

GSM MBA DISSERTATION

DISSERTATION TITLE				
EFFECTS OF INTERNAL MANAGERIAL CONTROLS ON THE OPERATIONAL PERFORMANCE OF AN ORGANIZATION. A CASE OF ASHANTI GOLD MINE				
DISSERTATION METHODOLOGY (please tick one)				
QUANTITATIVE	<input checked="" type="checkbox"/>	QUALITATIVE	<input type="checkbox"/>	MIXED METHODS
INTAKE (YEAR AND MONTH)				
AUGUST 2017				
Registration No.:		STUDENT		
R1712740		PRECIOUS CHIGARIRO		
DISSERTATION SUBMISSION DEADLINE		SUBMISSION DATE		
28 FEBRUARY 2020		28 FEBRUARY 2020		

This statement should be completed and signed by the student producing the dissertation.

Declaration and Statement of Authorship:

1. I hold a copy of this dissertation, which can be produced if the original is lost/damaged.
2. This work may be reproduced, communicated, compared and archived for the purpose of detecting plagiarism.
3. I give permission for a copy of my marked work to be retained by the Graduate School of Management for review and comparison, including review by external examiners.

I understand that:

4. Plagiarism is the presentation of the work, idea or creation of another person as though it is your own. It is considered cheating and is a very serious academic offence that may lead up to expulsion from the program. Plagiarised material can be drawn from, and presented in, written, graphic and visual form, including electronic data, and oral presentations. Plagiarism occurs when the origin of the material used is not appropriately cited.
5. Enabling plagiarism is the act of assisting or allowing another person to plagiarise or to copy your work.

Last Name	First Name	Signature
CHIGARIRO	PRECIOUS	

DECLARATION AND APPROVAL

This dissertation is submitted in partial fulfilment of the requirements for the Master of Business Administration Degree at the Graduate School of Management, University of Zimbabwe.

I declare that this research project is my original work and has not been submitted for any degree at any University.

Student

Date

Precious Chigariro (1712740)

.....
.....
.....
.....
.....
.....

Supervisor

Date

Dr. M. Mbasera

DEDICATION

This project is dedicated to my husband and children namely Nicholas, Nicole and Nick.

ACKNOWLEDGEMENTS

My special thanks goes to the almighty God for granting me good health, courage and inspiration which was essential for undertaking the study. I would also like to thank my supervisor Dr. Miriam Mbasera who, despite her busy schedule was always available to give me professional advice throughout the study. My special thanks also extend to my family for their support and encouragement during the period of the study.

ABSTRACT

The study was focused on examining the internal managerial controls used by Ashanti Gold mine to improve operational performance. The motivation for the study was as a result of an increase in the number of accidents and fatalities recorded at work; bad organizational reputation arising from impacts of mining activities on the environment and surrounding communities; and other operating inefficiencies reported. The main focus of the study was to establish whether there is a relationship between the effective use of internal managerial controls and operational performance of Ashanti Gold mine. The study used explanatory research design and cluster sampling was used to select 75 respondents from a target population of 100 employees of Ashanti Gold mine. Through the use of a structured questionnaire as a research instrument for data collection, the study established that the scope of management system and responsible mining policy; health, safety, environment and community management controls, legal conformance, communication and stakeholder engagement; crisis and emergency response controls; and auditing and systems management reviews are significantly and positively related to operational performance.

Other analysis performed indicated that other internal managerial controls used by Ashanti Gold mine are highly ineffective and the organization is not using the most critical health, safety, environment and community risk management controls for performance improvement. Generally, the study recommended that Ashanti Gold mine should shift its current mining policy to adopting a responsible mining policy framework which considers moderating the impacts of mining activities on the environment, community and the workforce health and safety issues.

TABLE OF CONTENTS

DECLARATION AND APPROVAL.....	iii
DEDICATION	iv
ACKNOWLEDGEMENTS.....	v
ABSTRACT.....	vi
TABLE OF CONTENTS.....	vii
LIST OF TABLES.....	xi
LIST OF FIGURES.....	xii
LIST OF APPENDICES	xiii
LIST OF ACRONYMS.....	xiv
CHAPTER ONE	1
INTRODUCTION.....	1
1.1 Introduction	1
1.2 Background of the Study.....	2
1.3 Statement of the Problem	3
1.4 Research Objectives	4
1.5. Research Questions	4
1.6 Hypothesis.....	5
1.7 Significance of the study	5
1.8 Assumptions of the Study	6
1.9 Scope of the Study	6
1.10 Limitations.....	7
1.11 Chapters outline.....	7
1.12 Chapter summary.....	8
CHAPTER TWO	9
LITERATURE REVIEW	9
2.1 Introduction	9
2.2 Mining sector internal managerial controls.....	9
2.3 Effectiveness of internal managerial controls	10
2.4 The Internal Control System of an Organization.....	11
2.4.1 Types of internal managerial controls	12
2.4.1.1 Scope of Management system and mining policy	13
2.4.1.2 Health, Safety, Environment and Community Risk Management Controls.....	13
2.4.1.3 Change Management and Performance Improvement controls.....	14

2.4.1.4 Legal conformance, communications and stakeholder engagement.....	15
2.4.1.5 Crisis and emergency response controls	16
2.4.1.6 Auditing and management systems review controls.....	16
2.4.1.7 Awareness, competence and training controls	16
2.5 Benefits of implementing internal managerial Controls.....	17
2.6 Challenges embroiled with the use of internal controls.....	18
2.6.1 Human Judgment.....	18
2.6.2 Internal Managerial Control Breakdowns.....	18
2.6.3 Collusion.....	19
2.6.4 Management Override.....	19
2.7 Internal Managerial Controls Theoretical Frameworks.....	19
2.7.1 The COSO Managerial Control Framework.....	20
2.7.2 The COCO Control Framework.....	22
2.8 Conceptual Framework.....	23
Fig 2.1 Conceptual Framework of the study	24
2.9 Empirical studies	24
2.10 Research gap	25
2.11 Chapter Summary	26
CHAPTER THREE	27
RESEARCH METHODOLOGY	27
3.1 Introduction	27
3.2 Research Philosophy	27
3.3 Research Paradigm	27
3.4 Research Design	28
3.5 Research Approaches.....	28
3.6 Population.....	29
3.7 Sampling.....	29
3.8 Sources of Data	30
3.9 Data collection instruments.....	31
3.9.1 Questionnaires.....	31
3.10 Validity and Reliability.....	31
3.11 Data Analysis	32
3.12 Ethical Considerations.....	32
3.13 Chapter Summary	33

CHAPTER FOUR	34
DATA PRESENTATION AND ANALYSIS	34
4.1 Introduction	34
4.2 Response Rate.....	34
4.3 Reliability of the Research Instrument	35
4.4 Respondents’ Background Information	36
4.4.1 Gender of the Respondents	36
Fig 4.1: Gender of the respondents	36
4.4.2 Age of the Respondents.....	37
Fig 4.2: Age of Respondents.....	37
4.4.3 Qualifications of the Respondents.....	38
Fig 4.3: Respondents’ Qualifications.....	38
4.4.4 Respondents’ Work Experience	38
Fig 4.4: Respondents’ Work Experience	39
4.5 Internal Managerial Controls Used at Ashanti Gold Mine	39
Fig 4.5: Internal Managerial Controls Used at Ashanti Gold Mine	40
4.6 Effectiveness of Internal Managerial Controls.....	41
Fig 4.6: Effectiveness of Internal Managerial Controls	41
4.7 Preliminary Analysis	42
4.7.1 Normality Test.....	42
4.7.2 Descriptive Analysis	43
4.8: Correlation Analysis	46
4.9 Multiple Regression Analysis	50
4.10 Benefits of Internal managerial controls	54
4.11 Challenges in the use of internal managerial controls	55
Fig 4.7: Challenges in the use of internal managerial controls.....	55
4.12 Chapter Summary	56
CHAPTER FIVE	57
RESEARCH FINDINGS, CONCLUSIONS AND RECOMMENDATIONS	57
5.1 Introduction	57
5.2 Achievement of Research Objectives	57
5.3 Conclusions	57
5.3.1 Effects of internal managerial controls on operational performance	58
5.3.1.1 Scope of management system and responsible mining policy	58

5.3.1.2 Health, safety, environment and community (HSEC) management controls.....	58
5.3.1.3 Change management and performance improvement controls.....	58
5.3.1.4 Legal conformance, communications and stakeholder engagement.....	59
5.3.1.5 Crisis and emergence response controls	59
5.3.1.6 Auditing and systems management review.....	60
5.3.1.7 Awareness, competence and training controls	60
5.3.2 Internal managerial controls used by Ashanti Gold mine.....	60
5.3.3 Benefits of using internal managerial controls	60
5.3.4 Challenges of using internal managerial controls.....	61
5.4 Answer to research questions	61
5.4.1 What are the effects of internal managerial controls on the operational performance of Ashanti Gold Mine in Bindura?	61
5.4.2 What are the internal managerial controls currently used by mine managers to	61
improve organization’s operational performance?	61
5.4.3 What are the benefits of using effective internal managerial controls?	61
5.4.4 What are the challenges associated with the use of internal managerial controls?.....	62
5.4.5 What scholarly and strategic policy recommendations that can be established to improve operational performance at the mine?	62
5.5 Contribution.....	62
5.5.1 Empirical contribution.....	62
5.6 Policy recommendations	63
5.7 Managerial Recommendations.....	63
5.8 Major Research Findings.....	64
5.9 Limitations.....	66
5.10 Area for further study	66
REFERENCES.....	67
APPENDICES	71
Appendix 1 : Questionnaire	71

LIST OF TABLES

Table 3.1 Target Population and Sample Size.....	30
Table 4.1 Questionnaire Rate.....	34
Table 4.2 Reliability of the Research Instrument.....	35
Table 4.3 Normality Test.....	42
Table 4.4 Descriptive Analysis.....	43
Table 4.5 Correlation Analysis.....	47
Table 4.6 Multiple Correlation of Independent Variable with Dependent Variable.....	51
Table 4.7 Analysis of variance (Anova) for Independent Variables.....	51
Table 4.8 Regression Coefficient and Significance of the Independent Variables.....	52
Table 4.9 Benefits of Internal Managerial Controls.....	54

LIST OF FIGURES

Fig 2.1: Conceptual Framework of the study.....	24
Fig 4.1: Gender of Respondents	36
Fig 4.2: Age of Respondents.....	37
Fig 4.3: Respondents' Qualifications.....	38
Fig 4.4: Respondents' Work Experience	39
Fig 4.5: Internal Managerial Controls used at Ashanti Gold Mine	40
Fig 4.6: Effectiveness of Internal Managerial Controls	41
Fig 4.7: Challenges in the use of Internal Managerial Controls	55

LIST OF APPENDICES

APPENDIX 1: Questionnaire.....	86
--------------------------------	----

LIST OF ACRONYMS

CICA - Canadian Institute of Chartered Accountants

COSO - Committee of Sponsoring Organizations

ERP - Emergency Response Plan

HSEC - Health, Safety, Environment and Community

IASB - International Auditing Standards Board

IASs - International Auditing Standards

IT - Information Technology

MMSD - Mining, Minerals and Sustainable Development

RMMF - Responsible Mining Management Framework

CHAPTER ONE

INTRODUCTION

1.1 Introduction

The contemporary business world has placed great priority on the need to craft and implement effective and compatible systems of internal controls as a key mechanism to achieve certain organizational goals. In 1994, earlier researchers under the Committee of Sponsoring Organizations of the Treadway Commission (COSO) over-emphasized the importance of setting up a vibrant system of internal managerial controls as a critical panacea to achieve organizational goals (COSO, 2016). These researches have forced many organizations to incorporate internal managerial controls at a larger scale to improve organizational performance. More precisely, Stamps (2017) defines internal managerial controls as the structures, processes, practices, reports and measurements that are put in place to implement organizational strategy and enforce compliance.

Adu- Frimpong (2015) asserts that systems of internal managerial controls have been mainly set to redirect organizations to achieve their financial goals, combat theft and fraud, ensure compliance to organization's administrative instructions, governing operating frameworks and code of conducts. For instance, the International Auditing Standards Board (IASB) has crafted the International Auditing Standards (IASs) as a framework from which reasonable assurance on the fairness of the preparation and presentation of a typical organization's financial statements can be placed. However, few studies have directed focus on exploring the effect of internal managerial controls on the operational performance of an organization. This study, therefore seeks to investigate the effects of internal managerial controls on the operational performance of Ashanti Gold Mine located in Bindura. The chapter also covers work on the background of the study, statement of the problem, aims of the study, research questions, and scope of the research, hypothesis, limitations, and organization of the whole research study.

1.2 Background of the Study

Managerial controls are mechanisms that allow a manager to direct the resources of an organization to profitable use (Jonhson, 2017). Internal managerial controls help to compliment the leadership capabilities of a manager by ensuring that systems of achieving productivity, efficiency and consistency are put in place. Malmi & Brown (2013) defines controlling as a primary goal and an oriented function of management in an organization. They added that controlling is a process of comparing the actual performance of an organization with the set standards. Therefore, in an ever-changing and complex environment, the aspect of controlling is an important integral part of an organization.

According to Gates (2016), controlling helps managers to monitor the effectiveness of their planning, organizing, and leading activities. In fact, controlling determines what is being accomplished that is, evaluating the performance and, if necessary, taking corrective measures so that the performance takes place according to the organization's set plans. In the same breath, Thompson (2015) adds that controlling promotes problem identification to take place quickly. Therefore, mining firms across the world should consider controlling as an integral part of business management so that they may enhance production and ultimately, profitability. There are internal managerial controls which managers can implement to achieve organizational goals. These may be directive in nature, preventive, or detective managerial controls designed to improve the overall operational performance of a business entity (Stamps, 2017).

According to Thompson (2015), the visible effects of lack and poor implementation of internal managerial controls are not immune from external players or environment outside the internal mining environment. For instance, lack of effective internal managerial controls or poor implementation of managerial controls may also affect the whole community where the mining organization is operating through harming the environment (Thompson, 2015). In addition, William (2014) states that traditional mining is a carbon intensive industry and operations executed there have damaged the ozone layer and ecological system. This issue of environmental bad footprint from mining activities is evident worldwide.

Close analysis entails that Ashanti Gold Mine's image has been affected by bad environmental footprint created by the organization through to its mining operations. A contemporary Zimbabwe's political economy scholar Professor Chigora states that around the period ranging from 2000 to 2010, many mining firms in Zimbabwe were closed and ceased to operate and

production could not be sustained due to economic hardships in the country. According to Professor Chigora, economic stability of a country also determines productivity and performance of mining firms. It is against such a conclusion by many mining scholars that this study seeks to take another exploration angle. Challenges being faced by Ashanti Gold Mine include the occurrence of accidents, deaths at work, environmental degradation and failure to perform sophisticated tasks. These might be linked to poor internal managerial controls, therefore, there is need to assess the effects of internal managerial controls on operational performance towards achieving short and long term organizational goals.

According to Fisher & Hazen (2012), problems including the occurrence of accidents and deaths at the work place; information loss and employees' failure to perform sophisticated tasks might be either directly or indirectly associated with the use and effectiveness of internal managerial controls within business entities. Therefore, it is worth investigating the effect of internal managerial controls on the operational performance of Ashanti Gold Mine, which has operational performance currently characterized, inter alia, by a rise in accidents and deaths at the workplace, bad organizational reputation, and land degradation.

The mining activities of Ashanti Gold Mine have left a very bad environmental footprint around the Bindura community where it operates. Also, the organization has been marred by poor employee safety and health practices which have allegedly resulted to a rise in the number of accidents and high death toll of employees being recording. This has not only affected the organization's human resource and productivity, but it has also negatively impacted on families in Bindura community as family bread winners were killed in those accidents. It is against such a background that this researcher wishes to investigate the importance of the use of internal managerial controls by Ashanti mine managers towards achieving effective business management.

1.3 Statement of the Problem

In Zimbabwe, most mining firms are leaving a bad environment footprint in the environment they are operating and Ashanti Gold mine is one of these firms. The operations of Ashanti Gold Mine in Bindura are slowly destroying the ecological system. These have tarnished the organization's image within the community. How it may rebuild its image and good reputation in the society has become an issue of great concern. On top of bad environmental footprint, a huge number of accidents, injuries and deaths at the organization are also being recorded. As a result these accidents and deaths have negatively impacted members of the community since

some of them were left without bread winners as a result of deaths at work. This also impacted negatively on organizational performance since these accidents and deaths resulted in loss of experts and specialists that are crucial in the performance of mining operations. The reasons for the above problem might be linked to poor internal managerial controls, hence there is need to stress the importance of various managerial controls which might be used by mine managers at Ashanti Gold Mine to effectively manage mining operations for performance improvement. With such a background of an ever-changing business world, do internal managerial controls affect an organization in any manner? Mine managers in this modern era need to take note of several internal managerial controls which have gained dominance in the field of management, and use or implement them in order to improve their operational performance.

1.4 Research Objectives

The objective of this study is:

To analyse the effects of internal managerial controls on the operational performance of Ashanti Gold Mine in Bindura.

The sub objectives are:

1. To identify various internal managerial controls that can be used by mine managers to achieve short and long term organisational goals.
2. To establish benefits of employing managerial controls in Mining firms
3. To establish the challenges of implementing managerial controls
4. To proffer scholarly and policy recommendations on how best different internal managerial controls can be of use in improving operational performance

1.5. Research Questions

The Main Research Question is:

What are the effects of internal managerial controls on the operational performance of Ashanti Gold Mine in Bindura?

The Sub Research Questions are:

1. What are the internal managerial controls currently used by mine managers to improve organization's operational performance?
2. What are the benefits of using effective internal managerial controls?
3. What are the challenges associated with the use of internal managerial controls?
4. What scholarly and strategic policy recommendations that can be established to improve operational performance at the mine?

1.6 Hypothesis

With respect to the research aim of assessing the effects of internal managerial controls on operational performance using the case of Ashanti Gold Mine in Bindura, the hypothesis to be tested is as follows:

H₀: Effective use of internal managerial controls affects the operational performance of Ashanti Gold mine.

