	26.9260	18.3450
P value	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0011

Figures in parenthesis = standard deviation

As shown in Table 6.3, the Pearson X^2 has P values of 0.0001 that signify a statistical difference in the companies' resource use performance-based on water use, energy use, and raw materials usage. Table 6.3 shows that local private limited companies display more water usage efficiency with a score of 0.2244 and raw materials with a score of 0.1633. Companies listed on foreign exchange indicate a lead in energy use efficiency with a score of 0.1018. Commenting on low-efficiency levels across the industry, an executive with a mining company listed on the Zimbabwe Stock exchange said, *'Our usage appears as if we are inefficient because industry-wide we operating below capacity and there are several reasons for that. Foreign currency retention is too low at 40%. Also the window for the usage of the retained currency is sixty days. Then thereafter, we are required to liquidate the currency. What this implies sometimes we are not able to source the raw materials. Some payments need up to ninety days and by then, we would have liquidated. Electricity also causes a lot of disruptions and a lot of downtime due to load shedding. With these and many more reasons, inefficiencies in resource usage are inevitable.'*

6.6.3 Composite indices for resource use indices

The indices were generated by combining subjective measures and objective measures. The formula $RU = \alpha_1 W + \beta_1 E + \gamma_1 M$ sums up the assessment. As shown in Table 6.3, P values of 0.0001 and 0.0011 indicate that there is enough evidence to suggest an association between company ownership and perceived resource use. Regarding water usage, local private limited companies seem to be doing better than the rest. In contrast, companies listed on foreign exchange beat the others in energy usage and raw materials used with indices of 1.7944 and 2.6307, respectively. The local private companies outperformed all the other companies in resource use with an index of 8.2710, followed by companies listed on the foreign exchange with an index of 7.3678. The companies listed on foreign stock exchanges have local stakeholders and global stakeholders, too hence the need for better efficiency.

6.6.4 Subjective measures of environmental quality

Environmental quality evaluated contaminants' management ,such as waste dumps reduction, soil reclamation practices, and prevention of environmental accidents.

Table 6:4: Employees' perceptions of the level of effort to: reduce contaminants (C), reduce waste dumps (WD), restore soil (S) and prevent environmental accidents (EA)

Governance Structure-ownership type		% of respondents saying											
		Reduction in contamination			Reduction in waste dumps			Soil Restoration			Prevention of environmental accidents		
		High	Mediun	Low	High	Mediun	low	High	Medi un	Low	High	Mediun	Low
Local Private Limited Company	n	23	0	11	23	2	9	19	8	7	16	17	1
	%	67.65	0	32.35	67.65	5.88	26.47	55.88	23.53	20.59	47.06	50	2.94
Listed in the Zimbabwe Stock Exchange	n	28	6	0	28	6	0	25	9	0	26	8	0
	%	82.35	17.65	0	82.35	17.65	0	73.53	26.47	0	76.47	23.53	0
Listed in foreign stock exchange	n	36	5	5	33	9	4	30	13	3	28	9	9
	%	78.26	10.87	10.87	71.74	19.57	8.7	65.22	28.26	6.52	60.87	19.57	19.57
Government owned companies	n	12	5	13	15	6	9	3	12	15	15	11	4
	%	40.00	16.67	43.33	50	20	30	10.00	40	50	50	36.67	13.33
Multi Nationals Not listed	n	26	1	5	19	2	11	20	9	3	20	12	0
	%	81.25	3.13	15.63	59.38	6.25	34.38	62.5	28.13	9.38	62.5	37.5	0
Total	n	125	17	34	118	25	33	97	51	28	105	57	14
	%	71.02	9.66	19.32	67.05	14.2	18.75	55.11	28.98	15.91	59.66	32.39	7.95
	Pearson chi2(8) = 34.5248 Pr = 0.0000				Pearsonchi2(8)= 24.0567 Pr =0.0002			Pearson chi2(8) = 47.2384 Pr= 0.0000			Pearson chi2(8) = 25.0938 Pr= 0.0001		

Figures in parenthesis = standard deviation

As shown in Table 6.3, the Pearson X^2 has a P value of 0.0000 shows that there is enough evidence to suggest an association between company ownership and the perceived reduction in contaminants practices. Results in Table 6.4 show that 82.35% of the locally listed companies' employees perceive that their companies have put measures to reduce contaminants, while 81.25% of employees of multinational companies not listed perceive the same.

Employee's perception of companies' waste dump practices

Waste dumps for this section mainly refer to the overburden removed to get to the ore. In Table 6.4, the Pearson X^2 has a P value of 0.0002, suggesting enough evidence to suggest an association between company ownership and the perceived effort to reduce mine dumps practices. Mining companies locally and foreign listed have 82.35% and 71.74% respectively, of their employees perceive them as making a high effort to reduce mine waste dumps. One mine manager said, *'To get to the ore-rich in gold, we have to remove overburden, sometimes ore that is not rich in gold is still bought for processing because to get to the richer ore, the less rich ore has to be extracted. However, sometimes we dump the less rich ore but do not abandon it but reserve it for future refining when the need arises.'*

Employees' perception of companies' soil restoration practices

As shown in Table 6.4, the Pearson X^2 has a P value of 0.0000, suggesting enough evidence to suggest an association between company ownership and the perceived effort to restore soil degraded through the mines. Close to 74% of respondents from companies listed on the Zimbabwean Stock Exchange, 65.22% from companies listed on the foreign stock exchanges perceive that their companies make a high effort to restore any degraded soil. The employee from a government-owned company explained why there are only 10% of employees perceiving high soil restoration said: *'We only pay attention to patches facing erosion due to rain because with mining you never know which section you will be dumping on next so reclaiming any pieces of land would be wasting resource.'*

Employee's perception of the company's reduction in environmental accidents practices

As shown in Table 6.4, the Pearson X^2 has a P value of 0.0001, suggesting enough evidence to suggest an association between company ownership and the perceived effort to reduce environmental accidents. About 76% of employees from companies listed on the Zimbabwean Stock Exchange and 62.5% from multinational companies not listed perceive their companies as having a high level of effort to reduce environmental accidents. An officer with the risk department of one of the multinational not listed companies commented on perceptions on environmental accidents, saying: *'Accidents which occur usually are caused by daring illegal artisanal miners. At one of our mines, which were on temporary care and maintenance, artisanal miners connived with the security guards, sneaked down the mineshafts, and caused a blast, which claimed 8 lives. But environmental accidents have not occurred so far.'* An officer with the Environmental Management Agency confirmed that there had not occurred environmental accidents recently at any of the mines in the target population.

6.6.5 Objective measures of environmental quality

Table 6.5 shows the objective values of reducing contaminants, reducing waste dumps and preventing environmental accidents and soil restoration practices.

Table 6:5 Objective measures of the companies' performance in fair fund administration

Governace structure	**Reduction in contaminants**	**Reduction in waste dumps**	**Reduction in environmental accidents**	**Percentage of restored soil**	**α_2C**	**β_2WD**	**γ_2S**	**Ω_2EA**	**Environ-mental Quality**
Local Private Limited	0.1641 (0.0599)	0.1296 (0.0602)	1 (0.0000)	1 (0.0000)	2.9810 (1.4966)	2.3832 (1.1822)	17.4706 (5.7379)	18.0882 (2.9682)	40.9230 (7.2362)
Listed in Zimbabwe Stock Exchange	0.1391 (0.1292)	0.1136 (0.0226)	1 (0.0000)	1 (0.0000)	2.7586 (2.1404)	2.1857 (0.4094)	19.0294 (1.6234)	18.9705 (2.3547)	42.9423 (4.3267)
Listed in Foreign Stock Exchange	0.2767 (0.0971)	0.2074 (0.1043)	1 (0.0000)	1 (0.0000)	5.6362 (2.44724)	3.9197 (1.6546)	18.0435 (2.9056)	17.0652 (4.7301)	44.6547 (8.1059)
Government owned	0.0189 (0.0971)	0.1884 (0.0961)	1 (0.0000)	1 (0.0000)	0.6351 (1.1554)	2.6447 (0.5170)	12.4333 (3.4808)	16.7666 (3.9713)	32.4698 (6.5535)
Multinational Companies not listed	0.0969 (0.0633)	0.2523 (0.0496)	1 (0.0000)	1 (0.0000)	1.6554 (1.1096)	4.2073 (1.1223)	17.4063 (3.3006)	18.9686 (3.6499)	42.2378 (4.4950)
chi-squared	106.0860	61.7160	0.0000	0.0000	90.22	63.38	40.05	8.64	46.75
P value	0.0001	0.0001	1	1	0.0001	0.0001	0.0001	0.0709	0.0001

Figures in parenthesis = standard deviation

As shown in Table 6.5, the Pearson X^2 has a P value of 0.0001, suggesting enough evidence to suggest an association between company ownership and the perceived effort to reduce contaminants and waste dumps. There is a significant difference in companies' performance based on reducing contaminants and reducing waste dumps. Otherwise, there is no difference in the companies' performance based on reducing environmental accidents and restoration of soils. In environmental quality management, companies listed on the foreign exchange show more responsibility in reducing contaminants and reducing waste dumps at 0.2767 and 0.2074,

respectively, compared to other categories. An executive with companies listed on foreign exchanges explained their lead, saying: *'Operating in an environment where there is a lot of scrutiny on activities we try by all means to monitor our environmental management. We even have sub-contracted a renowned specialist in tailings management to safeguard our activities.'*

At the time of the study, all companies in the research have recorded no environmental accidents. An informant with the Environmental Management Agency said, *'Very few companies practice soil restoration. The reasons for the lack of soil restoration were many and varied, but the key reason is soil restoration is provided, for in the statutes of Zimbabwe. Section 269 of The Mines and Minerals Act (21:05) provides for all open surface workings to be filled in, before the abandonment of a mining site. It must be noted that the concern here appears to be solely that of ensuring the safety of persons or animals and does not extend to the restoration of workings in any ecological sense, especially the re-vegetation of the site to its original, unspoiled state'.*

Another informant who is an executive with one of the companies listed on the Zimbabwe Stock Exchange said, *'Such a step to decommission is not yet feasible in Zimbabwe where politicians stall the decommissioning in favour of handing over to local small-scale miners. When the mining company has operational expenses too high, and the ore quality is no longer good enough, the mine may decide to close down and decommission. However, this decision so far has been hampered by the presence of risk-taking artisanal small-scale miners who then invade the mine, start apportioning themselves pieces of the mine and continue mining. In 2018, an environmental accident occurred in one such mine where there was flooding and people were trapped underground and lost their lives.*

6.6.6 Composite Indices for Environmental Quality.

The formula below sums up the environmental quality index, $EQ = \alpha_2 C + \beta_2 WD + \gamma_2 S + \Omega_2 EA$.

In Table 6.5, the P values of 0.0001 show a statistical difference in companies' performance based on efforts to reduce contaminants, waste dumps, and soil restoration. Companies listed on foreign exchanges lead to a reduction in contaminants with an index of 5.63. It is noteworthy that these companies go an extra mile; multinational companies not listed reduce waste dumps with an index of 4.21. Companies listed on the Zimbabwe Stock Exchange have the highest effort in

soil restoration, with an index of 19.03. On aggregate, companies on the foreign exchange lead in environmental quality responsibility at 44.65. An executive with one of the companies listed on foreign stock exchange explaining the lead reiterated the saying, *'We engage a well-known tailings management company for control and monitoring of our tailings dams.'* Although the objective measures of soil restoration show no statistical difference across the corporates, results in Table 5 indicate some statistical variation across governance systems. It is possible that respondents referred to minor soil restoration processes such as gully reclamation, while objectivities measured massive soil restorations.

6.6.7 Environmental Management Performance

The environmental management (EM) index is the overall assessment of the mining companies' corporate environmental responsibility where,

Resource Use (RU) = $\alpha_1 W + \beta_1 E + \gamma_1 M$;

Environmental Quality (EQ) = $\alpha_2 C + \beta_2 WD + \gamma_2 S + \Omega_2 EA$.

Environmental Management (EM) would be the sum of resource use and environmental quality,

EM = RU + EQ

Table 6:6 Overall stewardship of the environment by the mining companies

Governance Structure- Ownership type	Resource Use	Environmental Quality	Environmental Management
Local Private Limited Company	8.2710 (7.7333)	40.9230 (7.2362)	49.1940 (12.1619)
Listed on Zimbabwe Stock Exchange	4.2552 (1.6631)	42.9423 (4.3267)	47.1995 (5.3197)
Listed on foreign Stock Exchange	7.3678 (6.1369)	44.6547 (8.1059)	52.0225 (11.0106)
Government-owned companies	4.6743 (0.6497)	32.4698 (6.5535)	37.1442 (6.9641)
Multinational companies unlisted	4.2321 (1.3483)	42.2378 (4.4950)	46.4699 (5.3760)
chi-squared	18.345	46.747	42.646
P value	0.0011	0.0001	0.0001

Figures in parenthesis are standard deviation

The results in Table 6.6 show a significant difference in the companies' performance in terms of resource use and ensuring environmental quality. The highest performer in environmental management is companies listed on foreign stock exchange, followed by local private limited companies. The government-owned do trail behind overall.

6.7 DISCUSSIONS

The article sets out to assess corporate environmental responsibility in Zimbabwe's gold mining sector. The results indicate that the Zimbabwean gold mining sector exercises considerable good stewardship of the environment. The gold mining companies in Zimbabwe exercise good environmental stewardship given the regulatory environment. This is in tandem with Giannarakis, Andronikidis and Sariannidis (2019), who indicate that there is an association between governance and corporate environmental activities. They are context-specific and linked

to the regulatory environment. Simultaneously, the results show differences in how the different governance structures perform in exercising stewardship. There is evidence of an effort to maintain environmental integrity by the gold mining companies though by varying degrees of intensity, as shown by the different indices. According to Ashfaq and Rui (2019), corporate governance arrangements, such as ownership structure, can substantially safeguard stakeholder interests in environmental stewardship and disclosure.

As predicted by literature, companies listed on foreign exchange have a higher standard of performance. Ezhilarasi and Kabra, (2017) state that companies with foreign shareholders with decision making influence might require higher quality environmental disclosures of activities to meet foreign reporting requirements. The global community has high expectations, so the companies exercise a societal approach to their environmental management systems. A common perception is that large multinational companies engage in greenwashing by projecting their community developing activities as a cover-up of potential adverse environmental impacts of their actions (Laing *et al.*, 2019). However, this paper has shown that Zimbabwe's gold mining companies listed on foreign exchanges do their core business while responsibly managing environmental quality (as confirmed by Cai and Li (2018), who stated that by enhancing resource use efficiency, saving raw materials, and decreasing pollution would improve environmental quality).

The local private limited mining companies perform well, have good corporate citizenship, and are the second-highest performers. This is contrary to the predictions from literature, which had placed them under the shareholder model, where the focus is on profit and shareholders. According to Ullah, Muttakin and Khan (2019), for companies owned and managed by owners, when it comes to spending on corporate environmental issues, these companies seemed to be more concerned about reductions in their profits and tend to be less interested in the disclosure of environment-related activities. The performance of the Zimbabwe private companies has proved this to be otherwise. Therefore, this good performance places them under the stakeholder model, showing concern for the environment.

Companies listed on the Zimbabwe Stock Exchange are predicted to be following a stakeholder perspective lived up to the prediction. According to Nikolova and Arsić (2017), companies with a stakeholder perspective have an increased sensitiveness to their environment. Multinational companies not listed and government-owned companies are predicted to follow a shareholder approach. According to Nikolova and Arsić (2017), the companies are only instruments of wealth creation, and their social activities as a tool to achieve economic results. These two categories lived up to the prediction. The companies do their mining activities in a manner prescribed by the government. This is in line with the shareholder perspective, where they do business legally.

6.7.1 Limitations and recommendations

The population from membership to both Chamber of Mines of Zimbabwe and Mine Industry Pension fund and was restrictive. Other large-scale mining companies in Zimbabwe are not members of these two organisations. Future research focuses on the influence of the type of ownership that includes the origin of the multinational companies to investigate if that has significance.

6.7.2 Managerial Information

This article is important to gold mining companies in Zimbabwe because they can start improving their environmental management, performance, and indices as a sector. By ranking the mining companies, subtle competition is spurred the mining companies will strive to better their performance.

6.7.3 Value and contribution

This study contributes to the burgeoning literature on corporate environmental responsibility by illuminating the possible role played by governance structure in corporate social responsibility adoption. More indicators than resource use and environmental quality can be introduced for the betterment of environmental management in the gold mining sector in Zimbabwe.

6.8 CONCLUSION

The best practices expected of mining companies are in operation in Zimbabwe in a highly regulated environment. The study revealed that soil restoration and reduction in dumps of overburden are practices reserved for decommissioning.

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7. CHAPTER 7: RESEARCH ARTICLE 3

Title: An Evaluation of the nature of business ethics practised by the gold mining sector in Zimbabwe

The reader is requested to take note of the following:

The article was submitted for peer-review and possible publication in the following Department of Higher Education and Training (DHET) accredited academic journal indexed, peer-reviewed academic journal as follows:

Loveness Nyikahadzoi, Ronnie Lotriet, Anet Smit. An Evaluation of the nature of business ethics practised by the gold mining sector in Zimbabwe

African Evaluation Journal. ISSN: 2310-4988 076 (PRINT) ISSN: 2306-5133 (ONLINE).

https://aejonline.org .

Submission notification is shown in Appendix 7A on page 295. The article was written in line with the journal's submission guidelines, which are included in Appendix 7B on page 288 and AOSIS Publishing, the publishing organisation for the journal reference style guide in appendix 5 on page 260.The article was researched and written by the first author (Loveness Nyikahadzoi) as the PhD candidate and primary author, while the co-authors (Ronnie Lotriet and Anet Smit) fulfilled a supervisory function thereto as the PhD project's promoters.

ABSTRACT

Purpose*:* This article assesses the businesses ethics practices of the gold mine sector of Zimbabwe. Also, the paper aims to determine which among the five governance systems, among local private, government-owned, companies listed on the Zimbabwe Stock Exchange, multinational companies with parent companies abroad but not listed and companies listed on the foreign stock exchanges lead in the gold mining sector in business ethics. **Methodology**: The paper uses a mixed-method approach on a sample of large-scale gold mining companies that are members of both the Chamber of Mines of Zimbabwe and the Mine Industry Pension Fund. Data were collected using a questionnaire administered to employees, managers and leaders of workers' unions. In-depth interviews with relevant stakeholders were done. The Kruskal-Wallis test was used to rank the different governance structures in their performance.

Findings: The results indicate that companies listed in the Zimbabwe Stock Exchange have the highest ethics index signifying best performance. The results indicate that the sector exercise business ethics.

Contribution: To theory; The article showed that companies could not be confined to being purely shareholder, stakeholder or societal in their conduct and performance; therefore, governance structure alone cannot be used to predict the conduct and performance of companies.

To practice, the paper showed that business ethics practices are predominantly legislation driven, as evidenced by the little differences among companies' performance indices.

To policy, The study has shown that the hard legal stance promotes homogeneity in practices. Policymakers can therefore decide to strengthen the position or relax the drive.

Keywords: gold mining sector, corporate social responsibility, corporate citizenship, governance structure, stakeholder theory, corporate community interface, business ethics.

7 INTRODUCTION

Mining corporates with sound business ethics impact communities positively by catalysing social and economic development and transforming people's lives for the better (ICMM, 2020). A socially responsible corporate seeks to minimise negative impacts and maximise benefits, building long-term mutually beneficial relationships (ICMM, 2020). Large mining companies, by their sheer size, have impacts on their local communities. According to Kemp *et al.* (2016), while large-scale mining impacts nations' development, it inherently disrupts the host communities' livelihoods. In some cases, the presence of large scale mining corporates leads to a loss of opportunities to engage in other economic activities that compete for space with the mining operations (McNeish, 2017). Although corporates are in business to maximise profits, they should also display good corporate citizenship and commitment to society's general prosperity (Sonter, & Watson, 2018). Creating a positive impact in these communities may mean providing jobs, strengthening local economies, and providing donations (Zhang *et al.* 2018). Profit maximisation and supporting local communities are not mutually exclusive, but it is a good social responsibility to strive for both (Betancur-Corredor *et al.*, 2018).

In Zimbabwe, mining corporates have different governance systems operating in a highly regulated environment. At independence in 1980, the Government of Zimbabwe was faced with a dual challenge within the mining industry. Firstly, it sought to ensure the industry's profitability as it contributed 5% of the Gross Domestic Product (Mapira, 2017). Secondly, the state had to eliminate extreme inequalities generated by discriminatory regulations created during the colonial era 1890 to 1980. To eradicate the inequalities in ownership of national assets, the government adopted several policies designed to redistribute the benefits from mining across the population. The government had no policy framework to ensure that local communities living in affluent mineral areas equitably share mining benefits for a long time. In the absence of a legal framework, high incidences of poverty in mining communities remained present, largely because mining companies were not ploughing back into the communities around them. In 2007, the government introduced the Indigenisation and Economic Empowerment Act (No. 14 of 2007) which sought to, among other things, empower communities to benefit from mining operations being carried out within their areas. The

government of Zimbabwe promulgated new legislation that forces companies to promote local economies, Government of Zimbabwe (2007, p3.)

Part II section (3) subsections f of the Indigenisation and Economic Empowerment Act (no. 14 of 2007) states that:

> *'---- all Government departments, statutory bodies and local authorities and all companies shall procure at least fifty per centum of their goods and services required to be procured in terms of the Procurement Act [Chapter 22:15] from businesses in which a controlling interest is held by indigenous Zimbabweans;*

The law required that for every rural district, there be formed a community share ownership trust. The launched community share ownership trusts were mainly a tool by which enterprises that are utilising natural resources plough back to the communities within which they are working. Section 14 of the Indigenisation and Economic Empowerment (General) Regulations Statutory Instrument 21 of 2010 states that the revenue realised from the community share ownership scheme will be used for community projects such as hospitals, schools, and irrigation schemes, among others to uplift the lives of communities (Government of Zimbabwe, 2010). Any lack of compliance with the demands of the law has serious consequences provided for in Part II (5) (2) of The Indigenisation and Economic Empowerment Act (2007) which says;

'Subject to this section and section 20, the Minister may issue a written order to the licensing authority of any non-compliant business ordering that the licensing authority concerned declined to renew the licence, registration or other authority to operate of the business concerned, or, where the licence, registration or other authority concerned is granted for an indefinite term, ordering that the licence, registration or other authority concerned be terminated.'

This legal and regulatory environment is the backdrop against which the mining sector has to practise its business ethics towards the communities they operate in. This paper uses the Structure-Conduct-Performance (SCP) framework initially developed by Edward Mason in the 1930s to analyse corporates performance in business ethics. It is not within the scope of this paper to review the vast literature on SCP, but it suffices to say SCP paradigm assumes a causal relationship between market structure, conduct and performance (Berry *et al.* 2019; Lelissa &

Kuhil, 2018). In this article, the structure of how the corporates are governed, conduct their behaviour, business ethics, and performance are placed in the perspective. The dominant managerial philosophy of implementing business ethics practices, whether it is shareholder, valuing shareholders, stakeholder valuing other stakeholders or societal, considers international stakeholders and expectations.

7.1 THE SHAREHOLDER PERSPECTIVE

The shareholder perspective's corporate governance systems will always prioritise the shareholder; therefore, they view social demands as only imposing a cost on the company, and these are often neglected (Priem *et al.,* 2019). It, therefore, means issues of business ethics are largely side-lined. The shareholder perspective holds it that wealth is created efficiently for society by maximising profits, and it is the government's responsibility to meet society's social and economic needs (Yang *et al.,* 2018). The only social responsibility is to employ its resources to increase its profits legally, engaging in open and free competition without deception or fraud (Friedman, 1970). Under the shareholder approach, corporates do not have a well-defined approach for responding social demands of host communities affected by corporate policies and practices' (Yang, *et al.,* 2018). The shareholder standard economic model proposes value maximisation (Wu & Wokutch, 2015). The assumption is that the results bring a socially efficient outcome of which, in practice, these basic assumptions often do not hold (Melé *et al.,* 2017). Recent supporters of the shareholder approach argue that corporates will only give in to social demands if the process increases its comparative advantage (Siltaloppi *et al.* 2020). On the other hand, stakeholder perspective considers other stakeholders.

7.2 STAKEHOLDER PERSPECTIVE

to Fassin, de Colle, and Freeman (2016), a stakeholder perspective is a stakeholder group system, which can be viewed as a set of relationships among groups with different rights, objectives, expectations, and responsibilities. Perspective managers proactively address stakeholder needs and endeavour to balance the multiple and sometimes conflicting stakeholder interests (Richter & Dow, 2017). According to Olsen (2017), civil society, activists, communities

groups, governments, media, and other institutional forces pressure corporates to engage in responsible corporate practices. Under this perspective, the corporates' nature and type of business ethics would largely depend upon how organised the host communities are and how other stakeholders such as government and civil society exert pressure on the corporate. Similar to the stakeholder perspective is the societal approach.

7.3 SOCIETAL PERSPECTIVE

The societal perspective is similar to the stakeholder perspective but an additional stakeholder that is the international community. According to Freeman and Dmytriyev (2017), corporates governed by societal perspectives are global multinational companies. Hahn *et al.* (2016) argue that corporates with a societal perspective effectively combine profit-maximisation and address morally driven societal initiatives in an ambidextrous manner. Bryars and Stanberry (2018) suggest that corporates guided by the societal perspective tend to have social contracts that incorporate sound business ethics. With all the expectations from the government and the local communities, there are predictions about how the named governance systems are expected to perform when analysed from a structure conduct performance framework.

Table 7:1: Corporate governance systems and predicted performance

Governance structure	Categories predicted to conform to the perspective (Conduct)	Predicted performance in business ethics (performance)
Shareholder	Local private limited companies Government-owned companies Multinational companies not listed but with headquarters abroad	Maximise wealth for shareholders, leave social issues to the government
Stakeholder	Companies listed on the Zimbabwe stock exchange	Pay attention to stakeholder demands
Societal	Companies listed on foreign stock exchanges	Integrate and support socially responsible practices within business organisations in different global locations

Predictions about the likely behaviour and performance of the different governance systems (Table 7.1.) Local private companies, government-owned and multinational companies not listed but with headquarters abroad which by structure have a few owners or single owners are likely to conform to the shareholder perspective because they are in business to create wealth (Yang *et al.*, 2018). The companies listed on the Zimbabwe stock exchange are predicted to follow a stakeholder model considering different stakeholders' interests (Trevino & Nelson, 2021). Companies listed on the foreign stock exchange are likely to take a societal approach because Mosca and Civera (2017) say that stakeholders' interests and the existence of complex globalised business relationships pushed the integration and support of socially responsible practices within business organisations in different global and local industries.

The growing mining sector inevitably has negative social impacts and faces criticism (Frederiksen, 2018). The response by the sector is to engage in corporate social responsibility (CSR) through programs and other initiatives that benefit the people impacted by resource extraction (Idemudia & Kwakyewah, 2018). In this regard, the purpose of this paper is to establish the nature and extent of business ethics practised by the corporates under different governance systems. The paper uses Vintro & Commanjuncosa (2010)'s conceptualisation of business ethics indicators. The indicators promote local economies through subcontracting services, acquiring raw materials and labour from the local community, and fair funds administration reflected by social projects enhancements and donations as indicators for measuring ethics in the mining industry. According to Richter and Dow (2017), a corporate governance system determines the nature and scope of business ethics. The paper assesses the business ethics of the different governance systems. The selected five governance systems are; local private, listed on Zimbabwe Stock Exchange, listed on foreign stock exchanges, government-owned and multinational companies with parent companies abroad but not listed. The conceptual framework in Figure 1 shows the key drivers of business ethics in the gold mining sector.

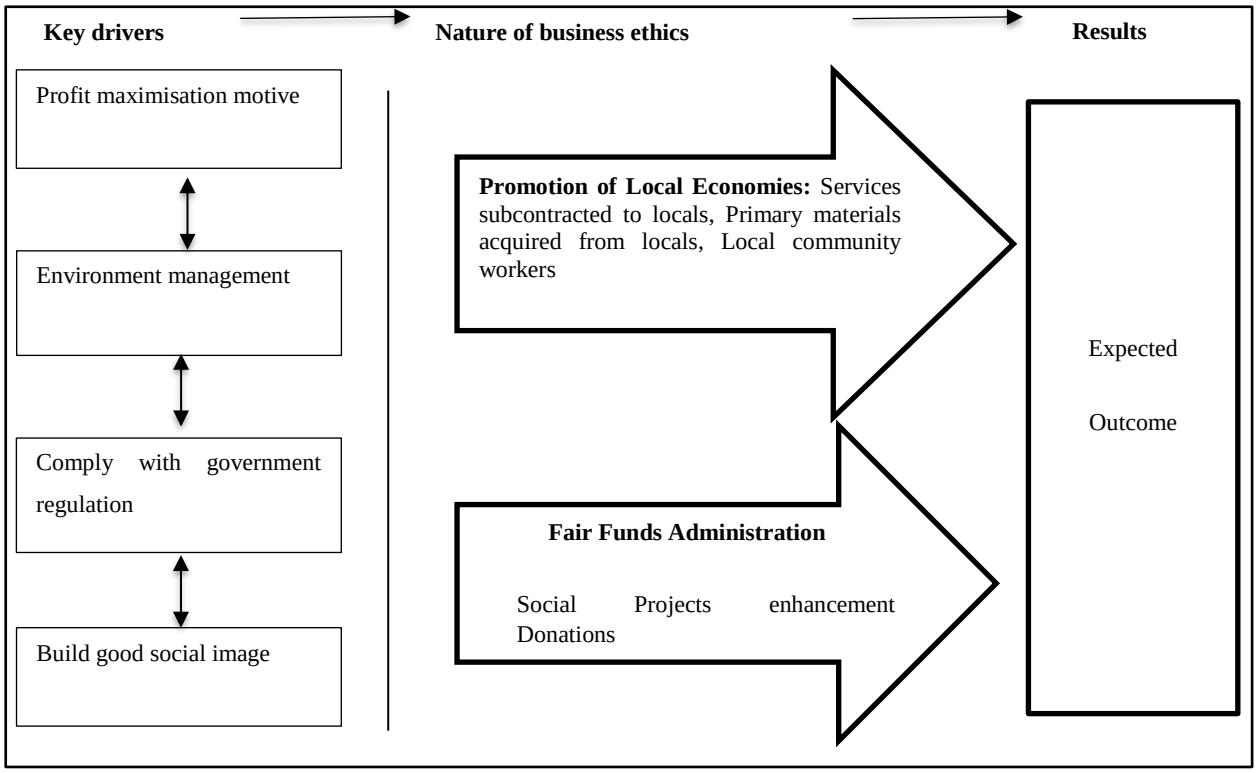

Figure 7:1: The conceptual framework used in this paper

The key drivers of business ethics are balanced against profit maximisation and awareness of environmental damages, subsequent desire to maintain environmental integrity, and the need to build a good corporate image (Figure 1). Business ethics focuses on the promotion of local economies and fair administration of funds. According to Frederiksen (2018), these deeds include giving agricultural inputs and aligning corporate mining activities with policies supporting purchasing services and goods from local businesses. Local economies are promoted by sourcing labour, materials, goods, and services from local businesses and communities. Many large mining companies undertake activities to promote well-being in their areas of operation through their CSR departments and often include fair funds administration to enhance social projects and donations made to the local communities (Frederiksen, 2018).

Given a stringent and hard legal environment and a structure conduct performance framework, this paper evaluates the emergent business ethics practised by the gold mining sector in Zimbabwe as practised by the five selected governance systems determining which among the

five performs best. Specifically, the paper investigates the extent to which the mining corporates under different governance systems promote local economies through practices such as procurement of raw materials, labour and other services supply from the host communities and support community projects through donations and other social projects enhancement initiatives.

7.4 STUDY DESIGN

The case study design is used, and multiple cases in the large scale gold mining sector in Zimbabwe were examined.

7.4.1 Data analysis.

The research carried out in Zimbabwe used a mixed-methods methodology applying both qualitative and quantitative research underpinnings. The quantitative approach had a survey of mining companies' employees and workers' union representatives. The qualitative approach included in-depth interviews with key stakeholders that work with the gold mining sector. Further, in-depth interviews with relevant key informants were held to explain emerging issues that required further clarification. The large scale gold mining companies in the target population at the study were members of both the Chamber of Mines of Zimbabwe and Mine Industry Pension Fund.

7.4.2 Setting

At the time of the study there were 35 large scale gold mining companies that were members of both the Chamber of Mines in Zimbabwe and Mines Industry Pension Fund. Out of the 35 mining companies, 23 participated, representing 66% of the target population. There was no limit to the number of respondents which the mining companies availed to complete the questionnaires. All mining companies' employees were eligible respondents; however, only those provided by the mining companies willing to participate took part in the research. Local private companies had 6 companies that participated and a total of 34 respondents from them. Mining companies listed in the Zimbabwe Stock Exchange also had 6 participating companies and a total of 34 respondents. There were 5 companies listed in foreign stock exchanges that participated and availed 46 respondents. Government-owned had 2 mining companies which

participated and 30 respondents. Multinational companies not listed had 4 participating companies and 32 respondents. Employees from the 23 mining companies were the respondents to the questionnaire and 206 respondents completed the questionnaires. All the 206 questionnaires were captured since they were administered personally and electronically, however from these 206 completed questionnaires, only 176 were appropriately completely and subsequently used.

7.4.3 Data collection

Qualitative data were collected through structured interviews with relevant stakeholders selected on the basis of their involvement with the mining industry. The first author carried out the interviews and transcribed them with the help of a research assistant. The quantitative data was collected through a questionnaire. To address the business ethics measurement challenge, a set of criteria reflective of these concepts or indicators which can be converted into measurable variables was developed using Vintro and Comajuncosa (2010)'s set criteria as detailed below, and a questionnaire was developed for the collection of quantitative data. The survey instrument was also used to capture and present a quantitative description of employees of gold mining companies' trends, attitudes, or perceptions. The data was administered with the help of a research assistant electronically using Census Survey Processing Entry (CSEntry) software. The research assistant, fluent in the two local languages Ndebele and Shona, was trained to translate the questionnaire.

Analysis of survey data was in two parts. Data generated from the use of the Likert scale was used for two purposes. Firstly, it was used to generate a mean score of the corporate's self-assessment of their performance in terms of key CSR indicators. Secondly, the data was used to generate weights α, β, and γ. The computed indicators and the mean score from the Likert scale were compared across the selected different governance structures. Non-parametric test, the Kruskal Wallis test, was used to establish any statistical differences between the different companies in terms of CSR performance. A comparative analysis of busines ethics indices was undertaken across different company categories. A global index for business ethics was calculated to establish the business ethics performance index.

The quantitative used both subjective measures (employees' perceptions) and objective measures (accounting data). Combining the two measures was done because of the mining industry's nature, where there is a lot of security and secrecy surrounding objective accounting data. The main weaknesses of subjective measures are biases inherent in perceptions (Singh *et al.*2016). Therefore the study combined the two types of measures to mitigate weaknesses of objective and subjective measures.

7.5 COMPUTING SUBJECTIVE MEASURES

The subjective measures included local economy promotion focusing on services contracted from locals, workers employed from the local community and raw materials sourced from local businesses. The other category was the fair funds administration section, which included the enhancement of social projects and donations to the local community. The questionnaire used a five-point Likert scale that ranged from strongly disagree to strongly agree. The weighting of the responses was;

1= strongly disagree; 2= disagree; 3 =neutral; 4= agree; 5= strongly agree.

A mean score was then computed using the following formula [$\frac{\sum_i^n Xi}{n}$] where '*X' is* the response to a given Likert statement by the respondent and '*n*' is the number of statements for each of the corporate environment responsibility indicators. This resulted in three distinct categories, namely, a high level of effort (2 to 0.5), medium level of effort (0.51 to -0.5) and no effort (-0.51 to -2). These subjective values of α, β, γ, were then combined with objective measures to develop the business ethics indices, as shown in the following formulas and algorithms. The algorithms and formulas used to calculate the mining sector's ethics indices as adapted from Vintro and Comanjuncosa (2010).

Services subcontracted with locals (SSL)

$$SSL = 1 - \frac{Amount\ paid\ for\ services\ subcontracted\ with\ locals}{amount\ paid\ for\ services\ subcontracted}$$

Primary Material acquired from locals (ML)

$$ML = 1 - \frac{Amount\ paid\ for\ primary\ materials\ offered\ by\ locals}{Amount\ paid\ for\ primary\ materials}$$

Local Community workers (CW)

$$(CW) = 1 - \frac{number\ of\ local\ community\ workers}{total\ number\ of\ workers}$$

$LE = \alpha_3 SSL + \beta_3\ ML + \gamma_3 CW$

An index for local economy promotion (LE) was determined using the following formula:

$LE = \alpha_1 SSL + \beta_1\ ML + \gamma_1 CW$ where the α_1, $\beta_1$and $\gamma_1$are values based on subjective assessments. Also, SSL, ML and CW are objective measures for services subcontracted with locals, primary material acquired from locals and local community workers, respectively, all obtained using the formulas above. The index reflects the level of business ethics effort by the companies towards the promotion of the local economy. The next aspect is on Fair Funds Administration.

7.6 COMPUTING OBJECTIVE MEASURES FOR EVALUATING FAIR FUNDS ADMINISTRATION

A socially responsible corporation is also expected to take into account ethical issues. Such issues will include the promotion of local economies and fair funds administration, special projects enhancement and donations. The formulas and algorithms used to calculate fair funds administration indices using objective measures are given below.

Social Projects enhancements (SPE)

$$SPE = 1 - \frac{Amount\ invested\ in\ social\ projects}{Total\ amount\ of\ all\ named\ expenses}$$

Donations (D)

$$D = 1 - \frac{Amount\ donated\ to\ Charitable\ oganisations}{Total\ amount\ of\ all\ named\ expenses}$$

The index for Fair Funds Administration (FFA) would be determined using the following formula: FFA = α_2SPE + β_2D, where α_2 and β_2 are calculated values based on subjective measures SPE and D, are social projects enhancement and donations, respectively. The ethics index reflects the overall effort in business ethics. According to Vintro & Comanjuncosa (2010), the rule of thumb is the higher the index, the better the effort or practice. The Ethics Index (E) would be the sum of Local Economy Promotion (LE) and Fair Funds Administration (FFA);

E = LE + FFA

7.6.1 Ethical considerations

The research was approved by the Zimbabwe Ministry of Mines and Mineral Development through a clearance letter which authorised the researcher to contact all government departments and quasi-government departments. An Institutional Review Board at a large North-western public university in South Africa approved the research. The first author did all interviews then transcribing was done with the help of a research assistant who was sworn to confidentiality. All the respondents for both quantitative and qualitative data collection processes signed an informed consent form. These were kept by the first author. Respondents were informed of their right to withdraw from the research process at any moment without providing any reason and that they could request that information which they provided be discarded and be excluded from the analysis. Participants were also informed that they could skip any questions that they did not feel comfortable answering.

7.7 RESULTS

Employees' Employees' perceptions of local economy promotion, subjective measures Local economy promotion refers to the practices put in place by the mining company to promote the

community's economic activities. Table 2 shows employees' assessment of how their company promoted the local economy.

Table 7:2 Employee perceptions on quantity of services subcontracted to locals SSL, raw materials acquired from locals (ML) and workers employed from the local community (CW)

Governance Structure-ownership type		% of respondents saying								
		Services contracted to locals			Material Sourced from locals			Workers employed from local communities		
		High	Medium	Low	High	Medium	Low	High	Medium	Low
Local Private Limited Company	n	23	2	9	25	9		10	15	9
	%	67.65	5.88	26.47	73.53	26.47		29.41	44.12	26.47
Listed in the Zimbabwe Stock Exchange	n	23	11	0	19	2	0	25	8	1
	%	67.65	32.35	0	63.33	4.35	0	73.53	23.53	2.94
Listed in foreign stock exchange	n	40	6	0	44	2	0	26	15	5
	%	86.95	13.05	0	95.65	4.5	20	56.52	32.61	10.87
Government owned companies	n	19	2	9	22	4	6	18	2	10
	%	63.33	6.67	30	68.75	12.5	18.75	60	6.67	33.33
Multi Nationals Not listed	n	24	1	7	133	26	17	22	1	9
	%	75.00	3.13	21.88	75.57	14.77	9.66	68.75	3.13	28.13
Total	n	135	16	25	25	9	0	101	41	34
	%	76.70	9.09	14.2	73.53	26.47	0	57.39	23.3	19.32
	Pearson chi2(8) = 52.5045 Pr = 0.0000				Pearson chi2(8) = 25.1389 Pr = 0.0001			Pearson chi2(8) = 35.789 Pr = 0.0000		

The Pearson X^2 has a P value of 0.000, suggesting that there is enough evidence to suggest an association between company ownership and the level of satisfaction with the number of services subcontracted with locals (Table 7.2). About 86.95% of the respondents interviewed from companies listed on foreign exchange, 75% from multinational companies, and 67.65% from those listed on the Zimbabwe Stock Exchange are satisfied with the quantities of services contracted to the local suppliers (Table 2). An executive with one of the companies listed on the foreign stock exchange said, *'Some companies offering us specialist services have established offices in the local community where we are operating; hence they form part of the local economy.'* The reason why the government-owned mining companies had the least satisfaction, was explained by one of the workers, *'The local community itself does not have much to offer in terms of contracting some of the services to locals as they outsource services like the servicing and monitoring tailings.'*

Corporates' performance in acquiring primary materials from locals

Acquiring raw materials like the chemicals used to benefit from local businesses supports the local economy of the mining company. The Pearson X^2 has a P value of 0.0001, suggesting enough evidence to suggest an association between company ownership and the perceived quantity of primary material acquired from locals (Table 7.2). The percentages of employees saying there is a high quantity of primary raw materials acquired from local suppliers are as follows: companies listed on the foreign exchange with 95.65%, multinational companies not listed with 75.57%, local private limited with 73.53% (Table 7.2). An executive with one of the companies listed on the foreign exchanges said,

> *Some local companies had realised our need for numerous raw materials needed by the mining companies. They do not stock them as such but source them and supply them in good lead time. 'This saves the mining companies logistics of bringing the raw materials.*

Corporates' performance in employing workers from the local community

Hiring workers, both skilled and unskilled, is a practice, which supports the local economy. The Pearson X^2 has a P value of 0.0001, showing enough evidence to suggest an association between

company ownership and the satisfaction of the number of workers from the local community (Table 7.2). About 73.53% of the employee from companies listed on the Zimbabwe Stock Exchange are satisfied that their companies have hired many employees from the local community(Table 7.2). Companies listed on foreign exchanges had a lower percentage of employees perceiving a high number of employees coming from the local community. When probed about this, one of the managers had this to say:

> *We hire people from local a lot, but because we also have several expatriates who come for three or so years on skills transfer programmes, these are then viewed as non-locals who are employed.*

7.8 CORPORATES' PERFORMANCE IN PROMOTING LOCAL ECONOMY USING OBJECTIVE MEASURES.

Table 7.3 shows the results from applying the local economy promotion formulas provided earlier. Vintro and Comanjuncosa (2010) say that the higher the index, the better the performance.

Table 7:3: Objective measures in supporting local economies

Governance structure	**services subcontracted from locals**	**materials acquired from locals**	**workers from the local community**	**α_1SSL**	**β_1ML**	**γ_1CW**	**promotion of the local economy**
Local Private Limited	0. 6201	0.4305	0.4926	14.6177	7.5691	7.2071	29.3939
Listed in Zimbabwe Stock Exchange	0.6070	0.3641	0.6586	18.7059	6.8963	12.2780	37.8802
Listed in Foreign Stock Exchange	0.7560	0.4646	0.5762	16.9565	9.6452	9.7722	36.3739
Government owned	0.6760	0.4260	0.6464	16.5333	8.0881	10.7275	35.3489
Multinational Companies not listed	0.5319	0.6128	0.4677	16.0937	10.9988	7.5634	34.6559
chi-squared	78.721	20.979	72.670	61.103	23.0160	52.6330	19.586
P value	0.0001	0.0003	0.0001	0.0001	0.0001	0.0001	0.0006

The Pearson X^2 has P values of 0.0001, 0.003 and 0.0001 in the three sets suggesting that there is enough evidence to postulate an association between company ownership and the indices of services subcontracted from local businesses, the quantity of primary material acquired from local enterprises. The workers were hired from the local community, respectively (Table 7.3). Companies listed on the foreign stock exchange are the highest in subcontracting local services with a score of 0.76, followed by government-owned companies with a score of 0.68. The employee who explained why companies listed on the local stock exchange are performing better in contracting services from local businesses said: '*Some organisations of certain trusted*

services providers who have been persuaded to come and be part of the local community and they established offices here.' An official from the government-owned mine said,

> *While the local community does not offer many services, it is mandatory for us as a company to consider the local community businesses first before looking elsewhere because it is government policy applying to government entities.'*

For acquiring raw materials from locals, multinational companies not listed lead them all with a score of 0.61, followed by companies listed on the foreign stock exchange with a score of 0.46. An official from one of the companies listed on the Zimbabwe Stock Exchange lagging in this respect commented, saying:

> *We have a system of central buying for procurement of raw materials, which is a preserve of the headquarters in the big cities hence the little acquisitions of raw materials from locals.*

When it comes to hiring workers from the local community companies listed on the Zimbabwe stock exchange lead with a score of 0.6586, government-owned companies comes next with a score of 0.6464. One of the locally listed companies' executives explained that saying: *'I am a local person myself and it was easier to know and trust the local employees,'* hence the lead. The government-owned companies compete favourably and according to a middle manager there said *'Local employees are loyal and value the success of the company.'* These figures reflect the situation supposedly on the ground.

7.9 CORPORATES' PERFORMANCE IN PROMOTING LOCAL ECONOMY USING COMPOSITE INDICES

The composite indices were generated by combining subjective measures and objective measures to develop the overall index of promoting local economies for all the company types. The formula for promotion of the local economy $LE = \alpha_1 SSL + \beta_1 ML + \gamma_1 CW$. The results on the performance in the promotion of the local economy are presented in Table 3

The Pearson X^2 has P values of 0.0001 in all the sets suggest that there is enough evidence to postulate an association between company ownership and the indices of services subcontracted from locals, primary quantity material acquired from locals, and workers hired from the local community (Table 7.3). Companies listed on the Zimbabwe stock exchange lead with an index

of 37.88, followed by companies listed on the foreign stock exchange with an index of 36.37. A key informant in the industry, when asked if listing requirements compel these companies to be visible in the promotion of local economies, said,

> *Listing rules are mainly administrative and give technical guidance. This is our own effort. We interact well with local communities because it is company policy and the right thing to do. We build schools, offer bursaries operate kitchens to feed the early childhood learners; the list of the support from the mine is long..*

7.10 CORPORATES' PERFORMANCE IN FAIR FUNDS ADMINISTRATION USING SUBJECTIVE MEASURES

Fair funds administration refers to the way companies set aside funds dedicated to any philanthropic acts towards the local communities through Donations (D) and Social Projects Enhancement (SPE)

Table 7:4 Employees' perceptions of companies' fair funds administration

Governance Structure-ownership type		% of respondents saying					
		Social Prjects enhancemnet			Donations		
		High	Medium	Low	High	Medium	Low
Local Private Limited Company	n	23	2	9	24	2	8
	%	67.65	5.88	26.47	70.59	5.88	23.53
Listed in the Zimbabwe Stock Exchange	n	23	11	0	26	8	0
	%	67.65	32.35	0	76.47	23.53	0
Listed in foreign stock exchange	n	39	7	0	45	1	0
	%	84.78	15.22	0	97.83	2.17	0
Government owned companies	n	17	9	4	19	2	9
	%	56.67	30	13.33	63.33	6.67	30
Multi Nationals Not listed	n	22	6	4	22	1	9
	%	68.75	18.75	12.5	68.75	3.13	28.13
Total	n	124	35	17	136	14	26
	%	70.45	19.89	9.66	77.27	7.95	14.77
	Pearson chi2(8) = 28.6797 Pr = 0.0000				Pearson chi2(8) = 39.4082 Pr = 0.0000		

Corporate's performance in promoting social projects

The Pearson X^2 has a P value of 0.0001, suggesting that there is enough evidence to suggest an association between company ownership and the perceived level of social projects enhancements (Table 7.4). Mining companies that are foreign listed and multinational companies not listed have 84.78% and 68.75% of employees, respectively, saying their companies make an effort to enhance social projects. An official from the Rural District Council where one of the companies listed on the foreign exchange operates had this to say:

> *The mining company complied with the requirements of the Indigenisation and Empowerment Act. The mine and has supported the community share ownership trust fund, which is benefitting the community.* One of the employees of the same company said, *'The mining company had even established an employee share ownership trust, and all permanent employees big and small are benefitting from it through dividends.*

Corporates' performance in giving donations

Donations constitute a wide range of charitable activities. The Pearson X^2 has a P value of 0.0000, suggesting enough evidence to suggest an association between company ownership and the perceived satisfaction with donations to locals (Table 7.4). Mining companies locally and foreign listed have 97.83% and 76.47% respectively employees saying they are satisfied with their companies' level of donations to locals. An employee from one of the companies listed on foreign exchanges key informant said: '*It is important for the mining company to be visible for we needed to be seen as good corporate citizens by playing their part in the local community.'*

7.10 CORPORATES' PERFORMANCE IN FAIR FUNDS ADMINISTRATION USING OBJECTIVE MEASURES.

The performance of the companies is also assessed based on objective measures, which estimate what is on the ground and from applying the formulas presented earlier.

Table 7:5: Objective measures of the companies' performance in fair fund administration

Governace structure	Special projects enhancement	Donations	α_1SPE	β_1D	Fair funds administration
Local Private Limited	0.6774	0.9933	11.9760	12.4441	24.4202
Listed in Zimbabwe Stock Exchange	0.7411	0.9939	13.4794	12.8917	26.3710
Listed in Foreign Stock Exchange	0.5914	0.9948	11.2825	11.0945	22.3770
Government owned	0.6240	0,9999	11.3936	13.6667	25.0603
Multinational Companies not listed	0.6442	0.9976	11.4744	13.9966	25.4711
chi-squared	29.266	85.203	5.964	24.222	15.570
P value	0.0001	0.0001	0.2019	0.0001	0.0037

The Pearson X^2 has a P Value of 0.0001 suggesting that there is enough evidence to suggest an association between company ownership and the perceived satisfaction with donations to locals and social projects enhancement (Table 7.5). The philanthropic side is evident in the sector as all categories are at 0.99, with no exception when it comes to donations (Table 7.5). Companies listed on the Zimbabwe stock exchange lead in social projects enhancement with an index of 0.74, followed by local private limited companies with an index of 0.68. Performance in social projects enhancement and donations sum up fair funds administration. A key informant at one of the companies listed on the Zimbabwe Stock Exchange said:

> *Our mining company support for projects enhancement is significant. We partnered with a local non-governmental organisation and established a viable aqua fish project for the local community. This has seen one of the projects becoming a sole supplier of fish fingerlings in the province and second-largest supplier in the country.'*

7.11 CORPORATES' PERFORMANCE IN FAIR FUNDS ADMINISTRATION USING COMPOSITE INDICES

Composite indices of the mining sector's performance fair funds administration was computed by combining objective and subjective measures are made to develop the indices upon which inferences can be made. The results of the fair funds administration are presented in Table 7.5. The indices were generated by combining subjective measures and objective measures. The formula for computing fair funds administration is $FFA = \alpha_2 SPE + \beta_2 D$.