H₁: Effective use of internal managerial controls does not affect the operational performance of Ashanti Gold mine

1.7 Significance of the study

The study is of great significance to Ashanti Gold Mine as it suggests possible policy and scholarly recommendations Ashanti Gold Mine can implement as part of a comprehensive organization's process to rebuild its image currently on a bad path. In addition, the study clearly displays to the organization how poor implementation of internal managerial controls will cost the firm. The study will not only be of significance to Ashanti Gold mine but it is also beneficial to the Bindura community in the sense that health precautions will be taken and that the damaged environment will be restored. The research also fill the knowledge gap that has been left by other researchers concerning aspects revolving around internal managerial controlling.

The academics fraternity will benefit from new knowledge and literature the study brings to the existing board of knowledge on management practices. This study helps Ashanti Gold mine to correctly implement internal managerial controls in order to improve the organization's

profitability. Law makers will benefit from the research by formulating laws which can improve the operations of the mining industry. The rationale for undertaking this research is that most researchers have only analysed mining firms' management without taking into consideration the use and importance of implementing different managerial controls in this modern era. From the above, it can be noted that there is a research gap that needs to be filled by examining the effectiveness of the use of internal managerial controls in improving operational performance of mining firms.

Curiosity to find out more on managerial controls also influenced the researcher's decision to embark on this study. The research will also offer a lee-way to policy formulators, managers and business analysts a chance to reconsider a way forward to redress the impacts of mining operations on the environment and community it operates.

1.8 Assumptions of the Study

The assumptions that the researcher carried in mind while conducting the study are as follows:

1. The respondents gave true factual responses/answers.
2. Research data obtained was accurate and reliable.
3. The sample is a fair representation of the mine

1.9 Scope of the Study

The study focused on examining the effects of different internal managerial controls on the operational performance of mining entities although the study is rooted on the assumption that the research findings apply world-wide especially in developing countries. This research was based on data obtained from Ashanti Gold mine in Bindura, Zimbabwe. The research was conducted in Bindura, Mashonaland Central Province because that is where most mining organizations are located (Ashanti-Gold Mine, Trojan Nickel Mine which is one of the largest Nickel Mine in Africa and Rein Mine). The study population comprise of 1500 employees stationed at Ashanti Gold mine in Bindura. However, the sample is comprised of 100 employees from the Internal Audit, Finance, Human Resources and Administration and Production. From the population a sample was chosen. The researcher is based in Harare, thus it is more convenient for the researcher to travel to Bindura since it is a nearby town.

1.10 Limitations

There are limitations the researchers come across when trying to access information since some of the information is very sensitive to such an extent that some of the managers at Ashanti Gold Mine were afraid to release such information which is crucial in reaching at the research findings and conclusions. Some participants feared losing their jobs and positions; therefore, sensitivity of the information affected the study. The researcher overcame the above challenges by strengthening the issue of confidentiality and anonymity so that the study respondents will feel safe. The researcher encountered a challenge of lack of adequate financial resources to efficiently conduct the research study in the current turbulent economic status in Zimbabwe. For instance, transport prices were rising and changing day by day yet the researcher wanted to travel to the research field, hence, the proposed budget for the study was frequently reviewed and adjusted regularly during the research process.

1.11 Chapters outline

Chapter 1: Introduction

The chapter included the introduction, background of the study, statement of the problem, objectives, and research questions, scope of the study, hypothesis, limitations and significance of the study.

Chapter 2: Literature Review

This chapter revealed other scholarly views on the general effects of internal managerial controls on organizational performance. The chapter also included a theoretical framework used by the researcher to shape the research study.

Chapter 3: Methodology

This chapter illustrates the methodology that the research used, sample selection, sampling techniques, methods of data collection, data evaluation techniques and ethical consideration observed during the research study.

Chapter 4: Data Presentation and Analysis

This chapter revealed, presented and analysed the research data gathered on the matter under study. The gathered research data was analysed using quantitative means.

Chapter 5: Conclusion and Recommendations

This chapter mainly focused on summarizing the research conclusions and recommendations. At the end of the chapter, the researcher provided a reference list of all sources that were consulted.

1.12 Chapter summary

The chapter outlined background of the study, statement of the problem, aims of the study, research questions, and scope of the research, hypothesis, limitations, and organization of chapters. The next chapter will reveal literature on internal managerial controls.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The purpose of this chapter is to review related, published, unpublished and appropriate literature on establishing the extent internal managerial controls can be implemented to achieve effective mine management. This chapter aims to discuss in depth, relevant internal managerial controls applicable in the mining sector which directly enhance the effectiveness of mine management. Related cases, theoretical and conceptual frameworks, guidelines and other issues surrounding the importance of internal managerial controls in the mining sector were also reviewed.

2.2 Mining sector internal managerial controls

In 2002, tireless efforts to assess the environmental and social impacts of mining were fostered by the International Institute for Environment and Development in its publication titled “Mining, Minerals and Sustainable Development” (MMSD). Within the two years of research, the organization came up with internal management controls mining firms can institute to achieve effective mine management. In a closer look, the Responsible Mining Management Framework (RMMF) comprise a set of guidelines organizations involved in mining activities can utilise to minimize accidents at work, reduce or eliminate ecological damage. In the same breath, the Lundin Mining Corporation Framework crafted in 2017 highlights a number of internal managerial controls the organization can institute to improve organization’s operational performance.

As introductory remarks, Lungs (2014) states that managerial controlling involves setting performance standards, measuring performance and taking corrective actions when necessary. In the same breath, Murray (2014) asserts that managerial controlling is a management tool used to quickly identify problems, improve employees’ health and safety at work, improve staff morale, reduce the time operations will be at a standstill, enable the smooth flow of operations and improve productivity. The above argument by Murray (2014) is also supported by Naidoo (2016) who argues that managerial controlling is paramount if an organisation needs to realise its goals effectively. There are internal managerial controls which managers can implement to achieve organizational goals. Internal managerial controls includes the reports, processes, structures, and measurement forms put in place by the management to ensure the realization of

organizational goals through the efficient implementation of the organization's strategy (Stamps, 2017). The effectiveness of internal managerial controls has left a lot to be desired as the effects of lack of managerial controls at all may be equated to the effects of ineffective managerial controls.

2.3 Effectiveness of internal managerial controls

According to Adu- Frimpong (2015), effectiveness of internal managerial controls is strongly determined by the interaction between components of the system of internal managerial controls and the extent at which the system of internal controls is applicable to the organization's processes. Ayagre, P., Appiah-Gyamerah, I., & Nartey, J (2014) adds that the effectiveness of internal managerial controls significantly depends on the agents of effectiveness within an organization. These agents include board of directors and autonomous internal audit office. In other words, Ayagre, et al (2014) indicates that it is important for an organization to continually evaluate its internal control systems and environment intermittently to ensure that internal controls are working as intended. According to COSO (2016), the degree to which the directors comprehend as to whether the organization's objectives are being realized, the reliability of published financial information and the level of organizational compliance with appropriate rules and regulations are the main pillars from which the effectiveness of internal managerial controls can be assessed.

During the development of managerial control principles in 1994 by COSO, an ineffective system of managerial controls ignores how several elements of internal control can be measured and only focuses on elaborate internal control framework. Further, COSO (2011) highlights that the effectiveness of individual components of internal managerial controls directly impact on the effective functioning of the entire system of internal managerial controls. This means that the evaluation of the internal control structure must be in line with the individual components of control. However, the evaluation of the effectiveness of the overall internal managerial control system of an organization is a subjective decision on the individual components of the entire control system (COSO, 2016).

The internal control evaluator must comprehend the individual workings of the internal managerial control elements, the working philosophies of the control elements, and the application of the components throughout the organization (Agyare, et al, 2014). The importance of internal managerial control is to prevent, correct and detect errors and frauds in the business. It is therefore of my view that an effective system of internal managerial controls

should be able prevent errors from occurring; detect errors if they occurred; and correct detected errors. According to COSO (1994), the effectiveness of the internal managerial control system is dependent upon the diverse ways of implementing, controlling, and monitoring the adopted systems with an organization. Therefore, the effectiveness of the internal control system of an organization is based on subjective decisions on whether there is a sound assertion that the aims of internal managerial controls are being met.

2.4 The Internal Control System of an Organization

According to Committee of Sponsoring Organizations of the Treadway Commission (COSO) (2016), an organization's system of internal control is a process, effected by an entity's board of directors, management and other personnel, designed to provide reasonable assurance regarding the achievement of organization's objectives. Managerial controlling is a function of management that is responsible for ensuring that the organization's operations are carried out in a more efficient and effective manner. In addition, COSO (2016) describes internal managerial controls as a critical organization's element which helps an organization to improve the reliability of its financial data and an effective tool to enforce compliance to organization's regulations and industry's governing laws. The COSO (2016) definition of internal managerial controls highlights that managerial controlling is essential to guide management in making informed decisions and at large, helping the organization meet its short and long term objectives.

In the same vein, Schroy (2010) defines the internal managerial controls as the organization's integral process influenced by an entity's structure, management information systems and people interconnected to achieve specific organizational goals. Further, Schroy (2010) opines that since the organization's resources are directed, monitored, and can be measured, internal managerial controls are important in preventing and detecting fraud and safeguarding the organization's physical and intangible resources.

In establishing a common ground to establish a better definition of internal managerial controls by bringing together the work highlighted by COSO (2016) and Schroy (2010), the internal managerial control system is an adopted and established system of an organization which may be mandatory or advisory in nature and designed for directing, preventing, detecting and correcting errors for the achievement of specific organizational goals and objectives.

2.4.1 Types of internal managerial controls

Internal managerial controls may be directive, preventive, detective or correctional in their making but all working together to help an organization meet its objectives. The newly updated COSO (2018) framework for internal controls describes directive managerial controls set operating procedures and guidelines that are designed to ensure that the organization's operational activities and processes do not deviate from the standards operating manuals. Directive controls helps to fulfil the role of management in sending a powerful message in all facets in the organization that control procedures are not compromised. According to Adu-Frimpong (2015), directive controls do not encompass mechanisms put in place to prevent the occurrence of errors but are only crucial to identify an error that has already occurred. Reconciliations and stock take are examples of directive controls.

Adu- Frimpong (2015) opines that preventive managerial controls relate to measures and steps taken by an organization to deter non- compliance with the set policies and procedures within the organization. Preventive controls includes mechanisms an organization can put in place to avoid the occurrence of errors in the first place. Unlike directive controls, preventive controls are very important since costs associated with remedies to correct the occurrence of errors in the first place are always avoided. As spelt out in the COSO (2018) framework for internal controls, examples of preventive controls includes proper authorization, separation of duties and protection of assets from physical damage.

By ensuring proper authorization, mining organizations should ensure that all internal managerial controls are fully authorized before they are incorporated into the organization's process. Separation of duties entails that individuals at different levels within the organization's systems should perform distinct functions to avoid collusion. Further, Adu- Frimpong (2015) describes adequate documentation as a preventive control which helps an organization to ensure that all internal managerial controls are properly documented for review and compatibility assessment purposes. Preventive controls to prevent physical damage of assets involves putting up measures to ensure that all assets are fully accounted for, use of assets is assigned to authorized personnel and disposals are optimally approved (Adu- Frimpong, 2015).

Compensating managerial controls are another umbrella type of controls. COSO (2018) describes compensating managerial controls as procedures and mechanisms put in place by management as a remedy to cure adverse effects brought by a break down in the normal

functioning of the internal control system. Examples of compensating controls include maintaining a multiple database backup facility on or outside the organization's premises.

Detective managerial controls are those procedures set by management to detect errors after they have occurred (COSO, 2018). Preventive controls are more crucial than detective controls and essential in helping an organization meet its goals. Detective controls work more effectively with penalties. There are specific managerial controls an organization can use in a mining industry to improve the overall organization's operational performance. There are as follows:

2.4.1.1 Scope of Management system and mining policy

According to French (2017), the mining policy of an organization and the scope of management's system should ensure that each operation within the organization has a supporting formal process that conform to the requirements of responsible mining management system and at the same time supporting the Health, Safety, Environment and Community (HSEC) performance standards and procedures. COSO (2018) adds that a gap assessment to newly acquired operations must be conducted and compliance assessment with the organization's mining policy should be satisfactory. This entails that the management has the liability approve implementation plans and monitor progress towards compliance.

2.4.1.2 Health, Safety, Environment and Community Risk Management Controls

The Lundin Mining Corporation Framework (2017) asserts that the HSEC risk management is important in a mining organization since it aims to ensure that HSEC hazards are identified, assessed and treated to prevent injuries and fatalities at work, and to mitigate the impact of adverse events on human health, the environment and communities. French (2017) adds that good internal managerial controls must establish a process to identify and assess HSEC hazards and environmental aspects that create risk. This means that all potential sources of risk should be identified and added to the organization's risk matrix.

The COSO Framework of (2018) stipulates that an organization should develop appropriate controls to redress risk exposures associated with every activity, operation or process by managing sources of risk to low levels. Further, risk treatment methods must follow the

hierarchy of controls, and priority must be given to their eventual elimination, substitution and other risk reduction strategies (French, 2017).

According to French (2017), the use of risk registers as part of internal managerial controls is of greater importance. For instance, each department should develop risk register for cataloguing risks and as well as relevant treatment controls. French (2017) adds that individual risk registers for each risk discipline and the organization should assign a competent person with the responsibility for managing risk registers. This means that the developed risk registers must be periodically reviewed and constantly updated to ensure that all business and operational changes are optimally taken into consideration. Adu- Frimpong (2015) is of the opinion that HSEC risks categorized as ‘Significant’ or ‘High’ must be reviewed by senior management on a more frequent basis to assess the effectiveness of risk reduction, elimination or treatment strategies and controls.

2.4.1.3 Change Management and Performance Improvement controls

According to Pradeep, Singh & Singh, (2016), change management controls are essential to ensure that the HSEC risks associated with changes to organization design, operating practices, technical processes, introduction of new assets and equipment, changes to plant or mine configuration, and changes to technical drawings are effectively managed. Effective change management controls begin with ensuring that there are already laid down change management procedures which should be followed. Singh et al (2015) asserts that change management procedures should ensure that each operation must have a formal process for identifying and managing change. This process must address changes that could affect the safety, health and well-being of people, the environment, the community, compliance and company reputation.

According to Putra (2015), it is essential for change management proposals to be evaluated and approved before they are put into use. This entails that the review process must include an appropriate level of knowledge and expertise; and should involve employees affected by the change. French (2017) opines that the approval of change must be made by a person of the same level of authority as those who control the existing process or item being changed. Therefore, the effectiveness of change management controls will be in jeopardy if change management awareness and communication is ineffectively done.

According to French (2017), employees and contractors working in a mining organization must be trained to identify what constitutes a change and how to initiate the change management

process. In other words, good change management controls ensures that all affected people must be formally notified of a change, planned timelines for the change, and the impact the change will have on their work activities. French (2017) also highlights that there must be a formal post-implementation review process to evaluate the change against intended impacts and to address the reasons for any deviation from the expected outcome. The process must capture any new hazards or risk exposures identified or created as a result of the change.

Performance improvement managerial controls includes procedures and guidelines set by management to ensure that the organization's objectives and targets consistent with the organization's mining policy are established to support continual health, safety, environment and community improvement across the organization's operations (French, 2017). According to FICCI (2013), each department within the organization must develop its improvement action plans and these plans may include improvement activities to be monitored. Improvement action plans also include assignment of accountabilities and responsibilities for execution of plan tasks and activities, identification of human and financial resources required and a key milestones and a timetable for achieving plan objectives.

2.4.1.4 Legal conformance, communications and stakeholder engagement

A good internal managerial control system is one which ensures that the organization's mining policy incorporates the legal aspects which govern its operations. Legal conformance controls include the procedures put in place by management to ensure that the organization's mining operations comply with the applicable legal and other requirements including laws, regulations, licences and permits (Tripathi et al, 2016). These includes procedures and guidelines set by management to ensure that the organization's objectives and targets consistent with its mining policy are established to support the health, safety, environment and community across the organization's operations (French, 2017).

According to FICCI (2016), communications and stakeholder engagement mechanisms are designed to ensure that all processes are established to effectively communicate, consult and engage with internal and external stakeholders on all matters related to health, safety, environment and community. For instance, good internal managerial controls ensure that organizational operations and processes have a formal process for managing internal and external communications.

2.4.1.5 Crisis and emergency response controls

COSO (2018) states that crisis and emergency response mechanisms involve internal arrangements set by management to ensure that processes are established to protect employees, to minimize operational break down, and to mitigate negative impact to the community, the environment and assets in the event of an emergency. French (2017) adds that each internal operation must have an Emergency Response Plan (ERP) appropriate to the size, complexity and risks of the site.

2.4.1.6 Auditing and management systems review controls

Putra (2015) opines that the continuous assessment of performance and institution of ad-hoc internal audit engagement helps to ensure that mining management performance is assessed, recorded, tracked, and analysed to assure system effectiveness and to verify operational adherence to the requirements of the mining policy. These internal managerial controls ensures that every internal process have a formal process for regularly inspecting, monitoring, measuring and evaluating mining performance (Singh et al, 2015).

A good system of internal managerial controls ensures that every process and operation in the organization has a process for conducting formal audits to evaluate the effectiveness of internal managerial controls (Putra, 2015). This process must check for compliance and conformance with the organization's mining policy framework, performance standards and with legal and other requirements. COSO (1994) asserts that internal operations must develop an annual audit schedule that details the types of audits planned, location of the audits, focus areas and topics to be covered. This entails that audits must be conducted using approved audit procedures. Further, French (2017) highlights that, a report of audit findings must be produced and provided to senior management and subsequently, corrective actions must be developed and implemented.

Management systems reviews involve mechanisms put in place by management to ensure that the organization's mining policy framework is being followed and adequately supports internal and external objectives (Pradeep et al, 2016). Therefore, it is the responsibility of corporate management to conduct a review of the mining policy to assess the effectiveness of the overall system of internal managerial controls.

2.4.1.7 Awareness, competence and training controls

Singh et al (2015) assert that awareness, competency and training controls are important to ensure that the workforce is hazard aware, trained and competent to safely and effectively carry

out assigned work in accordance with the organization's mining policy framework. This entails that each department must have a formal process to support the development of workforce awareness to risks, the delivery of training, and testing for competency and qualification.