As shown in Table 7.5, the Pearson X^2 has a P-Value of 0.0037, suggesting that there is enough evidence to suggest an association between company ownership and the perceived satisfaction with Fair Funds Administration. Companies listed on the Zimbabwe stock exchange lead in social projects enhancement with an index of 13.48, followed by local private limited companies with an index of 11.98. Multinational companies unlisted lead in making donations with an index of 13.00, followed by government-owned companies with an index of 13.67. The overall leader in fair funds administration is companies listed on the Zimbabwe stock exchange with an index of 26.37, followed by multinational companies not listed. An executive with one of the companies listed on the Zimbabwe Stock Exchange said:

> *It is important to know what issues affect the locals most and addresses those issues. Most people, given the state of the economy, value projects that enhance their livelihood. With the help of the local communities, our companies identify these projects, and the company support them financially.*

7.12 CORPORATES' PERFORMANCE IN PRACTISING BUSINESS ETHICS USING COMPOSITE INDEX

Table 7.6 shows the ethics index, which is the overall assessment of the corporate social responsibility for the mining companies' business ethics and summarises the mining companies' performance by combining the promotion of the local economy and fair funds administration indices. Where, promotion of local economy; $LE = \alpha_1 SSL + \beta_1 ML + \gamma_1 CW$;

fair funds administration, $FFA = \alpha_2 SPE + \beta_2 D$

and Ethics index would be the sum of promotion of the local economy and fair funds administration, $E = LE + FFA$.

Table 7:6: Overall ethics index

	Fair Funds Administration	Promotion of Local Economy	Ethics Index
Local Private Limited Company	24.4202	29.3939	53.8140
Listed on Zimbabwe Stock Exchange	26.3710	37.8802	64.2512
Listed on foreign Stock Exchange	22.3770	36.3739	58.7509
Government-owned companies	25.0603	35.3489	60.4092
Multinational companies unlisted	25.4711	34.6559	60.1269
chi-squared	15.570	19.586	19.063
P value	0.0037	0.0006	0.0008

The Pearson X^2 has a P Values of 0.0037, 0.0006 and 0.0008 in fair funds administration, local economy promotion and ethics, respectively, suggesting that there is enough evidence to postulate an association between company ownership and the perceived satisfaction with fair funds administration, local economy promotion, and ethics (Table 7.6). Companies listed on the Zimbabwe stock exchange lead in business ethics practices 64.25, followed by government-owned companies with an index of 60.41. Companies listed on the Zimbabwe Stock Exchange lead in Ethics index according to one of the executives in a locally listed company said:

> *Our mining companies are well aware of the cultural values of the local people, and we capitalise on these by fulfilling most of their needs, some of which are not even financial. We show them that we are one with them through practices like having company representatives present at community cultural gatherings, joyful or solemn assemblies.*

7.13 DISCUSSIONS

Results presented in this paper show that all companies, irrespective of the governance system, had high subjective and objective scores with regard to business ethics. This is in line with Jackson *et al.* (2020), who demonstrate that where CSR is institutionalised through legislation,

the variation in CSR activities declines as firms adopt increasingly similar practices over time. The chief and most plausible explanation of this high performance could be that the minimum parameters for acceptable business ethics were clearly enshrined within the country's legal system. The difference between best performer, medium performer and worst performer is relatively small, ranging between 64.25 and 53.81 in index terms. This agrees with Jackson *et al.* (2020), who say legislation led CSR policy leads to homogeneous CSR activities within the country and reduces the gap between best practice corporates and typical corporates' activities. This resonates with Berger- Walliser and Scott (2018), who assert that national statutes set standards for the corporate world to keep a check on companies, adherence to the basic principles and moral values.

Companies that are predicted to be under the stakeholder governance systems listed on the Zimbabwe Stock exchange outperformed all the other companies. This confirms what Isaksson and Mitra (2019) said: corporates that deliberately identify, prioritise, and address the most important social matters make the highest impact on society and the business's future. Such companies are under the scrutiny of many stakeholders, hence guided by the tenets of stakeholder theory. According to Corrigan (2019), in the stakeholder approach, the corporates must balance the shareholders' interests with other stakeholders' interests. In other words, stakeholder theory demands that all stakeholders' interests should be considered, where host communities are also regarded as very important stakeholders (Freeman, 2017).

The corporates predicted as being societal in the governance system, with broadened stakeholder focus that includes the international community, have been predicted to be the best performers in practising good business ethics. However, their average performance, in terms of business ethics, in this article is low. This is in agreement with literature that says companies with a societal approach to CSR usually self-regulate and tend towards complacency in compliance with hard regulation (Jackson *et al.* 2020). This is in line with Berger-Walliser and Scott (2018), who supported Pandey and Pattnaik (2017) in stating that the legalisation of CSR results in the hardening of the formerly self-driven, soft CSR concept. Results show that companies predicted to be following the shareholder governance system represented by government-owned

companies and multinationals not listed companies have outperformed their predicted performance. As Berger-Walliser and Scott (2018) established, the legalisation of CSR fosters the growth of shareholder primacy across the globe.

The key aspect of the shareholder governance that gave government-owned companies and multinational not listed companies an urge over companies listed on the foreign stock exchange is obeying the law in the fair funds administration area. This is in line with tenets of the shareholder perspective with the stance to maximise wealth legally. Although the results subjectively indicated that the interviewed employees were very satisfied with the performance of companies who are listed on a foreign exchange (regarding donations and assistance towards special projects), the composite results suggest that there is room for these companies to do much more relative to their size. This notion is supported by Gatti *et al.* (2019), who indicated that size influences CSR adoption.

This study uses cross-sectional data. It is possible that the nature and scope of Corporate Social Responsibility, in this case, business ethics, can change due to changes in the country's political economy. It is important to trace changes in corporate's performance over different development epochs. Tracing performance over time is important for two reasons. Firstly, the researchers will establish a governance system that consistently promotes good business ethical practices even when the law is silent. Secondly, this also allows the researchers to establish how the corporate social responsibility of corporates quickly align with the regulatory framework

The results showed that business ethics practices, predominantly driven by legislation, lead to homogeneity in practices among different governance structures. This thwarts innovation, and companies end up doing what is barely minimal, as evidenced by the little differences in the companies' performance indices. Where the hard legal stance promotes homogeneity in practices, heterogeneity might be more beneficial. Policymakers can therefore revisit mining policy with an enlightened approach.

The evaluation showed that companies could not be confined to being completely classical, stakeholder or societal in their conduct and performance. The results indicate that a company can have classical attributes in the structure and still conduct itself in a manner predicted to be peculiar to stakeholder structure and perform in a way that considers more stakeholders than just shareholders' expectations. Therefore, another evaluation can add a study with more aspects to the structure like board structure and chief executive officer attributes.

7.14 CONCLUSION

The paper set out to evaluate the mining corporates' business ethic practises of the gold mining sector. Mining corporates are doing very well as far as business ethics is concerned. The results are conclusive that the stakeholder governance system yields high business ethics scores under mandatory CSR regulation.

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8. CHAPTER 8: RESEARCH ARTICLE 4

Title: ASSESSING SCOPE AND NATURE OF HUMAN CAPITAL MANAGEMENT PRACTISED BY ZIMBABWE'S GOLD MINING SECTOR

The reader is requested to take note of the following:

The article was submitted for peer-review and possible publication in the following Department of Higher Education and Training (DHET) accredited academic journal indexed, peer-reviewed academic journal as follows:

Loveness Nyikahadzoi, Ronnie Lotriet, Anet Smit. Assessing scope and nature of human capital management practised by Zimbabwe's gold mining sector. SA Journal of Human Resource Management ISSN: 1683-7584 (PRINT) ISSN: 2071-078X (ONLINE).

https://sajhrm.co.za

Article was acceted for publication see notice in Appendix 8A on page 292. The article was written in line with the journal's submission guidelines, which are included in Appendix 8B page 294 and AOSIS Publishing, the publishing organisation for the journal reference style guide in Appendix 5 on page 260. The article was researched and written by the first author (Loveness Nyikahadzoi) as the PhD candidate and primary author, while the co-authors (Ronnie Lotriet and Anet Smit) fulfilled a supervisory function as the PhD project's promoters.

ABSTRACT

Introduction: Mining industries are usually labour intensive, corporate social responsibility and human resources management are indispensable components of mining companies.

Purpose: Assessing the socially responsible human resources management practised by Zimbabwe's gold mining sector, the paper also determines which among the five governance systems; local private, government-owned, listed on Zimbabwe Stock Exchange, multinational not listed and listed on foreign stock exchanges leads in this regard.

Design, methodology, approach: The paper uses a multiple case study design with a population of 35 large-scale gold mining companies that are members of both Chamber of Mines of Zimbabwe and Mine Industry Pension Fund and 23 participated. The paper uses a mixed-methods approach using a questionnaire and structured interviews to collect quantitative and qualitative data. Kruskal–Wallis rank test was used to test the differences in the governance structures' performances.

Findings: Results indicate that gold mining companies exercise socially responsible human resources management. The listed on foreign stock exchanges have the highest index signifying best performance, followed by government-owned.

Contribution: The corporates can improve their social responsibility in human resources management by using the balanced scorecard to assess their performances.

Limitations and implications: Theoretical perspectives of the firm, which are shareholder, stakeholder and societal, cannot act alone to explain the complex phenomenon of structure-conduct-performance in assessing the nature of socially responsible human resources management. Therefore future research must combine principles of these perspectives with concepts of the legal environment, board structure and managerial attitudes as determinants of the nature and scope of socially responsible human resources management.

Implications-Practical/Social/Policy: Most human resources management issues in the mining sector are prescribed by regulation, policy makers can benefit from the perceptions of the

workers concerning the way socially responsible the different governance structures implement human resources management.

Contribution/Originality/Value of the study: This study contributes to the previous literature on socially responsible human resources management by illuminating the possible role played by governance structure in corporate social responsibility adoption.

Keywords: gold mining sector, corporate social responsibility, modified balanced scorecard, governance structure, socially responsible human resources management

8 INTRODUCTION AND PROBLEM STATEMENT

Mining drives economic development worldwide (Sankey, 2018, Pedro, Ayuk, Bodouroglou, Milligan, Ekins & Oberle, 2017). For Zimbabwe, the mining sector is the centrepiece of the country's economic recovery and growth, responsible for generating growth spurts across sectors, contributing 13% to fiscal revenue and is responsible for more than 50% of foreign direct investment in Zimbabwe (Chamber of Mines of Zimbabwe, 2017). The sector's contribution to economic development compares favourably with experiences within the Southern Africa Development Community (SADC) region (Chamber of Mines of Zimbabwe, 2017).

Mining has different impacts on the biophysical environment, social environment and economic environment (Pedro et al., 2017). Mining is a dangerous operation (Mancini & Sala, 2018), and therefore, mineworkers' health and safety are essential in every mining setup (ISO Standard No. 45001, 2018, Naveed & Ali, 2021). In return, mining industries should benefit society (Lindman, Ranängen & Kauppila, 2020). Some of the benefits to society that mining brings include employment creation and improvements in their employees' living standards during the mine's operation phase (Reinecke & Ansari, 2016, Mancini & Sala, 2018). While making a profit, the mining sector should focus on human wellness and development (Yakovleva, Kotilainen & Toivakka, 2017, Lindman *et al.*, 2020). According to Vintro and Commanjuncosa (2010), whose criteria for human resources management this paper uses, best human resource management practices include training capacity, creating high-security levels by providing a safe environment, collective bargaining, and providing retirement and medical assurance plans, and win-win resolutions of conflictive situations. According to Cantele (2017), a comprehensive corporate social responsibility program should go beyond paying attention to profitability and environmental protection and encompass societal needs and expectations, including good employee corporation relations and social protection.

Mining industries are usually labour intensive (Guliwe, 2019) and require corporate social responsibility and human resources management as indispensable components of organisational leadership (Herrera, Juan, and Carlos de las Heras-Rosas, 2020). The social involvement of workers in the company's management focuses on building the right relationships with

employees, respecting their rights and involving them in business management (Herera *et al.* 2020). Of late, the connection between corporate social responsibility and measurable performance has attracted attention (Pisani, Kourula, Kolk & Meijer, 2017, Asiaei & Bontis, 2019). For this article, corporate social responsibility towards employees is referred to as socially responsible human resources management (Zhao & Zhou, 2021).

The framework for analysing the socially responsible human resources management performance (Zhao & Zhou, 2021) of the corporates in this paper is the Structure-Conduct-Performance (SCP) paradigm initially developed by Edward Mason in the 1930s. The SCP paradigm assumes a causal relationship between market structure, conduct and performance (Lelissa & Kuhil, 2018). In this paper, structure refers to how the corporate is governed. The corporates' conduct (behaviour) is the socially responsible human resources management practices in employee corporation relations and social protection. The performance refers to how the company is implementing its human resources management systems, whether it is a shareholder in perspective, valuing shareholders mostly, or stakeholder in approach considering other stakeholders or being societal, conscious of international expectations. Governance systems establish the rules that shape organisational actions, and a corporate is defined by its governance structure (Klein, Mahoney, McGahan, & Pitelis, 2019). The selected governance structures are: private limited, listed on Zimbabwe Stock Exchange, listed on foreign stock exchanges, government-owned and multinational companies with parent companies abroad but not listed.

8.1 LITERATURE REVIEW

Traditionally organisations account for only those items that can be reduced to monetary value, and it has been challenging to convert social practices and performance into financial values and more difficult when the assessment is extended to the sphere of human resources management (Mansour, 2017). Building upon the three named perspectives, this paper uses the balanced scorecard to assess how different governance structures influence the scope and nature of socially responsible human resource management within Zimbabwe's gold mining sector and business governance theories to predict their performance. The nature of socially responsible human resources management Zhao & Zhou, (2021), according to the structure-conduct-

performance paradigm depends on the guiding philosophy of the corporates' governance structure, this paper uses three dominant perspectives; shareholder, stakeholder and societal perspectives, which are theories that determine and shape the nature of a business's corporate social responsibility.

8.1.1 The shareholder perspective

The shareholder perspective is important as a view that describes how corporates guided by this perspective practise what Zhao and Zhou, (2021) call socially responsible human resources management. As popularised by Friedman (1970), the shareholder perspective says the only business of businesses is to maximise wealth for the shareholder legally and leave socially responsible activities to the governments. Shareholders wealth maximisation has been described as a process that increases the shareholder capital gains so as to bring the highest possible return to shareholders (Denis, 2016, Wang & Wu, 2020). Corporates governed by the shareholder perspective emphasise profit maximisation, and accordingly, the governance proposes that the business concern should only consider the decisions that maximise the shareholders' wealth (Khan, & Hussanie, 2018). As a result, such corporates guided by the shareholder approach have room to maximise profit at the employees' expense because corporates will hire and retain employees whose expected value to the corporate is equal to or greater than the cost of employing them, as long as there are no other employees who will do an equivalent job for less compensation (Denis, 2016). Shareholder wealth maximisation view holds it that higher compensation can reduce the portion of the value created by the corporate and reduce the economic benefits created from human capital resources (Morris, Alvarez, Barney, & Molloy, 2017, Barney, 2018). Again, there is a belief that training investment dilutes shareholders wealth when proper needs assessment, which is one of the phases of any training, is not properly done (Dwomoh, Boachie, and Kwarteng, 2017). These assertions from literature lead to the prediction that those governance structures in the gold mining sector with a shareholder perspective as the guiding philosophy engage less in socially responsible human resources management. On the other hand, the stakeholder perspective agrees with the shareholder on creating wealth responsibly and legally but differs on points of emphasis. While the shareholder perspective

primarily focuses on economic return, the stakeholder perspective has interests that go beyond narrow economic gain (McGahan, 2020).

8.1.2 Stakeholder perspective

Stakeholder perspective propounded by Freeman (2020) suggests that corporates' decision on how to engage with the employees is a negotiated outcome involving the management, employees and shareholders. Barney (2018) acknowledges that the generation of firm profits requires that stakeholders, besides shareholders, consider employees at the top of the list of these stakeholders. Thus, within the stakeholder perspective, the employees are vital stakeholders. The stakeholder approach, by default, has a platform for engaging in dialogue through collective bargaining (Mamabolo & Myres, 2020). Therefore the prediction is that governance structures with stakeholder perspective as a dominant philosophy practise socially responsible human resources management. Barrena-Martinez, López-Fernández and Romero-Fernández, (2019) say that the integration of the social demands of workers into corporate social responsibility practices can improve their well-being and motivation and add overall stakeholder value. While the stakeholder perspective considers both internal and external stakeholders the societal perspective has additional stakeholders, which are the international stakeholders.

8.1.3 The societal perspective

The societal perspective suggests that besides adhering to national rules and regulations guiding human resources management, corporates must contend with the global framework of rules and regulations (Parsa, Roper, Muller-Camen & Szigetvari, 2018, Monteiro, Aibar-Guzmán, Garrido-Ruso, & Aibar-Guzmán, 2021). The societal aspect is important for this study because multinational companies both listed on foreign exchanges and those not listed, are important actors in the global business arena (Luo & Tung, 2018). There is negative stereotyping of these multinational companies by global stakeholders that is inherent in their nature of being foreign Edman, (2016) which compels companies to act responsibly in their corporate social responsibility performance. Parsa *et al.* (2018) say that due to international expectations, training capacity, employer-employee relationship, remuneration and other benefits are measured using global standards and tend to be of high quality, especially in the multinational corporates operating in developing countries. Given these, predictions about how the different governance systems are expected to perform can be made. Table 8.1 summarises the various governance systems and the predicted performance given their governance structure as proposed by the literature.

Table 8:1: Corporate governance systems and predicted performance

Theoretical governance system	**Company categories predicted to conform to the model**	**Predicted performance in socially responsible human resources management**
Shareholder	• Local private companies • Government-owned companies	Shareholder primacy and wealth maximisation
Stakeholder	• Companies listed in the Zimbabwe Stock Exchange	Pay attention to stakeholder demands
Societal	• Companies listed in foreign stock exchanges • Multinational companies not listed but with headquarters abroad	Integrate and support socially responsible practices within business organisations in different global locations

Table 8.1 summarised the predicted performance of the named five governance systems given their assumed structures and expected performance and conduct as described in the literature. The modified balanced scorecard is then used for the assessment of the actual performance. According to Tabatabaei, Omran, Hashemi and Sedaghat (2017), socially responsible human resources management is intangible. It is therefore not feasible to determine quantitative values expressed quantitatively as well as in monetary units. In this regard, the modified balanced scorecard seems to be the tool to measure socially responsible human resources management practices. Figure 8.1 shows the critical aspects of socially responsible human resources management.

Figure 1 reflects the socially responsible human resources management indicators

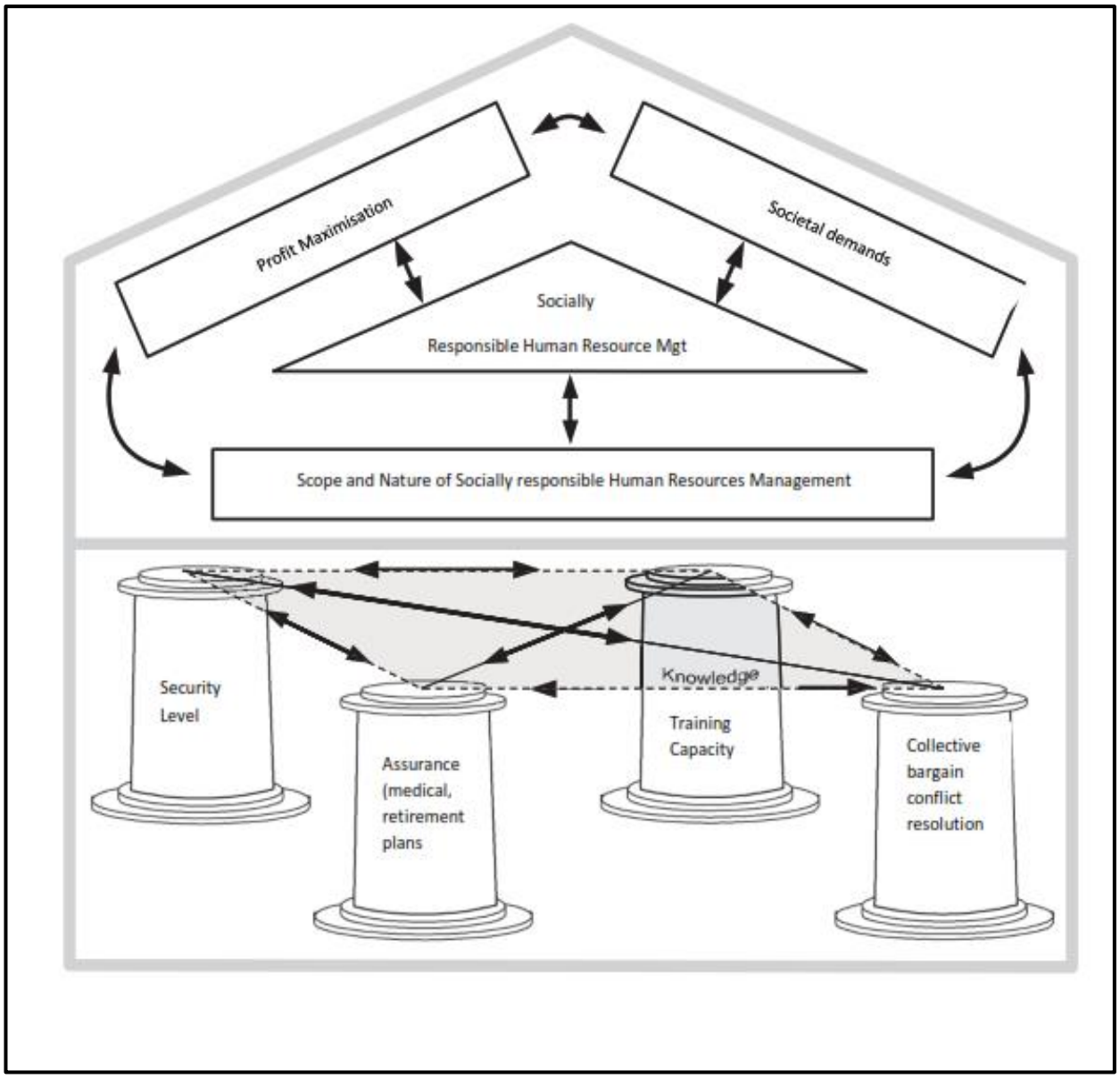

Figure 8:1: Critical aspects assessed in the socially responsible human resources management

Figure 8.1 shows a conceptual framework for socially responsible human resources management with four pillars supporting sound corporate social responsibility. Security-level shows workers

need employment stability which Failla, Melillo and Reichstein (2017) say is an important pillar of human capital needs. Medical assurance and retirement plans aspects make up employee corporation relations assessment. On the post of medical assurance and retirement plans, Osborne and Hammoud (2017) cite health and safety at work as essential factors for responsible human resources management practices. Cantele (2017) says overlooking health and hygiene factors threaten employees' physical and mental health. Training capacity and collective bargaining and conflict resolution assess social protection. Osborne and Hammoud (2017) suggest that employees need training and resources to work well. Cantele (2017) says that the organisation's social responsibility practices increase employee engagement and satisfaction, leading to positive performance.

8.2 RESEARCH METHODOLOGY

The research design used is the case study design, using the large scale gold mining sector in Zimbabwe. The study makes use of multiple cases.

8.2.1 Research objectives and problem statement

Given the sector's significance to the country's economic development, this study seeks to establish the corporate social responsibility performance in human resources management by large scale gold mining companies given their different governance structure and predicted conduct and performance.

8.2.2 General objectives

The article's purpose is to assess the scope and nature of human resources management practised by Zimbabwe's gold mining sector. In addition, the paper aims to determine which among the five governance systems operating in Zimbabwe's gold mining sector leads the industry in human resources management in a socially responsible way. These five governance systems are the local private, listed on the Zimbabwe Stock, listed in foreign stock exchanges, government-owned companies and multinational companies with parent companies abroad but not listed. The article also aims to determine which among the companies identified by governance systems perform best.

8.2.3 Specific objectives

The paper adopted an assessment based on Vintro and Comanjuncosa's (2010) concept to measure CSR factors. In particular, for this paper, the scale contains six items of socially responsible human resource management; security level, training capacity, collective bargaining, retirement plans, medical assurance and occurrence or non-occurrence of a violent or conflictive situation. The items are observed under two factors: employee corporation relations and social protection. The paper borrows from the CSR performance measures developed by Vintro and Comnjuncosa (2010) and then uses the balanced scorecard framework to assess the extent of CSR performance.

8.2.4 Research approach

The study employed a mixed-methods approach using both quantitative and qualitative research philosophical underpinnings (Almeida, 2018). Qualitative data were collected using structured interviews with several respondents, including mineworkers, union representatives, community leaders, managers and other workers. Additional interviews were carried out seeking clarification on emerging issues needing further explanations. The quantitative survey used a self-designed questionnaire administered electronically with the help of a research assistant. The questionnaire solicited for knowledge, attitudes and perceptions of employees on given corporate social responsibility indicators, thus giving subjective information which, when analysed, result in subjective measurements. These subjective measurements consist of knowledge, attitudes and perceptions and depend on managers' and other employees' perceptions of how well their corporate entity performs and then they are statistically analysed. The objective measurements section of the questionnaire collected accounting information on the ground as recorded in the formal records of the mining companies. They were combining perceptions and official records to mitigate weaknesses of objective and subjective measurements (Singh, Darwish & Potočnik, 2016). The main weakness of subjective measurements is the biases inherent in perceptions (Singh *et al*., 2016). The main weakness of the objective measurements is that the nature of accounting information by nature is sensitive and highly confidential and hence susceptible to inconsistencies, Pisani, Kourula, Kolk and Meijer (2017), in their systematic review of corporate

social responsibility research, found that, there are difficulties in gathering quantitative data on corporate social responsibility research in developing countries.