According to Pradeep et al, (2016), every internal operation must develop a training matrix for each role in the workforce and the matrix must be based on a training needs assessment. For instance, all visitors, vendors, and consultants must receive basic awareness training before entering operating areas or beginning any consulting work activities.

2.5 Benefits of implementing internal managerial Controls

Every business wants to grow, succeed and survive for long. To attain a sustainable development, it sets forth its own objectives to be pursued by delineating the responsibilities among the employees while directing and motivating them. However, after the plans being set and the responsibilities being delegated, it is not necessarily assured that the objectives may be achieved in a way as planned or wanted. There might be several reasons that a business may fail to achieve its intended objectives. It is here the internal controls of management become apparent while its importance is understood in terms of the results that are attained. Thus, internal controls are an indispensable function of management (Frazer, 2016).

Internal controls are there to guarantee that the firm's strategy and objectives can be successfully achieved. During the development of firms, the firm's size and business procedure are increasingly become significant. The financial reporting system becomes the main basis for making decisions by the management. The effective implementation of internal controls systems would lead to an effective financial reporting system. According to the 1992 COSO model, the internal controls are assessed by different elements which include control environment, risk assessment, control activities information and communication and monitoring.

Ridely (2008), asserts that internal management Controls are of great value and importance in a business organization since they ensure that the actual state of affairs of a business is along the lines of what is expected to be. One of the most obvious benefits of internal management controlling is that it provides the accurate information which is what is wanted for effective decision making process as well as maintaining effective functioning state of a business.

Controlling is the process through which the activities are not only turned in to producing better results, but are also improved in a way to continue success while eliminating obstacles that get in way of business progress. In addition, controlling function has a great application during the

times that demand immediate attention or action. If the timely action is not taken, there might be considerable loss to a business. Hence, in such times, controlling function is of great use to offer timely help and assistance to the key individuals of a business. Control is not just limited to determine whether or not the plans are being adhered to, but it also leads to identify the reasons of deviations and to take corrective actions accordingly (Frazer, 2016).

Harrier (2007), argued that managers play a variety of roles in an organization. And one of the most important roles that they need to undertake is controlling which ensures work rules and discipline while it leads to get the things done in a manner which is expected of. However, this function should not be taken in isolation while there is a need to understand its functionality properly. It is aimed at improving effectiveness, efficiency of a business entity and achieving better results. It is therefore to be used to support the organization in achieving its objectives - not otherwise. It must be noted that an effective control system can bring better results while it can lead a business organization to succeed, survive and attain sustainable development.

2.6 Challenges embroiled with the use of internal controls

Although a number of scholars (COSO, 2018 & Adu- Frimpong 2015) have linked the effective use of internal controls to better organizational performance, there are a number of challenges which come on board with their use. The following challenges are associated with the use of internal managerial controls;

2.6.1 Human Judgment

According to French (2017), the primary purpose of internal managerial controls is mainly affected by decisions made with human judgment under pressures to conduct business based on the information at hand. Decisions are often made within a limited time frame, based on incomplete information, and under time pressures of conducting agency business (Adu-Frimpond, 2015). Human judgment may affect the overall achievement of organizational goals and objectives, with or without good internal managerial controls. Further, internal managerial controls may become ineffective if management fails to minimize the occurrence of errors. (COSO, 2016).

2.6.2 Internal Managerial Control Breakdowns

Even well designed internal controls can break down and in many occasions employees at different levels sometimes misunderstand instructions or simply make mistakes. According to

Adu- Frimpong (2015), the occurrence of such errors usually is as a result of acquisition of new technological equipment or the use of sophisticated computerized information systems.

2.6.3 Collusion

Internal managerial control systems can be largely bypassed through collusion (COSO, 2016). For instance, individuals may agree to change financial data or bypass the normal working of a specific control procedure for personal gain. Collusion is difficult to be detected by internal managerial control mechanisms. The effectiveness of segregation of duties lies with the individuals only honestly performing their assigned tasks or in the performance of one person being checked by another (Williams, 2009). However, there is always high risk that collusion between individuals will destroy the effectiveness of segregation of duties.

2.6.4 Management Override

Adu- Frimpong (2015) asserts that there is usually a possibility that high level personnel within the organization may be able to override prescribed operating procedures for personal advantage. However, the management override of policies and guidelines should be differentiated from management intervention, which represents management actions to depart from prescribed policies and procedures for legitimate purposes. COSO (2016) states that management override practices include misrepresentations made by employees for their advantage. Although a thin line can be drawn between management intervention and management override, management intervention may be sometimes required in order to process customized transactions that otherwise would be handled inappropriately by the internal control system.

2.7 Internal Managerial Controls Theoretical Frameworks

The diverse views on the use of internal managerial controls to achieve organizational goals entails that internal controls cover many aspects of an organization and there is a clear need for a way of pulling together control concepts to form an integrated control framework. According to Adu- Frimpong (2015) risks affecting the achievement of organizational goals and objectives are inevitable and as such failure becomes a strong possibility prompting controls to be put in place to address, manage and monitor these risks. Putra (2015) opines that internal managerial controls involve huge costs and ensuring their effectiveness is essential. Poorly designed internal managerial controls lead to losses, scandals, failures, and they damage the reputation of organizations (COSO, 2016). The internal control banner is being raised by many authorities

and regulators in the business world. As Putra (2015) asserts, COSO is the most popular and authoritative body on internal managerial control framework and model.

2.7.1 The COSO Managerial Control Framework

According to Adu- Frimpong (2015), in 1985, the American National Commission of Fraudulent Financial Reporting, known as the Treadway Commission, was created through the joint sponsorship of including American Accounting Association, and Institute of Management Accountants (America). Based on its recommendations, a task force under the auspices of the Committee of Sponsoring Organizations (COSO) conducted a review of internal control literature. The eventual outcome was the document named “Internal Control- Integrated Framework”. According to Putra (2015), COSO emphasized the responsibility of management in designing, monitoring and evaluating the organization’s internal managerial control system. The COSO internal control framework identifies five components of internal control system. According to COSO (1994), components of internal managerial control system include the control environment, risk assessment, information and communication, control activities, and monitoring.

According to COSO (1994), the control environment of an organization is a key element for the creation of other parts of the overall internal control system and determines the association of internal control variables such as people. In his studies, Putra (2015) highlights that the control environment sets the level of integrity of the whole internal control system and it are a base from which supporting control elements are developed. The COSO (1994) framework of internal managerial controls stipulates that after determining the control environment, risk assessment should be done. This means that all internal and external risk exposures should be identified. According to Putra (2015), risk assessment should start by considering the aim of the organization, connecting these to organizational operations at distinct levels and ensure internal consistence. Risk assessment is essential since it is the only way an organization determines how risk exposures can be effectively managed.

A good system of internal controls includes setting up the control activities (COSO, 1994). According to Putra (2015), control activities are the policies and procedures that help to ensure that all management directives are carried out. These policies and procedures helps management to ensure that necessary actions are taken to address risks encountered in the achievement of the entity’s objectives (Putra, 2015). Control activities occur throughout the

organization, at all levels and in all functions and include a range of activities as diverse as approvals, authorizations and reconciliations (COSO, 1994).

The COSO (1994) theoretical framework of internal controls identifies information and communication as a strong attribute to setting up effective system of internal controls. Information and communication element requires pertinent information to be identified, captured and communicated in a form and timeframe that enable people to carry out their responsibilities (COSO, 1994). Information systems produce reports, containing operational, financial and compliance-related information, that make it possible to run and control the business (COSO, 1994). They deal not only with internally generated data, but also information about external events, activities and conditions necessary to inform business decision-making and external reporting (COSO, 1994).

Effective communication must also occur at a larger scale across the whole organization. In addition, Putra (2015) adds that all personnel must receive a clear message from top management that control responsibilities must be taken seriously and must understand their own role in the internal control system, as well as how individual activities relate to the work of others. Further, COSO (1994) adds that the personnel must have a means of communicating significant information to the management since effective communication with the organization's external parties, such as customers, suppliers, regulators and shareholders is crucial.

According to Putra (2015), the organization's internal control framework should be monitored and this involves a process that evaluates the quality of the system's performance over time. This is accomplished through performing frequent monitoring activities and the monitoring exercise should occur in the course of operations. According to the COSO (1994) framework of internal controls, the monitoring of internal controls phase should incorporate regular management, supervisory activities and employees whilst in the process of performing their normal duties.

According to COSO (1994), there is synergy and linkage among the components of internal controls and management should ensure that an integrated system that responds rapidly to changing conditions is put in place. Recent studies such as French (2017) points out that the COSO (1994) framework may be relevant to larger organizations, but inappropriate for small ones due to large capital outlays required to set up the internal control systems mere complexity

in operations. Administration of small organizations may not require formal internal controls for the reliability of the records and other information, because of their personal involvement in the operations of the organization. This raises a question whether the controls of small companies should be as complex as those of large companies for them to be effective. The research conclusion by Putra (2015) shows that the COSO (1994) framework does not perceive and capture the balance between formal and informal controls in smaller organizations.

Moreover, Putra (2015) states that the COSO (1994) framework's failure to recognize Information Technology (IT) and people as major control components leaves a lot to be desired. IT is crucial to an internal control framework. Today, organizations use IT for initiation, authorization, recording and processing of transactions. Further, IT ensures effectiveness of internal controls (Amudo & Inanga, 2009). In addition, people are very important in control system. The commitment and capability of people play critical role in whether a control system will be effective or not. On the other hand, COSO's inability to recognize IT and people as a control component inspired other bodies to design and create frameworks to remedy the oversight.

2.7.2 The COCO Control Framework

According to Putra (2015), the COCO framework is an internal managerial control framework that focuses more on individuals, groups and teams and involves important learning outcomes. The COCO Framework was promulgated by the Canadian Institute of Chartered Accountants (CICA) with a view to improve organizational performance. According to (Putra, 2015), the framework's major elements are purpose, commitment, capability, action and monitoring and learning.

This model advocates for clear direction and sense of purpose. This includes setting out clearly the organization's objectives, mission, vision and strategy; risks and opportunities; policies; planning; and performance targets and indicators (Putra, 2015). Therefore, internal controls must focus on objective achievement and thus employees must work to achieve corporate purpose.

The COCO control framework requires employees to appreciate and identify themselves with the organization's values. Examples of these values is trust, ethics, human resource policies, integrity, responsibility, accountability and authority. Many corporate control failures are due to the mismatch between employees from control principles of the organization (Putra, 2015).

Therefore, personnel must be made a natural element of how the organization works. In addition, lack of employees' commitment to the control systems may lead to control circumvention (COSO, 1994). However, a difficult task to establishing control criteria is getting people to buy into the control system.

According to Putra (2015), capability element means that employees must be resourced in terms of competences and equipment to discharge the tenets of the control model. Where there is a clear objective and everyone is ready to participate in designing and installing good controls, there is still a need to develop some expertise in the aspect of organizational life (Putra, 2015). This entails that the element of capability is about resourcing the control effort by ensuring that staff has the right skills, experience and attitudes not only to perform well but also to be able to assess risks and ensure controls make it easier to deal with these risks. In addition, capability can be assisted by training and awareness seminars, either at induction or as part of continuing improvement programs.

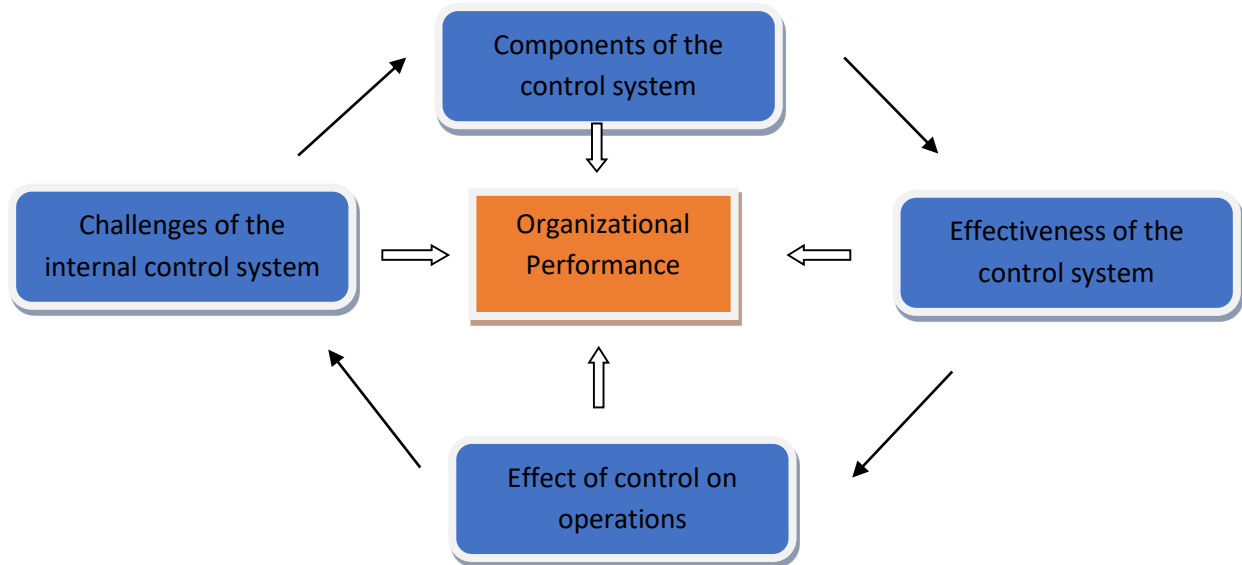
According to French (2017), action involves executing the plan that is being controlled. This means that employees should act with a clear purpose, a commitment to meet their targets and the ability to deal with problems and opportunities. Any action that comes after these pre-requisites has more chance of leading to a successful outcome. According to CICA, control systems must be adequately monitored and the monitoring of control system includes the appraisal of both the internal and external environment (Putra, 2015). The monitoring include the review of information needs and systems, procedures and control effectiveness. A comment from COSO (1994) asserts that control systems should not only be monitored and reviewed but the organization must also learn from the outcomes of the control monitoring and reviews. Therefore, monitoring is a hard control element in the sense that it fits in with inspection, checking, supervising and examining. From the COSO (1994) and COCO theoretical frameworks of internal controls, Adu- Frimpong (2015) developed a conceptual framework of internal controls linking together elements of internal managerial controls to organizational performance. This is described below;

2.8 Conceptual Framework

The conceptual framework of this study was adapted from the work of Adu- Frimpong (2015) who aimed to establish a mechanism in which an effective system of internal managerial controls can be put in place to achieve organizational goals. Adu- Frimpong (2015) asserts that an effective system of internal controls works well in cycle encompassing the components of

the control system, effectiveness of the control system, effect of the control system on organization’s operations and the challenges of the system of internal managerial controls. The conceptual framework is largely developed from the COSO (1994) framework of internal managerial controls but includes the importance of information and communication technology at a broader scale. The diagrammatic presentation of the Adu- Frimpong (2015) conceptual framework is inserted below;

Fig 2.1 Conceptual Framework of the study



Source: Adu- Frimpong (2015)

The conceptual framework presented above shows that the desired organizational results are dependent upon four major elements of the internal control system of an organization namely; the components of the control system, effectiveness of the internal managerial controls, effect of control on organizational operations and the challenges of the internal control system. The conceptual framework is viewed to establish the use of internal managerial controls in achieving reduced number of accidents or injuries at work and the organization’s adherence to environmental and safety requirements of the governing statutes of the Ashanti Gold Mine in Bindura, Zimbabwe.

2.9 Empirical studies

In 1994, the COSO framework of internal controls focuses much on how organizations can develop effective systems of internal controls to meet their objectives. However, other scholars mainly Putra (2015) asserts that the COSO 1994 framework is now irrelevant as it does not consider people and information and communication technology in the development of the

internal control system. However, in 2018, COSO continually updates its framework for internal controls and places importance on the control environment as a backbone of the overall control system. COSO (2018) also concludes that the integrity of the internal managerial control system of an organization is mainly dependant on the control environment it develops.

In the same breath, Michina (2011) carried out a research on the impact of managerial control on operational efficiency of non-governmental organisations (NGOs) in Nairobi. The study established that managerial controls in the NGOs based in Nairobi were influenced by the organisation structure such where the top management decides on how to allocate the resources received from donors and well-wishers are collected and distributed to the beneficiaries. The results showed that higher operational efficiency was achieved in NGOs which lead to effective managerial controls. According to this study the results showed that managerial control affects operational efficiency.

French (2017) studied a responsible mining management framework whereby the Lundin Mining Corporation can use to minimise effects of mining on the environment and the surrounding communities. However, differences in mining laws from country to country and region to region render the document selectively applicable across the globe. French (2017) did not explore on the effects of internal managerial controls on operational performance in a broader context.

In the same vein, Adu- Frimpong (2015) establishes that organizational performance is collectively influenced by components of the control environment, effectiveness of the control system, challenges of internal managerial controls and effect of internal controls on the organization's operations. Overallly, the researches undertaken by French (2017), COSO (2018), Adu- Frimpong (2015) & Michina (2011) are mainly in harmony on the use and importance of financial managerial controls in achieving organizational goals at large. The use of internal managerial controls has proved to be a key element in which organizations may improve profitability and liquidity.

2.10 Research gap

Quite a number of studies highlighted in this study fail to iron out the effect of internal managerial controls on the operational efficiency of organizations especially those in the mining sector. This has resulted in a research gap focussing on the importance and use of internal managerial controls to reduce or eliminate accidents and fatalities at work; the organization adherence to health, safety and environmental requirements; and effect of internal

managerial controls on the organization's corporal image. Studies highlighted above focus much on financial controls and neglect various aspects on how managerial controls influence a typical organization's operational performance.

2.11 Chapter Summary

This chapter gave a detailed review of literature on the importance, use and effectiveness and challenges of internal managerial control on operational performance of an organization. It also laid down a solid foundation on the possible relationship between components of internal managerial system to operational performance and it also reviewed literature on the theoretical and conceptual frameworks rooted on internal managerial controls. The next chapter will look at the research methodology.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The main objective of this chapter is to give a detailed account of the research methodology which was used in the study in reaching at the research findings and conclusions. More specifically, this chapter presents the research design, target population, sample size, sampling procedure, data collection procedures and methods of data analysis used to critically examine the use and effect of internal managerial controls on the operational performance of Ashanti Gold Mine located in Bindura. It also spells out the ethical considerations observed during the data gathering process.