8.2.5 Subjective measurements of companies' social responsibility

The subjective measures of a companies' socially responsible human resources management consist of two broad categories: social protection and employee corporation relations. Social protection sought employees' perceptions of companies' practices. The Cronbach's alpha test was used to test the instrument's reliability. The Cronbach's alpha test reflects the validity or the extent to which an instrument measures what it claims to measure, and reliability that is the extent to which an instrument can be expected to give the same measured outcome should the measurements be repeated (Taber, 2018). A five-point Likert scale that ranged from strongly disagrees to strongly agree was used for the questions. The weighting of the responses where they indicated the extent to which they agree with the statements on CSR processes and practices where:

1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree. A mean score with a cut-off point of 0.5 was subsequently computed using the following formula $\frac{\sum_i^n Xi}{n}$ Xi responds to a given Likert statement by the respondent, and **n** is the number of statements for each of the corporate environment responsibility indicators. This resulted in three distinct categories, namely, a high level of social protection and employee corporation relations (2 to 0.5), medium level of social protection and employee corporation relations (0.51 to -0.5) and a low level of social protection and employee corporation relations (-0.51 to -2). The three categories were treated as follows: low level was 1, the medium level was 2, and the high level was 3. These subjective values of α, β, and γ were then combined with objective measures to come up with the CSR indices, as shown in the formulas and algorithms below.

8.2.6 Research strategy

This the modified balanced scorecard, this paper evaluates the gold mining sector's socially responsible human resources management performance in Zimbabwe. The study used gold mining companies categorised by size and the governance systems among private companies. Companies listed in the Zimbabwe Stock Exchange, companies listed in foreign stock exchanges, government-owned and multinational companies not listed in any stock exchange but

with parent companies abroad were also evaluated. The process included place-based ethnographic observation of mining corporates, a survey, and socio-economic and political analysis across the selected multiple cases of gold mines. Most Socially responsible human resources management research has mostly been carried out more from the managerial perspective only at the exclusion of other workers (Tabatabaei *et al.*, 2017, Xiao, Cooke, Xu, & Bian, 2020). This article included both management and other workers. The sample of corporates that participated in the study was selected from large-scale gold mining companies that are members of both the Chamber of Mines of Zimbabwe and the Mines Industry Pension Fund, which at the time of the research, were 35.

8.3 DATA COLLECTION METHOD

This paper proposes using a modified balanced scorecard as initially propounded by Kaplan and Norton (1992) to assess the performance of different mine types in undertaking corporate social responsibility in conjunction with Vintro and Comanjuncosa's (2010) concept to measure CSR factors. In particular, the scale contains six items or modified balanced scorecard perspectives, namely: Security Level (SL), Training Capacity (TC), Collective Bargaining (CB) observed under the factor Employee Corporation Relations (ECR). The factor Social Protection (SP) contains Retirement Plans (RP), Medical Assurance and occurrence or non-occurrence of a Violent Conflictive situation (VC) as the observed scale items. Quantitative data was collected electronically using Census Survey Entry (CSEntry) software using electronic tablets, and the questionnaire was administered with the help of a research assistant. Structured interviews were used to collect qualitative data, and additional interviews were carried out to seek clarification on issues arising.

8.3.1 Participants

At the time of the study, the target population consisted of 35 large scale gold mining companies that were members of both the Chamber of Mines in Zimbabwe and Mines Industry Pension Fund. Out of the 35 mining companies, 23 participated (representing 66% of the target population). There was no limit to the number of respondents completing the questionnaires from the participating mines. All mining companies employees were eligible respondents; however, only those provided by the mining companies were willing to participate. Local private

companies had 6 participating mining companies and a total of 34 respondents from this category. Mining companies listed in the Zimbabwe Stock Exchange also had 6 participating companies and a total of 34 respondents. There were 5 companies listed in foreign stock exchanges participating with a total of 46 respondents. Government-owned had 2 participating mining companies with 30 respondents. Multinational companies not listed had 4 companies participating and 32 respondents. Employees from the 23 mining companies were the respondents to the questionnaire and they were 206 respondents who completed the questionnaires. All the 206 questionnaires were collected since they were administered personally. However, from these 206 completed questionnaires, only 176 were appropriately completely and subsequently used.

8.4 DATA ANALYSIS AND DISCUSSION

Objective measures of employee corporation relations

The algorithms and formulas used to calculate the mining sector's performance on employee corporation indices were adapted from Vintro and Comanjuncosa (2010). These indices assess the mining companies' practices on the ground.

Employee/corporation relations (ECR) formulas

Security Level (SL)

$$SL = 1 - \frac{Number\ of\ accidents}{Number\ of\ workers}$$

Training and Capacity (TC)

$$TC = \frac{Real\ average\ training\ hours\ per\ worker}{Average\ training\ hours\ planned\ per\ worker}$$

Collective Bargaining (CB)

$$CB = \frac{Number\ of\ workers\ receiving\ collective\ bargaining}{Total\ number\ of\ workers}$$

An index for Employee Corporation Relations (ECR) would be determined using the following formula:

ECR = α_1SL + β_1TC +γ_1CB, where the α_1, $\beta_1$and $\gamma_1$are values based on subjective assessments and SL, TC and CB are objective measures for security level, training capacity and collective bargaining respectively that were obtained using the formulas as shown above. The index reflects the companies' CSR efforts towards providing training capacity, security level, and an environment suitable for collective bargaining. The next aspect is social protection, the formulas and algorithms used to calculate social protection indices using objective measures.

Social protection (SP) formulas

Retirement Plans (RP) supported by the corporation

$$RP = \frac{number\ of\ workers\ receiving\ retirement\ plans}{Total\ number\ of\ workers}$$

Medical Aid (MA) supported by the corporation

$$MA = \frac{number\ of\ workers\ receiving\ medical\ plans}{Total\ number\ of\ workers}$$

Prevention of Conflictive Situations (VC)

$$VC = 1 - \frac{Number\ \ of\ violent\ incidents}{total\ number\ of\ workers}$$

The social protection index is determined using the following formula:

SP = α_2RP + β_2 MA + γ_2VC, where α_2, β_2, and γ_2 are calculated values based on subjective measures. RP, MA, and VC's objective measures are retirement plans, medical assurance occurrence of confrontational situation, respectively. The human resources index would be the sum of employee corporation indices. This index reflects the overall CSR effort towards these internal stakeholders. According to Vintro and Comanjuncosa (2010), the higher the index, the better the CSR effort or practice.

8.5 ETHICAL CONSIDERATIONS

The research was approved by the Ministry of Mines and Minerals Development in Zimbabwe through a clearance that authorises the researcher to contact all government departments and quasi-government departments. The Institutional Review Board of the Faculty of Economic and Management Sciences at North-West university approved the research. The first author did the individual interviews, then transcribed by both researcher and research assistant, who was sworn to confidentiality. All participants for both quantitative and qualitative signed an informed consent form, which the researcher kept. Participants were informed that they had a right to withdraw from the research process at any moment and that they could request that information that they provided be discarded and excluded from the analysis. Participants were able to withdraw without providing any reason. Participants were also informed that they could skip any questions that they did not feel comfortable answering.

8.5.1 Research procedure

The Cronbach's alpha coefficients for 5 items per indicator

Cronbach's alpha coefficient determined the reliability and internal consistency. The internal consistency in measurement refers to whether all measuring criteria measure the same construct or concept (Sharma, 2016). The reliability coefficients of the five items about each of the three socially responsible human resources management performance measures were determined. Sharma's (2016) thumb rules for interpreting the Cronbach's reliability coefficient are as follows: $\alpha > 0.9$ = excellent; $\alpha > 0.8$ = Good; $\alpha > 0$ .7 = Acceptable; $\alpha > 0.6$ = Questionable; $\alpha > 0.5$ = Poor and $\alpha < 0.5$ = Unacceptable. The Cronbach's alpha coefficients for 5 items per indicator are as following: security Level = 0.908, excellent internal consistency; training capacity = 0.888, good internal consistency; collective bargaining = 0.951, excellent internal consistency; retirement plan = 0.904, excellent internal consistency; medical aid = 0.873, good internal consistency and collective situation = 0.728, acceptable internal consistency. These results show that items measuring security level, collective bargaining and retirement plan have excellent internal consistency; training capacity, social protection and medical aid have good reliability and internal consistency. Items measuring the collective situation have acceptable reliability and internal consistency.

8.6 EMPIRICAL INVESTIGATION

8.6.1 Subjective Measure

Employee corporation relations

Employee corporation relations consists of security level, training capacity and collective bargaining practices as indicators. Table 8.2 shows the perceptions of employees concerning all aspects of employee corporation relations.

Table 8:2: Employee perceptions on security level (SL), training capacity (TC) and collective bargaining (CB)

Governance Structure-ownership type		% of respondents saying								
		Collective bargaining			Training Capacity			Security level		
		High	Medium	Low	High	Medium	Low	High	Medium	Low
Local Private Limited Company	n	22	4	8	23	5	6	23	2	9
	%	64.71	11.76	23.53	67.65	14.71	17.65	67.65	5.88	26.47
Listed in the Zimbabwe Stock Exchange	n	20	14	0	28	6	0	26	8	0
	%	58.82	41.18	0	82.35	17.65	0	76.47	23.53	0
Listed in foreign stock exchange	n	43	1	2	44	2	0	45	1	0
	%	93.48	2.17	4.35	95.65	4.35	0	97.83	2.17	0
Government owned companies	n	19	4	7	19	5	6	18	3	9
	%	63.33	13.33	23.33	63.33	16.67	20	60	10	30
Multi Nationals Not listed	n	19	6	7	22	5	5	22	1	9
	%	59.38	18.75	21.88	68.75	15.63	15.63	68.75	3.13	28.13
Total	n	123	29	24	136	23	17	134	15	27
	%	69.89	16.48	13.64	77.27	13.07	9.66	76.14	8.52	15.34
	Pearson $chi^2(8)$ = 37.7663 Pr = 0.0000				Pearson $chi^2(8)$ = 21.8104 Pr = 0.0005			Pearson $chi^2(8)$ = 35.789 Pr = 0.0000		

As shown in Table 8.2, the Pearson X^2 has a P value of 0.0000, 0.0005 and 0.0000, suggesting enough evidence to imply an association between company ownership and the perceived security level, training capacity and collective bargaining.

Security level

Security level focuses on perceptions of employees on whether their mining company has procedures to stop any form of discrimination in the workplace, promoting diversity in the workforce and at the same time encouraging whistleblowing. Table 8.2 shows that 97.83% of the employees who responded from the companies listed in foreign stock exchanges reported high-level security. Of all the employee respondents interviewed from mining companies listed in the Zimbabwe Stock Exchange, 76.47% reported a high-security level provided by their employer. Therefore, listed mines have a high record in offering high-level security to their employees. On the other hand, 60% of the respondents interviewed from government-owned companies reported high-level security provided to their employees. About 68% of the respondents from not listed multinational companies and local private companies reported a high-security level. The research team noted information displayed on information boards of one of the listed companies indicated a decrease in work-related injuries confirming the high-security level. During a follow-up interview, an executive with one of the companies pointed out that technological improvements and new equipment for ventilation and diffusion of harmful gases underground. He commented that this contributes to reducing the danger to the mineworkers, thereby increasing the security level.

Training capacity

socially responsible practices primarily focus on the workers in investment areas in human resources, empowerment through training within the company. The training capacity section assessed whether the companies funded capacity building by providing a budget for training, organising training and financing other capacity-building activities. Table 8.2 shows that 95.65% and 82.35% of the respondents from mines listed in the foreign stock exchange and mines listed in the Zimbabwe Stock Exchange respectively reported high-level training capacity offered to workers. Of all the respondents interviewed from not listed multinational companies, 68.75% said high-level training provided for workers. The subjective measurements show that the lowest

performers are government-owned companies (63.33% of the respondents reported a high level of training) followed by the local private companies at 67.65%). A key informant from one of the listed companies pointed out that a lot of training has to be done to maintain ISO 14000 certification and high standards. Therefore, the employees can see the action in training them.

Collective bargaining

In this respect, mining companies listed in the foreign stock exchange are the highest performers, with 93.48% of the respondents reporting high collective bargaining levels. The least performers are local mining companies listed in the stock exchange, not listed multinational mining companies and local private companies. An executive from one of the companies listed in the stock exchange commented that their collective bargaining system might not be that visible because it already has an alternative system in place, which proactively takes care of the pertinent issues. One executive also pointed out that collective bargaining is deeply enshrined in the Labour Act with a Mineworkers' Union formed under the provisions of the Labour Act.

8.6.2 Objective measures of employee corporation relations

Objective measures reflect what is on the ground, based on estimates obtained from the companies' accounting data. In this section, the results come from applying the social protection formulas given above. Table 8.3 shows the security level values, training capacity, and collective bargaining computed using STATA, a statistics and data software package. The rule of thumb is, according to Vintro and Comanjuncosa (2010), the higher the index, the better the CSR performance. Table 3 collates employee corporation relations assessment.

Table 8:3: Employee corporation relations

	Security level	Training capacity	Collective bargaining	α_1SL	β_1TC	γ_1CB	Employee Corporation Relations
Local Private Limited	0.93	0.91	1.00	17.42	17.61	18.68	53.70
Listed in Zimbabwe Stock Exchange	0.94	1.00	1.00	16.57	18.13	16.80	51.51
Listed in Foreign Stock Exchange	0.95	1.00	1.00	20.83	21.15	20.74	62.72
Government owned	0.90	0.88	1.00	16.39	15.89	16.69	48.97
Multinational Companies not listed	0.88	0.85	0.93	15.15	15.49	15.94	46.58
chi-squared	30.77	16.47	21.37	42.62	35.02	27.86	43.46
P value	0.0001	0.0001	0.0003	0.0001	0.0001	0.0001	0.0001

Results in Table 8.3: the Pearson X^2 has a P value of 0.0001 for security level and 0.0003 for collective bargaining, suggesting that there is enough evidence to suggest an association between company ownership and the performance in establishing employee corporation relations. The best performers are the mining companies listed in the foreign stock exchange, followed by mining companies listed in the Zimbabwe Stock Exchange. Table 8.3 shows that the least performers are multinational companies, unlisted and government-owned companies.

8.6.3 Combining objective and subjective measures

A combination of objective and subjective measures was used to determine the indices and make inferences about the mining sector's performance on employee corporation relations. The results on employee corporation relations appear in Table 3. The subjective and objective measures to calculate the indices are shown in the formulas in Table 3. Employee corporation relations index was obtained using the formula $ECR = \alpha_1 SL + \beta_1 TC + \gamma_1 CB$. Table 3 summarises the assessment of employee corporation relations.

Employee corporation relations index

As shown in Table 8.3, a P value of 0.0001 shows enough evidence to suggest an association between company ownership and employee corporation relations. Companies listed in the foreign stock exchange seem to be doing better than the rest in all three aspects of employee corporation relations which are security level (with a score of 20.82), training capacity (with a score of 21.15) and collective bargaining (with a score of 20.73). Not listed multinational companies are the least performers in all three aspects of employee corporation relations.

Social Protection

This section evaluates corporate social responsibility in the area of social protection. The section assesses the retirement plans, medical assurances and whether violent or conflictive situations between the company management and the employees have occurred. Subjective measures are the first to be presented.

Employees' assessments of social protection.

The mining companies are expected to put measures to protect their employees by availing retirement plans, medical aid plans and prevention of occurrence of violent conflictive situations. Table 4 presents employees assessments on these three indicators.

Table 8:4: Retirement Plan (RP) Medical Assurance (MA) Conflictive Situation (VC)

Governance Structure-ownership type		% of respondents saying								
		Retirement Plan			Medical Assurance			Conflictive Situation		
		High	Medium	Low	High	Medium	Low	High	Medium	Low
Local Private Limited Company	n	14	10	10	22	4	8	3	11	20
	%	41.18	29.41	29.41	64.71	11.76	23.53	8.82	32.35	58.82
Listed in the Zimbabwe Stock Exchange	n	27	7	0	31	3	0	27	7	0
	%	79.41	20.59	0	91.18	8.82	0	79.41	20.59	0
Listed in foreign stock exchange	n	32	14	0	44	1	1	18	10	18
	%	69.57	30.43	0	95.65	2.17	2.17	39.13	21.74	39.13
Government owned companies	n	19	0	11	17	7	6	20	9	1
	%	63.33	0	36.67	56.67	23.33	20	66.67	30	3.33
Multi Nationals Not listed	n	6	16	10	19	7	6	12	19	1
	%	18.75	50.00	31.25	59.38	21.88	18.75	37.5	59.38	3.13
Total	n	98	47	31	133	22	21	80	56	40
	%	55.68	26.7	17.61	75.57	12.5	11.93	45.45	31.82	22.73
	Pearson $chi^2(8)$ = 56.1322 Pr = 0.0000				Pearson $chi^2(8)$ = 30.4278 Pr = 0.0000			Pearson $chi^2(8)$ = 76.0098 Pr = 0.0000		

As shown in Table 8.4 the Pearson X^2 has a P-value of 0.0000 for all three indicators. There is enough evidence to suggest an association between company ownership and the perceived provision of retirement plans, medical aid plans and prevention of the occurrence of violent

conflictive situations. Results show that 79.41% of respondents from the locally listed mining companies' rated the existing retirement plans highly. Likewise, 69.57% of respondents from the mining companies listed in the foreign exchange rated the existing retirement plans highly. The least performers are the multinationals not listed and the local private companies using subjective measures. One key informant from a not-listed multinational company commented that there are many changes in the management due to a seemingly new shareholding structure. Some top Chinese managers joined the company and suspended subscriptions to the Mine Industry Pension Fund.

Employee's perception of companies' medical assurance practices

Mine employees are susceptible to safety threats; thus, mine companies are expected to initiate measures to ensure employees' health and safety. One of these measures would be to put medical insurance policies that make medical attention available to workers and their families. As shown in Table 8.4, the Pearson X^2 has a P value of 0.0000, suggesting enough evidence to imply an association between company ownership and medical insurance provision. The subjectively calculated measurements indicate that the highest performers are companies listed in a foreign stock exchange, followed by mining companies listed in the Zimbabwe Stock Exchange, with 95.65% and 91.18% of the employers rating the provision of medical insurance as high. The lowest performers are the government-owned mining companies and not listed multinational mining companies, with 56.67% and 59.38% of the respondents, respectively, saying the medical insurance plan is high. One key informant from the government-owned companies lamented that while the company is prepared to provide for medical insurance, the challenge is that the monthly employee contribution is too high to engage in more benefits packages. Therefore, the employees end up with the basic benefit package, a low benefit package fully funded by the company.

Employees' perception on prevention of occurrence of conflictive situations

Companies' ability to provide for dialogue reduces eruptive situations like strikes or sit-ins. The absence of conflictive situations indicates that the companies are sensitive to their employees' economic and social needs. As shown in Table 8.4, the Pearson X^2 has a P value of 0.0000, suggesting enough evidence to suggest an association between company ownership and the

perceived sensitivity to conflict situations. Table 8.4 shows that companies listed in the Zimbabwe stock exchange are perceived to have high sensitivity to conflictive situations by 79.41 employees.

However, a workers' union representative from companies listed in the foreign stock exchange said that the labour Act in Zimbabwe is against any violent or conflictive workplace situation. The union representative explained that before engaging in a collective job action like a strike, workers are expected to give a 14-day notice to their employment council, the Ministry of Labour and the employer. The employer can apply what is referred to as a 'show cause order' with the Ministry of Labour or the Labour Court to stop the industrial action. This 'show cause' order can be given by a Labour Court, President of the country or the Minister of Labour after application by the aggrieved party to show why a disposal order should not be made in relation to the industrial action. Given such a situation, the union representative lamented it is not easy to embark on a legal strike. This long process contributes to a lack of sensitivity by employers towards any violent or conflictive situations. It is rare to have a legal strike and pointless to have an illegal one for it achieves nothing. The above elaboration partly explains why there are no violent conflictive situations in the gold mining sector.

8.6.4 Objective measures of social protection

The objective social protection measures refer to how the mine companies provide for social protection economically and socially. Table 5 shows the objective values of social protection. Table 5 also shows the results of combining objective measures and subjective measures and the composite index for social protection.

Table 8:5: Social protection

	Objective measures			**subjective and objective measures Combined**			**SP Index**
Governance Structure-ownership type	Retirement Plans	Medical Assurance Plans	Conflictive Situation	α_2RP	β_2 MA	γ_2VC	Social Protection
Local Pvt Ltd	1.0000	1.0000	1.0000	17.4706	19.2941	12.3235	49.0882
Listed in Zimbabwe Stock Exchange	0.9265	0.9265	0.9986	17.3235	17.9411	18.2690	53.5337
Listed in Foreign Stock Exchange	1.0000	1.0000	0.9994	20.6957	22.1304	14.9241	57.7502
Government-owned	1.0000	1.0000	1.0000	16.8000	18.0333	19.0000	53.8333
Multi-national Companies	1.0000	1.0000	1.0000	14.5313	17.78125	16.875	49.1875
chi-squared	21.371	21.371	19.341	27.339	37.719	46.204	19.167
P-value	0.0003	0.0003	0.0007	0.0001	0.0001	0.0001	0.0001

As shown in Table 8.6, the Pearson X^2 has P values of 0.0003 for both retirement plans and medical insurance and 0.0007 for a conflictive situation. This suggests enough evidence to imply an association between company ownership and the perceived company support for medical assurance and retirement plans and sensitivity towards violent conflictive situations. A key informant explained that there are certain benefits and rewards enjoyed by permanent workers only. For instance, the same number of workers who qualify for medical assurance is also provided with retirement plans.

8.6.5 Combining subjective and objective measures for social protection

The social protection index was generated by combining the subjective estimates and objective measures of retirement plans and medical insurance supported by the mining companies and

whether a strike or other conflictive situation occurred. The formula below sums up the social protection index, $SP = \alpha_2 RP + \beta_2 MA + \gamma_2 VC$.

As shown in Table 5, the P-values show a statistical difference in companies' performance based on support for retirement plans and medical assurance and the occurrence of a conflictive situation. Companies listed in foreign exchange provide the most support regarding retirement plans and medical insurance, with indices of 20.69 and 22.13, respectively. Government-owned companies, on the other hand, lead the way in reducing conflictive situations. On aggregate, companies in the foreign exchange provide the best social protection at 57.75. The companies listed in foreign exchange earn their licence to operate by addressing social concerns.

8.6.6 Index using a combination of objective and subjective measures

The human resources index reflects the overall assessment of socially responsible human resources management for the mining companies. This index summarises the mining companies' environmental performance by category. The index is obtained by combining employee corporation relations and social protection indices. (Where: Employee Corporation Relations, $ECR = \alpha_1 SL + \beta_1 TC + \gamma_1 CB$ and Social Protection, $SP = \alpha_2 RP + \beta_2 MA + \gamma_2 VC$).

Socially responsible human resources management would be the sum of employee corporation relations and social protection, $SRHRM = ECR + SP$.

Table 6 shows the overall corporate social responsibility in human resources by the mining companies.

8.7 DISCUSSIONS

Results in Table 8.6 indicate a significant difference in the performance of the companies in terms of socially responsible human resources management. The highest performer in socially accountable human resources management is companies listed on a foreign stock exchange with an index of 120.47.

Table 8:6 Composite indices for socially responsible human resources management

Index	Employee corporation relations	Social protection	Socially responsible Human resources management
Local Pvt Ltd	53.70	49.09	102.79
Listed in Zimbabwe Stock Exchange	48.97	53.53	102.51
Listed in Foreign Stock Exchange	62.72	57.75	120.47
Government-owned	51.51	53.83	105.34
Multinational Companies	46.585	49.19	95.76
chi-squared	43.46	19.17	33.35
P value	0.0001	0.0001	0.0001

Table 8.6 shows that the next best performers in socially responsible human resources management are government-owned companies with an index of 105.34. Local private limited companies come third with an index of 102.79, almost neck and neck with companies listed in the Zimbabwe Stock Exchange with an index of 102.51. Multinational companies not listed are the least performers, with an index of 95.76.

The article set out to assess the scope and nature of socially responsible human resources management in the gold mining sector in Zimbabwe using the modified balanced scorecard approach. The results revealed that the gold mining sector in Zimbabwe practices sounds socially responsible human resources management. However, the results showed that there are different degrees in the extent to which they practise their management. Companies listed in foreign exchanges have the highest index indicating their best degree of performance. This is in line with extant literature, which supports that companies with a global link have a societal approach to

CSR because they have to consider the international standards (Clarke & Crane, 2018). Parsa *et al.* (2018) further assert that multinational companies are increasingly under pressure to account how fairly and ethically they treat their workforce.

The government-owned companies predicted to be classical and shareholder-oriented have performed beyond expectation. There are no strikes or job actions reported, and a possible explanation is a regulatory environment, this is in line with According to Buhmann, Jonsson, & Fisker (2018), the basic minimum level of socially responsible human resources management practices depends on the political framework of rules and regulations defined by governmental authorities. The current high unemployment rate in the country is above 16% (ZimStats, 2019). This is in line with literature where Burda, Genadek & Hamermesh (2020) suggest that unemployment incentivises workers to work harder to decrease lay-offs. As a result, employees avoid any conflicts that can jeopardise their chances of remaining employed. The local private companies together companies listed in the Zimbabwe stock exchange with multinational companies not listed perform in. Multinational companies not listed with parent companies abroad perfectly conform to Hemingway's (2017) classical statements where shareholder value maximisation is most important.

8.7.1 Managerial Information

All indicators used are very important to sound human resources management. However, with the aspect of training, needs assessments must be carefully done to benefit both the employees trained and the mining company.

8.7.2 Value and contribution

This study contributes to the previous literature on socially responsible human resources management by illuminating the possible role played by governance structure in CSR adoption.

8.7.3 Practical implications

The modified balanced scorecard framework used points to the idea that companies can adopt the same method to evaluate their performance. The corporates can increase the extent to which they can improve their corporate social responsibility in human resources management by using the balanced scorecard to assess their personal performances.

8.7.4 Limitations and recommendations

This research has some limitations, which also serve as potential opportunities for future research. Theoretical perspectives of the firm, which are classical, stakeholder and societal, cannot act alone to explain the complex phenomenon of structure-conduct-performance in assessing the nature of socially responsible human resources management. The classical, stakeholder, and societal perspectives provide a basis to integrate the extant CSR performance literature. Yet, more factors like the institutional and legal environment impact the performance.

This suggests further research, which can build on the mining companies' capabilities to respond to socially responsible human resources management needs. Therefore, further research combines critical principles of the company's classical, stakeholder and societal views with concepts of legal institutions and more about the structure. Future research should include board structure and managerial attitudes as determinants of the nature and scope of socially responsible human resources management.