3.2 Research Philosophy

This research study is built on ontological constructs. According to Hurlimann (2019), ontology is a research philosophy which directs the researcher to investigate the nature of social entities. Ontology aims to establish whether social entities could be objective institutions which independently exist from social actors or social constructions built from perceptions, actions or interpretations of individuals in society (Hurlimann, 2019). This research study made use of ontological assumptions since the impact of internal managerial controls on the operational performance of Ashanti Gold mine in Bindura can be examined objectively through the use of structured research instruments which allow objective generalizations of the research findings to be made.

3.3 Research Paradigm

The positivist paradigm of exploring social reality around the research phenomenon was used in this research study. Gemma (2018) defines positivism as a research philosophy that assumes that certain knowledge is based on natural occurrence of events. Therefore, positivism is based on the fact that observation and reasoning are the best means of understanding human behavior and true knowledge is based on experience of senses (Smith, Proops, Grounds, Wathan, McComb, 2016). In addition, positivists assume that the reality is objectively given and is measurable using properties which are independent of the research instruments used. Positivist

research paradigm is also based in the assumption that knowledge is objective and quantifiable (Hurlimann, 2019). Therefore, this research study relies on positivism assumptions since the researcher quantified variables and materially relied on objective opinions of respondents.

3.4 Research Design

Engel & Schutt (2013) asserts that explanatory research identifies causes, ascertains causality between factors and determines effects on behavior of a social phenomenon. Explanatory research also seeks to predict how one phenomenon will change or vary in relation to another variable, for instance, to understand and explain the causes of a social condition. In the same view, explanatory studies are normally experimental in nature, where hypotheses can be tested and research results based on the outcome (Thyer, 2010). Unlike descriptive research studies, an explanatory research study tends to establish the rationale behind the nature or state of circumstances. As Gemma (2018) opines, explanatory research studies are important in bringing out the causal relationships between dependent and independent variables.

It is within the above context that this research study adopted an explanatory research design in seeking to explain the relationships between variables related with exploring the impact of internal managerial controls on the operational performance of Ashanti Gold mine in Bindura. This research design reliably establish and explain why and how there is a positive, negative or no relationship between the use of internal managerial controls and operational performance. As a merit, (Kumar, 2011) notes that explanatory research design allows the researcher to quantify the impact of variables on one another and establish the extent of cause and effect relationship.

3.5 Research Approaches

Researches can have elements based on non-empirical or empirical approach and in some cases it could be a combination of both (Saunders. Lewis. & Thornhill, 2009). The elements that form the basis of the empirical approach can be deductive or inductive in nature. According to Easterby-Smith et al. (2000), the deductive research approach is the research methodology whereby a theoretical and a conceptual structure is developed and evaluated by empirical observation allowing general instances to be deduced. Moreover, Smith et al (2016) argue that unlike the deductive research approach, inductive approach is a research framework whereby a theory is developed from the observation of empirical reality and general inferences are induced from given circumstances.

Gemma (2018) opines that the aim for undertaking a research study is to enable the pursuit of enhancement of knowledge. Researches focus on the examination, development, refinement and verification of the methods of research, their procedural techniques as well as tools that would form the research methodological body. Therefore, applied research constitutes the majority of the research in the social sciences and it involves the research methods and techniques which form the body of research methodology applied in the collection of data and information about various aspects of a problem or situation (Smith et al, 2016).

Based on the above highlighted explanations, this study is deductive in nature and aims to establish the causal and effect relationship between the use and effect of internal managerial controls on the operational performance of Ashanti Gold mine since a conceptual structure is developed and aims to deduce conclusions based on empirical research responses. In addition, a deductive approach is used when one develops a theory and hypothesis, and then designs a research strategy to test the hypothesis (Saunders et al., 2009). The deductive method is also founded on a universal rule, and this describes a specific case of interest.

3.6 Population

According to Gemma (2018), a research population is defined as a total collection of elements the researcher wishes to gather data from. In addition, the research population should be of varying characteristics so as to eliminate bias in data collection. According to Saunders et al (2009) data related to the research topic under investigation should be gathered from every element of the research population. The gathering of information from every part of the research population is of greater importance in cases where the research population constitutes different elements with versatile characteristics.

The study population comprised of 100 employees from the Internal Audit (responsible for internal control setting and evaluation; and performance of ad-hoc audit engagements), Finance (provision of financial resources), Human Resources and Administration (staff welfare including employees' health and safety) and Production (actively involved in the mining activities).

3.7 Sampling

According to Miller (2010) a sample is a number of people that are chosen from the population, who presumably are considered to represent the majority of the population to be used in gathering the research data. In addition, Gemma (2018) suggests that sampling involves the

criteria of choosing a representative subset of observations from a research population to establish the characteristics of the variable under study. In this research study, cluster sampling technique was used.

The whole population is divided into clusters or groups and a random sample is taken from these clusters, all of which are used in the final sample. In this case, the Ashanti Gold mine organization’s departments were used as clusters which are the Internal Audit, Finance, Human Resources and Administration and Production. Cluster sampling helps to improve the validity of the research results (Smith et al, 2016) as it allows the researcher to deal with people with versatile expertise and knowledge on the use of internal controls on the organization’s operational performance. A detailed breakdown of the sample size is presented in Table 3.1 below.

Table 3.1 Target Population and Sample Size

Department	Target Population	Sample Size	Percentage (%)
Internal Audit	10	8	80
Finance	20	10	50
Human Resources	20	15	75
Production	50	42	84
Total	100	75	75

Source: Primary data

3.8 Sources of Data

According to Gemma (2018), sources of data collection refers to type of sources used by the researcher during the data gathering process. The study used both primary and secondary sources of data mainly to interpret the research results in a deductive manner. According to James (2014) data collection involves the establishment of a system which measures information on variables so that one will be able to answer the questions addressing the aim of the study and evaluate the outcomes.

Douglas (2015) describes primary data as real time data that is gathered by the researcher for a specific purpose. Examples of primary sources of data include observations, questionnaires, interviews and surveys. This research study used questionnaires as sources of primary data. Secondary sources of data refers to information gathered by the researcher from already published articles such as journals, books, reports, newspapers, internet and website, (Smith et al, 2016). This entails that secondary sources of data refers to information or facts already published or printed, which can be found from various sources for instance the internet, websites and books. Sensitivity of the current matter under study which deals with internal managerial controls of the Ashanti Gold mine can make participants to withhold information; therefore, the research used secondary sources to complement the research results from primary data sources. Secondary sources of data used by the researcher were used to interpret the results obtained from primary sources of data.

3.9 Data collection instruments

The quantitative tool used for data collection in this research study is a structured questionnaire.

3.9.1 Questionnaires

The research study used closed ended questions, that is, use of questions which do not give the respondents room to explain/ express themselves outside the study area. Structured questionnaires are useful in this research because the researcher seeks to gather guided and objective data. A questionnaire was formulated in line with the objectives of the study to ensure that all the research questions are answered. According to Saunders et al (2009), questionnaires enable vast information to be collected from a large number of people in a short period of time and involve a relatively cost effective way of data collection. In addition, research results to be gathered from questionnaires can be quickly and easily quantified and allows information to be analysed more scientifically and objectively than other forms of research (Smith et al, 2016). Use of questionnaires in data gathering provides the researcher with more control over the data collection activity compared to the observation method.

3.10 Validity and Reliability

Transferability is analogous to external validity, that is, the extent to which findings can be generalized (Smith et al, 2016). Generalizability refers to the extent to which one can extend the account of a particular situation or population to other persons, times or setting than those directly studied (Gemma, 2018). To improve the validity of the research study, throughout the process of

this study, the researcher was sensitive to possible biases by being conscious to ambiguous questions on the research instrument.

Reliability is the extent to which an observation, questionnaire or other measurement procedure gives accurate results on more than one repeated trials (Miller, 2010). A sample size of at least 50 % of the target population within an organisation helps to improve the reliability of the results to be obtained (Simbachako, 2017). More importantly, to improve the reliability of the questionnaire, the researcher conducted a Cronbach test on the questionnaire so as to ensure the internal consistency of the research instrument. According to Smith et al (2016), a Cronbach's Alpha of 0.7 and above is acceptable to validate the reliability of the research instrument.

3.11 Data Analysis

The collected research data is presented in the form of tables, such as bar and pie charts, figures and percentages. The percentages are partly used to analyse the data and table presentations which makes it easier for the researcher to make inferences. The percentages helps the researcher to make sure that the data is easy to understand and comment upon. Most importantly, inferential relationships between components of internal managerial control and measures of operational performance is established using the Pearson's correlation and multiple regression method as it was drawn down from SPSS.

3.12 Ethical Considerations

According to Kothari (2004) ethics are norms and values for conduct that distinguish between acceptable and unacceptable behavior when carrying out a research. Prominent scholars such as Paul & Elder (2009) define ethics as a set of concepts and principles that guide us in ensuring authenticity and validity of the research results. Research must not harm participants and it is the responsibility of the researchers to ensure that the research instrument is free from materials that may harm the respondents (Saunders et al, 2009).

In addition, protecting the confidentiality and anonymity of the respondents is an important component of research ethics. If a participant volunteers to give information of a private and sensitive nature, the researcher should hold such information in confidence (Smith et al, 2016). The researcher ensured that identities were removed from the questionnaire layout and permission was sought before any confidential information was disclosed. Smith et al (2016) opines that participants should be awarded the right to withdraw from the research process

whenever they feel uncomfortable. This principle was observed and all the participants were awarded the right to withdraw at any stage of the research process

3.13 Chapter Summary

The chapter presented the overall research methodology. In this study, the explanatory research design was considered the appropriate method. The use of a structured questionnaire was regarded as the best research instruments for data collection. This chapter critically looked at the research methodology and the corresponding justification of the methodology adopted. This study will adopt ontology research philosophy since it is appropriate in quantitative researches. The next chapter will present the research findings.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter presents the research results from the study and various analyses performed on the collected research data. The first section of the chapter presents information collected on the respondents' background information. The chapter also presents the reliability test results done on the research data on every section highlighted on the questionnaire. Moreover, normality test results are also presented to confirm sample normality and further, descriptive analyses were executed using SPSS on predictors and the criterion of the research study. More specifically, the researcher performed two inferential analyses, which are the Pearson's correlation and multiple regression analysis. The bivariate tests are useful to establish any relationships that exist between the independent variables and the dependent variable.

4.2 Response Rate

Table 4.1 presented below highlights the response rate on 75 questionnaires distributed to the respondents during the data gathering process. A finer breakdown of the response outcome is detailed below.

Table 4.1: Questionnaire Response Rate

Cluster/ Department	Distributed	Returned	Percentage (%)
Internal Audit	08	05	62.50
Finance	10	07	70.00
Human Resources & Administration	15	13	86.67
Production	42	27	64.29
Total	75	52	69.33

Source: Primary data

Table 4.1 highlights that a total of 75 structured questionnaires were distributed to the respondents for the sole purpose of data collection and 52 were returned giving a total response

rate of 69.33 %. According to Smith et al (2016), an average response rate on questionnaires of at least 50 % on medium sized samples guarantees the dependability of the research outcome. Therefore, the attained response rate is sufficient enough to proceed on data presentation and analysis. A further analysis of the individual response rates of the clusters presented also denotes that each cluster’s response rate is above the 50% threshold therefore, is in harmony with the Smith et al (2016) assertion.

4.3 Reliability of the Research Instrument

Reliability in this research study was tested using the Cronbach’s Alpha coefficient. Zhuwao (2017) stipulates that a Cronbach’s alpha of 0.7 threshold and above shows very good reliability of the research instrument. However, Table 4.2 below shows reliability levels of the research variables.

Table 4.2 Reliability Test

	Variables	Number of Items	Cronbach’s Alpha Value
IV1	Scope of management & responsible mining controls	5	0.798
IV2	Health, Safety, Environment & Community risk management	5	0.863
IV3	Change management & performance improvement	5	0.912
IV4	Legal conformance, communications & stakeholder engagement	5	0.772
IV5	Crisis and emergency response controls	5	0.832
IV6	Auditing and systems management review	5	0.902
IV7	Awareness, competence & training controls	5	0.705

Source: Primary data

Table 4.2 highlights that the reliability results support the appropriateness of the research questionnaire and exhibits that the outcome of the research instrument qualifies for a higher level of analysis. All the research variables have scored the Cronbach’s alpha greater than 0.70

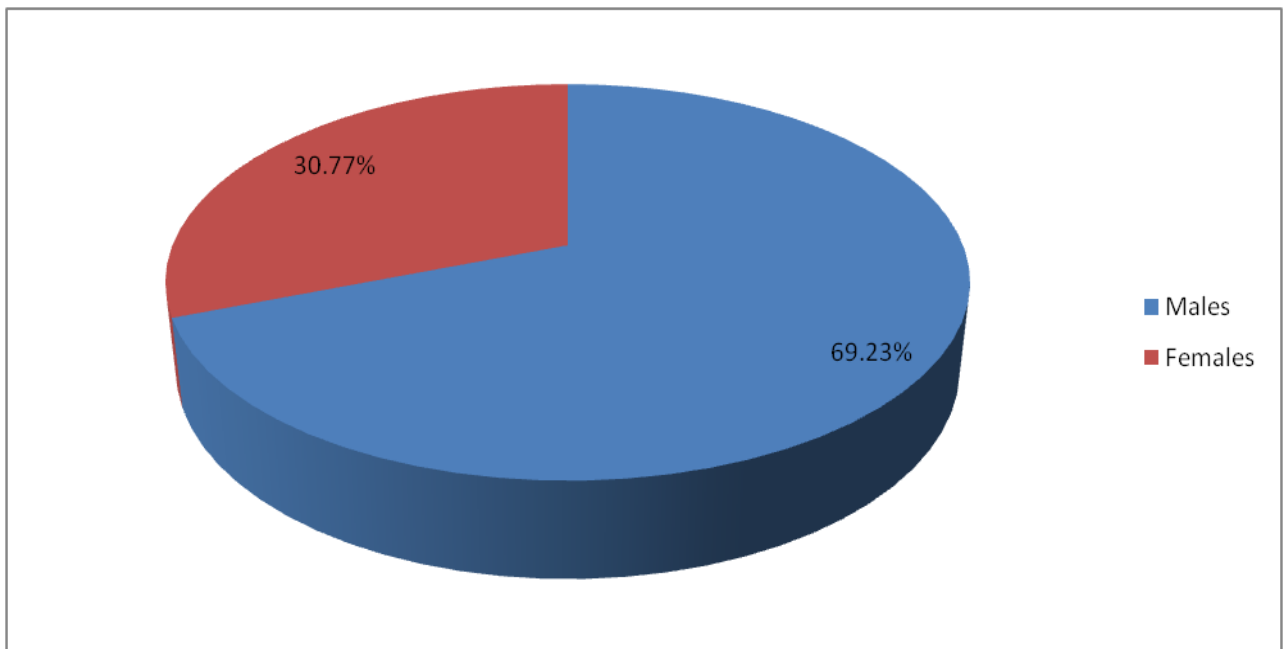
which is the least acceptable level to perform inferential statistics on the data for meaningful results.

4.4 Respondents' Background Information

This section presents the respondents' demographic details. A detailed overview of the respondents' demographic profiles and background is presented below.

4.4.1 Gender of the Respondents

Fig 4.1 highlights the respondents' demographic aspect of gender within the internal audit department; finance department; human resources and administration department; and the production function.



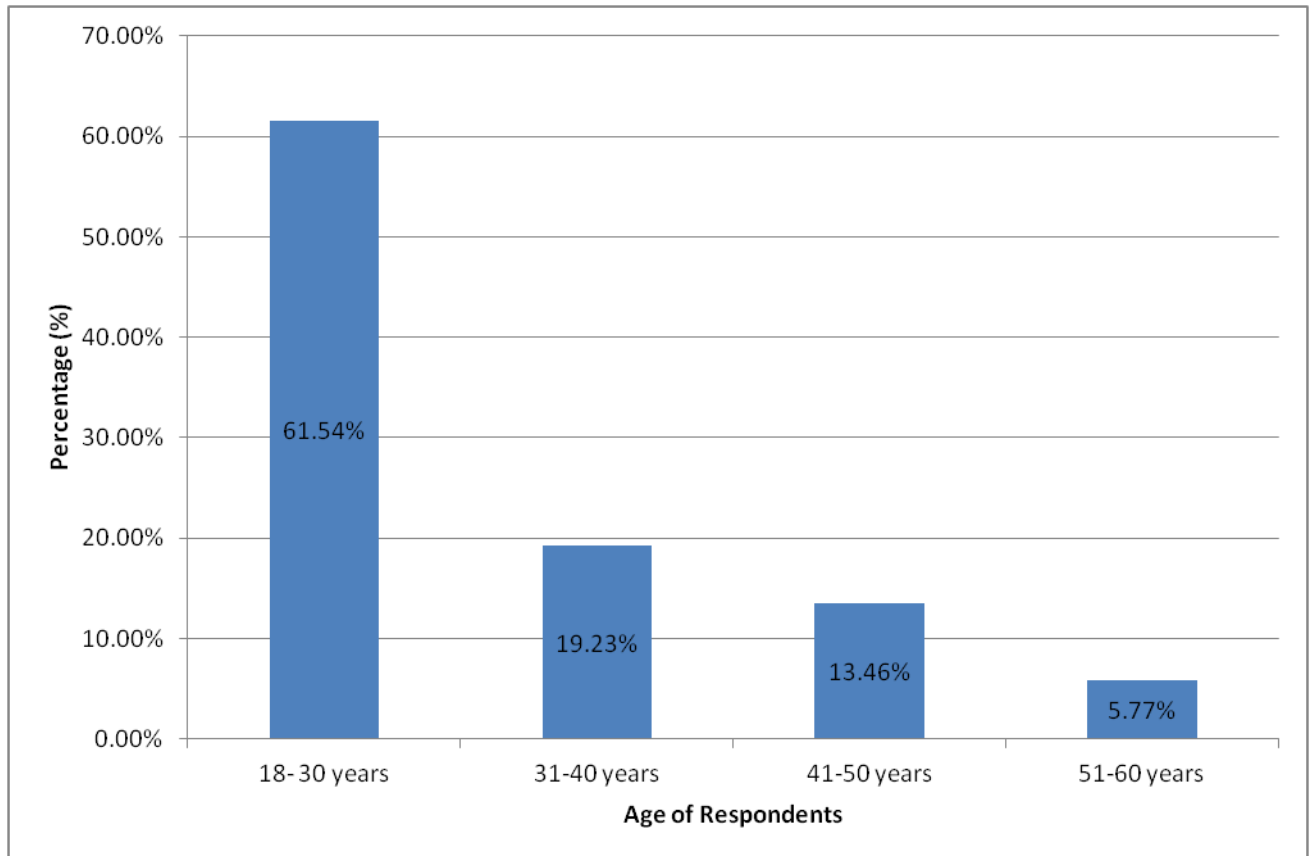
Source: Primary data

Fig 4.1: Gender of the respondents

Fig 4.1 highlights that male participants (69.23 %) outnumbered their female counterparts (30.77 %) by more than a double proportion of their own ratio. A large number of male participants can be best explained by the physical requirements and use of heavy industrial machines in the mining sector which is mostly shunned by female job seekers. A larger proportion of female participants was obtained from supporting functions such as the human resources and finance clusters.