8.8 CONCLUSION

The article evaluated the scope and nature of socially responsible human resources management performance of gold mining companies in Zimbabwe using the modified balanced scorecard approach. The assessment revealed that all companies practise socially responsible human resource management. Companies listed in the foreign stock exchange have the highest index. The article also aimed to determine which companies identified by governance systems perform best and the results they have differences in the extent to which they do so with companies listed in foreign exchanges outperforming all other categories.

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9. CHAPTER 9: SUMMARY AND PROPOSED CORPORATE SOCIAL RESPONSIBILITY FRAMEWORK

9 INTRODUCTION

This chapter summarises the theoretical arguments and empirical findings and recaptures some of the thesis' most important conclusions. This thesis's main subject centres to understand the nature and scope of corporate social responsibilities adopted by Zimbabwe's large-scale gold mining companies. The study shows that the nature and scope of corporate social responsibility vary across the different governance systems. The key research question was to what extent has the different gold mine governance systems balanced between and among conflicting demands to be profitable and also socially and environmentally responsible?

Corporate social responsibility generally implies more self-control than external coercion and should be understood as an equilibrium between corporate economic, environmental and social performances. Corporate social responsibility is a custom-made process where each company chooses its specific ambitions and approaches regarding the corporate, meeting the aims and intentions, and aligning them with strategies as an appropriate response to the circumstances in which the company operates (Vevere & Svirina, 2020). Vintro and Comanjuncosa (2010) identify three important dimensions of corporate social responsibility: environmental responsibility, socially responsible human resources management, and business ethics. The mining sector needs sound corporate social responsibility because of the nature of the mining industry. In mining, companies must integrate environmentally, have socially responsible human resources management and have good business ethics through all phases of mineral production from exploration through construction, operation and mine-site closure. This is necessary given the high impacts inherent in the extractive industry.

9.1 METHODOLOGICAL REFLECTIONS

Literature acknowledges that corporate social responsibility has several facets, including maintaining environmental integrity, socially responsible human resources management, and ethics. Environmental integrity dealt with resource use and environmental quality. Resource use assessed the use of clean extractive technologies of gold recovery programs, water and raw

materials usage and energy efficiency. Environmental quality evaluated the management of contaminants and waste dump reduction, soil reclamation practices and prevention of environmental accidents.

Socially responsible human resources management included assessment of employee corporation relations focussing on security levels, training capacity and presence of collective bargaining practices. Social protection assessed the provision of retirement plans, medical assurance practices and dealing with any violent conflictive situations. The corporate community interface section assessed the mining companies' practices in local economy promotion: hiring local workers, sourcing raw materials from local businesses, and subcontracting local services. The interface practices included adequate funds administration where the study assessed companies' efforts in social projects enhancement and providing donations to the local community.

In many cases, environmental management, socially responsible human resources management and corporate community interface practices are viewed and studied in isolation. Disciplinary bias led social and natural scientists researchers to focus on one or two aspects of corporate social responsibility. Worldwide conclusions about the extent to which a company practices corporate social responsibility are made at scales that do not incorporate all the above important aspects at once. For example, environmentalists are more interested in environmental issues, human resources researchers are interested in socially responsible human resources management, and sociologists are interested in corporate-community interface practices. In most cases, these concepts are each studied and documented separately. This approach failed to acknowledge that corporate social responsibility is voluntary. Different companies emphasize one or two aspects of interest to the management, which is shaped by the national, global economic and legal situation. The concept-based approach might miss these conditions if conditions structuring behaviour were located outside the system under study.

Focusing on one component of CSR has a danger of creating a false picture of the companies' performance in CSR performance. This research adopted a systems approach to avoid creating a monster from unrelated and concept-based approaches of CSR. The approach emphasised the governance system, the effect of the macroeconomic, legal and global environment in shaping

the approach of different companies towards CSR. It is not adequate to study corporate social responsibility in isolation from its governance system since other companies have additional comparative advantages in implementing various aspects of corporate social responsibility.

9.2 SUMMARY OF FINDINGS

For ease of reference, the study's research aims and objectives are repeated in this section.

Research Aim

This research investigates the extent to which mining companies practice corporate social responsibility that is friendly to the physical, social and economic environment using the gold mining sector of Zimbabwe.

Research Questions

In this study, the research seeks to answer the following research questions

To what extent do companies categorised by different corporate governance systems among local private limited companies, companies listed on the Zimbabwe Stock Exchange, companies listed on foreign stock exchanges, government-owned mining companies and multinational companies with headquarters abroad but not listed perform in corporate social responsibility that focuses on the following aspects::

Environmental protection

Business Ethics

Socially responsible human resources management

Primary objective

To assess the nature and scope of corporate social responsibility among Zimbabwe's mining companies using the gold mining sector.

Secondary objectives and specific research questions

a. To establish historical context regarding the legal, regulatory and institutional environment of the mining industry in Zimbabwe.

- What are the key policy and legislation promoting corporate social responsibility?

b. To investigate the level of the mining sector's responsibilities to environmental sustainability

- To what extent are the gold mining companies in the mining sector rationally using resources (water, energy and materials) during exploitation?
- To what extent are the mining companies ensuring the maintenance of environmental quality (reducing emissions, reducing mine waste dumps reclamation of land?

c. To investigate the level of the mining sector's responsibilities to the promotion of ethical and stakeholder issues.

- To what extent are the mining companies promoting local economies, such as giving supply contracts to locals and employment of local people?
- To what extent are the mining companies supporting local initiatives with donations and other social projects?

2 To investigate the level of the mining sector's responsibilities to the promotion of human safety and development

- To what extend do mining companies promote the safety of workers through security levels, training capacity and collective bargaining?
- To what extent do mining companies promote social protection schemes for their employees through retirement plans, medical assurance schemes and conflict resolution?

9.3 SUMMARY FINDINGS, EMERGING CONCLUSIONS AND THEORETICAL REFLECTIONS

This section aims to present and summarize the key research findings that are presented in Chapters Three, Five, Six and Seven. Table 1 shows the performance of different companies on

the different aspects of corporate social responsibility. The results are based on indices generated using both subjective and objective measures of corporate social responsibility.

9.4.1 Chapter Three: Contextualising the study

The objective of this chapter was to establish the historical context of gold mining in Zimbabwe, showing the legal, regulatory and institutional environment of the mining industry. The chapter also established the Acts of parliament that affect the mining sector's corporate social responsibility practices. The chapter showed that Zimbabwe's mining sector is highly regulated. 9.1 shows the government agencies managing the gold mining sector mining.

Table 9.1: Government's agents managing resource use and the environment

Area of influence in the study	Managing Body	Applicable Regulation	Non-compliance penalties
Water usage and management	Zimbabwe National Water Authority	The Water Act	Disconnection of supply or high fines
Energy usage	Zimbabwe Electricity Supply Authority	The Electricity Act	Disconnection
• Raw materials and hazardous substances • Prevention of contaminating environment • Prevention of Environmental accidents	Environmental Management Agency	The Environmental Management Act The Hazardous Substances and Particles Act (Chapter 15:05)	Withdrawal of licence Closure Imprisonment of top management representing company
• Waste Dump Management and Soil restoration	Ministry of Mines and Mineral Development Environmental Management Agency Rural District Councils	Section 269 of the Mines and Minerals Act	Fines
• Ethical considerations	Rural District Councils Community Share Ownership Trusts	Indigenisation and Economic Empowerment Act	Penalties, fines or withdrawal or non-renewal of licence
• Human resources issues	National Social Security Agency National Employment Council is a statutory body established in terms of Section 57 of the Labour Act [chapter 28:01] Chamber of Mines Zimbabwe	National Social Security Act Labour Act Chamber of mines Act	Fines

(Source Own compilation)

The government of Zimbabwe has a hard regulatory stance with penalties as extreme as closure or non-renewal of licences for non-compliance. Chapters 5, 6, 7 and 8 are the analytical chapters that present the study's empirical findings. Figure 9.1 shows the summary of the quantitative results on the CSR performance by the mining sector in the areas of environmental responsibility, business ethics and socially responsible human resources management.

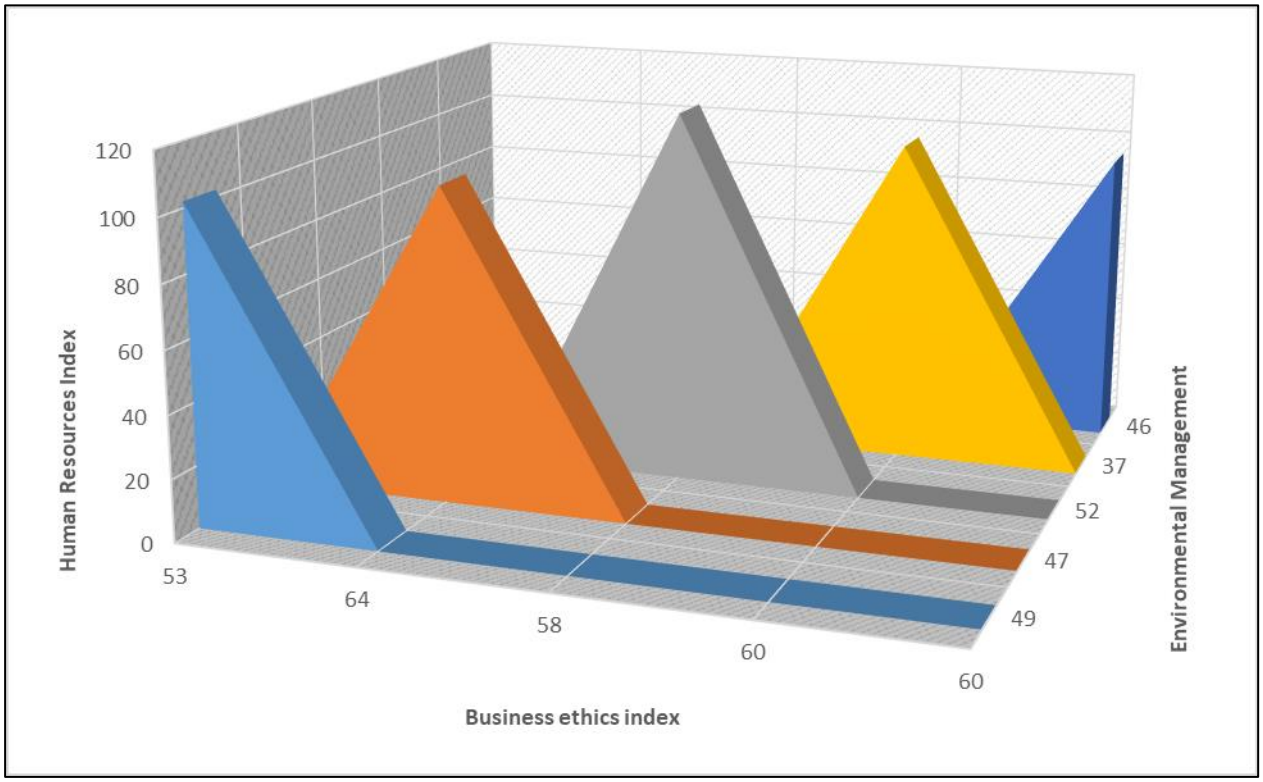

Figure 9.1: Performance of Corporate at a glance

	Local private limited companies
	Companies listed on Zimbabwe Stock Exchange
	Companies listed on foreign stock exchanges
	Government-owned companies
	Multinational companies unlisted with parent company abroad

Source: Own compilation

Figure 9.1 summarises the performance of the gold mining sector in the areas of environmental management, business ethics and socially responsible human resources management. The summary shows that all companies offer corporate social responsibility but in varying degrees.

9.3.1 Chapter 5: Article 1. Determinants of the nature of business ethics practised in the gold mining sector.

The chapter investigates the driving forces of corporate social responsibility in the gold mining sector in Zimbabwe. The chapter shows that the regulatory environment is the key driving force within the sector. A state-owned mining company was closed down for flouting environmental requirements. 9.4.2 Government regulation is associated with greater stringency around minimum standards. In India, if a corporate fail to comply with CSR laws, the company only has to explain in its financial statements why it was unable to comply (Pandey & Pattnaik 2017). For Zimbabwe, the government has punitive measures against non-compliance, including having the company closed. This was the case with DTZ-OZGEO mining company, a partnership between the Development Trust of Zimbabwe (DTZ) and a Russian registered company called Econedra. The mine was closed indefinitely in 2014 for lack of compliance with regulations. In "The Herald" (23 February 2021), a senior reporter, Farirai Machivenyika, reported that the Parliament of Zimbabwe Portfolio Committee on Mines and Mining Development received a petition from Zimbabwe Environmental Law Association to make into law the recent policy pronouncement banning mining in all National Parks areas. This follows the banning of mining in National Parks areas. As seen from the Acts of law extracts in this article, Zimbabwe has hard laws towards CSR practices, comprising mandatory laws with a high level of formalisation and strong sanctions for non-compliance (Gatti et al., 2019).

9.3.2 Chapter Six; Article 2, Environmental management

The chapter sets out to investigate the gold mining sector performance in business ethics. Table 9.2 summarises the performance.

Table 9.2: Environmental Management Performance

Governance Structure- Ownership type	Resource Use	Environmental Quality	Environmental Management
Local Pvt Ltd	8.2710 (7.7333)	40.9230 (7.2362)	49.1940 (12.1619)
Listed on Zimbabwe Stock Exchange	4.2552 (1.6631)	42.9423 (4.3267)	47.1995 (5.3197)
Listed on Foreign Stock Exchange	7.3678 (6.1369)	44.6547 (8.1059)	52.0225 (11.0106)
Government-owned	4.6743 (0.6497)	32.4698 (6.5535)	37.1442 (6.9641)
Multi-national Companies	4.2321 (1.3483)	42.2378 (4.4950)	46.4699 (5.3760)
chi-squared	18.345	46.747	42.646
P-value	0.0011	0.0001	0.0001

Figures in parenthesis are the standard deviation. (Source: Own compilation)

As shown in Table 9.2, the Pearson X^2 has a P value of 0.0001 across all indicators, giving enough evidence to suggest an association between company ownership and the perceived performance in resource use environmental quality and environmental management. The results in Table 9.2 indicate the overall performance in environmental management. While there are statistically significant differences in performance between the categories, there is no established pattern in performance. No category is an established high performer in all indicators. For example, local private limited companies are the highest performers in resource use with the 8.2710 index, followed by companies listed on foreign stock exchanges with an index of 7.3678.

The highest performer in environmental management is companies listed on a foreign stock exchange, followed by local private limited companies. The government-owned do trail behind overall. At the time of the research, one of the two government-owned that participated was under judicial management, which thwarts any possibility of doing extra. According to one key

informant, government-owned mining companies' profit does not benefit the local community only. Still, it contributes to fiscal revenue, which is redistributed for the national good. This makes the state-owned mining companies conform to the prediction of being a classical model company.

The chapter set out to investigate the level of the mining sector's environmental responsibilities as practised by the different governance systems. The primary focus of the study is to examine the scope and nature of corporate environmental responsibilities of the gold mining sector in Zimbabwe as practised by selected governance structures. Corporate governance structures appear to affect the environmental practices of selected gold mining companies. The study finds that companies that are listed on foreign stock exchanges exercise good environmental management as reflected by their highest index. The study further observes that contrary to literature which suggests that companies in which foreigners hold the majority of shares significantly influence environmental disclosures to meet foreign reporting requirements, companies owned by multinationals but unlisted are at the bottom of the list. The study also observed the government-owned companies and multinational companies unlisted with parent companies abroad conform to the classical model of governance where they do their mining within the confines of the only nothing more. Further, companies listed on stock exchanges voluntarily follow environmental norms and guidelines and conform to societal and stakeholder governance models. This wins the trust and goodwill of stakeholders and earns them legitimacy in the long run. The overall result of the chapter supports that the companies all companies in the study exercise good environmental stewardship. However, the present study's findings suggest that there should be stringent regulations for soil restoration practices during the operational stage of the mine, for these are non-existent. The next section is on mining companies' business ethics practices.

Environmental protection

In terms of environmental management, companies listed on the foreign stock exchange outperformed all the other types of companies, followed by local private companies. Therefore, it is important to determine why mining companies listed on the foreign stock exchange are ranking first in environmental protection. A possible solution here is that it is important to

interrogate what shaped the organisational culture of mines listed on foreign exchange. Firstly, using the societal view of the firm brings the international community in determining the firm's behaviour. The societal approach pays attention to society's international requirements and environment (Kalender & Vayvay, 2016).

Using results presented in Chapter 6, mining companies listed on the stock exchange had an urge over maintaining good environmental quality, which encompasses reducing contaminants, reducing waste dumps, restoring soil, and reducing environmental accidents. Activities of maintenance are costly. In this respect, the performance of companies listed on the foreign stock exchange can be explained using the resource-based view (RBV) theory as originally propounded by Wernerfelt in 1984, which suggests that international companies with access to finance both from their operation and the country of origin. In relating the resource-based view theory to the current study, this research submits that the material resources associated with multinational companies listed on the foreign stock exchange significantly influence meeting expected environmental management protection practices. Therefore, the resource-based view theory explains why international companies' resource base gives them a competitive advantage over their competitors concerning environmental management.

A key informant in Chapter 6 mentioned that gold mining companies listed on foreign stock exchanges are generally good stewards of the environment. Gold mining companies listed on the foreign stock exchange have developed a relatively sound corporate social responsibility culture. Aguilera-Caracuel, Guerrero-Villegas and García-Sánchez (2017) attribute the good environmental performance need to improve their reputation where reputation refers to environmental, social, and employee behaviour, among others other issues. Park and Ghauri (2015) show that practices are linked to social development and very closely linked to a sustainable reputation, such as improving measures with repercussions in the environment.

Companies with an international reputation best practise corporate social responsibility to protect and have international regulators watching their actions. However, the performance of multinational companies that are not listed on any stock exchange is compared with other governance systems. Although the objective in Chapter 5 shows that unlisted multinational gold

mining companies were doing well in environmental management, the overall index was lowered by the inclusion of subjective assessment in the joint index presented in Table 1 above. This suggests that unlisted multinational companies could do even much more as expected by their workers that were interviewed.

9.4.4 Chapter 7: Article 2, Mining sector performance in business ethics

The chapter sets out to investigate the gold mining sector performance in business ethics. Table 9.3 summarises the performance.

Table 9:3: Corporate performance in business ethics

	Fair Funds Administration	Promotion of Local Economy	Ethics Index
Local Private Limited Company	24.4202	29.3939	53.8140
Listed on Zimbabwe Stock Exchange	26.3710	37.8802	64.2512
Listed on foreign Stock Exchange	22.3770	36.3739	58.7509
Government-owned companies	25.0603	35.3489	60.4092
Multinational companies unlisted	25.4711	34.6559	60.1269
chi-squared	15.570	19.586	19.063
P value	0.0037	0.0006	0.0008

As shown in Table 9.3, the Pearson X^2 has a P value of 0.0037, 0006 and 0008 across all indicators, giving enough evidence to suggest an association between company ownership and the perceived performance in business ethics practices. Results in Table 3 summarise the overall position in business ethics practices. The leader in the promotion of the local economy is the companies listed on the Zimbabwe stock exchange with an index of 37.8802 followed by companies listed on the foreign stock exchange with an index of 36.3739. Companies listed on the Zimbabwe stock exchange lead fair funds administration with an index of 26.3710, followed by Multinational companies unlisted with an index of 25.4711, with the government-owned companies coming next at 25.0603. Given the state of the economy, most people value projects that enhance their livelihood and their companies with the help of the communities, identify these projects and support them financially.

This chapter investigates the level of the mining sector's social responsibilities reflected in corporate-community interface practices. The section established that companies listed on the Zimbabwe stock exchange lead in good corporate citizen practices. Government-owned companies are in second place with an index of 60.4092. Local private limited companies are the least performers in this section. By comparison, even though stringent laws govern business corporates in South Africa. Corrigan (2019) notes that corporate social responsibility is weak because the South African regulatory process has not sufficiently enabled local-level governments and communities most directly affected by mining operations. This is not the case in Zimbabwe's gold mining sector, where corporates are mainly concerned with their image before the government.

9.3.3 Business Ethics

Gold mining companies listed on the Zimbabwe stock exchange are leading in ethics, followed by government-owned companies. Gold mining companies listed on the Zimbabwe stock exchange are leading in business ethics. These companies perform key aspects of ethics better than the others in promoting local economies, including employing workers from the local community and fair funds administration, including social projects enhancement. The behaviour of companies listed on the Zimbabwe Stock Exchange fits the description of integrative theories, which suggests that companies become responsive to the needs of society in a tangible way. Using the theory of the firm, one can also argue that companies listed on the Zimbabwe stock exchange have a societal view of their firm and are guided by ethical consideration and focus. They hold that the relationship between business and society should be embedded with ethical values. However, there is no evidence from this suggesting that their behaviour is designed to acquire corporate legitimacy, which explains why companies emphasise ethical issues.

This can be explained in part by the theory of the firm's societal approach that suggests that corporates engage in ethical issues to earn their licence to operate from the society and hence should be responsible to society as a whole, to serve the needs of the society constructively. Government-owned companies are second in practising ethical issues in their mining operations. According to Detomasi (2015), government-owned enterprises operate with a profit interest and

have a political agenda. Detomasi (2015) further notes that the state-owned companies, when being controlled by democratic governments, might be charged with more political legitimacy than the shareholder-owned corporation. It is unsurprising, therefore, that government-owned mining companies performed better than other local mining companies.

Business Ethics is the only aspect of corporate social responsibility that gold mining companies listed poorly perform on a foreign stock exchange. Although these companies emphasize ethical issues, the scale and scope are below companies listed on the Zimbabwe Stock Exchange and government-owned companies. Owusu, Ansah and Louw (2019) suggest that understanding the culture of people from different geographical environments has the propensity to respond to contemporary international business challenges. The objective measure of ethical consideration was high for all the aspects of ethics. However, the poor performance of companies listed on the foreign stock exchange can be explained by the inclusion of a generally low subject measure. This means that employees of these companies expect the employers to do much more. This violates Aguilera-Caracuel *et al.* (2017)'s assertion that international companies can meet expectations on social issues of several stakeholders from different contexts (local, national or global) and can attend to the needs of a specific local community and create its standards. This is possible to extend to different contexts. However, Aguilera-Caracuel *et al.* (2017) asset that multi-national companies should distinguish the needs of more specific local environments rather than more global needs that they can satisfy by creating standards internal to the company itself. The next section reports on the gold mining sector's social responsibility on human resources management.

9.4 SOCIALLY RESPONSIBLE HUMAN RESOURCES MANAGEMENT

The chapter set out to investigate the gold mining sector performance in socially responsible human resources management. Table 9.4 summarises the findings.

Table 9:4: Corporates performance in human resources management

Index	Employee corporation relations	Social protection	Socially responsible Human resources management
Local Pvt Ltd	53.7011	49.0882	102.7894
Listed on Zimbabwe Stock Exchange	48.9719	53.5337	102.5057
Listed on Foreign Stock Exchange	62.7188	57.7502	120.469
Government-owned	51.5105	53.8333	105.3438
Multinational Companies	46.5765	49.1875	95.7640
chi-squared	43.459	19.167	33.352
P value	0.0001	0.0001	0.0001

Source: Own compilation

As shown in Table 9.4, the Pearson X^2 has a P value of 0.0001 across all indicators, giving enough evidence to suggest an association between company ownership and the perceived performance in socially responsible human resources management. Companies listed on the foreign stock exchange seem to be doing better in all three aspects with the highest indices. The companies listed on foreign exchanges earn their licence to operate by addressing social concerns. The highest performer in socially responsible human resources management is companies listed on a foreign stock exchange with an index of 120.469. The next best are government-owned companies with an index of 105.3438. Local private limited companies are third in performance with an index of 102.7894, almost neck and neck with companies listed on the Zimbabwe stock exchange with an index of 102.5057. Multinational companies unlisted are the least performers, with an index of 95.7640. The chapter sought to investigate the level of the mining sector's responsibilities to promote socially responsible human resources management. It established that companies listed on the foreign stock exchanges perform best with an index of 120.4690 followed by government-owned companies with an index of 105.3438.

9.4.1 Socially responsible human resources management

Gold mining companies listed on the foreign stock exchanges lead in socially responsible human resources management, followed by government-owned companies. Being a multinational mining company alone does not guarantee high performance on socially responsible human resources management. The company has to be listed on the foreign stock exchange. According to the results presented in Chapter 8, companies listed on the foreign stock exchange have an urge over other governance structures, including good employee corporate relationships characterised by good security levels, training of workers, and collective bargaining. Regarding social protection, companies listed on the foreign stock exchange performed better than other companies in retirement plans supported by the company and medical aid funded by the company. Park et al. (2015) show that developing ethical management practices linked practices such as improving labour conditions, improving the companies' reputation, and earning the licence to operate. All of these aspects cost money. The Resource-Based View theory can partly explain the performance of mining companies listed on the foreign exchange. The theory assumes that sustainable competitive advantage in these companies is obtained by exploiting the organisation's internal strengths and external opportunities. Being listed implies that the company has to meet the expectations of multiple international shareholders. According to Dyduch and Krasodomska (2017), companies listed on the foreign stock exchange are likely to adopt global best practices as organisations enhance their competitive advantage by replicating successful models in other countries. To achieve this, they develop strong human development programmes.

Government-owned mining companies have an urge over other types of companies in dealing with violent or conflictive situations. Nazarian, Atkinson and Foroudi (2017) revealed that national culture has an effect on the activities of organisational culture. Zimbabwe does not tolerate violent or conflictive situations. At one of the government-owned mines where workers had gone for several months without being paid, the wives of the mineworkers staged the demonstration and not the workers. In a country where unemployment is estimated at 80% (Zimbabwe Statistical office, 2020), few workers would risk their employment over conflictive situations (Burda, Genadek & Hamermesh, 2020). This indicates that unemployment incentivises

workers to work harder to avoid layoffs. As a result, employees prevent any conflicts that can jeopardise their chances of remaining employed.