4.4.2 Age of the Respondents

Age of the respondents was spaced on a 10 year interval except in the first range where the researcher chose 18-30 years interval.



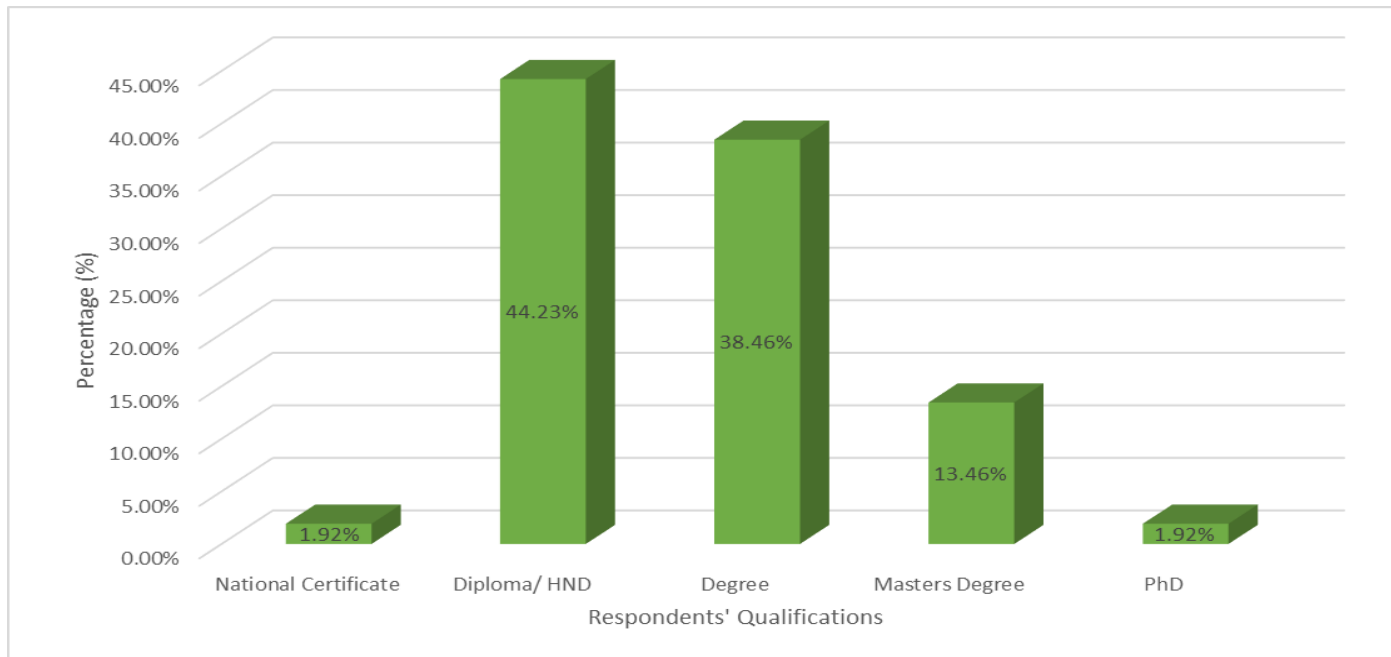
Source: Primary data

Fig 4.2: Age of Respondents

Fig 4.2 highlights that the collected research data about the age of the respondents shows that the majority of the respondents (61.54%) are from 18-30 years. Further, the chart also shows that 19.23% of the respondents are aged between 31- 40 years, 13.46% of the respondents 41- 50 years whilst 5.77% are aged between 51-60 years.

4.4.3 Qualifications of the Respondents

Fig 4.3 below highlights the respondents' work experience.



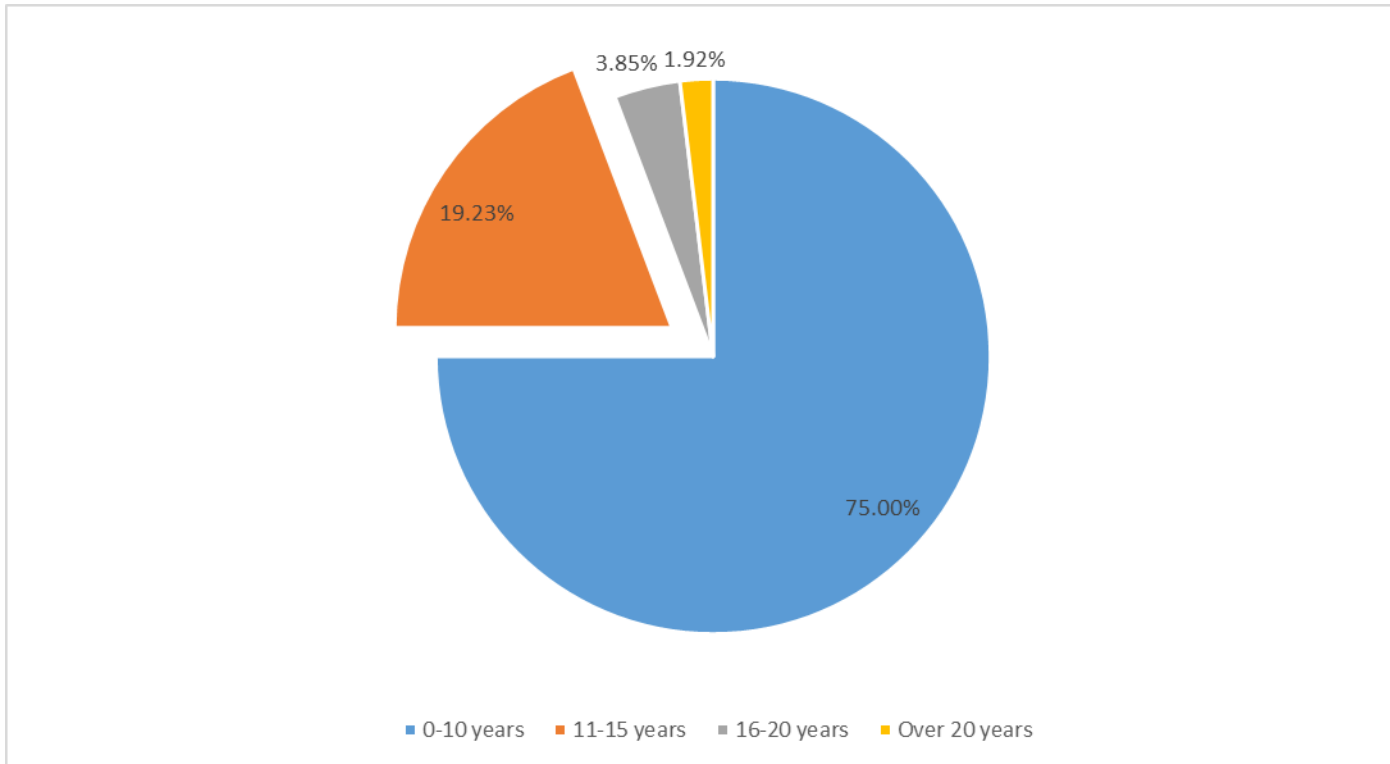
Source: Primary data

Fig 4.3: Respondents' Qualifications

Fig 4.3 shows that 1.92% of the respondents have either a national certificate or a PhD. The majority of respondents (44.23%) have a Diploma or HND whilst 38.46% of the respondents are degree holders. Fig 4.3 also highlights that 13.46% of the respondents have masters' degrees. In general, employees at Ashanti Gold mine are well qualified for their positions throughout the organization.

4.4.4 Respondents' Work Experience

The researcher chose to use a mixed 5 and 10 year interval to classify the respondents' work experience. A detailed breakdown of the study results on the subject under review is presented below;



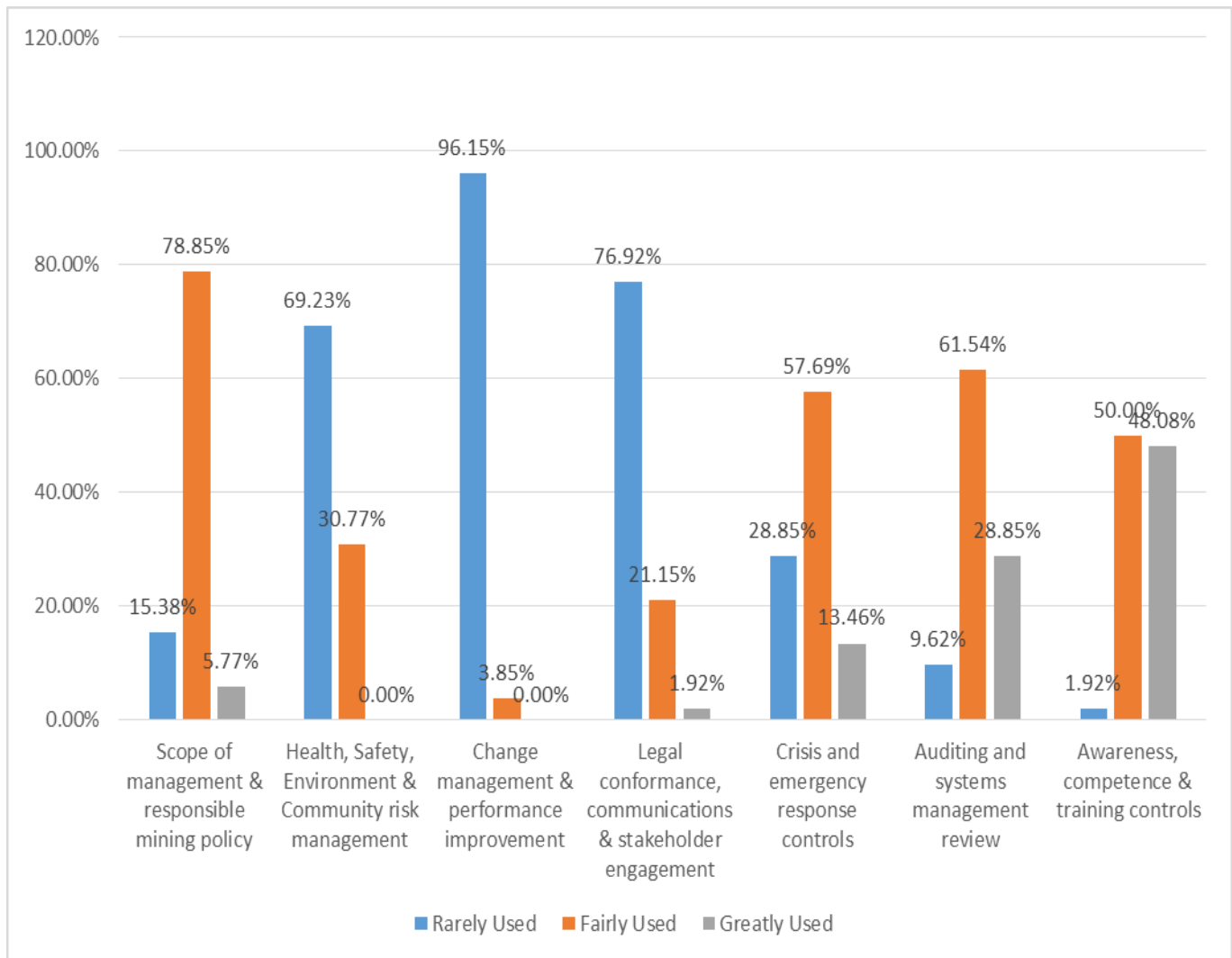
Source: Primary data

Fig 4.4: Respondents' Work Experience

As highlighted in Fig 4.4 presented above, the majority of employees (75%) at Ashanti Gold mine in Bindura have served the organization for the period ranging from 0- 10 years of age. It is also shown that 19.23% of the employees have spent 11- 15 years in the organization, a poultry 3.85% and 1.92% have spent 16-20 years and over 20 years respectively. The above computed work experience arithmetic exhibits that the organization has poor workforce retention strategies or a high rate of turnover.

4.5 Internal Managerial Controls Used at Ashanti Gold Mine

This section aims at exploring information from the respondents to reliably identify internal managerial controls used at Ashanti Gold mine in Bindura to improve the latter's operational performance. This information is presented in Fig 4.5 below using a scale ranging from rarely used to greatly used.



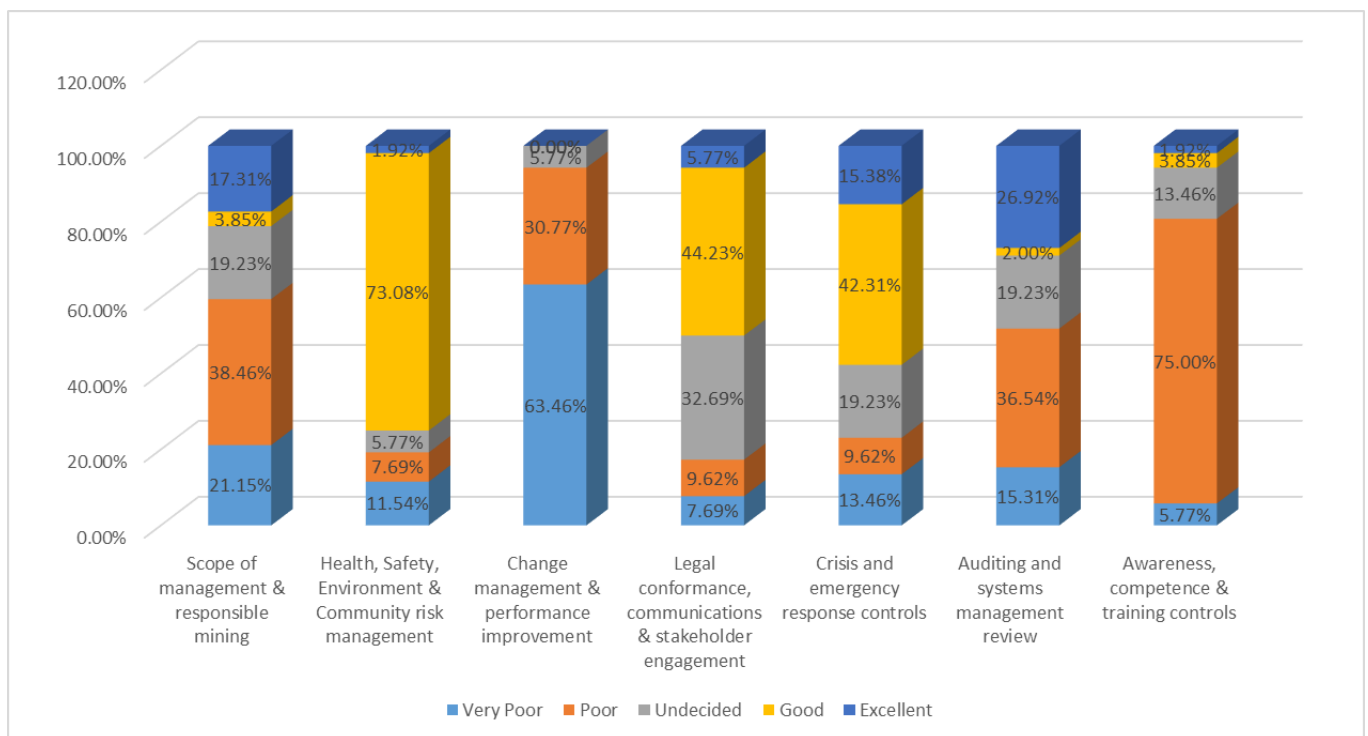
Source: Primary data

Fig 4.5: Internal Managerial Controls Used at Ashanti Gold Mine

The research evidence exhibited in Fig 4.5 highlights that the scope of management and responsible mining controls; crisis and emergency response controls; auditing and systems management review controls and the awareness, competence and training controls are fairly used by Ashanti Gold mine to improve the organization’s operational performance. Fig 4.5 further shows that although the majority of the respondents (69.23%) felt that the organization rarely use the critical health, safety, environment and community controls, 30.77% of the respondents suggested that these are fairly used in the organization. However, 96.15% and 76.92% of the respondents are of the opinion that both change management and legal conformance controls are rarely used by the organization respectively.

4.6 Effectiveness of Internal Managerial Controls

Reflecting back to the work of Adu- Frimpond (2015), the effects of total absence of internal managerial controls in place and the question regarding their effective use might result to the same effect on operational performance. However, this section of research aims to solicit, the degree at which the internal managerial controls are used to regulate the operations of the organization as intended by management, that is, the effectiveness of internal managerial controls. This information is highlighted in Fig 4.6 below;



Source: Primary data

Fig 4.6: Effectiveness of Internal Managerial Controls

According to Fig 4.6, the majority of respondents have registered their discontent on the effectiveness of internal managerial system of Ashanti Gold mine. For instance, Fig 4.6 denotes that the scope of management system and responsible mining controls; change management; auditing and systems management review; and awareness, competence and training controls are poorly used throughout the organization. In other words, the immediately above mentioned controls are not working to serve the purpose they were originally designed to execute by management. Fig 4.6 also shows that 76.08% of the respondents are satisfied that health, safety, environment and community controls; legal conformance; and crisis and emergency controls are reasonably effective.