The next section gives the overall corporate social responsibility performance of the gold mining sector in Zimbabwe.

9.5 CORPORATE SOCIAL RESPONSIBILITY PERFORMANCE BY GOLD MINING SECTOR

The corporate social responsibility performance is the overall performance of the mining sector. The grand index is the total of environmental management, business ethics and human resources indices. Table 9.5 summarises the results.

Table 9:1: Corporate social responsibility grand index

Index	Environmental Management index	Human resources index	Business Ethics index	Corporate social responsibility index
Local Private Limited	49.1940	102.7894	53.8140	205.7974
Listed on Zimbabwe Stock Exchange	47.1995	102.5057	64.2512	213.9564
Listed on Foreign Stock Exchanges	52.0225	120.4690	58.7509	231.2424
Government-owned	37.1442	105.3438	60.4092	202.8973
Multi-national Companies unlisted	46.4699	95.7640	60.1269	202.3608
chi-squared	42.646	33.352	19.063	23.072
P-value	0.0001	0.0001	0.0008	0.0005

Source Own compilation

As shown in Table 9.5, the Pearson X^2 has a P value of 0.0001, 0001, 0008 and 0005 across all indicators, giving enough evidence to suggest an association between company ownership and the perceived performance in corporate social responsibility. The study sought to investigate the level of the mining sector's corporate social responsibility in the gold mining sector in Zimbabwe. It established that companies listed on the foreign stock exchanges perform best with an index of the chapter that sought to investigate the level of the mining sector's responsibilities to promote socially responsible human resources management. Overall, companies listed on the

foreign stock exchange are more corporate socially responsible, with an index of 231.2424. This is followed by companies listed on the Zimbabwe Stock exchange with an index of 213.9564. Private limited companies are in third place with an index of 205.7974. Government-owned companies and multinationals are almost at par with indices of 202.8973 and 202.3608, respectively. The next section shows individual companies performed on each aspect of CSR and interrogates theoretical and empirical explanations for performance

Although stakeholders may define actions that go over and above what is profitable and responsible, firms will act differently in different domains of responsibility. For example, failure to engage in environmental or worker protection can result in large fines, lawsuit penalties, and costly mitigation requirements. Actions against firms who breach such social responsibility expectations also increase. Figure 9.2 shows the first two highest performers in environmental performance, business ethics and socially responsible human resources management

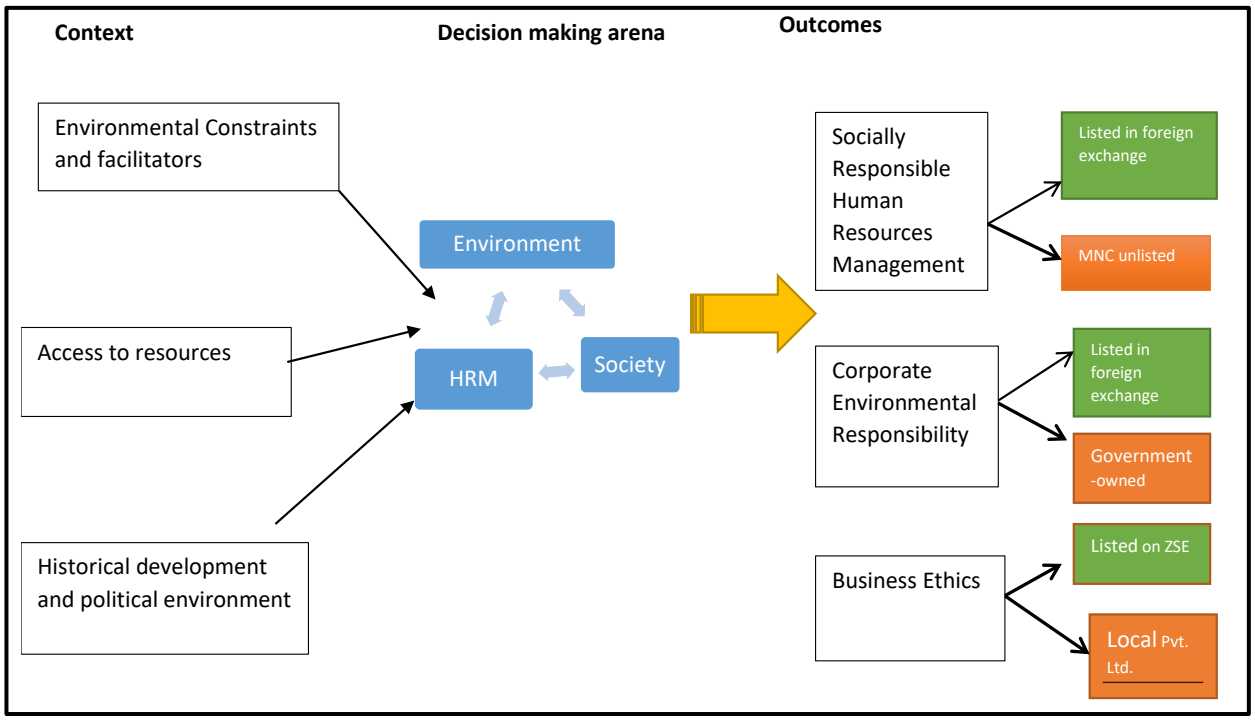

Figure 9:1 Corporate social responsibility performance by type of company

Figure 9.2 shows that the relationship between CSR performance and governance structure is complex, with companies performing excellently in one aspect of CSR and badly in another. This research highlights the extent to which different dimensions of CSR influence firm performance, informing both risk management and instrumental stakeholder theories. The results indicate that an assessment of CSR performance requires a multi-theoretical approach. The empirical research showed that the principles of the theory of the firm, namely the shareholder, stakeholder and perspectives, cannot be applied to any particular organisational structure in isolation. The shareholder structure, stakeholder conduct can be combined and reconceptualised in a framework like the balanced scorecard and explain CSR performance. As has been accepted throughout the thesis, these findings provide an excellent starting point for further research to be conducted on the concepts of the effect of governance structure given specific legal and institutional context.

9.6 PROPOSED FRAMEWORK

This research makes a key contribution by linking different theories of CSR performance and the development of a new model to explain the legal context, corporate environmental responsibility, business ethics, and socially responsible human resources management as pillars of CSR. The four pillars, legal context, corporate environmental responsibility, business ethics and socially responsible human resources management, form the support structure that pays attention to the triple bottom line. This new model is steeped in existing shareholder, stakeholder, and societal theories yet can expand upon them, providing a dynamic relationship among triple bottom line, corporate social responsibility, and a modified balanced scorecard.

This framework is important because it suggests cohesion in how CSR performance pillars influence CSR outcome of profit, planet and people. This implies that policymakers and practitioners' structured research at a national level (context pillar) can occur by focussing on the reflected interactions performance pillars (the environmental responsibility, business ethics, and socially responsible human resources management pillars). Companies can determine which areas of the model need the most support resource. The framework suggests that whichever area decision-makers support, all the other areas of the model benefit.

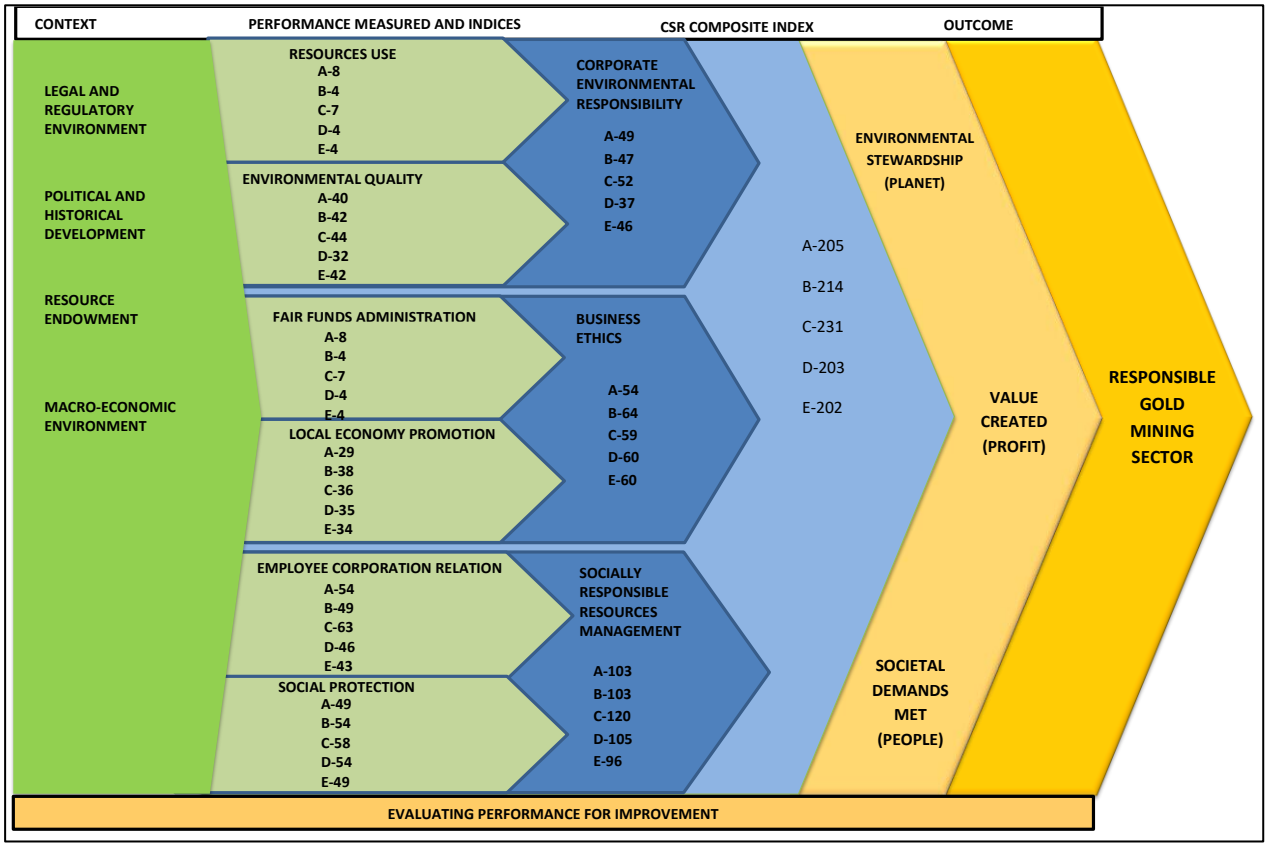

Figure 9:2 Proposed framework

Key

A	Local private limited companies
B	Companies listed on Zimbabwe Stock Exchange
C	Companies listed on foreign stock exchanges
D	Government-owned companies
E	Multinational companies unlisted with parent company abroad

Source: Own compilation

The framework shows that practitioners and academics could determine parts of the framework that require further improvement and which can be added. However, further research is required to test this proposed model on a broader range of mining companies to include small and medium and companies' members to other associations in the gold mining sector in Zimbabwe to test the level to which it can be generalised.

9.7 LIMITATIONS OF THE STUDY

This study has its unique limitations. This study only considers large-scale mining companies, and therefore, the results obtained cannot be operationalised to small and medium companies. Therefore, future research should extend the sample, including different company sizes, to compare findings. The sample only considered mining companies that are members of the Chamber of Mines in Zimbabwe and also Mine Industry Pension Fund. These results cannot be extended to large scale mining companies who are not members of these two organisations, of which Chinese companies fall into that category. Future research can include these players, for they are increasing in Zimbabwe.

The membership to COMZ and MIPF may have limited the number of payers included in the study. The political situation and subsequent approach to Acts of parliaments may have changes that impact laws. The Covid-19 pandemic had an impact on the way human resource management is exercised because there was downtime, fear because of lack of social distance in the mine sector, increase in medical assurance charges and changes in the retirement plans with some policies being differently denominated between local currency and United States dollars. Changes in ownership structure as some mines changed shareholding structures with some delisting from the Zimbabwe Stock Exchange. However, these facts do not discredit the results because they reflect the companies' practices in the gold mining sector.

9.8 CONTRIBUTION OF THE STUDY

There is growing interest in CSR in Zimbabwe. Empirical evidence of the practice's presence in Zimbabwe will add to the growing literature on developing countries participation in CSR.

- To theory, it is general knowledge that companies worldwide have begun to talk the language of CSR. This research establishes the extent to which companies walk the talk and practise CSR in Zimbabwe using the mining industry as a case study. A wide range of theories have been used to investigate CSR practices, but in Zimbabwe, the theory of the firm has not been used as a lens with which to study CSR practices. This means the study adds to the theoretical lenses, which can apply to the Zimbabwean context.

- To policy, Zimbabwe has operated for four decades post-independence without a properly documented mining policy that would guide the development of legislation, regulating programs and projects in the sector. Corporate social responsibility could be one of the key programs to be embedded in the policy framework; therefore, academic research on CSR could be useful to policymakers. The current mining policy regime has not been revisited and possibly dates back to the onset of the colonial era in 1890. The research has the potential to open a social dialogue platform as the focused group discussions held within the mining communities in the research will open a thread of communication. The research can be used as a policy gap analysis.
- To research and development, the research offers an evaluation of the extent of local practices of CSR in the Zimbabwean context. Possible limitations of the analysis have been discussed, and implications for further research have been established.

9.9 CONCLUSIONS AND DISCUSSION ON WAY FORWARD

Companies listed on the foreign stock exchange have an urge over other companies' governance systems. Verbeke, Kano, and Yuan (2016) observed that research on multinational companies in current global business activity likely offers theoretical and useful implications for best business practices. Park et al. (2017) stated that when CSR philosophy is formulated strategically, clearly communicated, and practised. Companies can attain desirable business performance outcomes for more stakeholders. The study set out to assess the scope and nature of corporate social responsibility in the gold mining sector in Zimbabwe. The results show that different governance structures have strengths in different areas, as reflected by their performance. For a practical way forward, the stakeholders can take a multi-stakeholder partnership to extend the resource-based view. The results indicate that partners can experience positive results from participating in multi-stakeholder partnerships.

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APPENDICES

Appendix 1: Survey Questionnaire

QUESTIONNAIRE

CONFIDENTIAL

+263779438021
Email: nyikahadzoiloveness@gmail.com
Janury 2020

Dear Sir/Madam

Re: Request to participate in an academic research study for a PhD in Business Administration by completing the attached questionnaires.

As part of a PhD research study, I am assessing the scope and nature of corporate social responsibility as practised in the gold mining sector in Zimbabwe. You have been selected to participate in the study by completing the attached questionnaires. This will take about 30 minutes to complete

The results of these questionnaires will be used for academic purposes only. Written feedback will be given to respondents who request.

Thank you for giving up your valuable time to assist me in this research.

Yours Faithfully

Loveness Nyikahadzoi

10 APPENDICIES

10.1 APPENDIX 1: QUESTIONNAIRE

Instructions; Complete to the best of your knowledge.

Questionnaire Identification: _____

A. IDENTIFYING INFORMATION

1. Name of Enumerator	
2. Date of interview	
3. District	
4. Province / Region / State	
5. What is the job title of the respondent	1 = CEO/Board member; 2 = Executive Director; 3= Mine Manager; 4 = Geologist; 5= Operations Supervisor; 6 = Others, Specify
6. Length of service in the current position (years)	

B. GENERAL INFORMATION

Variable	Response	Codes
1. In what year did the current owner started mining?		1 Before 1980; 2 = 1981 – 1990; 3 = 1991 – 2000; 4 = 2001 – 2010, 5= 2011 - present
2. What the type of current ownership of the mine		1 = Local Private; 2 = MNC unlisted; 3 = Listed on ZSE; 4 = Listed foreign exchange; 5 = government owned
3. What kind of certificate does the mine hold		1=ISO9001; 2 = ISO14001; 3= Hazardous substance permit; 4= Tailing storage 3rd part audit; 5 = environmental management permit

B1. Do you have a CSR office 1= Yes 2= No _____

B2.If yes where does it lie? (Tick one only)

	Where	**Response**
1	Human resources	
2	Public relations	
3	Corporate Affairs	
4	Other (specify)	

C At what level is your CSR organised? Tick the appropriate box

	Level	
C1	Headquarters	
C2	Parent Company abroad	
C3	Business unit	
C4	Operational unit	

D1 Indicate to what extent you agree with the following statements on CSR processes and practices:

1= strongly agree; 2= agree; 3 =neutral; 4= Disagree; 5= strongly disagree;

D1	CSR enhances our corporate image	1	2	3	4	5
D2	Our stakeholders expect us to engage in CSR practices	1	2	3	4	5
D3	We follow our competitors who have adopted CSR practices	1	2	3	4	5
D4	Our company believes CSR is the right thing to do	1	2	3	4	5
D5	CSR enhances our reputation	1	2	3	4	5

	SECTION E: Resources Used E1: RRE E1					
	E1 (i) Water (W)					
E1.1.1	The company makes effort to provide all water source needs	1	2	3	4	5
E1.1.2	The company is always recycling water for re use in operations	1	2	3	4	5
E1.1.3	Company invests in technologies which use less water in operations	1	2	3	4	5
E1.1.4	Mine makes effort to provide clean water used by community	1	2	3	4	5
E1.1.5	Mine invests in water purification for water used for consumption	1	2	3	4	5
	E1 (ii) Energy (E)					

E1.2.1	The company invests in technologies which use less energy for operations	1	2	3	4	5
E1.2.2	The company is adopting new ways of using renewable energy	1	2	3	4	5
E1.2.3	The company promotes renewable energy in the form of solar power	1	2	3	4	5
E1.2.4	The company promotes renewable energy in the form of biogas for domestic fuel	1	2	3	4	5
E1.2.5	The company provides electricity to employees at a subsidy	1	2	3	4	5
	E1 (iii)Raw Materials (M)					
E1.3.1	The company has the latest gold searching technology	1	2	3	4	5
E1.3.2	The quality of stone brought to the mill is only the good one	1	2	3	4	5
E1.3.3	The company has practices to reduce ore poor in gold content	1	2	3	4	5
E1.3.4	The company rewards rich gold deposits siting	1	2	3	4	5
E1.3.5	Our company communicates on CSR matters on a regular basis	1	2	3	4	5
	E2 EQ. (i) Reduction in contaminants (C)					
E2.1.1	We have concrete measurable targets to judge our liquid waste	1	2	3	4	5
E2.1.2	We have an established method for monitoring waste management	1	2	3	4	5
E2.1.3	We have an established method for providing treatment of water from mine processes before releasing in into streams	1	2	3	4	5
E2.1.4	We ask a third party to audit our tailings	1	2	3	4	5
E2.1.5	We have standard procedures that we follow to determine the quality of water for domestic use	1	2	3	4	5
	E2 (ii) Reduction in waste dumps (WD)					
E2.2.1	Our company considers potential environmental impacts when dumping	1	2	3	4	5
E2.2.2	We have a functioning waste dump management program in place	1	2	3	4	5
E2.2.3	Our company has a waste recycling program	1	2	3	4	5
E2.2.4	The public will approve firms that have environmental integrity in their agenda.	1	2	3	4	5
E2.2.5	It is possible to be economically viable while being environmentally responsible	1	2	3	4	5
	E2 (iii) Soil Restored (S)					
E2.3.1	Managers can maximize shareholder value as well as achieve environmental objectives at the same time	1	2	3	4	5
E2.3.2	Restoring soil while still working on it is pointless	1	2	3	4	5

E2.3.3	It is in our practice to restore some soil annually.	1	2	3	4	5
E2.3.4	We have a policy in place guiding soil restoration on decommissioning	1	2	3	4	5
E2.3.5	There is a causal link between environmental performance and financial performance.	1	2	3	4	5
	E2 (iv) Reduction in environmental accidents (EA)					
E2.4.1	Our company considers potential environmental impacts when adopting new technologies	1	2	3	4	5
E2.4.2	Environmental accidents are common in mining	1	2	3	4	5
E2.4.3	No matter how vigilant, environmental accidents just occur	1	2	3	4	5
E2.4.4	Our company vigilantly protects the environment	1	2	3	4	5
E2.4.5	Environmental accidents are common during the rainy season					

SECTION F: ETHICS ISSUES F1 Promotion of the local economy (LE)

	F1 (i) Services subcontracted from locals (SSL)	1	2	3	4	5
F1.1.1	We subcontract some services from the local community	1	2	3	4	5
F1.1.2	Our company supports employees' activities in the community	1	2	3	4	5
F1.1.3	Our company provides financial support to local community activities.	1	2	3	4	5
F1.1.4	Our company provides material support to local community activities.	1	2	3	4	5
F1.1.5	We ensure that suppliers are paid on time	1	2	3	4	5
	F1.2. Materials subcontracted from locals (ML)					
F1.2.1	CSR of a business is reflected in the active concern for the economic impact of the business on local economic activities	1	2	3	4	5
F1.2.2	Community share ownership is a good move towards CSR	1	2	3	4	5
F1.2.3	A business is as strong as the community in which it operates	1	2	3	4	5
F1.2.4	For companies to be socially responsible government needs to define corporate duties through legislature	1	2	3	4	5
F1.2.5	Government should be responsible for society not corporations	1	2	3	4	5
	F1.3. Local Community workers (CW)					
F1.3.1	The sole social responsibility of a corporation is maximizing shareholder wealth	1	2	3	4	5
F1.3.2	Companies should make any investment in social demands only if it would produce an increase in shareholder value	1	2	3	4	5
F1.3.3	Investment in social demands imposes a cost on the company and should be	1	2	3	4	5

	rejected					
F1.3.4	The firm has resources for a better understanding of how to solve some social problems.	1	2	3	4	5
F1.3.5	The firm has the knowledge for a better understanding of how to solve some social problems	1	2	3	4	5
	F2 Administration (FFA)					
F2.1.1	Managers cannot maximize shareholder value as well as achieve social objectives at the same time	1	2	3	4	5
F2.1.2	Social objectives which are not guided by regulations strain organisations	1	2	3	4	5
F2.1.3	There is no business case for CSR if shareholder value and social goals are not in line with each other.	1	2	3	4	5
F2.1.4	Adhering to social standards will harm competitive position.	1	2	3	4	5
F2.1.5	There is no causal link between social performance and financial performance.	1	2	3	4	5
	Donations (D)					
F2.2.1	Giving to the community improves competitiveness	1	2	3	4	5
F2.2.2	Financial support to communities gives us political legitimacy	1	2	3	4	5
F2.2.3	CSR is morally the right thing to do	1	2	3	4	5
F2.2.4	CSR mitigates regulatory risks	1	2	3	4	5
F2.2.5	CSR enhances the company's image	1	2	3	4	5

	SECTION G: Human Resources (ECR)					
	G(i) Security Levels (SL)					
G1.1.1	Our company has strict procedures to stop any form of discrimination in the workplace	1	2	3	4	5
G1.1.2	Our company promotes diversity in the workforce	1	2	3	4	5
G1.1.3	A whistle blowing policy is in place for employees to report any misconduct at work	1	2	3	4	5
G1.1.4	Whistle blowing is frequently encouraged by management	1	2	3	4	5
G1.1.5	Some of our company policies do not have a CSR component	1	2	3	4	5
	G1 (ii) Training capacity (TC)					
G1.2.1	Funding education benefits the company by preparing a future labour force for the company.	1	2	3	4	5

G1.2.2	We have an annual CSR budget for employee training	1	2	3	4	5
G1.2.3	Funding training benefits the company by preparing a good labour force for the company.	1	2	3	4	5
G1.2.4	Our company has a comprehensive code of conduct	1	2	3	4	5
G1.2.5	Every employee has been given a copy of the code of conduct	1	2	3	4	5
	G1 (iii) Collective bargaining (CB)					
G1.3.1	CSR increases organizational commitment	1	2	3	4	5
G1.3.2	CSR increases employee motivation	1	2	3	4	5
G1.3.3	CSR prevents and/or mitigates new regulations	1	2	3	4	5
G1.3.4	CSR satisfies employee groups in in organizations	1	2	3	4	5
G1.3.5	Most employees belong to affiliation groups	1	2	3	4	5
	G2 (i) Social Protection (SP)					
G2.1.1	Employees can self-organise into affiliations	1	2	3	4	5
G2.1.2	Mine employees are members of a workers' union	1	2	3	4	5
G2.1.3	The union engages in collective bargaining	1	2	3	4	5
G2.1.4	There have been situations of labour disputes in the past year?	1	2	3	4	5
G2.1.5	There has been a strike in the past year?	1	2	3	4	5
	G2 (ii) Retirement plans (RP)					
G2.2.1	Our company has a procedure in place to look after relational needs of employees	1	2	3	4	5
G2.2.2	Our company has pension plans for its employees	1	2	3	4	5
G2.2.3	Our company has retirement homes for its employees	1	2	3	4	5
G2.2.4	Relational needs of employees are important	1	2	3	4	5
G2.2.5	Moral needs of employees are important	1	2	3	4	5
	G2 (iii) Medical aid (MA)					
G2.3.1	Funding SHEQ benefits the company by preparing a healthy labour force for the company.	1	2	3	4	5
G2.3.2	Funding medical facilities benefit the company by preparing a healthy labour force for the company.	1	2	3	4	5
G2.3.3	Contributing to medical needs prepares a healthy labour force	1	2	3	4	5
G2.3.4	Investing in social activities by a company creates greater social value	1	2	3	4	5
G2.3.5	Our company complies with safety regulations in the workplace	1	2	3	4	5

	G2 (iv) Collective situation (VC)					
G2.4.1	All employees belong to a workers union	1	2	3	4	5
G2.4.2	Workers unions are influential in decisions on actions taken during grievance situations	1	2	3	4	5
G2.4.3	There has been a job action organised by employees in the past year	1	2	3	4	5
G2.4.4	The mine administration retaliates harshly after a job action	1	2	3	4	5
G2.4.5	There has been a demonstration of grievance by spouses of employees in the past year	1	2	3	4	5

H1 Funds allocation

	CSR activities	Does this company practice these		If yes, how much $
		Yes	No	
H1.1	Organising public welfare activities			
H1.2	Encouraging employees' voluntary welfare programs			
H1.3	Improving employee welfare (facilities			
H1.4	Active contribution of tax to government			
H1.5	Improving environment impact			
H1.6	Contribution to vulnerable groups			
H1.7	Donation to charitable organizations			
H1.8	Contribution to cultural and literary programs			
H1.9	Pension			
H1.10	Medical aid			
H1.11	Funeral assistance			
H1.12	Long service awards			
H1.13	Transport			
H1.14	Health facilities			
H1.15	Schools development			
H1.16	Scholarships and bursaries			
H1.17	Community share ownership trust			
H1.18	Employee share ownership trust			
H1.19	Roads and other infrastructural development			

H1.20	Water and sanitation			
H1.21	Other (specify)			

H2 Procurement of regular services

	Type of service required	**Top Reference value $**	**Total for the year $**
H2.1	Water		
H2.2	Electricity		
H2.3	Primary raw materials from local		
H2.4	Total primary raw materials		
H2.5	Other services subcontracted to locals		
H2.6	Total services subcontracted		

I.1 Soil restoration

		Total area degraded	**Area Restored**
I.1	Square metres of soil		

I.2: waste management

	Waste type	**2018**	**2019**
I.2.1	Contaminants released		
I.2.2	Mine waste dumps		

I.3 Environmental accidents:

	Year	How Many
I.3.1	2018	
I.3.2	2019	

J.1. Indicate as necessary

	Category of employee	**Number**
J1.1	Total number of employees employed by the mine	
J1.2	How many are from the local community	
J1.3	How many are on pension scheme	
J1.4	How many are on medical aid schemes	
J1.5	How many are members of workers union	

J.2 Indicate what has been the case for your organisation concerning employees

	Event or activity	**Yes =1 No=0**	**Quantity**
J2.1	Have any accidents occurred		
J2.2	Has there been any job action by employees		
J2.3	Time planned for capacity building of employees		
J2.4	Time was actually spent on capacity building		

Thank you for the time devoted to completing this questionnaire.

10.2 APPENDIX 2: DATA ANALYSIS PLAN

Formulas below show how the data from the questionnaire were used to calculate CSR indices.

Mining sector environmental management (EM)

Table 1 Resource Use (RU)

Section	CSR FORMULA	Source
E1.1	Water consumption (WC) $$WC = 1 - \frac{Water\ consumed\ over\ \ the\ last\ 12\ months}{Top\ reference\ value}$$	H.2.1
E1.2	Energy Consumption (E) $$E = 1 - \frac{Energy\ consumed\ over\ \ last\ 12\ months}{Top\ reference\ value}$$	H.2.2
E1.3	Primary Material consumed (M) $$M = 1 - \frac{Primary\ material\ used\ over\ the\ last\ 12\ months}{Top\ reference\ value}$$	H.2.3
Index	RU = $\alpha_1 W + \beta_1 E + \gamma_1 M$	1

Table 2 Environmental Quality (EQ)

Section	CSR FORMULA	Source
E2.1	Reduction in contaminants (C) $$C = 1 - \frac{contaminants\ released\ this\ period}{contaminant\ emission\ from\ last\ period}$$	I.2.1
E2.2	Reduction in waste dumps (WD) $$WD = 1 - \frac{tons\ of\ mine\ waste\ dumps\ dumped}{tons\ of\ mine\ waste\ dumped\ from\ last\ period}$$	I.2.2
E2.3	Percentage of restored soil (S) $$(S) = 1 - \frac{total\ square\ of\ restored\ soil}{total\ square\ of\ mines - degraded\ soil}$$	I.1
E2.4	Reduction of environmental accidents (EA) $$EA = 1 - \frac{No.of\ accidents\ over\ \ last\ 12\ months}{No.of\ accidents\ from\ pervious\ 12\ months}$$	I.3.1 I.3.2

Index	$EQ = \alpha_2 C + \beta_2 WD + \gamma_2 S + \Omega_2 EA$	2

Environmental Management index (EM) would be the sum of RU and EQ. 3

Mining sector and ethics issues (E)

Table 3 Promotion of local economies (LE)

Section	CSR FORMULA	Source
F1.1	Services subcontracted with locals (SSL) $SSL = 1 - \frac{Amount\ paid\ for\ services\ subcontracted\ with\ locals}{amount\ paid\ for\ services\ subcontracted}$	H.2.5 H.2.6
F1.2	Primary Material acquired from locals (ML) $ML = 1 - \frac{Amount\ paid\ for\ primary\ materials\ offered\ by\ locals}{Amount\ paid\ for\ primary\ materials}$	H.2.3 H.2.4
F1.3	Local Community workers (CW) $(CW) = 1 - \frac{number\ of\ local\ community\ workers}{total\ number\ of\ workers}$	J.1.2 J.1.1
Index	$LE = \alpha_3 SSL + \beta_3 ML + \gamma_3 CW$	4

Table 4. Fair Funds administrations (FFA)

Section	CSR FORMULA	Source
F2.1	Social Projects Enhancements (SPE) $SPE = 1 - \frac{Amount\ invested\ in\ social\ projects}{Total\ amount\ of\ all\ named\ expenses}$	Totals For H1 H1+H2
F2.2	Donations (D) $D = 1 - \frac{Amount\ donated\ to\ Charitable\ oganisations}{Total\ amount\ of\ all\ named\ expenses}$	H.1.7
Index	$FFA = \alpha_4 SPE + \beta_4 D$	5

Ethics index would be sum of LE and FFA; Ethics = LE + FFA 6

The mining sector and human resources (HR)

Table 5: Employee/Corporation relations (ECR)

Section	CSR FORMULA	Source
G1.1	Security Level (SL) $$SL = 1 - \frac{Number\ of\ accidents}{Number\ of\ workers}$$	J.2.1 J1.1
G1.2	Training and Capacity (TC) $$TC = \frac{Real\ average\ training\ hours\ per\ worker}{average\ training\ hours\ planned\ per\ worker}$$	J.2.3 J.2.4
G1.3	Collective Bargaining (CB) $$CB = \frac{Number\ of\ worker\ receiving\ collective\ bargaining}{Total\ number\ of\ workers}$$	J.2.5 J.1.1
Index	ECR = α_5SL + β_5 TC + γ_5CB	7

Table 6:Social Protection (SP)

Section	CSR FORMULA	Source
G2.1	Retirement Plans (RP) supported by the corporation $$RP = \frac{number\ of\ workers\ receiving\ retirement\ plans}{Total\ number\ of\ workers}$$	J.1.3 J.1.1
G2.2	Medical assurance (MA) supported by the corporation $$MA = \frac{number\ of\ workers\ receiving\ medical\ plans}{Total\ number\ of\ workers}$$	J.1.4 J1.1
G2.3	Violent or Conflictive Situations (VC) $$VC = 1 - \frac{No.of\ violent\ incidents}{total\ number\ of\ workers}$$	J.2.2 J.1.1
Index	SP = α_6RP + β_6 MA + γ_6VC	8

The grand Human Resource Index, HRI = ECR + SP 9

The grand CSR index would be the sum of EM, E and HR: 10

CSR = EM + E HR The higher the index the better the CSR practices

10.3 APPENDIX 3: INTERVIEW GUIDES FOR KEY INFORMANTS

10.3.1 Appendix 3a: Environmental Mmanagement Agency

- What are the requirements mines in starting up
- There are guides on slug and tailings management what are the consequences of non-adherence to these guides?
- How often are you as Environmental Mmanagement Agency expected to physically visit and evaluate environmental activities of the gold mines?
- Have you been able to visit all mines as expected in the past twelve months?
- If not what are the possible effects on the environment
- Mines starting up are expected to submit an environmental impact assessment this became a requirement in 2003 what do mines which were already operational by then do?
- There are certifications which the mines are expected to hold in what way do these promote environmental integrity?
- Some mines are put on care and maintenance program for extended periods and gradually abandoned what are the regulations in place to ensure there are mine decommissioning and rehabilitation of pits and voids?
- Are there any arrangements on mining development which make the sites suitable for other planned uses after the completion of extractives?

10.3.2 Appendix 3b: Zimbabwe National Water Authority

- Do the permits for water use specify amounts of water to be used annually by mining companies?
- Are there any renewable certifications you issue for water usage by mining companies?
- How often are you as Zimbabwe National Water Authority expected to physically visit and evaluate water usage activities of the gold mines?
- Have you been able to visit all mines as expected in the past twelve months?
- If not what are the possible effects on the resource?
- What are the measures put to monitor water usage by mining companies
- Are there any guidelines from Zimbabwe National Water Authority on collaboration by mining companies with other water users to mitigate shared water risks and support equitable access?
- Do you require mines to report on water usage, material water risks and performance?
- What strategies has Zimbabwe National Water Authority put in place to encourage water recycling by mining companies?

10.3.3 Appendix 3c: Zimbabwe Electricity Supply Authority

- What is the major source of grid electricity you provide to mining companies?
- Do you equally exercise power cuts on mining companies or there are exceptions?
- Are there any sources of renewable energy available to mining companies?
- What are the strategies Zimbabwe Electricity Supply Authority has put in place to encourage the use of green energy?
- Mining companies are heavy users of electricity what are the down sides of this heavy usage?
- What are the upsides?

10.3.4 Appendix 3d: Rural District Council

- The government through the Indigenisation act required of mining companies to form Community Share Ownership Trusts of which the Rural District Council is a member of the board of trustees, has the mining company in your district fully complied with the requirements?
- Is the presence of the mine a curse or a blessing to the district?
- In what ways?
- What gaps have the mine filled or opened

10.3.5 Appendix 3e: Community leader

- The government through the Indigenisation act required of mining companies to form Community Share Ownership Trusts of which the Rural District Council is a member of the board of trustees, has the mining company in your district fully complied with the requirements?
- Is the presence of the mine a curse or a blessing to the district?
- In what ways?
- Does the mine have a system for employment of locals?
- Which aspects or activities does he mine support financially?
- Which aspects or activities does he mine support materially?
- Does the mine support local economic activities?
- If so which ones?
- Do you think the mine company is responsible for the environment?
- What have they done?
- What should they do?

10.3.6 Appendix 3f: Non-Governmental Organisations

- Non-Governmental Organisations normally has the betterment of the social or environmental issues for the local communities, has the mine volunteered to partner with you in any way towards any cause?
- Has the Non-Governmental Organisations approached the mine in this regard?
- What has he mine done for the betterment of the community which compliments your current effort?
- What do you think they should do?

10.3.7 Appendix 3g: Mine Industry Pension Fund

- What is the purpose of Mine Industry Pension Fund in the welfare of mine employees?
- Without naming the companies which category among Multi-National ,government, listed and local mining companies have the best record of remittance?
- Which has the worst?
- What do you think are factors attributed to non-compliance?

10.3.8 Appendix 3h: Workers Union

- Does he mine allow employees to be unionised locally?
- Does he mine allow employees to be affiliated to a national mine union?
- When you raise grievances through the union does the mine make some concessions and compromises?
- Has there been any form of job action in the last 12 months
- What are the benefits of being unionised?

10.4 APPENDIX 4: INFORMED CONSENT FORM FOR BOTH INTERVIEWS AND QUESTIONNAIRE

INFORMED CONSENT FORM

Assessing the nature and scope of corporate social responsibility within the Zimbabwe gold mining sector

Principal investigator: Doctoral student at North West University School of Business and Governance, Potchefstroom Campus South Africa. +263779438021 nyikahadzoiloveness@gmail.com

Promoter: Professor Ronnie Lotriet, NWU Business School email, Ronnie.Lotriet@nwu.ac.za Tel: (018) 299 1415)

Purpose of Study: You are being requested to take part in this research study. The purpose of this doctoral study is to assess corporate social responsibility practices in the gold mining sector in Zimbabwe focusing on large scale gold mines. You have been selected to participate in the study. The results obtained will be used for academic purposes only.

Voluntary participation: If you agree to take part, I will ask you some questions about your organisation. It will take up to 30 minutes. You are free to choose whether or not to take part in the survey. If you choose not to take part, you will not be affected in any way whatsoever. If you agree to take part and later change your mind, you may stop answering the questions or questionnaire at any time and tell me that you don't want to continue. I won't ask you to give a reason for deciding not to continue. If you decide not to take part, there will be no adverse consequences in any way. If you agree to take part, and there are any questions that you would prefer not to answer then you can skip the question and move on to the next question in the study. If you are willing to take part in the study, please sign at the bottom of this page to show that you consent to take part in the study, and for me to use your answers as part of the results for this study.

Confidentiality: Your responses to this study will be anonymous. No identifying information will be required and I have assigned code names and numbers for participants that will be used on all research notes and documents. Notes, interview transcriptions, and any other identifying participant information will be in the personal possession of the researcher locked away and password protected. The data will be stored electronically and will be password protected.

Benefits: There will be no direct benefit to you for your participation in this study. However, we hope that the information obtained from this study may beneficial to your organization or community when you read the results.

Consent: I have read and I understand the provided information and have had the opportunity to ask questions. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and without cost. I understand that I will be given a copy of this consent form. I voluntarily agree to take part in this study.

- I have been given the opportunity to ask any questions and to have had them answered to my satisfaction;
- I agree to take part in this study;
- I understand that my participation is voluntary and I am free to withdraw at any time without giving any explanation;
- I understand the data will be handled with confidentiality and that my company and any information I give will be treated as anonymous.
- I consent to proposals for data storage, archiving, sharing and use for academic purposes;
- I consent to any planned audio recording for transcribing and use by the researcher.

Participant's signature _____ Date _____

Investigator's signature _____ Date _____

10.5 APPENDIX 5 AOSIS PUBLISHING HOUSE STYLE FOR AUTHORS

AOSIS Publishing house style for authors

Manuscripts must adhere to the following guide before submission.

Table of content

Language usage 2
General elements 2
Sensitive and political terms 2
Tables, figures and photographs 4
Footnotes to tables, figures and photographs 5
Guidance on submitting creatives electronically 6
Guidelines for Math 7
Fonts: Unicode fonts 7
Understanding Unicode 7
How to check whether your font-type is unicode compliant 7
Which fonts are Unicode compliant? 8
Unicode in Windows 8
Unicode in Macintosh 9 2

Language usage

General elements

 Quotations: Use single quotation marks for quotations. For quotations within quotations, use double quotation marks. Quotations of more than 30 words are to be indented. Do not use quotation marks for indented quotations unless it is direct speech (e.g. interviewee responses).

 En dashes and hyphens: Use an en dash (i.e. extended hyphen that can be found in the Insert box under Symbols in Microsoft Word) in ranges of numbers and dates. Use hyphens only for words that are hyphenated.

 Dates: Format dates as '02 October 2006', except at the beginning of sentences where numerals and dates should either be spelt out or the sentence should be rearranged.

 Percentage: The per cent symbol (%) is used in conjunction with all numbers (e.g. 12%). Numbers that have been written out will appear with 'percent' (e.g. five percent). 'Percentage' is used in a general sense.

 Numbers: Numbers from one to nine must be written out. Numbers from 10 onwards, must be used as numerals, except at the beginning of a sentence.

 Spacing and punctuation: There should be one space (and not two) between sentences; one space before unit terms (e.g. 5 kg, 5 cm, 5 mmol, 5 days, 5 °C, etc.), but no space before the percentage symbol (%). Thousands and millions are marked with a space and not a comma (e.g. 1000, 1 000 000). Ranges are expressed with an extended hyphen (i.e. en dash), not with a short hyphen (e.g. 1990–2000).

 Units: The use of units should conform to the SI convention and be abbreviated accordingly. Metric units and their international symbols are used throughout, as in the decimal point (not the decimal comma), and the 24-hour clock.

 Foreign language: Foreign language words should be italicised, unless these words are part of normal usage. Consult the Oxford English Dictionary if in doubt.

 Acronyms: If a phrase with an established acronym or abbreviation is used and appears more than five times in your manuscript, please include the acronym or abbreviation in brackets after first mention of the phrase, and then use the acronym or abbreviation only. Please note that you should not define acronyms or abbreviations in any of your headings. If either has been used in your abstract, you need to define them again on their first usage in the main text.

Sensitive and political terms

 Race and ethnicity: Try to avoid terms such as 'blacks' and 'whites'; use instead 'black people', 'white people', etc. 'Caucasian', 'Mongoloid', 'Negroid', etc. are generally to be avoided except in human population studies. 'Mixed race' is preferable to 'half-caste' or 'coloured'.

 Disabilities: Avoid using 'the disabled', 'the handicapped', and instead use 'people with disabilities not 'the disabled' or 'people with learning difficulties', not 'mentally handicapped'.

 Disease

- Avoid health-determined categorisation.
  - Use 'people with diabetes'; not 'diabetics'.
  - Use 'people with cancer'; not 'cancer sufferers'.

3

- Use ‘sexually transmitted infection (STI)’ and not ‘sexually transmitted disease (STD)’.

○ Avoid phrasing that dehumanises a patient. Many authors use case (instance of a disease) when they mean patient (i.e. the person or individual who is ill with the (disease).

 AIDS

○ Ensure that ‘AIDS’ is used for the disease and ‘HIV’ for the virus, e.g. do not use ‘AIDS carrier’, ‘AIDS positive’, ‘AIDS virus’ or ‘catching AIDS or HIV/AIDS’ (avoid using the solidus here).

○ ‘AIDS sufferer/victim’ is inappropriate; use ‘people with AIDS’.

○ Refer to ‘people who practise high-risk activities’ and not ‘high-risk groups’.

○ The expression ‘full-blown AIDS’ is unnecessary if the correct distinction has been made between HIV and AIDS.

 Male versus Female

○ ‘Male’ and ‘female’ are adjectives, so be careful to use them as such (i.e. a male patient and a female frog, but a 35-year-old man, a French woman and a group of 25 men and 35 women).

 Sexuality: Avoid the terms ‘homosexual activities’ (if achievable within the manuscript’s context, specify which activity is being referred to, especially when dealing with medical research.) Avoid using ‘homosexuals’ (specify homosexual men or homosexual women).

 Gender: Use gender neutral nouns. Avoid the use of ‘man’ if not specifically referring to men; for example:

○ for ‘man’ use ‘humans’

○ for ‘man-kind’ use ‘the human race’

○ for ‘man-power’ use ‘workforce’

○ for ‘man-made fibre’ use ‘synthetic fibre’

 ‘He/she’, ‘him/her’ and ‘his/hers’: For ‘he/she’, ‘him/her’ and ‘his/hers’ rather use ‘he or she’, ‘her or him’, ‘his or hers’ (without a solidus) or change to plural ‘they’. Use inclusive pronouns: use ‘he or she’, or rephrase the sentence (rephrasing to the plural form often works):

✗ … Any observer of changes in publishing technology will perceive that he has need of…

✓ … Observers of… will perceive that they have…

Beware of referring to people with stereotypical pronouns (e.g. ‘the doctor treated his patient’; ‘the secretary tidied her desk’).

 Geography

○ The terms Third World, poor countries and underdeveloped countries should be avoided.

○ Developing or non-developed country/society is better, but it is best to specify countries or regions instead.

○ Western society and Western World should only be used in relation to geography; otherwise, use developed world/society or, even better, specify the countries themselves or the region.

4

Tables, figures and photographs

Tables should in an Excel (.xls) format. Ensure that all personal identifying information is removed from the supplementary files as indicated in the provided instructions. All captions should be provided together on a separate page. Tables and figures should use numerical numbers.

 Organise your visual presentation: Once you have read through the analyses and decided how best to present each table or figure, think about how you will arrange them within the manuscript. The analyses should tell a story' that leads the reader through the steps needed to logically answer the question(s) that you as author are posing in the Introduction. The order in which you present the results can be as important in convincing the readers as what you actually are saying in the text.

 How to refer to tables and figures in the text: Every figure and table included in the paper *must* be referred to in the body of the text. Use sentences that draw the reader's attention to the relationship or trend you wish to highlight, referring to the appropriate figure or table only in parenthesis e.g.:

- Germination rates were significantly higher after 24 h in running water than in controls (Figure 4).
- DNA sequence homologies for the purple gene from the four congeners (Table 1) show high similarity, differing by at most 4 base pairs. (Avoid sentences that give no information other than directing the reader to the figure or table, e.g. Table 1 shows the summary results for male and female heights at Bates College.)

 Abbreviation of the word 'Figure': When referring to a figure in the text, the word 'figure' is never abbreviated as 'Fig.'; the same rule applies to the usage of 'table'. Both words are spelled out completely in descriptive legends.

 How to number tables and figures: Figures and tables are numbered independently, in the sequence in which you refer to them in the text, starting with Figure 1 and Table 1. If, in revision, you change the presentation sequence of the figures and tables, you must renumber them to reflect the new sequence.

 The acid test for tables and figures: Any table or figure you present must be clear, well-labelled, and described by its legend to be understood by your intended audience without reading the results section. That is, it must be able to stand alone and be interpretable. Overly complicated figures or tables may be difficult to understand in or out of context, so strive for simplicity whenever possible.

 Descriptive legends or captions: To pass the acid test above, a clear and complete legend (sometimes called a caption) is essential. Like the title of the manuscript itself, each legend should convey as much information as possible about what the table or figure intends to tell the reader:

- the results that are being shown in the graph(s), including the summary statistics plotted
- the organism studied in the experiment (if applicable)
- a context for the results: the treatment applied or the relationship displayed, etc.
- location (only if a field experiment)
- specific explanatory information needed to interpret the results shown (in tables, this is frequently done as footnotes)
- culture parameters or conditions if applicable (temperature, media, etc.)

5

- sample sizes and statistical test summaries, as they apply

Do not simply restate the axis labels with a 'versus' written in between.
Example: Figure 1: Height frequency (%) of White Pines (Pinusstrobus) in the Thorncrag Bird Sanctuary, Lewiston, Maine, before and after the Ice Storm of 1998. Before, n = 137, after, n = 133. Four trees fell during the storm and were excluded from the post-storm survey.
Note: Questions frequently arise about how much methodology to include in the legend, and how much results reporting should be done. For laboratory reports, specific results should be reported in the results text with a reference to the applicable table or figure. Other than culture conditions, methods are similarly confined to the Methods section.
Footnotes to tables, figures and photographs
Do not introduce footnotes in the body of the manuscript. Footnotes should be used as follows:
 Copyright and permissions to reproduce should be clearly stated.
 Notes about the table as a whole can be left unlinked (i.e. no linking letters or numbers or symbols) or linked to, for example, a relevant column heading.
 Notes about specific parts of the table should be linked using superscript lower case letters (preferred), superscript numbers or symbols.
 If lower case letters are used, it could be confused with the table data; use symbols or numbers instead.
 Do not make use of superscript numbers in parentheses (brackets).
 If an abbreviation is mentioned for the first time in a table (e.g. 'CE' in Table 1), it must be defined in a footnote to that table, (e.g. HE, Heat event (introduced at weekly intervals).
 Asterisk footnotes are reserved for probability values in tables and usually signify the following values: *, $p \leq 0.05$; **, $p \leq 0.01$; ***, $p \leq 0.001$. The asterisk is often used in mathematics and should therefore be avoided as a footnote symbol.
 Footnote links should be placed after punctuation. The preferred order of footnote symbols in tables (which should be superscripted) is †, ‡, §, ¶ (these are doubled if more footnotes are needed, e.g. ††).
 When superscript numbers or letters are used in text, beware of potential confusion with other superscripts (e.g. 2 for 'squared').
 Footnotes should be in the following order:
6

- source notes
- other general notes
- notes on specific parts of the table (following the order in the table itself)
- notes on level of probability

Guidance on submitting creatives electronically
Please supply images as the size intended for final publication. Resizing of images is time consuming and can result in loss of quality.
Supply your manuscript creatives in one of the following three preferred formats:
 TIFF: This is an image made up of pixels and is the most universal and most widely supported format across Windows and Mac platforms. Most graphics packages can save a file as a TIFF. The higher the resolution (i.e. the number of pixels) the sharper the final image.
- Colour or greyscale photographic images: 300dpi
- Line art or combination images: 600/900dpi
- We would recommend using this format for photographic images.

 EPS: An EPS is essentially an envelope for holding text and images. Line art can be produced as an EPS (in Illustrator, for example). There are virtually no limits to scaling line art saved as an EPS. It can also contain TIFF images. However, please ensure that all fonts are embedded (that is, saved as outlines) and that line weights are not defined as hairline.
 PDF: This format is, again, like an EPS in that it is an envelope for holding different kinds of images and line art. Great care should be taken to ensure that fonts are embedded and that original images are at the correct size and resolution before being saved as a PDF. It is possible to save or export as TIFF or EPS from most graphics applications, just as it is possible to save direct to a PDF from most graphics packages by using a postscript printer driver. PDF creation packages (e.g. Acrobat Distiller) are also now widely available.

Other file formats
☐ **JPEG**: A JPEG compressed TIFF is acceptable as long as the degree of compression is moderate. It is better to use a JPEG for online images as a good quality image is achievable even with a high degree of compression.
 GIF: A format suitable for images that contain few colours. Again, this should only be used for images intended for the web.
 We cannot guarantee the quality of images supplied in other formats.

Colour:
☐ Greyscale, CMYK, RGB.
 Greyscale art should be saved in greyscale mode.
 CyanMagentaYellowBlack are the base colours used during the printing process.
 Any colour that is to appear in print must be in CMYK mode.
 Red**G**reen**B**lue are the colours used by monitors and default scanner settings. Any colour that is to appear online must be in RGB mode.
7

Guidelines for Math

 Set display equations in MathType. Each display equation should be in its own MathType object. Each MathType object should contain the entire equation, including final punctuation. The equation number should be set as Microsoft Word regular text, outside the MathType object, separated by either a tab or a space.

 Set in-text (inline) math in Microsoft Word regular text. Exception: If in-text (inline) math has elements that should be stacked or have rules, circumflexes, arrows, or other accents spanning over more than one character, set in MathType as 'Inline Equation.'

 If any characters cannot be found in Word's Symbol palette ('(normal text),' 'Times New Roman,' or 'Symbol'), please set in MathType.

 No display equations are allowed in figure captions, table titles, or table footnotes. If a display equation occurs in a text footnote, it is best to recast it as inline math. There are a few journals with lengthy footnotes with style exceptions to this rule.