4.7 Preliminary Analysis

This section aims to perform several analyses as part of the process of inspection of the data collected for this study. The nature of variables in this study is explored through statistical techniques to answer the research questions of this study.

4.7.1 Normality Test

According to Atyah (2016), preliminary analysis is very important as the outcome from this analysis helps the researcher to ascertain whether its acceptable to perform various inferential tests on the research data with a purpose of obtaining reliable and valid results. For instance, it is important for the researcher to find out whether the research data collected for the purpose of this study follows a normal distribution. Detailed results of the normality test performed are shown in Table 4.3 presented below.

Descriptive Statistics							
	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Scope of management and responsible mining	52	3.8800	.21587	.382	.423	-2.993	2.000
Health, safety, environment and community	52	3.9000	.22683	.364	.732	-1.859	2.000
Change management controls	52	3.9060	.06804	1.593	.913	2.687	2.000
Legal conformance	52	3.8600	.43122	-.888	.231	.599	2.000
Crisis and emergency response	52	3.8620	.28446	.644	.985	-2.879	2.000
Auditing and systems management	52	4.4060	.35620	-.137	.853	1.365	2.000
Awareness, competence and training	52	3.9100	.27911	-.169	.013	-2.653	2.000
Operational Performance	52	3.8280	.51490	-1.077	.213	1.148	2.000
Valid N (listwise)	52						

Source: Primary data

Table 4.3: Normality Test

Table 4.3 shows the results of the normality test performed by the researcher to determine the normality of the sample size used during the data gathering process. According to Atyah

(2016), the Skewness and Kurtosis tests are most suitable to determine the normality of the sampled population. Further, Saunders et al. (2016) states that the normal values for skewness test should range between -2 to +2 whilst values ranging from -3 to +3 for kurtosis test are considered within the normal range. The valid criterion stated above was met by the test results for normality and proceeding to carry out inferential tests is acceptable.

4.7.2 Descriptive Analysis

The purpose of performing descriptive analysis is to compute the average score of all the 40 variable items which will be used for the purposes of either accepting or rejecting the research hypothesis. Table 4.4 presented below highlights the means of each variable item.

Scope of management and responsible mining policy		Importance	
		<i>Mean</i>	<i>S.D</i>
<i>OS1</i>	<i>The organization's mining policy is approved by the entity's senior management.</i>	3.80	.45023
<i>OS2</i>	<i>The mining policy is formally documented, implemented and maintained.</i>	4.10	.23326
<i>OS3</i>	<i>The mining policy is effectively communicated to all employees and stakeholders.</i>	3.72	.26014
<i>OS4</i>	<i>The mining policy adequately reflect all the operation's health, safety, environmental and community risks as well as regulatory requirements.</i>	4.12	.31225
<i>OS5</i>	<i>The mining policy aims to prevent illnesses, deaths, injuries, environmental degradation and adverse community impacts.</i>	3.66	.30220
Health, safety, environment and community risk management			
<i>HS6</i>	<i>The organization's risk registers covers the health, safety and well-being of employees and other stakeholders.</i>	3.67	.28993
<i>HS7</i>	<i>The organization applies the highest level of control commensurate with the risk exposures.</i>	4.05	.37881
<i>HS8</i>	<i>Lower level controls may be used as treatment measures until long-term controls can be implemented.</i>	3.88	.36210

HS9	<i>Each operation has developed a risk register for cataloguing risks exposures.</i>	4.20	.48001
HS10	<i>Risks exposures characterized as 'Significant' or 'High' are frequently reviewed by senior management.</i>	3.70	.34041
Change management and performance improvement controls			
CM11	<i>The organization has a method for the identification of hazards and an analysis of all risk exposures.</i>	3.86	.36695
CM12	<i>There is a set criterion for the identification and implementation of appropriate internal controls to mitigate the risk exposures.</i>	3.85	.20145
CM13	<i>The organization use an appropriate risk analysis methodology based on the complexity of the change.</i>	4.02	.36210
CM14	<i>A process for documenting recommendations, logging of required risk management and corrective actions is in place.</i>	3.91	.41897
CM15	<i>There is continual improvement of the mining policy implementation.</i>	3.89	.26205
Legal conformance, communications and stakeholder engagement			
LC16	<i>The organization has developed a centralized obligations register detailing the applicable legal and other requirements.</i>	3.87	.36358
LC17	<i>The organization has a mechanism for all stakeholders to report grievances and ensures effective internal communication.</i>	4.18	.46970
LC18	<i>The organization defines the responsibilities and accountabilities for maintaining compliance or conformance to each requirement.</i>	3.20	.05236
LC19	<i>Regulatory trends are frequently monitored to anticipate and identify changes to the legal requirements.</i>	4.30	.48387
LC20	<i>The organization develops and implements specific action plans for maintaining compliance with the legal and other requirements.</i>	3.75	.30256
Crisis and emergency response controls			
CE21	<i>There is a listing of potential emergency incidents and a listing of available support resources including financial resources.</i>	3.66	.20115

CE22	<i>The Emergency Response Plan (ERP) must be reviewed at least annually and updated as needed.</i>	4.12	.39887
CE23	<i>The emergency response team attends frequent training and gets tested for competency.</i>	3.69	.32100
CE24	<i>There are emergency systems installed in place.</i>	4.22	.41021
CE25	<i>The emergency systems in place are maintained and meet all the applicable local regulatory, legislative and certification requirements.</i>	3.62	.31224
Auditing and systems management review controls			
AS26	<i>There is frequent assessment of operational controls to mitigate risks and impacts.</i>	4.36	.80215
AS27	<i>The organization assesses the HSEC performance against the set objectives and targets.</i>	4.89	.85412
AS28	<i>The organization assesses and monitors occupational health exposures against internal and regulatory limits.</i>	3.90	.62352
AS29	<i>The organization reviews corporate operational circumstances and anticipated changes.</i>	4.36	.80215
AS30	<i>The organization reviews overall HSEC performance against objectives, targets and performance indicators.</i>	4.52	.82145
Awareness, competence and training			
AC31	<i>New employees are introduced to general rules, hazards, risks and required controls.</i>	3.62	.65285
AC32	<i>The organization ensures training on legal and other requirements relevant to each employee's role.</i>	3.98	.69852
AC33	<i>Awareness training on fatality hazards and required critical controls is frequently performed.</i>	4.23	.74122
AC34	<i>There is technical qualification and licensing for roles or occupations with specific requirements.</i>	3.62	.65285
AC35	<i>There is training on required emergency and evacuation procedures.</i>	4.10	.72158

Operational Performance			
<i>OP36</i>	<i>Accidents and fatalities at work have reduced as a result of the use of internal managerial controls</i>	3.02	.61203
<i>OP37</i>	<i>Internal managerial controls have significantly helped the organization to adhere to environmental, legal and other operating statutes.</i>	4.12	.73158
<i>OP38</i>	<i>Internal managerial controls improves the organization's image and corporal standing in the community</i>	3.68	.65985
<i>OP39</i>	<i>The organization's general profitability and cash flow position have improved due to the use of internal managerial controls</i>	4.36	.78546
<i>OP40</i>	<i>Use of internal managerial controls improves the organization's health and safety conditions of its employees</i>	3.96	.63881

Source: Primary data

Table 4.4: Descriptive Analysis

Table 4.4 below shows the means of 40 variable items. The results show that all the 40 variables have a mean score above 3.00. This indicates that the majority of the respondents agrees with the statements describing each key variable and significantly considers all those items as major antecedents of Ashanti Gold mine's operational performance.

4.8: Correlation Analysis

The researcher's aim of choosing the Pearson's correlation is to examine the relationship between the various elements of internal managerial controls (independent variables) and operational performance of Ashanti Gold mine in Bindura. According to Dzvairo (2019), correlation coefficients are useful in providing a numerical overview of the direction and magnitude of the linear relationship which exists between the dependent and independent variables. Pearson's correlation coefficients (r) range from -1 to +1 for the indication of positive or negative correlation. However, the size of the absolute value formulates information on the strength of the relationship (Smith et al., 2016). A computation of the correlation coefficients between the variables under study are summarized and presented in Table 4.5 below.

		Dependant Variable
Independent Variables		Operational Performance
Scope of management system and mining policy	Pearson Correlation	.565**
	Sig. (2-tailed)	.000
	N	52
Health, safety, environment and community management controls	Pearson Correlation	.783**
	Sig. (2-tailed)	.000
	N	52
Change management and performance improvement	Pearson Correlation	.028
	Sig. (2-tailed)	.000
	N	52
Legal conformance, communication and stakeholder engagement	Pearson Correlation	.453**
	Sig. (2-tailed)	.000
	N	52
Crisis and emergency response	Pearson Correlation	.721**
	Sig. (2-tailed)	.000
	N	52

Auditing and systems management reviews	Pearson Correlation	.333**
	Sig. (2-tailed)	.000
	N	52
Awareness, competence and training	Pearson Correlation	.136
	Sig. (2-tailed)	.000
	N	52

** Correlation is significant at the 0.05 level (2 tailed).

Source: Primary data

Table 4.5: Correlation Analysis

Scope of management system and responsible mining controls

The results of the Pearson's correlation analysis performed shows that there is a significant, moderate and positive correlation between the scope of management system and responsible mining controls and Ashanti Gold mine's operational performance ($r = 0.565$; $p < 0.05$). Generally, Gemma (2018) asserts that a correlation coefficient of 0.7 and above is interpreted as strong, 0.3 to 0.6 is considered as moderate whilst correlation coefficient of less than 0.3 is referred to as weak. For practical goals, a correlation coefficient of 0.565 means that the organization's effort to improve management's scope and adherence to responsible mining policy practices will ultimately result to a related increase in the organization's operational performance. These results are in harmony with French (2017) who opines that the mining policy of an organization and the scope of management's system that improve the performance of an organization is the one which ensures that each operation within the organization has a supporting formal process that conform to the requirements of responsible mining management system framework.

Health, safety, environment and community management controls

Emperical research results shows that there is a significant, strong and positive relationship between the health, safety, environment and community controls and operational performance

($r= 0.783$; $p< 0.05$). These results strongly support a direct link between independent variables and the dependent variable. In other words, the correlation of 0.783 means that a higher improvement in the use and effectiveness of the health, safety, environment and community controls directly results in the increase on the operational performance of the organization. These results coincides with the research carried out by The Lundin Mining Corporation Framework (2017) who states that the HSEC risk management is important in a mining organization since it aims to ensure that HSEC hazards are identified, assessed and treated to prevent injuries and fatalities at work, and to mitigate the impact of adverse events on human health, the environment and communities which have a direct bearing on organizational performance.

Change management and performance improvement controls

There is a very weak, insignificant or no correlation between change management and performance improvemet controls and operational performance ($r= 0.028$; $p< 0.05$). The research results means that an effort by management to improve change management controls have very little or no direct bearing on the organization's operating performance. According to Singh et al (2015), change management procedures should ensure that each operation must have a formal process for identifying and managing change. Employees' resistance to change at Ashanti Gold mine undermines the positive contribution of change management controls on the entity's operational performance.

Legal conformance, communications and stakeholder engagement

There is a moderate, significant and positive correlation between adequate legal conformance, communication and stakeholder engagement controls and operational performance ($r= 0.453$, $p< 0.05$). This means that the more an organization adheres to the governing legislature and operating regulations, the more its operational performance will be set to increase. Tripathi et al (2016) states that a sound internal managerial control system is one which ensures that the organization's mining policy incorporates the legal aspects which govern its operations which include the procedures put in place by management to ensure that the organization's mining operations comply with the applicable legal and other requirements including laws, regulations, licences and permits.

Crisis and emergency response controls

The research outcome shows a strong, significant and positive correlation between crisis and emergency response controls and the organization's operational performance ($r= 0.721$; $p < 0.05$). This means that a great improvement in the use of crisis and emergency controls will lead to a direct increase in operational performance. The research results support the research findings of French (2017) who found that each internal organizational operation must have an Emergency Response Plan (ERP) appropriate to the size, complexity and risks of the site to increase operational performance.

Auditing and systems management review controls

A moderate, significant and positive relationship between auditing and system review managerial controls was evidenced to operational performance ($r= 0.333$; $p < 0.05$). This entails that systems reviews and ad-hoc audit engagements should be frequently reviewed and carried out respectively for performance improvement. This is in harmony with Putra (2015) who opines that the continuous assessment of performance and institution of ad-hoc internal audit engagements helps to ensure that mining management performance is assessed, recorded, tracked, and analysed to ensure system effectiveness and to verify operational conformance to the requirements of the organization's mining policy.

Awareness, competence and training controls

There is a weak, insignificant and positive relationship between awareness, employee competence assessment and training controls and operational performance ($r= 0.136$; $p < 0.05$). Although other independent control items exhibited less influence on operational performance, workforce training on HSEC related matters proved to be very useful to improve operational performance.

4.9 Multiple Regression Analysis

A multiple regression analysis was performed to identify the predictor and its contribution towards the criterion. This section aims to determine the statistical effect of a single dependent variable from a group of independent variables. To ensure the value and appropriateness of the results from multiple regression analysis, the assumptions of multiple regression must be closely adhered to. In this case, multicollinearity was tested. This refers to the various aspects of the distribution of scores and the nature of the underlying relationship between the variables.

Table 4.6: Multiple correlation of independent variables with the dependent variable

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin Watson
1	.743 ^a	.722	.720	.682	.674	9.265	2	35	.000 ^b	1.625

- a. Predictors: (Constant), Scope of management system and responsible mining policy, Health, safety, environment and communication, Legal conformance, communications and stakeholder engagement, Crisis and emergency response controls, Auditing and systems management review
- b. Dependent Variable: Operational Performance

Source: Primary data

There are multiple correlations ($R = 0.743$) of 5 significant predictors (Independent variables) with the criterion (Operational performance), as demonstrated in Table 4.6 above. From the model, the internal managerial controls that affect operational performance at Ashanti Gold mine are the scope of management system and responsible mining policy; health, safety, environment and community management, legal conformance, communication and stakeholder engagement; crisis and emergency response controls; and auditing and systems management reviews. These 5 elements of internal managerial controls have a significant impact which explains more than 70 percent ($R\text{ square} = .720$) of the variability on operational performance. The results also show that there is no correlation between the residuals as Durbin Watson is $1.623 < 2$.

Table 4.7: Analysis of Variance (ANOVA) for Independent Variables

The analysis of variance (ANOVA) is performed to ascertain the degree at which total variance is affected by the regression equation. Summarized below, are the analysis of variance results.

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	274.060	4	68.515	97.322	.000 ^b
Residual	33.102	47	.704		
Total	307.162	51			

- a. Dependent Variable: Operational Performance
- b. Predictors: (Constant), Crisis and emergency response controls, Auditing and systems management review, Legal conformance, communication and stakeholder engagement, Health, safety, environment and community management, Scope of management system and responsible mining.

Table 4.7 reveals that only 10.8% of the variance of the criterion is unaccounted for. This shows that the regression is significant ($F_{4,47} = 97.322, P < 0.05$).

Table 4.8: Regression coefficients and significance of the Independent Variables

Although the study has previously shown that only 5 out of 7 independent variables are significantly influencing the operational performance of Ashanti Gold mine, it is important to establish the degree of their influence. Regression coefficients also help the researcher to formulate an estimate of the regression equation of the independent variables directly influencing operational performance. Table 4.8 presented below has the detailed results.

Model		Coefficients ^a						
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.741	.672		2.608	.000		
	Scope of management system and responsible mining	2.971	.423	2.504	1.896	.000	.636	1.572
	Health, safety, environment and community management	6.134	.732	2.702	3.201	.000	.569	1.757
	Auditing and systems management review	1.514	.852	1.047	.230	.000	.864	1.157
	Legal conformance, communication and stakeholder engagement	.671	.231	.364	1.685	.000	.792	1.263
	Crisis and emergency response	4.236	.985	3.891	.625	.000	.821	1.218

a. Dependent Variable: Operational Performance

Source: Primary data

Table 4.8 shows that 5 out of 7 significant predictors are positively related to the criterion (Dependent variable) in the regression. Health, safety, environment and community management controls have the highest regression coefficient of 6.134; followed by the crisis

and emergency response controls 4.236; scope of management system and responsible mining 2.971; auditing and systems management review 1.514; and legal conformance, communication and stakeholder engagement 0.671. The multiple regression equation is therefore as follows:

$$DV = 0.741 + 2.971IV1 + 6.134IV2 + 0.671IV4 + 4.236IV5 + 1.514IV6 \text{ where,}$$

DV = Operational Performance

IV1= Scope of management system and responsible mining policy

IV2= Health, safety, environment and community management

IV4= Legal conformance, communication and stakeholder

IV5= Crisis and emergency response controls

IV6= Auditing and systems management review

From the above equation, it is shown that each additional increase on the independent variable factor translates to a proportionate increase (of the regression coefficient) on the operational performance of Ashanti Gold mine. Table 4.8 also reviews that the statistical data is not affected by multicollinearity between the independent variables since Tolerance is greater than 0.2 on every variable.

Hypothesis Testing Results

Statement	Decision
H ₀ : Effective use of internal managerial controls affects the operational performance of Ashanti Gold mine.	Accept
H ₁ : Effective use of internal managerial controls does not affect the operational performance.	Reject

Based on the multiple regression results presented above, it cannot be contested that the effective use of internal managerial controls affect operational performance of Ashanti Gold mine which operates in Bindura. Therefore, the null hypothesis is accepted based on 5 out of 7 independent control variables that have collectively showed a positive regression correlation with the criterion (operational performance).

4.10 Benefits of Internal managerial controls

Table 4.9 presented below highlights the proportionate percentages of the respondents' judgment on the benefits of using internal managerial controls using a five point likert scale ranging from 1 being Strongly Disagree to 5 being Strongly Agree.