 No numbered equations are allowed in table footnotes.

 Display and/or numbered equations ARE allowed in table body, but must be 'inline' when converted to MathML equations.

Fonts: Unicode fonts

Please use standard (UNIcode) fonts such as Palatino, Times New Roman, Helvetica and Symbol. Fonts that have not been embedded will usually be replaced by Courier, resulting in character loss or realignment.

Understanding Unicode

The explanation at Unicode.org is a good place to begin.

'Unicode provides a unique number for every character, no matter what the platform, no matter what the program, no matter what the language.' (Unicode.org, 2011)

Put more simply, no matter what font is used, your computer and other computers will always know exactly what symbol is called for and display the text correctly.

Note: AOSIS Publishing publishes in four different formats, namely, PDF, HTML, XML and ePUB. If your manuscript is not unicode compliant, then it will not be possible to produce all four formats. We will send the back to you to make the fonts Unicode compliant to enable us to produce all four formats.

How to check whether your font-type is unicode compliant

1. Open your manuscript in your text editor.
2. Highlight all the text within your manuscript and change the font to Arial or Times New Roman.
3. Scrutinise your entire manuscript.

- Document reads perfectly? If the words are readable and identifiable, then the font that you are using is unicode compliant.
- Document has changed certain or all characters? Font used is not unicode compliant and needs to be changed prior to submission to this journal.

8

Which fonts are Unicode compliant?
 To use Unicode, you will need to install (or find already installed) Unicode fonts on your computer. This is neither difficult nor costly.
 For basic information and links to numerous Unicode fonts, see http://www.alanwood.net/unicode/fonts.html
- Arial Unicode MS
- Courier New
- DejaVu Serif
- Gentium
- Garamond
- Minion Pro
- Myriad Pro
- Tahoma
- Times New Roman
- Verdana

Unicode in Windows
Installing fonts on a Windows computer is fairly simple.
1. Download the font.
2. If it is a compressed file (such as .zip), expand it.
3. Open the fonts folder by clicking on Start, then Settings, then Control Panel, then Fonts.
4. Drag the font file(s) into this folder. It should automatically install.

Using the insert symbol function
 Use the Insert Symbol function (found in the Insert menu). This function allows you to choose characters from a grid displayed in its own window. Double-clicking the desired character inserts it at the cursor in the document.
 Use the symbol insert window to assign keystrokes to the characters you use most often. For example, you might assign the keystroke alt+a to the lower case a with macron, and alt+shif+A to capital A with macron.

Keyboard for Windows The preferred method for typing in Unicode. Essentially this means telling Windows that you want a different keyboard layout to be available for use. At this step things might vary from computer to computer.
 Click on Start, then Settings, then Control Panel.
 Double click Regional and Language Options. The window that opens should have three tabs: Regional Options, Languages, and Advanced.
 Click on the Keyboards and Languages tab.
 Options include installing additional languages or changing the keyboard. Read the guidelines provided by Windows carefully.
 Select ‘Change keyboards’ in the same window after installing additional language.
 To make it your default keyboard you must choose it in the drop down list under Default Input Language at the top of this window. Click Add.
 Proceed to select the ‘Language Bar’ tab at the top and ensure that the box ‘Show additional Language bar icons in the taskbar’ is ticked.
9

 Now there should be a little keyboard icon in the task bar at the bottom of your screen (if there wasn't already). (It will be next to the blue square with EN in it, which signifies that the current input language is English. If you use no other languages, this icon might not be there.) When you click on the small keyboard icon, a list of keyboard choices pops up. If you made Alt-Latin the default, it should be in bold type. (However, it may not appear until the next time you restart your computer. Until then it might be a blank line in the list.)

Typing with the alternative keyboard is simple. For most letters you will do things as you always have. When you need a special character or a character with a diacritic or accent, you will use key combinations with the Alt key to the right of the space bar (the one on the left side does not work for this in Windows, unfortunately). For example, to type the letter 'a' with a macron you hold down the Alt key and press the letter a, release them both, then type the letter a. For letters with a dot below them, hold down Alt, press the period key, release both, and then type the letter which needs the dot.

Unicode in Macintosh

To enter Unicode text on a Macintosh, you have several options. Firstly, you may use the **Character Pallette**, which is found in the Input Menu (the flag menu in the upper right, near the clock).

 If the Character Pallette option is not shown, enable it by doing the following:

- Go to the Apple menu, select System Preferences.
- In the Preferences window, choose International.
- Select Input Menu.
- Check Character Pallette. You can also check Keyboard Viewer, Unicode Hex Input, and US Extended at this time.
- Check Alt-Latin. If it is not there, see below for information on installing it.
- Make sure the "Show Input Menu in menu bar" option is checked.

 To use the Character Pallette to enter Unicode characters in a document, just keep it open in the background. When you need a character, you can enter it by double clicking on it in Character Pallette.

 A useful feature of Character Pallette is the ability to designate frequently-used characters as favourites, saving you the trouble of finding the different letters each time you need them.

 For more information on Character Pallette, see Alan Wood's site: http://www.alanwood.net/unicode/utilities_fonts_macosx.html

Secondly, you may use the excellent and extremely simple **Alt-Latin keyboard** or **LatinTL keyboard**, both of which were created specifically for this purpose by Kino.

 To install either keyboard (or both of them), you must first download AltLatin.zip and/or LatinTL_X.dmg.sit from Alt-Latin page).

 If your browser does not automatically expand the .zip or .sit file, tell it to save the file to your desktop (so it will be easy to find), then manually expand it. Usually this can be done simply by double-clicking the file, which will start the appropriate decompression program. LatinTL expands to a disk image, but for the purpose of installation you can treat it just like a folder.

 Make it visible in the Input Menu by following the instructions given above for the Character Pallette.
 Because Alt-Latin and LatinTL work like any other keyboard, you will not have to change keyboards unless you need to type in a different alphabet, such as Arabic.
 Entering letters with diacritics using either keyboard is very simple:
1. Make sure you are using a Unicode font. It may work with other fonts, but you should use Unicode (OS X comes with Lucida Grande and there are others available).
2. To enter a vowel with a macron, simply hold down either **option** key and hit the letter 'a' simultaneously. Release them, then type the letter that needs the macron (using the shift key if you need a capital).
3. For letters with dots below, press option and period, release, then type the letter.
4. Hamza is shift+option+P, and 'ayn is option+p. (This may not work in Microsoft Word with Alt-Latin – reason unknown. If it does not work, use the LatinTL keyboard instead, or use the Character Pallette for these two characters. These keystrokes do work in TextEdit and other software with Alt-Latin.)
 The PDF file included with Alt-Latin shows maps of the keyboard, in case you need something not mentioned here, or you may use our maps found on http://www.lib.uchicago.edu/e/collections/mideast/encyclopedia/unicode.html.
 The layout of LatinTL is very similar, with only a few differences, and it also includes maps. (See the Alt-Latin page for a description of the differences.)
 Click here **for diagrams of the Alt-Latin keyboard** (usable for LatinTL as well, with a few differences) and for downloads.
 The diagrams are for the Windows version, but the layout is almost identical to the Mac version. The main difference is that where the Windows version uses only the Alt key to the right of the space bar, the Mac version uses either of the two Option keys. This makes the Mac version a little more comfortable to use, since you can use either hand. (There is no Windows version of LatinTL.)
 There are downloadable PDF files of the diagrams available on the same page, in case you would like to print them for easier reference while typing.
 Kino's site (linked above) also has numerous other Macintosh keyboard and font resources, such as some keyboards based on non-US layouts (notably a UK variant of Alt-Latin).

Thirdly, you may want to use Knut S. Vikør's **Jaghbub keyboard layouts** (and, perhaps, his Unicode fonts). His Arabic Macintosh pages have long been one of the web's most useful sources for Mac users who need to type Arabic or transliteration, and he has updated both the pages and the downloadable resources he created.
 The page on transliteration, ‘Writing Arabic with Latin letters’, explains the issues and provides a downloadable file containing the JaghbUni font package and the American Diacs. keyboard layout.
 The Jaghbub font package page gives more information about the three fonts included, as well as German, French, Italian, Danish, Swedish, Norwegian, US and UK keyboard layouts for typing diacritics in Unicode fonts.
 There are also separate keyboard layouts for typing IPA characters in Unicode fonts for the same national standards (that is, the non-option keys
11

follow the regular national keyboard standard, but the IPA characters are all placed on option keys under no particular standard).

For any keyboard layout, you can always select **Keyboard Viewer** from the Input Menu to see what different keystrokes will do.
These instructions were taken from:

http://www.lib.uchicago.edu/e/collections/mideast/encyclopedia/unicode.html

10.6 APPENDIX 5A: ARTICLE 1 NOTICE OF SUBMISSION AND JOURNAL GUIDE LINES

10.6.1 NOTICE OF SUBMISSION FOR ARTICLE 1

APPENDIX 5A NOTICE OF SUBMISSION

SAJEMS Submission 4411 – Acknowledgement of manuscript receipt to all the co-authors Inbox

Add star aosis@sajems.org<aosis@sajems.org> Fri, Oct 22, 2021 at 11:07 AM

Reply-To: Ms Keshia Jansen <1ts.srsupport@sajems.org>

To: Loveness Nyikahadzoi <lnyikahadzoi@gmail.com>, Ronnie Lotriet <Ronnie.Lotriet@nwu.ac.za>, Anet Smit <Anet.Smit@nwu.ac.za>

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****

Ref. No.: 4411

Manuscript title: Determinants of the nature of business ethics practised by the gold mining sector in Zimbabwe

Journal: South African Journal of Economic and Management Sciences

****

Dear Loveness Nyikahadzoi, Ronnie Lotriet, Anet Smit

The above manuscript, for which you are listed as a contributing author, has been received by the journal. Future communications regarding this manuscript will be sent to the corresponding author only, Mrs NYIKAHADZOI.

If you need to contact us or the publisher about your manuscript for any reason, please be sure to quote the journal name and manuscript reference number 4411.

Kind regards,

Ms Jansen

AOSIS Pty Ltd

****

Frequently Asked Question

What does it mean to be a co-author?

****

If your manuscript is a multi-authored manuscript, and you are listed as a contributing author all co-authors (collaborators) share a degree of responsibility for manuscripts they collaborate on, and it is essential that you are informed and aware that you are listed as a contributor. The publisher is a member of the Committee of Publication Ethics.

Editorial Coordinator

Scholarly Journals Department

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[https://sajesbm.co.za] | • South African Journal of Economic and Management Sciences [https://sajems.org] | • Africa's Public Service Delivery and Performance Review [https://apsdpr.org] | • Journal of Economic and Financial Sciences [https://jefjournal.org.za] | • South African Journal of Business Management [https://sajbm.org] | • Journal of African Foresight [https://jafonline.org]

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Quick Reply

To: Ms Keshia Jansen <1ts.srsupport@sajems.org>

To all: Ms Keshia Jansen <1ts.srsupport@sajems.org>, Ronnie Lotriet <Ronnie.Lotriet@nwu.ac.za>, Anet Smit <Anet.Smit@nwu.ac.za>

10.7 APPENDIX 5B: AUTHOR GUIDELINES FOR SOUTH AFRICAN JOURNAL OF ECONOMIC AND MANAGEMENT SCIENCES (SAJEMS)

Cover Letter

The authorship, disclosure statements, copyright, and license agreement form is our compulsory cover letter which needs to form part of your submission. Kindly download and complete, in English, the provided **form**.

Anyone that has made a significant contribution to the research and the paper must be listed as an author in your cover letter. Contributions that fall short of meeting the criteria as stipulated in our policy should rather be mentioned in the 'Acknowledgements' section of the manuscript. Read our **authorship** guidelines and **author contribution** statement policies.

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- Tweet for the journal Twitter profile: This sentence/statement will be used on the journal Twitter profile to promote your published article. Max 101 characters (including spaces). If you have a Twitter profile, please provide us your Twitter @ name. We will tag you to the Tweet.

Abstract: The Abstract should provide the context or background for the study and should state the study's purpose, basic procedures (selection of study participants, settings, measurements, analytical methods), main findings (giving specific effect sizes and their statistical and clinical significance, if possible), and principal conclusions. The Abstract should not exceed 250 words. Please minimize the use of abbreviations and do not cite references in the abstract. Refer to the relevant article type's guideline you are submitting for the abstract sections.

Introduction: The Introduction should put the focus of the manuscript into a broader context and explain its social and scientific value. Address this to readers who are not experts in this field and include a brief review of the key literature. If there are relevant controversies or disagreements in the field, they should be mentioned. Conclude with a brief statement of the overall aim of the experiments and a comment about whether that aim was achieved. Cite only directly pertinent references, and do not include data or conclusions from the work being reported.

Methods: The Methods section should provide clarity about how and why a study was done in a particular way. It should provide enough detail for reproduction of the findings. Protocols for new methods should be included, but well-established methodological procedures may simply be referenced. A full description of the methods should be included in the manuscript itself rather than in a supplemental file. Only information that was available at the time the plan or protocol for the study was being written must be included; all information obtained during the study belongs in the Results section. If an organization was paid or otherwise contracted to help conduct the research (examples include data collection and management), then this should be detailed in the methods.

The methods section should include:

- The selection and description of participants or description of materials.
- The aim, design and setting of the study.
- The description of the processes, interventions and comparisons. Generic drug names should generally be used. When proprietary brands are used in research, include the brand names in parentheses.
- The type of statistical analysis used, including a power calculation if appropriate.

The Methods section should include a statement indicating that the research was approved or exempted from the need for review by the responsible review committee (institutional or national). If no formal ethics committee is available, a statement indicating that the research was conducted according to the principles of the Declaration of Helsinki should be included.

Results: Present your results in logical sequence in the text, tables, and figures, giving the main or most important findings first. Do not repeat all the data in the tables or figures in the text; emphasize or summarize only the most important observations. Provide data on all primary and secondary outcomes identified in the Methods Section. Give numeric results not only as derivatives (for example, percentages) but also as the absolute numbers from which the derivatives were calculated, and specify the statistical significance attached to them, if any. Restrict tables and figures to those needed to explain the argument of the paper and to assess supporting data. Use graphs as an alternative to tables with many entries; do not duplicate data in graphs and tables. Avoid nontechnical uses of technical terms in statistics, such as "random" (which implies a randomizing device), "normal," "significant," "correlations," and "sample." Separate reporting of data by demographic variables, such as age and sex, facilitate pooling of data for subgroups across studies and should be routine, unless there are compelling reasons not to stratify reporting, which should be explained.

Conclusion: It is useful to begin the discussion by briefly summarizing the main findings, and explore possible mechanisms or explanations for these findings. Emphasize the new and important aspects of your study and put your findings in the context of the totality of the relevant evidence. State the limitations of your study, and explore the implications of your findings for future research and for clinical practice or policy. Discuss the influence or association of variables, such as sex and/or gender, on your findings, where appropriate, and the limitations of the data. Do not repeat in detail data or other information given in other parts of the manuscript, such as in the Introduction or the Results section.Link the conclusions with the goals of the study but avoid unqualified statements and conclusions not adequately supported by the data. In particular, distinguish between clinical and statistical significance, and avoid making statements on economic benefits and costs unless the manuscript includes the appropriate economic data and analyses. Avoid claiming priority or alluding to work that has not been completed. State new hypotheses, when warranted and label them clearly.

Acknowledgements: Those who contributed to the work but do not meet our authorship criteria should be listed in the Acknowledgments with a description of the contribution. Authors are

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Also provide the following, each under their own heading:

- Competing interests: This section should list specific competing interests associated with any of the authors. If authors declare that no competing interests exist, the article will include a statement to this effect: *The authors declare that they have no financial or personal relationship(s) that may have inappropriately influenced them in writing this article.* Read our **policy on competing interests**.
- Author contributions: All authors must meet the criteria for authorship as outlined in the **authorship** policy and **author contribution** statement policies.
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- Disclaimer: A statement that the views expressed in the submitted article are his or her own and not an official position of the institution or funder.

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The above manuscript section guidelines are adapted from the recommendations from the International Committee of Medical Journal Editors: preparing for submission, available from http://www.icmje.org/recommendations/browse/manuscript-preparation/preparing-for-submission.html on April, 24, 2017.

10.8 APPENDIX 6 NOTICE OF SUMISSION AND AUTHOR GUIDELINES, ARTICLE 2

APPENDIX 6A NOTICE OF SUBMISSION ARTICLE 2

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to me, Ronnie.Lotriet, Anet.Smit

****

Ref. No.: 712
Manuscript title: Assessing the nature of corporate environmental responsibility in Zimbabwe's gold mining sector
Journal: Journal of Economic and Financial Sciences

****

Dear Loveness Nyikahadzoi, Ronnie Lotriet, Anet Smit

Your blinded manuscript moved into the peer review process on 19-Oct-21 and is still undergoing assessment by our expert independent reviewers. Read our peer review process https://aosis.co.za/policies#peer_review.

We hope to receive an outcome of the finalisation of the review shortly, which will be communicated by the assigned Review Editor, as our records indicate that your manuscript has been in our review stage for 13 days.

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ORA: Quantitative research full structure

Title: The article's full title should contain a maximum of 95 characters (including spaces).

Abstract: The abstract, written in English, should be no longer than 250 words and must be written in the past tense. The abstract should give a succinct account of the objectives, methods, results and significance of the matter. The structured abstract for a Quantitative Research article should consist of seven paragraphs labelled Orientation, Research purpose, Motivation for the study, Research approach/design and method, Main findings, Practical/managerial implications and Contribution/value-add.

Introduction: Provide the following, each under their own heading.

- Orientation
- Research purpose and objectives

Literature review: Provide a summary of previous research findings, indicating the gap in the literature and the necessity to address this void.

Research design: Provide the following, each under their own heading and subheading.

- Research approach
- Research method
    - Research participants
    - Measuring instruments
    - Research procedure and ethical considerations
    - Statistical analysis

Results: The reporting of the results must be clearly linked to the research objectives and research hypotheses. Tables may be used or models (diagrams/figures) may be drafted to indicate key components of the results of the study.

Discussion: Provide the following, each under their own heading.

- Outline of the results
- Practical implications
- Limitations and recommendations

Conclusion: Provide a brief conclusion that summarises the results and their meaning or significance in relation to each objective of the study.

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Also provide the following, each under their own heading:

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- Author contributions: All authors must meet the criteria for authorship as outlined in the **authorship** policy and **author contribution** statement policies.
- Funding: Provide information on funding if relevant
- Data availability: All research articles are encouraged to have a data availability statement.
- Disclaimer: A statement that the views expressed in the submitted article are his or her own and not an official position of the institution or funder.

References: Authors should provide direct references to original research sources whenever possible. References should not be used by authors, editors, or peer reviewers to promote self-interests. Refer to the journal referencing style downloadable on our *Formatting Requirements* page.

10.10 APPENDIX 7 NOTICE OF SUBMISSION AND AUTHOR GUIDELINES FOR ARTICLE 3

APPENDIX 7A NTOTICE OF SUBMISSION ARTICLE 3

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to me, Ronnie, Anet

****
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The above manuscript, for which you are listed as a contributing author, has been received by the journal. Future communications regarding this manuscript will be sent to the corresponding author only, Mrs Nyikahadzoi.

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Ref. No.: 585
Manuscript title: An evaluation of the nature of business ethics practiced by the gold mining sector in Zimbabwe
Journal: African Evaluation Journal
****

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10.11 APPENDIX 7B AUTHOR GUIDELINES FOR AFRICAN EVALUATION JOURNAL

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Title: The article's full title should contain a maximum of 95 characters (including spaces).

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- Background: *Why do we care about the problem?* State the context and purpose of the study. (What practical, scientific or theoretical gap is your research filling?)
- Objectives: *What problem are you trying to solve*? What is the scope of your work (e.g. is it a generalised approach or for a specific situation)? Be careful not to use too much jargon.
- Method: *How did you go about solving or making progress on the problem*? State how the study was performed and which statistical tests were used. (What did you actually do to get the results?) Clearly express the basic design of the study; name or briefly describe

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- Results: *What is the answer*? Present the main findings (that is, as a result of completing the procedure or study, state what you have learnt, invented or created). Identify trends, relative change or differences on answers to questions.
- Conclusion: *What are the implications of your answer*? Briefly summarise any potential implications. (What are the larger implications of your findings, especially for the problem or gap identified in your motivation?)

Do not cite references and do not use abbreviations excessively in the abstract.

Introduction: The introduction must contain your argument for the social and scientific value of the study, as well as the aim and objectives:

- Social value: The first part of the introduction should make a clear and logical argument for the importance or relevance of the study. Your argument should be supported by use of evidence from the literature.
- Scientific value: The second part of the introduction should make a clear and logical argument for the originality of the study. This should include a summary of what is already known about the research question or specific topic, and should clarify the knowledge gap that this study will address. Your argument should be supported by use of evidence from the literature.
- Conceptual framework: In some research articles it will also be important to describe the underlying theoretical basis for the research and how these theories are linked together in a conceptual framework. The theoretical evidence used to construct the conceptual framework should be referenced from the literature.
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Research methods and design: This must address the following:

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- Setting: A description of the setting for the study; for example, the type of community from which the participants came or the nature of the health system and services in which the study is conducted.

- Study population and sampling strategy: Describe the study population and any inclusion or exclusion criteria. Describe the intended sample size and your sample size calculation or justification. Describe the sampling strategy used. Describe in practical terms how this was implemented.
- Intervention (if appropriate): If there were intervention and comparison groups, describe the intervention in detail and what happened to the comparison groups.
- Data collection: Define the data collection tools that were used and their validity. Describe in practical terms how data were collected and any key issues involved, e.g. language barriers.
- Data analysis: Describe how data were captured, checked and cleaned. Describe the analysis process, for example, the statistical tests used orsteps followed in qualitative data analysis.
- Ethical considerations: Approval must have been obtained for all studies from the author's institution or other relevant ethics committee and the institution's name and permit numbers should be stated here.

Results: Present the results of your study in a logical sequence that addresses the aim and objectives of your study. Use tables and figures as required to present your findings. Use quotations as required to establish your interpretation of qualitative data. All units should conform to the **SI convention** and be abbreviated accordingly. Metric units and their international symbols are used throughout, as is the decimal point (not the decimal comma).

Discussion: The discussion section should address the following four elements:

- Key findings: Summarise the key findings without reiterating details of the results.
- Discussion of key findings: Explain how the key findings relate to previous research or to existing knowledge, practice or policy.
- Strengths and limitations: Describe the strengths and limitations of your methods and what the reader should take into account when interpreting your results.
- Implications or recommendations: State the implications of your study or recommendations for future research (questions that remain unanswered), policy or practice. Make sure that the recommendations flow directly from your findings.

Conclusion: Provide a brief conclusion that summarises the results and their meaning or significance in relation to each objective of the study.

Acknowledgements: Those who contributed to the work but do not meet our authorship criteria should be listed in the Acknowledgments with a description of the contribution. Authors are responsible for ensuring that anyone named in the Acknowledgments agrees to be named. Refer to the acknowledgement structure guide on our *Formatting Requirements* page.

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- Data availability: All research articles are encouraged to have a data availability statement.
- Disclaimer: A statement that the views expressed in the submitted article are his or her own and not an official position of the institution or funder.

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****
Ref. No.: 1699
Manuscript title: Assessing scope and nature of human capital management practised by Zimbabwe's gold mining sector
Journal: SA Journal of Human Resource Management
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10.13 APPENDIX 8B AUTHOR GUIDELINES FOR SA JOURNAL OF HUMAN RESOURCE MANAGEMENT

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Original Research Article: Quantitative research full structure

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Title: The article's full title should contain a maximum of 95 characters (including spaces).

Abstract: The abstract, written in English, should be no longer than 250 words and must be written in the past tense. The abstract should give a succinct account of the objectives, methods, results and significance of the matter. The structured abstract for a Quantitative Research article should consist of seven paragraphs labelled Orientation, Research purpose, Motivation for the study, Research approach/design and method, Main findings, Practical/managerial implications and Contribution/value-add.

Introduction: Provide the following, each under their own heading.

- Orientation
- Research purpose and objectives

Literature review: Provide a summary of previous research findings, indicating the gap in the literature and the necessity to address this void.

Research design: Provide the following, each under their own heading and subheading.

- Research approach
- Research method
    - Research participants
    - Measuring instruments
    - Research procedure and ethical considerations
    - Statistical analysis

Results: The reporting of the results must be clearly linked to the research objectives and research hypotheses. Tables may be used or models (diagrams/figures) may be drafted to indicate key components of the results of the study.

Discussion: Provide the following, each under their own heading.

- Outline of the results
- Practical implications
- Limitations and recommendations

Conclusion: Provide a brief conclusion that summarises the results and their meaning or significance in relation to each objective of the study.

Acknowledgements: Those who contributed to the work but do not meet our authorship criteria should be listed in the Acknowledgments with a description of the contribution. Authors are responsible for ensuring that anyone named in the Acknowledgments agrees to be named. Refer to the acknowledgement structure guide on our *Formatting Requirements* page.

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- Funding: Provide information on funding if relevant
- Data availability: All research articles are encouraged to have a data availability statement.
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References: Authors should provide direct references to original research sources whenever possible. References should not be used by authors, editors, or peer reviewers to promote self-interests. Refer to the journal referencing style downloadable on our *Formatting Requirements* page.

10.14 Appendix 9: Language letter

Dynamic Language & Translation Specialists

Antoinette Bisschoff
71 Esselen Street,
Potchefstroom
Tel: 018 293 3046
Cell: 082 878 5183
Language@dlts.co.za
CC No: 1995/017794/23

Monday, 15 November 2021

To whom it may concern

Re: Confirmation of language edit

The PhD thesis "**Assessing the scope and nature of corporate social responsibility within the Zimbabwe gold mining sector**" by **Loveness Nyikahadzoi** (25581236) was edited for language and technical precision. The NWU Harvard referencing style applies to Chapters 1-4 and 9, while the referencing and sources of the articles were checked and complied with the journal guidelines.

The articles were edited independently. Hence, it is important that the authors ensure that the articles' latest edited versions are included in the final thesis. Final, last-minute corrections remain the responsibility of the author.

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