Statement	1	2	3	4	5
They provide accurate information needed for effective decision making and proper functioning of the business.	0%	0%	2%	83%	15%
Internal managerial controls are an effective basis to institute responsibility accounting and variance analysis	0%	0%	0%	42%	58%
Can lead a business organization to succeed, survive and attain sustainable development.	5%	10%	10%	63%	12%
Helps an organization to adhere to legal and other regulatory frameworks hence, are critical as they help organizations to escape penalties and fines	0%	0%	18%	70%	12%
Implementation of internal control systems lead to an effective financial reporting system	0%	0%	5%	45%	50%

Source: Primary data

Table 4.9: Benefits of Internal managerial controls

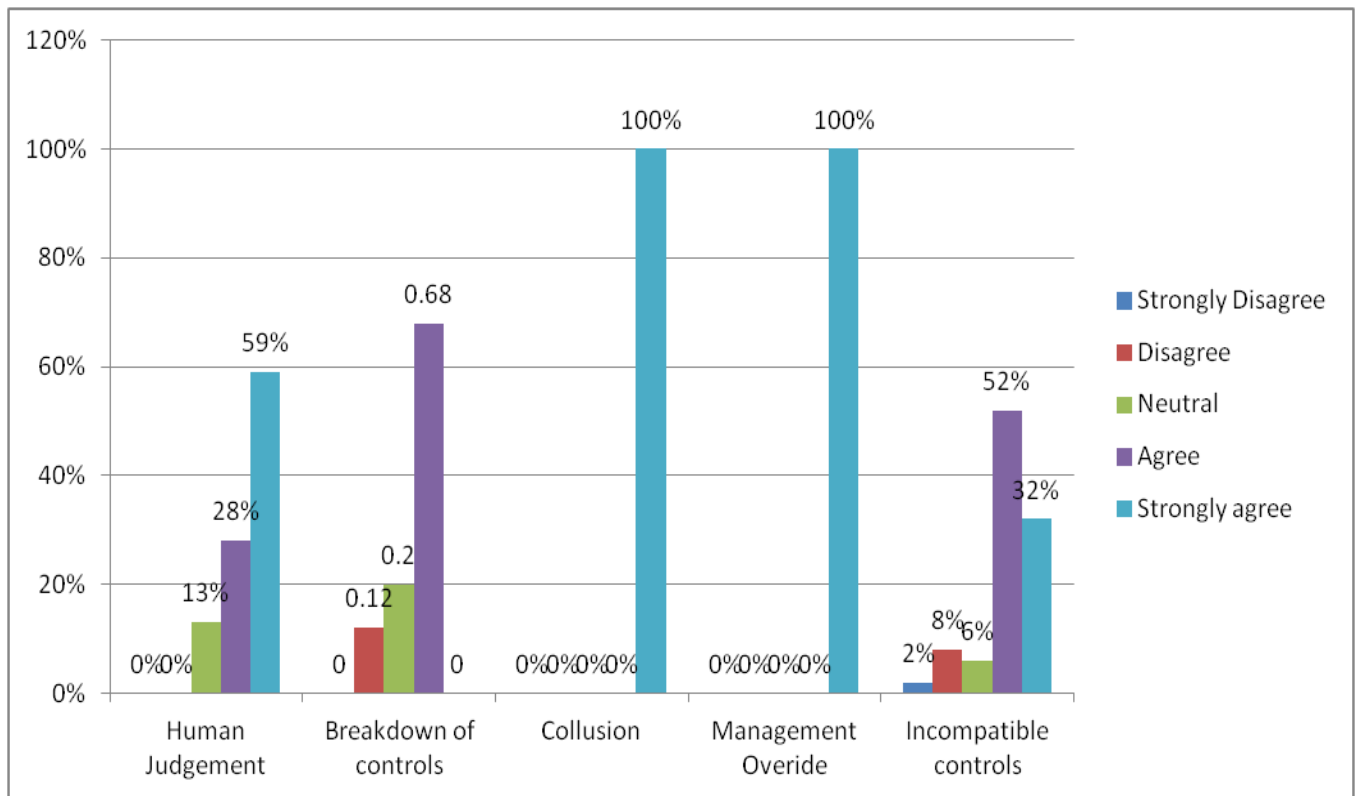
The research study carried out showed that the majority of the respondents strongly agreed (15%) and agreed (83%) that internal managerial controls are essential mechanisms which help an organization to use accurate information for decision making. Only 2% of the respondents were not sure about the contribution of internal managerial controls in decision making. The research results also supported the notion that internal managerial controls are an effective basis to institute responsibility accounting and variance analysis (42% agreed and 58% strongly agreed). Although the respondents showed mixed views on the third benefit suggestion, 63% of the respondents highlighted that internal managerial controls helps a business organization to succeed, survive and attain sustainable development.

In the same context, 70% of the respondents showed that internal managerial controls are a critical component of business management that helps an organization to adhere to legal and other regulatory frameworks and hence, are critical as they help organizations to escape penalties and fines. Internal managerial controls were also viewed as important managerial

tools that help an organization built up an effective financial reporting system with 45% and 50% of the respondents agreed and strongly agreed, respectively.

4.11 Challenges in the use of internal managerial controls

Fig 4.7 presented below highlights the research results on the challenges associated with the use of internal managerial controls in an organization.



Source: Primary data

Fig 4.7: Challenges in the use of internal managerial controls

Fig 4.7 presented above shows that all the respondents (100%) strongly felt that collusion and management override are the main challenges that compromise the effective use of internal managerial controls in an organization. This view is supported by COSO (2016) and Adu-Frimpong (2015) who cited collusion and management override as internal control challenges that are difficult to mitigate. In addition, 59% of the respondents strongly felt that the challenge of human judgment presents a big threat to the effectiveness of organization’s control system. Lastly, 68% and 52% of the respondents agreed that internal managerial control breakdowns and the challenge of incompatible controls, respectively, are threats to the effective use of internal managerial controls. This position is in harmony with the research findings of French

(2017) who states that the timeous failure of organizations to upgrade their systems of internal controls to current global trends and requirements renders them ineffective.

4.12 Chapter Summary

This chapter discussed in detail, all the statistical analysis performed and briefly discussed the rationale for interpreting the results. The normality tests including skewness and kurtosis tests indicated that the sample is normally distributed. Further, the Pearson's correlation analysis and multiple linear regression were conducted to establish any relationship between the Independent Variables and the Dependent Variable. Further discussions of the major research findings, conclusions and recommendations will be presented in Chapter 5.

CHAPTER FIVE

RESEARCH FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The main purpose of this chapter is to give a comprehensive discussion of the major research findings based on authentic research results presented in chapter 4. The chapter is also designed to present the research conclusions and proffer some policy recommendations Ashanti Gold mine can implement to improve its organizational operational performance. This chapter highlights the extent to which the research objectives were met, gives answers to the research questions and outlines the research limitations. An area for further research is also suggested at the end of this chapter.

5.2 Achievement of Research Objectives

The results of the research study have managed to meet the research aim and objectives. This research study successfully established the effects, internal managerial controls have on the operational performance of Ashanti Gold mine. The research study also positively identified the benefits and challenges associated with the use of internal managerial controls in business organizations. More importantly, the study respondents also pointed out the internal managerial controls currently in use at Ashanti Gold mine for performance improvement. Therefore, to a larger extend, the research was successful.

5.3 Conclusions

The following research conclusions were made based on the research findings. These conclusions were drawn against the research objectives of the study. The research objectives of the study includes analysing the effects of internal managerial controls on the operational performance of Ashanti Gold Mine in Bindura, identifying various internal managerial controls that can be used by mine managers to achieve short and long term organisational goals, establishing benefits of employing managerial controls in mining firms, establishing the challenges of implementing managerial controls and to proffer scholarly and policy recommendations on how best different internal managerial controls can be of use in improving operational performance;

5.3.1 Effects of internal managerial controls on operational performance

Different elements of internal managerial controls have exhibited diverse effects on the operational performance of Ashanti Gold mine as explained below;

5.3.1.1 Scope of management system and responsible mining policy

The research results confirm that the scope of management system and implementation of controls that enforce the use of responsible mining initiatives is a significant factor that influences operational performance of an organization. The research results are in harmony with French (2017) who asserted that the mining policy of an organization and the scope of management's system should ensure that each operation within the organization has a supporting formal process that conforms to the requirements of responsible mining management system and at the same time, supporting the organization's performance standards and procedures to improve operational performance.

5.3.1.2 Health, safety, environment and community (HSEC) management controls

As expressly highlighted by the study respondents, HSEC management controls are the strongest facet of internal managerial controls which critically determines the operational performance of the organization. The research results shows that HSEC controls are a facet of internal managerial controls that determines the rate of accidents and fatalities at the workplace, the overall safety of employees at work, regulates the environmental effects of mining and are critical for creating and reshaping the community's perception with regard to the organization's operations. The research results confirms the research findings by The Lundin Mining Corporation Framework (2017) which published that HSEC risk management is important in a mining organization since it aims to ensure that HSEC hazards are identified, assessed and treated to prevent injuries and fatalities at work, and to mitigate the impact of adverse events on human health, the environment and communities.

5.3.1.3 Change management and performance improvement controls

The study showed that change management and performance improvement controls have a very weak or no correlation with operational performance. The researcher's concluding view is that the employees' fear of change and a combination of other factors which compromise employee performance always contributes to the inefficiency in change management controls. Although Pradeep, (2016) opines that change management controls are essential to ensure that

the HSEC risks associated with changes to organization design, operating practices, technical processes, introduction of new assets and equipment, changes to plant or mine configuration, and changes to technical drawings are ensured, their ultimate goal is always undermined by employees who individually aims to preserve the status quo. Effective change management controls begin with ensuring that there are already laid down change management procedures which should be followed.

5.3.1.4 Legal conformance, communications and stakeholder engagement

Mining firms are not immune from governing operating statutes which enforce mining entities to operate in line with their dictates. For instance, Ashanti Gold mine is obliged to conform to the demands of operating laws and policies of the Environmental Management Agency (EMA) which regulates the effects of mining activities on the environment. It is therefore important to register that an organization's operating performance is directly associated to the degree on which mining firms obey the governing operating statutes. In addition, effective communication within an organization should be ensured and views of stakeholders should always be incorporated into the organization's strategic plan for performance improvement. Tripathi et al (2016) supports this view by stating that legal conformance controls including the procedures put in place by management to ensure that the organization's mining operations comply with the applicable legal and other requirements including laws, regulations, licences and permits should always be ensured.

5.3.1.5 Crisis and emergence response controls

The research results show that employee fatalities and related aggravated impacts can only be worsened if there are no proper or ineffective crisis and emergency response controls. It is therefore worth stating that the more an organisation improves the effectiveness of its crisis and emergency response controls, the more its operational performance will be set to increase. This is in line with COSO (2018) who stated that the crisis and emergency response mechanisms involve internal arrangements set by management to ensure that processes are established to protect employees, to minimize operational break down, and to mitigate negative impact to the community, the environment and assets in the event of an emergency occurring.

5.3.1.6 Auditing and systems management review

The study results show that ad-hoc audit engagements and periodical review of management systems is optimally associated with operational performance. Although there are challenges inherent with the use of internal controls, FICCI (2016) highlighted that ad- hoc audit engagements is one of the effective methods an organization can use to assess the effectiveness of its control systems.

5.3.1.7 Awareness, competence and training controls

A combination of both the Pearson's correlation ($r= 0.136$, $p=0.000$) and regression analysis exhibited a weak association and no multiple relationship with other independent variables to operational performance of Ashanti Gold mine respectively. An analysis on the rationale of this position shows that awareness, competence and training controls are largely ineffective. In most cases, the author's interpretation to this view is that the organization might not be willing to adequately fund the awareness and competence initiatives and also restricting funds for workforce training needs.

5.3.2 Internal managerial controls used by Ashanti Gold mine

Although the scope of management and responsible mining controls; crisis and emergency response controls; auditing and systems management review controls and the awareness, competence and training controls are fairly used by Ashanti Gold mine to improve the organization's operational performance, the respondents highlighted that the organization is rarely using the most critical health, safety, environment and community controls which is strongly and positively related to operational performance. This means that the most important factors which determine operational performance are being left uncontrolled and unmonitored.

5.3.3 Benefits of using internal managerial controls

The study results explicitly show that internal managerial controls are essential mechanisms which help an organization to use accurate information for decision making. Further, the research results also supported the notion that internal managerial controls are an effective basis to institute responsibility accounting and variance analysis. Although there are mixed views on the contribution of internal managerial controls to organizational success, survival and development, it can be deduced that internal managerial controls help a business organization to succeed, survive and attain sustainable development.

5.3.4 Challenges of using internal managerial controls

The study results shows that collusion and management override of the set internal controls are inherent challenges which do not only undermine operational performance, but also difficult to detect. COSO (2016) and Adu- Frimpong (2015) agree that collusion and management override are internal control challenges that are difficult to address, eliminate or mitigate. This study also showed that the human judgment presents a big threat to the effective functioning of the organization's control system. In addition, it can be concluded that internal managerial control breakdowns; and the challenge of incompatible controls remains active threats which compromise the effective use of internal managerial controls.

5.4 Answer to research questions

5.4.1 What are the effects of internal managerial controls on the operational performance of Ashanti Gold Mine in Bindura?

This was the main research question of the study. The research results show that the use of internal managerial controls has positive effects on operational performance, that is, the more an organization use and ensure effectiveness of internal managerial controls, the more its operational performance is set to increase. However, the study results also showed that other internal managerial controls such as the awareness, competence and training controls; and change management controls have less impact on the operational performance of Ashanti Gold mine.

5.4.2 What are the internal managerial controls currently used by mine managers to improve organization's operational performance?

The research study showed that the scope of management and responsible mining controls; crisis and emergency response controls; auditing and systems management review controls and the awareness, competence and training controls are fairly used at Ashanti Gold mine. In addition, the results showed that the critical health, safety, environment and community risk management controls are rarely used at Ashanti Gold mine.

5.4.3 What are the benefits of using effective internal managerial controls?

The study results showed that internal managerial controls enables management to make informed decisions which is an important base for improved operational performance. The results further shows that internal managerial controls make up the primary control components which support responsibility accounting and variance analysis. Responsibility accounting and

variance analysis is important to ensure the effectiveness of the organization's system of internal controls. Business success and survival largely depends on the use and effectiveness of internal managerial controls. The study results also show that internal managerial controls improve the quality and capability of the organization's financial reporting. The study results could not deny that use of internal managerial controls helps an organization to comply with the governing operating guidelines and statutes.

5.4.4 What are the challenges associated with the use of internal managerial controls?

The research established that internal managerial controls are mainly undermined by circumstances when 2 or more people agree to bypass or circumvent the normal functioning of management controls. Further, the study shows that management override of internal control systems usually compromise the intended use and normal functioning of internal managerial controls. The challenge of incompatible controls with current global business practices render the set systems of internal controls invalid and errors in human judgment and breakdown of control systems remains threats to the effective functioning of internal managerial controls.

5.4.5 What scholarly and strategic policy recommendations that can be established to improve operational performance at the mine?

It is important for Ashanti Gold mine to use other identified internal managerial controls which have proved to have a strong, significant and positive relationship to operational performance to improve its operational performance. For example, Ashanti Gold mine should use the health, safety, environment and community risk management controls to significantly and meaningfully improve operational performance and drop some internal managerial controls that have a weak or no relationship with operational performance. Ashanti Gold mine should not just put in place internal managerial controls without putting maximum effort to ensure their effectiveness. Effectiveness of internal managerial controls can be improved by addressing the challenges of using them such as collusion and management override of controls.

5.5 Contribution

The following contributions are made;

5.5.1 Empirical contribution

Several studies conducted have mainly dwelt much on examining the impact of internal managerial controls on the financial performance of organizations in the banking or

manufacturing sectors. Other studies were also directed at examining the effect of managerial controls in businesses operating in developed countries such as American and Chinese economies. This study therefore, comes in to give relevant literature applicable in the mining sector of an organization operating in a developing country. Unlike past researches, this research examines the impact of internal managerial controls on the operational performance of Ashanti Gold mine in Bindura, Zimbabwe. This research study showed that the crisis and emergency response controls; and the health, safety, environment and safety risk management controls, highly and positively influences operational performance. The study shows that operational performance of mining organizations should be shifted from traditional mining to adopting responsible mining initiatives.

5.6 Policy recommendations

Based on the major research findings, there is a great need for Ashanti Gold mine to review its general mining policy and adopt responsible mining policy framework. A responsible mining policy framework is the one which takes on board the impacts of the environmental, community, health and safety of employees and other stakeholders at the workplace. The responsible mining frameworks also help mining organizations to prioritize their corporate image and brand position in the eyes of both the government and the general populace.

5.7 Managerial Recommendations

Based on the research findings, the following recommendations are suggested;

1. Ashanti Gold mine should direct more resources and attention to improving the health, safety, environment and community management; and the crisis and emergency response controls as these two have both, individually and in combination with other independent variables exhibited a strong and positive relationship with operational performance. As the health, safety, environment and community management controls are rarely used at Ashanti Gold mine, the management of the same should quickly ensure that these are effectively put to use for performance improvement. Whilst continually assessing the effective use of the scope of management and responsible mining practices; auditing and management systems review; and legal conformance, communication and stakeholder engagement controls, the management of Ashanti Gold mine should address the reasons behind the ineffectiveness of both change management and performance improvement; and the awareness, competence and training controls.

2. On probing to determine the internal managerial controls used by Ashanti Gold mine, the organization should ensure that the health, safety, environment and community risk management controls are immediately put to use as these internal managerial controls are strongly, positively and directly related to operational performance.

3. Referring back to the hypothesis results presented in Chapter 4, the null hypothesis has been accepted. This alone proves that the use of internal managerial controls is significant and essential in improving the operational performance of Ashanti Gold mine in Bindura. In actual fact, the use of internal managerial controls help to improve the financial reporting capability and quality of organizations; they are bedrock to executing responsibility accounting and variance analysis; and are significant in ensuring business growth, survival and sustainable development.

4. It is more important for the management to appreciate that the attainment of organizational goals using internal managerial controls is mainly and strongly compromised by the challenges associated with their use. For instance, the respondents have expressed no reservations in advocating the fact that collusion and management override of controls are real threats to their effective use, which are also difficult to mitigate. It is therefore paramount for any management relying on using internal managerial controls for performance improvement, to regularly come up with applicable remedies to these challenges.

5.8 Major Research Findings

In line with the pre- outlined research objectives, a number of significant research findings were recorded. The research study established that the majority of the employees at Ashanti Gold mine are males and this is explained by the physical requirements and use of heavy industrial machines in the mining sector which is mostly shunned by female job seekers. The study results also showed that the majority of the workforce is aged between 18- 30 years and a larger proportion of these employees are degree holders. The experience of employees at Ashanti Gold mine is unsatisfactory since more employees have worked for the organization for a period ranging from 0- 10 years.

The study results also showed that the scope of management and controls ensuring responsible mining are fairly used at Ashanti Gold mine. In addition, it is also shown that other controls such as the crisis and emergency response controls; auditing and systems management review; and awareness, competence and training controls were being fairly used in the organization.

The health, safety, environment and community management controls; change management and performance improvement controls; and legal conformance, communication and stakeholder engagement are rarely used in the organization for performance improvement.

The effectiveness of internal managerial controls being used at Ashanti Gold mine were largely below the expected range. For instance, the research results showed that the effectiveness of change management and performance improvement controls is very poor. The effectiveness of the scope of management system and responsible mining controls, auditing and systems management review; and awareness, competence and training controls was also highlighted to be poor. In the same breath, legal conformance, communication and stakeholder engagement; crisis and emergency response controls; and health, safety, environment and community management controls are reasonably effective.

The Pearson's correlation test performed indicated that the health, safety, environment and community management controls are the strongest components of internal managerial controls that directly affect the operational performance of Ashanti Gold mine in Bindura. The study results also showed that the crisis and emergency response controls are strongly and positively related to operational performance. Further, the scope of management system and mining policy; legal conformance, communication and stakeholder engagement; and auditing and systems management review controls are positively and moderately related to operational performance of Ashanti Gold mine. Change management and performance improvement; and awareness, competence and training controls respectively showed a no and weak direct relationship to operational performance of Ashanti Gold mine.

The results of multiple regression analysis performed found that the correlation between 5 out of 7 independent variables to the dependent variable showed strong relationship. The multiple regression analysis showed that there are multiple correlations ($R = 0.743$) of 5 significant predictors with the criterion (operational performance). From the model, the factors that influence operational performance of Ashanti Gold mine in Bindura are the scope of management system and responsible mining policy; health, safety, environment and community management controls, legal conformance, communication and stakeholder engagement; crisis and emergency response controls; and auditing and systems management reviews.

These 5 elements of internal managerial controls have a significant impact which explains more than 72.0% (R Square= 0.722) of the variability towards operational performance. However, in terms of the strength of the independent variables, the health, safety, environment and community management controls showed the highest relationship with the highest regression coefficient of $r= 6.134$, crisis and emergency response controls $r= 4.236$, scope of management system and responsible mining $r= 2.971$, auditing and systems management review $r= 1.514$ and legal conformance, communication and stakeholder engagement with an r value of 0.671. Effects from other predictors are insignificant in this set of combinations, and those factors are not included in the multiple regression equation. The analysis of variance performed also indicated that the independent variables significantly affect the operational performance of Ashanti Gold mine.

5.9 Limitations

This research study only focused on exploring the effects of internal managerial controls on operational performance using only Ashanti Gold mine as a case study. Other players operating in Zimbabwe were not considered and their possible views were eventually eliminated at reaching at the research conclusion of this study. Time for undertaking the research study was a great limitation. The researcher distributed 75 questionnaires and managed to collect 52 filled up questionnaires within a period of 1 week. Since the response rate was satisfactory, the research results collected were used for data presentation and analysis.

5.10 Area for further study

Although the research study has managed to establish the relationship between elements of internal managerial controls and operational performance, a gap is left on how the effectiveness of the independent variables could be guaranteed. It is in this view that future researchers are advised to explore on practical mechanisms and remedies that can render effective the internal managerial controls in a mining sector and how challenges to their use can be addressed, minimized or eliminated.

REFERENCES

- Adu- Frimpong, A. (2015). *Evaluating the Effects of Internal Controls in the Operations of Financial Institutions. A Case Study of Bond Savings and Loans: College of Art and Social Sciences. KSB.*
- Ali, K. H. (2013). *Contribution of Internal Control System to the Financial Performance of Financial Institution a Case of People's Bank Of Zanzibar Ltd.* Master's Degree Thesis: Mzumbe University
- Ayagre, P., Appiah-Gyamerah, I., & Nartey, J. (2014). *The effectiveness of Internal Control Systems of banks. The case of Ghanaian banks: International Journal of Accounting and Financial Reporting, Vol. 4, No. 2, Pp 377-389.*
- Bedford, D. S. (2015). *Management control systems across different modes of innovation: Implications for firm performance.* Management Accounting Research.
- Bedford, D. S., & Sandelin, M. (2015). *Investigating management control configurations using qualitative comparative analysis: An overview and guidelines for application.* Journal of Management Control.
- Bedford, D. S., Malmi, T., & Sandelin, M. (2016). *Management control effectiveness and strategy: An empirical analysis of packages and systems.* Accounting, Organizations and Society.
- Chenhall, R. H., & Moers, F. (2015). *The role of innovation in the evolution of management accounting and its integration of management control.* Accounting organization and society
- Committee of Sponsoring Organizations of the Treadway Commission (COSO, 2018). *Enterprise Risk Management - Integrated Framework*, Committee of Sponsoring Organizations of the Treadway Commission.
- Committee of Sponsoring Organizations of the Treadway Commission (COSO, 2016), *Internal Control -Integrated Framework*, Durham: COSO.
- Engel, R. J., & Schutt, R. K. (2013). *The Practice of Research in Social Work.* Los Angeles: Sage Publications.

FICCI (2013). *Development of Indian Mining Industry – The Way Forward*. <http://ficci.in/spdocument/20317/Mining-Industry.pdf>

Frazer L. (2016). *Internal Controls: Is it Benefit or Fad to Small Companies?* Journal of Accounting and Finance Volume 16

French, J. (2017). *Responsible Mining Management System*. Lundin Mining Corporation

Gate, S. (2014) *Changing risk management paradigm – Perspective of the Regulator*. Pakistani: Bluemoon Press.

Gemma, R. (2018). *Introduction to Positivism, Interpretivism and Critical Theory*. Nurse Researcher, 25 (4).

Harrier, J. (2007). *Internal control strategies*. River Street, NJ: John Wiley & Sons.

Hurlimann, C. (2019). *Research Philosophy and Ethics*. Springer Gabler: Wiesbaden.

Johnson, G. (2017). *The Discipline of Teams: The Control of Team-Based Industrial Work through Electronic and Peer Surveillance*, *Administrative Science Quarterly* 43(2): 406–69, available at www.jstor.org, accessed on 20/09/19.

Kothari, C. R. (2004). *Research Methodology: Methods and Techniques*, 2nd Ed. New Delhi: New Age International (P) Ltd., Publishers.

Kumar, R. (2011). *Research Methodology, A step-by-step guide for beginners*, 3rd Ed, Sage Publication Limited.

Malmi, T., & Brown, D. A. (2008). *Management Control Systems as a Package- Opportunities, Challenges and Research Directions*. *Management Accounting Research*.

Malmi, T., Brown, D. (2013). *Management Control Systems as a Package-Opportunities, Challenges and Research Directions*, *Management Accounting Research*, 19, pp.287- 300.

Miller, K. D. (2010). *Testing Management Theories: Critical Realist Philosophy and Research Methods*. Wiley Press.

O’Grady, W., & Akroyd, C. (2016). *The MCS package in a non-budgeting organisation: A case study of mainfreight*. *Qualitative Research in Accounting & Management*.

Otely, D. (2016). *The contingency theory of management accounting and control 1980-2014* Management Accounting Research.

Pradeep, K., Singh, P. K., & Singh, R. (2016). *Environmental and Social Impacts of Mining and their Mitigation*. CSIR-Central Institute of Mining and Fuel Research Barwa Road: Dhanbad - 826015, Jharkhand.

Putra, L. D. (2015), *Control Frameworks and Their Components*, Accounting, financial and tax for the rest of us, available at <http://accounting-financial-tax.com/category/financial/internal-control-financial/>, accessed on 17/01/2020

Ridley, J. (2008). *Cutting edge internal auditing*. Chichester, West Sussex, England: John Wiley & Sons.

Saunders, M. P., Lewis, P., & Thornhill, A. (2009). *Research Methods for Business Students*. Harlow, England, FT Prentice Hall: Pearson Education.

Simbachako, B. (2018). *Effectiveness of Debt Management Strategies. A Case of ZIMRA*. University of Zimbabwe

Singh, A.N., Srinivas, M., & Naik, B. N. (2015). *Forecasting the Impact of Surface Mining on Surrounding Cloud Computing*. Journal of Computer Sciences and Applications, Vol. 3, No. 6, 2015, pp 118-122.

Smith, A.V., Proops, L., Grounds, K., Wathan, J., McComb, K. (2016). *Functionally Relevant Responses to Human Facial Expressions of Emotion in the Domestic Horse*. Google Scholar.

Stamps, C.A. (2017) *Corporate Culture: The Last Frontier of Control*, Journal of Management Studies 23(3): 287–97, available at www.jstor.org, accessed on 22/09/19.

The Lundin Mining Corporation Framework (2017).

Thompson, K. (2015). *Risk Management Practices: An Empirical Analysis of the UAE Commercial Banks*. New York: Whitehead Co.

Thyer, R. B. (2010). *The Handbook of Social Work Research Methods*. Los Angeles: Sage Publications.

Tripathi, N., Singh, R. S., & Hills, C.D. (2016). *Reclamation of Mine-impacted Land for Ecosystem Recovery*. Wiley Blackwell publishers: UK.

William, C. R. (2014). *A Critique of the Mainstream Management Control Theory and the Way Forward*, Sage Open, available at <http://sgo.sagepub.com>, pp.1-11, accessed on 10/07/19.

www.managementstudyguide.org

www.gratisport.co.in

www.hubpages.com

APPENDICES

Appendix 1 : Questionnaire



UNIVERSITY OF ZIMBABWE

QUESTIONNAIRE

My name is Precious Chigariro and currently a student at the University of Zimbabwe doing a Masters in Business Administration degree programme (MBA). I am carrying out a research and analysis on the effects of internal managerial controls on the operational performance of Ashanti Gold Mine located in Bindura. I am pleased that you have been selected for this study and hope that interacting with you will yield useful results. Your willingness to respond to this questionnaire and the genuineness and accuracy of your responses will be very much appreciated. All the information collected from this questionnaire will be used for academic purposes only and will be kept anonymous and in strict confidence.

This questionnaire consists of eight sections (A- H). The respondents are expected to answer all the questions in all the sections included in the questionnaire. Section A covers questions on the respondents' background information and you are required to put a tick where appropriate, in the spaces provided. The Likert scale has been used as a measurement scale. In Section B, a scale of 1 to 3 is used, 1 being Rarely Used, 2 Fairly Used and 3 Greatly Used. In Section C, a scale of 1 to 5 is used and please kindly rate the effectiveness of each internal managerial control used with 1 being Very Poor, 2 Poor, 3 Undecided, 4 Good and 5 Excellent. From Section D to H, kindly indicate the extent to which you agree or disagree with the following statements on the effects of internal managerial controls on operational performance using a scale of 1 to 5, 1 being 'Strongly Disagree' and 5 being 'Strongly Agree'.
Key: 1 'Strongly Disagree'; 2 'Disagree'; 3 'Neither Agree nor Disagree'; 4 Agree & 5 'Strongly Agree'.

SECTION A: RESPONDENTS' BACKGROUND INFORMATION

1. Gender

- Male
- Female

2. What is your age bracket?

- 18-30 years
- 31- 40 years
- 41- 50 years
- 51- 60 years

3. What is your highest qualification?

- National Certificate
- Diploma /HND
- Degree
- Masters
- PhD

Specify, if qualification is not mentioned above

4. How long have you been working for the organization?

- 0- 10 years
- 11- 15 years
- 16- 20 years
- Over 20 years

SECTION B: INTERNAL MANAGERIAL CONTROLS IN USE AT ASHANTI MINE

5. Indicate the internal managerial controls which are being used by Ashanti Gold Mine to improve its operational performance. Use a tick to show your answer.

1 --- Rarely used

2 --- Fairly used

3 --- Greatly used

INTERNAL MANAGERIAL CONTROL	<i>Rarely Used</i>	<i>Fairly Used</i>	<i>Greatly Used</i>
Scope of management system and mining policy framework	1	2	3
Health, Safety, Environment and Community risk management controls	1	2	3
Change management and performance improvement controls	1	2	3
Legal conformance, communications and stakeholder engagement	1	2	3
Crisis and emergency response controls	1	2	3
Auditing and systems management review controls	1	2	3
Awareness, competence and training controls	1	2	3

6. In your own opinion, what other internal managerial controls are in place and being used other than those listed above, please specify below;

.....

SECTION C: EFFECTIVENESS OF INTERNAL MANAGERIAL CONTROLS

7. On a scale of 1 to 5, please kindly rate the effectiveness of each internal managerial control used to improve the operational performance of Ashanti Gold Mine. Use a tick to show your choice.

1 = Very Poor 2 = Poor 3 = Undecided 4 = Good 5 = Excellent

INTERNAL MANAGERIAL CONTROL	SCALE				
	1	2	3	4	5
Scope of management system and responsible mining policy framework					
Health, Safety, Environment and Community risk management controls					
Change management and performance improvement controls					
Legal conformance, communications and stakeholder engagement					
Crisis and emergency response controls					
Auditing and systems management review controls					
Awareness, competence and training controls					

SECTION D: EFFECT OF INTERNAL MANAGERIAL CONTROLS ON OPERATIONAL PERFORMANCE

i. Scope of Management System and Mining Policy

Code	Statement	1	2	3	4	5
OS1	The organization’s mining policy is approved by the entity’s senior management.					
OS2	The mining policy is formally documented, implemented and maintained.					
OS3	The mining policy is effectively communicated to all employees and stakeholders.					
OS4	The mining policy adequately reflect all the operation’s health, safety, environmental and community risks as well as regulatory requirements.					
OS5	The mining policy aims to prevent illnesses, deaths, injuries, environmental degradation and adverse community impacts					

ii. Health, Safety, Environment and Community risk management controls

Code	Statement	1	2	3	4	5
HS6	The organization's risk registers covers the health, safety and well-being of employees and other stakeholders.					
HS7	The organization applies the highest level of control commensurate with the risk exposures.					
HS8	Lower level controls may be used as treatment measures until long-term controls can be implemented.					
HS9	Each operation has developed a risk register for cataloguing risks exposures.					
HS10	Risks exposures characterized as 'Significant' or 'High' are frequently reviewed by senior management.					

iii. Change management and performance improvement controls

Code	Statement	1	2	3	4	5
CM11	The organization has a method for the identification of hazards and an analysis of all risk exposures.					
CM12	There is a set criterion for the identification and implementation of appropriate internal controls to mitigate the risk exposures.					
CM13	The organization use an appropriate risk analysis methodology based on the complexity of the change.					
CM14	A process for documenting recommendations, logging of required risk management and corrective actions is in place.					
CM15	There is continual improvement of the mining policy implementation.					

iv. Legal conformance, communications and stakeholder engagement

Code	Statement	1	2	3	4	5
LC16	The organization has developed a centralized obligations register detailing the applicable legal and other requirements.					
LC17	The organization defines the responsibilities and accountabilities for maintaining compliance or conformance to each requirement.					
LC18	Regulatory trends are frequently monitored to anticipate and identify changes to the legal requirements.					
LC19	The organization develops and implements specific action plans for maintaining compliance with the legal and other requirements.					
LC20	The organization has a mechanism for all stakeholders to confidentially report grievances and ensure effective internal communication.					

v. Crisis and emergency response controls

Code	Statement	1	2	3	4	5
CE21	There is a listing of potential emergency incidents and a listing of available support resources including financial resources.					
CE22	The Emergency Response Plan (ERP) must be reviewed at least annually and updated as needed.					
CE23	The emergency response team attends frequent training and gets tested for competency.					
CE24	There are emergency systems installed in place.					
CE25	The emergency systems in place are maintained and meet all the applicable local regulatory, legislative and certification requirements.					

vi. Auditing and systems management review controls

Code	Statement	1	2	3	4	5
AS26	There is frequent assessment of operational controls to mitigate risks and impacts.					
AS27	The organization assesses the HSEC performance against the set objectives and targets.					
AS28	The organization assesses and monitors occupational health exposures against internal and regulatory limits.					
AS29	The organization reviews corporate operational circumstances and anticipated changes.					
AS30	The organization reviews overall HSEC performance against objectives, targets and performance indicators.					

vii. Awareness, competence and training controls

Code	Statement	1	2	3	4	5
AC31	New employees are introduced to general rules, hazards, risks and required controls.					
AC32	The organization ensures training on legal and other requirements relevant to each employee's role.					
AC33	Awareness training on fatality hazards and required critical controls is frequently performed.					
AC34	There is technical qualification and licensing for roles or occupations with specific requirements.					
AC35	There is training on required emergency and evacuation procedures.					

SECTION E: OPERATIONAL PERFORMANCE

Code	Statement	1	2	3	4	5
OP36	Accidents and fatalities at work have reduced as a result of the use of internal managerial controls					
OP37	Internal managerial controls have significantly helped the organization to adhere to environmental, legal and other operating statutes.					
OP38	Internal managerial controls improves the organization's image and corporal standing in the community					
OP39	The organization's general profitability and cash flow position have improved due to the use of internal managerial controls					
OP40	Use of internal managerial controls improves the organization's health and safety conditions of its employees					

SECTION F: BENEFITS OF IMPLEMENTING INTERNAL MANAGERIAL CONTROLS

Statement	1	2	3	4	5
They provide accurate information needed for effective decision making and proper functioning of the business.					
Internal managerial controls are an effective basis to institute responsibility accounting and variance analysis					
Can lead a business organization to succeed, survive and attain sustainable development.					
Helps an organization to adhere to legal and other regulatory frameworks hence, are critical as they help organizations to escape penalties and fines					
Implementation of internal control systems lead to an effective financial reporting system					

SECTION G: CHALLENGES OF INTERNAL MANAGERIAL CONTROLS

Statement	1	2	3	4	5
The challenge of human judgement					
Internal managerial control breakdown					
Collusion					
Management override of the set controls					
Incompatible internal managerial controls					

THANK YOU